Liberia

Infrastructure and Inclusive Growth

THE AFRICAN DEVELOPMENT BANK GROUP

Vice President: Zondo Sakala
Regional Director: Franck Perrault
Chief Country Economist (at the time): Stefan Muller
Senior Country Economist: Patrick Hettinger
Resident Representative: Margaret Kilo
Consultants: Andy Dijkerman, Emmanuel Akpa

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B.P. 323-1002 Tunis Belvedere, Tunisia

Tel: (216) 7110-2876

Fax: (216) 7110-3779

Website: www.afdb.org

Foreword

The African Development Bank views poor infrastructure as a critical barrier to reducing poverty and accelerating growth on the continent. Concurrently, African leaders increasingly realize the advantages of regional cooperation and countries are placing greater emphasis on accelerating integration through policies and infrastructure. However, countries recovering from prolonged periods of conflict or troubled governance face added challenges and this is especially the case when multiple recovering states share the same geographic neighborhood. Fragility renders countries inherently more vulnerable to threats and more focused upon domestic reconstruction as a consequence.

This fits into the context of the AfDB's Strategy for 2013 to 2022, which aims to broaden and deepen the continent's process of transformation, mainly by ensuring that growth is shared and not isolated. Moreover, the Strategy prioritizes regional integration, which is essential for Africa to realize its full growth potential, to participate in the global economy and to share the benefits of an increasingly connected global marketplace. Finally, the Strategy also emphasizes that fragile states require support tailored for their unique needs.

As part of its broader development effort to contribute to the integration of Africa, the AfDB Group is leading a new initiative to boost regional integration in West Africa focused on Guinea (Conakry), Guinea-Bissau, Liberia and Sierra Leone. These fragile and post-conflict states lag behind the rest of ECOWAS in terms of social and economic development and require attentive assistance in addressing their collective infrastructure gap. By assessing and addressing the infrastructure gap, the Bank aims to help these nations transition out of fragility and into stability.

The present report focused upon Liberia provides a synopsis of a longer study which is one of a series on fragile West African states. Infrastructure in Liberia suffered badly from its fourteen years of conflict, and the nation's stock of infrastructure remains inadequate and poorly maintained. There are, however, a number of opportunities to reverse this trend, especially if regional options are included. Regional integration is examined in the context of promising domestic growth strategies and the related infrastructure investment priorities that can best bring Liberia out of its relative isolation. These will enable Liberia to play a larger role on an agricultural trading stage within the Mano River Union, on a regional stage within the ECOWAS energy, communications and transit trade markets and on a globally competitive stage as an attractive investment destination for manufacturing, mining and agro-industry. The ultimate objective of the Report is to offer recommendations for short, medium and long-term infrastructure planning for Liberia. The approach takes its cue from Liberia's national poverty reduction strategy, the *Agenda for Transformation* which seeks inclusive economic growth and it adds a regional perspective on relevant infrastructure development.

The approach to planning seeks to prioritize infrastructure investments that maximize the benefits of internal integration and national stability in the near term, while identifying priority investments that will maximize the benefits of regional integration for Liberia over the longer term. Together, these outcomes will contribute in turn to regional stability. Important aspects of stability that are addressed include youth employment, inclusive approaches to natural resource concessioning and improvements in land tenure for smallholders, measures to reduce food insecurity and improved penetration of services into the hinterland. Many of these challenges can be better tackled and mitigated on a more enduring basis if they are addressed through synchronized national and regional initiatives.

Studies have shown that increasing the stock of infrastructure adds to growth and the gross domestic product. In countries with severe infrastructure deficits, the economic return from infrastructure investment is even more favorable. Improved infrastructure is a precondition for accelerated development of the domestic private sector and is a key requirement for the expansion of intra-regional trade, the benefit of which will improve regional food security over time and build the region's trading capacity and ability to compete in world markets. In recognition of these facts, the development of Africa's infrastructure and economic integration are key components of the strategic direction pursued by the Bank.

This study is important for three reasons. First, it provides the Government, the donor community and the private sector with a detailed assessment of infrastructure investment opportunities in Liberia. It provides an advocacy document with which the Government of Liberia can encourage and enlist the support of stakeholders and development partners on a way forward.

Second, the Report sensitizes readers to the particular challenges of achieving transformational growth—an outcome that can better be achieved through strategic prioritization of infrastructure that involves Liberian nationals in service delivery and includes the broader Liberian population within the domestic and regional growth opportunities at large.

This inclusion is vital to securing Liberia's stability for the long term future. Finally, it can serve as the catalyst for accelerated dialogue on integration between Liberia and neighboring states, both in the context of the Mano River Union and in the context of ECOWAS.

In these many ways, this Report can contribute to the sustained recovery and acceleration of development progress in Liberia.

Zondo Sakala
Vice President
Country and Regional Programs and Policy
African Development Bank Group

Preface

Liberia's new poverty reduction strategy, the ***Agenda for Transformation*** recognizes that economic growth and development cannot be achieved without adequate infrastructure. At the same time, key insights from the nation's history indicate that the social and economic benefits of growth must be inclusive and an enclave orientation must be minimized to avoid growth without development. Infrastructure investment must therefore be planned to support key growth corridors that connect urban centers with the rural milieu and foster conditions for economic advancement by smallholders and the domestic private sector as well as foreign direct investors. Infrastructure services must strive to improve quality, availability and affordability to citizens throughout the country.

This report provides an assessment of the current status of infrastructure and services in the transport, electric power, ICT, water and sanitation sectors in Liberia, together with the context of their participation in regional infrastructure development initiatives in the Mano River Union and ECOWAS. The report is divided into three chapters. Chapter one presents a diagnostic of the present situation including an analysis of determinants of past conflict and continuing vulnerabilities, indicators of social and economic performance, the status of infrastructure and the strategic policies guiding the nation. Chapter two takes a look ahead to evaluate growth strategies which could accelerate inclusive and stability-enhancing growth if binding policy and infrastructure constraints are addressed. Chapter three presents recommendations for short, medium and long-term infrastructure investment planning that, together with accompanying measures, will help unleash the potential of promising growth sectors in the Liberian economy. The full report is available online at http://www.afdb.org/en/countries/liberia.

This report was prepared on the basis of broad stakeholder participation and consultation. This involved numerous rounds of interview and consultations with Liberian Government officials and key stakeholders during the course of 2012, culminating in a consultative workshop to forge a consensus on priorities and actions held in Monrovia in December 2012. This report marks the beginning of a new initiative—one which seeks to engage the MRU countries in a new era of accelerated regional integration and associated infrastructure development.

The African Development Bank looks forward to continued dialogue to develop sound new approaches to investing in infrastructure through means that bolster national stability and improve Liberia's integration and prosperity in the region.

Franck Perrault
Director, Regional Department
West Africa 2 (ORWB)
African Development Bank Group

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The team of consultants included Andy Dijkerman and Emmanuel Akpa as prime authors of the report. They were provided in-country support by Byron Tarr.

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Abbreviations and acronyms

AFDB	African Development Bank
ACE	Africa Connecting Europe
ACS	American Colonization Society
AFL	Armed Forces of Liberia
AG	Auditor General
AFT	Agenda for Transformation
APCI	Africa Productive Capacity Initiative
ARTIN	Africa Regional Transport Infrastructure Network
ASF	Africa Union Standby Force
AU	African Union
BRICS	Brazil, Russia, India, China and South Africa
CAAS	Comprehensive Assessment of the Agriculture Sector
CAADP	Comprehensive African Agriculture Development Program
CARI	Central Agricultural Research Institute
CPIA	Country Policy and Institutional Assessment
CWIQ	Core Welfare Indicators Questionnaire
CBL	Central Bank of Liberia
DRC	Domestic Resource Cost
ECOMOG	ECOWAS Monitoring Group
ECOWAS	Economic Community of West African States
EITI	Extractive Industries Transparency Initiative
EPP	Emergency Power Program
ERERA	ECOWAS Regional Energy Regulatory Authority
ESF	ECOWAS Standby Force
EU	European Union
EZB	Economic Zone for Business, Trade and Commerce
EZTH	Economic Zones for Tourism and Hospitality
FAO	Food and Agriculture Organization
FBO	Farmer Based Organizations
FSP	Fragile States Principles
FRTUL	Federation of Road Transport Union of Liberia
GDP	Gross Domestic Product
GEMAP	Government Economic Management Assistance Programme
GNP	Gross National Product
GOLR	Government of Liberia
GW	Gigawatt
GWh	Gigawatt hour
GSM	Global System of Mobile Communication
HFO	Heavy Fuel Oil
HIPC	Highly Indebted Poor Countries
ICT	Information and Communication Technologies
IITA	International Institute of Tropical Agriculture
ILO	International Labor Organization
ISMOR	Integrated Sustainable Modernization of Rice
ITU	International Telecommunications Union
KwH	Kilowatt Hour
LASIP	Liberia Agricultural Sector Investment Programme
LCAA	Liberia Civil Aviation Authority
LEC	Liberian Electricity Corporation
LIBTELCO	Liberian Telecommunications Company
LISGIS	Liberian Institute of Statistics and Geo-Information Services
LNP	Liberia National Police
LPMC	Liberian Produce Marketing Corporation
LPRC	Liberian Petroleum Refining Company
LTA	Liberian Telecommunications Authority
LWSC	Liberian Water and Sewer Corporation
MDA	Ministry Development Agreement

MDG	Millennium Development Goals
MHI	Manitoba Hydo Incorporated
MOA	Ministry of Food and Agriculture
MPEA	Ministry of Planning and Economic Affairs
MRU	Mano River Union
MT	Metric Ton
MTEF	Medium Term Expenditure Framework
MW	Megawatt
NAA	National Airport Authority
NEPAD	New Economic Partnership for African Development
NFRL	National Forestry Reform Legislation
NIC	National Investment Commission
NIDFO	National Industrial Development and Financing Organization
NPA	National Port Authority
NRC	Natural Resource Concessioning
NTPS	National Transport Policy & Strategy
OECD	Organization for Economic Cooperation and Development
OSBP	One-Stop Border Post
PAP	Priority Action Plan
PETS	Public Expenditure Tracking System
PFM	Public Financial Management
PIDA	Program of Infrastructure Development in Africa
PRS	Poverty Reduction Strategy
PSD	Private Sector Development
PSIP	Public Sector Investment Plan
PUP	Private Use Permit
REC	Regional Economic Community
RIA	Roberts International Airport
LDAA	Liberia Domestic Airport Authority
SOE	State-Owned Enterprise
SPD	Spatial Development Programme
SSS	Special Security Services
TAH	Trans-African Highway
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Program
UNESCO	United Nations Educational Scientific and Cultural Organization
UNMIL	United Nations Mission to Liberia
WAEC	West Africa Education Council
WAPP	West Africa Power Pool
WASH	Water, Sanitation and Hygiene
WDR	World Development Report
WSIS	World Strategy on Information Services

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Executive summary

Overview and Purpose of the Report

The main purpose of this report is to propose an infrastructure planning strategy for Liberia that contributes to national and regional integration in a manner that secures peace and stability for the long term future. It specifically aims at formulating an investment approach that is explicitly cognizant of Liberia's status as a fragile state so as to promote inclusive growth and avoid a recurrence of conflict in the future, as well as enabling Liberia to deepen its links with MRU and ECOWAS neighbors, thereby enhancing the development benefits which can accrue from regional integration.

The study examines and is built around three major themes: (i) stability, (ii) regional integration, and (iii) the infrastructure gaps in Liberia. The issue of stability is a central concern that takes into account the extent of human harm and physical damage which the nation suffered during its fourteen years conflict. This theme informs the choice of growth strategies that will foster an era of inclusive and transformational growth. The report assesses the drivers of the original conflict and the vulnerabilities which remain as a basis for prioritizing infrastructure investment that delivers the inclusive growth which Liberia now requires.

Regional integration is examined in the context of promising growth strategies and the related infrastructure investment priorities that can best bring Liberia out of its relative isolation. These will enable Liberia to play a larger role on an agricultural trading stage within the Mano River Union, on a regional stage within the ECOWAS energy, communications and transit trade markets and on a globally competitive stage as an attractive investment destination for manufacturing, mining and agro-industry.

Infrastructure is vital to these strategies. From a stability perspective, some investments should be undertaken on a purely national basis to further unify the nation, penetrate the interior with essential services, remove counties from their isolation and unlock productivity. Examples would be primary road rehabilitation to connect county capitals plus infrastructure enrichment along key corridors to catalyze broad-based economic growth within the country. At the same time, the report recognizes that Liberia faces substantial fiscal constraints and the methodology is thus informed by realism. It avoids an approach of determining an exhaustive inventory of desirable infrastructure which, in a perfect world, would close the national infrastructure gap. Instead, the report seeks to identify the specific links between promising growth sectors and the type of infrastructure that can unlock their potential. It therefore identifies that capital flows could be easier to tap and of greater magnitude if national priorities were cast into and satisfied by participation in regional programs. Neither national nor regional infrastructure projects should be undertaken to the exclusion of the other—they should be planned in synchrony.

Issues of Fragility, Continuing Vulnerability and Implications for Future Growth Strategies

The analysis of issues of fragility and stability in Liberia highlights three central causes of the country's violent civil war. The first of these is the exclusion of the indigenous Liberians by Americo-Liberians from meaningful participation in the political governance of the country and access to economic opportunity for over a century. This made for a divided country, one that was susceptible to get into conflict should an event occur to exacerbate the differences. The second finding is that with deteriorating economic conditions and sharply reduced prices for commodity-based trade in the 1970s, policy responses adopted by the authorities made it appear as though further suffering was being imposed on the poor. This sentiment incited a challenge to the regime from the fledgling opposition, an event which triggered the military uprising, and launched the full conflict that followed. The third finding concerns the phenomenon of "growth without development" whereby the regime's pre-conflict open-door economic policy generated horizontal inequality in society, enriching a few while failing to deliver development to the masses. The consequence was a style of governance that did not create social mechanisms for wider distribution of national wealth and failed to create institutions through which grievances could be addressed or mitigated in non-violent fashion.

This history and the civil conflict itself have created a number of legacy problems which now endure and require continued attention. They include weak state legitimacy, ethnic fragmentation and vulnerability to internal and external threats. Liberia will remain vulnerable to a possible return of civil war as long as conditions endure that gave rise to conflict in the first place. In order to secure the peace for the long term future, Liberia will need to mitigate the following threats in the coming years:

- **Concessions that function as enclaves:** It is important that Liberia not return to its prior pattern of achieving growth without corresponding development for its people. In reviving the FDI-led natural resource concessions sector, Liberia must find a way to ensure that these do not function as enclaves. Instead, concessions must contribute jobs for and draw local content from the communities where they are situated and infrastructure planning should seek to ensure that public benefit is derived from private investment in concession-supportive infrastructure. Concurrently, Liberia must recognize that its environmental heritage is generous but fragile, requiring conscious stewardship of green growth to avoid the depletion of renewable resources.

- **Patronage and Corruption that undermine state legitimacy**: Liberia must continue to build the state by capably delivering on the provision of security, justice and other public services while avoiding a return to the cultures of patronage, impunity and corruption. Although the country has made tremendous strides in the sphere of transparency, the basing of the country's growth strategy in large measure upon collection of natural resource rents exposes it to conditions in which corruption might naturally thrive. It will remain a constant challenge to ensure that such rents are extracted only to serve the public good.

- **Attraction of criminal activity to unemployed youth:** It is essential that Liberia's lost generation begins to benefit from resurgent growth in the economy through direct participation in jobs and training programs that prepare them for productive engagement in society. Legitimate alternatives like these are important to steer youth away from criminal activity and drugs which threaten the nation.

- **Divisions within National Identity**: Although Liberia was founded on the premise of providing a home to the oppressed and formerly enslaved children of Africa, tribal affiliation remains more powerful than Negro racial ancestry. Consequently, religious, language and ethnic fault-lines divide the country far more than common racial ancestry serves to unify it. There is a compelling need to create a sense of belonging and pride of nationality that can unify the country in the future.

- **The twin threat of poverty with inequality**: With respect to mitigation of these threats, it will be essential to ignite growth in the rural economy. To do this, Liberia's rural counties must, first and foremost, be brought out of their relative isolation and inhabitants must be connected to markets. Improved infrastructure in the way of transport, power and communications networks will all contribute to this objective.

Poverty Reduction Strategies to Deliver Growth

By disrupting economic activity over an extended period, Liberia's civil war contributed to severe impoverishment of the nation, causing it to drop from a standing as one of few middle income Sub-Saharan countries in the 1970s to a ranking of 182 out of 187 on the 2011 Human Development Index. Certain rural counties have a very high prevalence of people living in poverty while others are home to large absolute numbers of poor. In contrast, those living in or near Monrovia tend to be relatively better off and this could fuel destabilizing perceptions about an urban-rural divide. Brain drain has compounded these problems and Liberia now has a major challenge to re-build the capacity of its public sector administration and nurture the expansion of an indigenous private sector. The absence of capable and effective governance structures in many spheres of economic and political life meant that the drivers of conflict could not previously find resolution through legitimate institutional mechanisms. This reasoning has led the Government of Liberia to conclude that sustained efforts at building governance capacity through human capital and institutional development are key imperatives for the nation's long term prosperity. The process of seeking improvements in governance was launched under the Lift Liberia Poverty Reduction Strategy (PRS-I 2008-2011). These efforts will be sustained under the Agenda for Transformation (PRS-II 2012-2015) with additional emphasis on infrastructure investment as a driver of economic growth. Moreover, Liberia has set the goal of regaining middle income status under its Vision 2020.

The State of the Economy and Growth Prospects in Productive Sectors and Trade

The economy has responded well since the onset of peace but there is a need for future growth to become more inclusive and generate more jobs for Liberians. An early decision was made to operate fiscal policy on the basis of a cash budget and this discipline has kept aggregate demand conducive to maintaining a stable macroeconomic environment. The overall fiscal accounts have remained in balance or ended with small surpluses. Since 2005, real GDP per capita has risen by an annual average of 3 per cent largely due to revival of traditional engines of growth, including that from the mining concessions and commercial plantation sectors as well as that from smallholder agriculture. Preliminary IMF estimates from May 2012 indicate a boost to 6 or 7 percent GDP growth in 2011. The first two segments have benefited from a massive inflow of foreign direct investment and will soon resume exports on a large scale. At that point, growth in mining and commodity exports of lumber, rubber and palm oil will take off and far out-pace the contribution and pace of expansion in the smallholder sector. These trends make it clear that Liberia needs not just a poverty reduction strategy, but a growth plan that deliberately seeks to deliver development to the rural milieu.

Liberia's miniscule industrial sector is characterized by a few large, generally monopolistic, manufacturing firms that produce a limited supply of goods for the domestic market. Outputs include cement, beverages, paints and varnishes, plastic and rubber products. Many enterprises were destroyed during the war and the sector is currently estimated to employ about 2,785 people, representing 0.25% of the nation's labor force. Government views industrial development as an important priority to create linkages with the extractive industries sector, thereby diversifying the economy and generating large scale employment.

Liberia has had a high degree of openness to international trade, both in the past and at present. The trade balance is currently negative and this reflects both a high degree of reliance on imports and the lag in resumption of exports. The trade balance can be expected to decline when the concessions sector gains greater momentum but the country continues to require high volumes of rice imports to ensure domestic food security. Current statistics do not adequately capture the patterns of regional trade, but there is evidence of informal cross-border trade in food commodities and it is clear that Liberia serves as hub for the supply of palm oil to the wider region, including more distant Senegal and Nigeria. Exchanges with MRU neighbors appear insignificant in terms of formal statistics, averaging less than 2 percent annually for exports as well as imports, but it is clear that informal trade carries on and could be enhanced with better infrastructure. One reason behind low volumes of intra-regional trade is the similarity in production and consumption structures. MRU countries are all predominantly producers of raw materials and consumers of manufactures. They therefore tend to sell exports to and source imports from markets outside the region. The limited amount of intra-regional trade that does takes place in local produce or manufactured re-exports occurs in the form of exchanges between border communities where local tastes and savings on transportation costs are an important consideration. Another major constraint to expanded regional trade is the under-developed state of agriculture whereby there is little marketable surplus presently produced. A third and very important reason is that infrastructure limitations have made it difficult for the sub-region to discover complementarities through trade. There is a need for paved inter-regional roads that can carry cargo-bearing traffic as well as border post facilities to ease the passage of good through borders.

The Current Status of Infrastructure

Liberia's infrastructure is in a woeful state in all of the sectors reviewed and the nation ranks in the bottom quintile of African countries on an infrastructure index established by the AfDB comparing all countries on the continent with Seychelles at the top. Underinvestment in the past meant that the network coverage was inadequate to begin with, while insufficient maintenance has caused progressive degradation in assets and service quality. Destruction during the war caused many infrastructure installations to cease to function altogether and this is most severe in the roads and power sector networks. Rehabilitation work since the end of the war has restored parts of the infrastructure network to functionality but much remains to be done.

Roads: Liberia's public road network falls short of the country's needs both in coverage and quality. The domestic network remains largely underdeveloped and access to the isolated south-eastern part of the country is particularly limited, increasing the isolation of that area. The 2010 CWIQ Survey 2010 indicated that only about 45 percent of households-nationwide, rural and urban- have access to an all-season road within 5 Km. Important paved roads connect Monrovia to the interior and a few reach as far as Guinea, Sierra Leone, and Côte d'Ivoire borders but they are in severe disrepair. Some roads reach to the borders, but do not extend effectively across them as is the case with the Liberia's road two coastal road segments of the Trans Africa Highway. Private roads are built by rubber and lumber companies and are mostly un-paved, though current concession contracts with mining companies will likely result in an expansion of multi-user paved roads. Government's Transport Master Plan strives to connect all county capitals with paved roads. While the aspiration is to achieve this outcome during the time-frame of the Agenda for Transformation (the second PRS), this may be ambitious and requires a substantial flow of incremental grant financing from development partners.

Power: Energy infrastructure is one domain where Liberia is vastly disadvantaged relative to the rest of sub-Saharan Africa and the world, especially in the sphere of electrical power. In mid-2011, Liberia's rate of access by the population to publicly provided electricity was close zero, with Liberia Electricity Company effectively serving about 1% of the Monrovia urban population. Yet, since 2005 steps have progressively been taken to restore the electricity grid. Approximately 6 MW of power is now provided to parts of Monrovia and this has been achieved with emergency programs supported by development partners. Transmission is based on a 66kV transmission grid and the distribution grid consists of both 33kV and 22kV grids with connections limited to about 3100 customers as at December 2011. All of this is currently provided through costly high speed diesel generation. Consequently, Liberia currently suffers with the highest cost of electricity both in the sub region and possibly on the African continent, presenting Liberia with a severe impediment to economic growth. A management contract signed with a power sector specialist firm in July 2010 is yielding good progress on restoration works and operational efficiency improvements. Above all, the GOLR now considers the reconstruction of Mt. Coffee to be a national emergency and the highest priority infrastructure project currently on the books.

Water: Few water and sanitation facilities survived the war and conflict significantly undermined the delivery of water and sanitation services. Access to safe drinking water and adequate sanitation facilities fell from 37 percent and 27 percent of the population in 1990, respectively, to 17 percent and 7 percent respectively in 2003. Poor access to safe drinking water and sanitation services are major causes of illness and poverty. The impact of inadequate drinking water and sanitation services is greatest on the poor, who are badly served by the formal sector.

ICT: Prior to the war, the predecessor to Liberia Telecommunications company, (LIBTELCO) had a network capacity of about 10,000 telephone exchange lines, of which 80 percent was in Monrovia. By the end of the hostilities, this exchange had declined to fewer than 7,000 fixed lines and the country is now migrating to use of wireless technology. Policy reforms to de-monopolize the sector have ushered in new investment and current priorities are focused on ushering in broadband internet to close the digital divide.

The State of Private and Public Sector Capacity

Liberia suffers from horizontal inequity in its private sector, with power and privilege exerted by foreign and domestic elites and poorly developed capacity within the indigenous segment of society. The MSME segment requires favorable policies and upgraded skills and education along with better infrastructure. Small businesses need better, cheaper communications, better roads and transport infrastructure to reduce the cost of bringing goods to market plus lower cost production facilities to make their outputs competitive with imports. Concurrently, further reforms are needed in the State Owned Enterprise sector to reduce the crowding out generated by monopolistic state enterprises. The financial sector is narrow and underdeveloped, characterized by limited financial instruments, a low level of financial intermediation, and limited trust among the public. There is a shortage of credit for SMEs and for the agricultural sector in particular. The government's financial sector reform strategy focuses on promoting competition and efficiency in the system to allow it to more effectively support development of the private sector.

Meanwhile, Liberia's stock of educated professionals and civil servants has been severely depleted. Literacy and skills among the majority of Liberia's population are dramatically low, particularly in the case of women. The entire generation of war-affected youth missed its opportunity for education leaving them ill-equipped for work and in many cases psychologically traumatized or physically disabled. Moreover, "brain drain" caused the exodus of many of Liberia's trained professionals and others were killed in the conflict. Whereas all of these problems contribute to weaknesses in the public civil service, the final problem which plagues efficacy is the culture of patronage and nepotism which continues to persist. To redress this situation, GOLR adopted a human capital development plan in 2008 to help move the country through three time-bound phases of expansion in the national work-force, including recovery (2008-2011), transformation (2012-2015) and sustainability (2016-2020) phases for both public and private sectors.

Promising Areas for Future Growth

Seeking a future economy that is more inclusive of the Liberian population, the authorities have concluded that the nation must engineer a profound structural transformation which expands the potential for endogenous growth generated by smallholders and the domestic private sector. In this context, the study appraises the attributes of four different growth strategies against a set of criteria that reflect the key themes of concern—stability, inclusion, growth and integration. The strategies reviewed include Industrialization through Special Economic Zones (SEZ), Commercialization of Smallholders through enhanced engagement in trade, Concessioning of land for renewable and non-renewable resource development and Enabling SME development through Corridor Development Strategies. Each of these growth strategies is ranked against two sets of priorities—(1) the priority for state intervention in the provision of directly supportive infrastructure, and (2) the priority for state attention to governance and policy gaps needed to enhance the inclusive benefits which could arise or mitigate the potential risks associated with each growth strategy. The intent is not to come up with yet another proposal on what should be Liberia's development strategy, but to take stock of the existing body of analytic work and the country's forward-looking framework and present recommendations about strategic choices with respect to priority investments in infrastructure. In summary, the study concludes that Liberia should allocate its scarce public investment capacity in priority to infrastructure projects that favor smallholder commercialization and SME development. It also concludes that Natural Resource Concessioning and Industrialization represent growth strategies where Liberia should upgrade the intensity of public governance and oversight in order to extract genuinely transformational benefits for the population and economy at large.

A Short, Medium and Long-Term Infrastructure Plan for Liberia

The study sets forth recommendations on a priority infrastructure action plan for Liberia against three time-frames:

- the short term period during which progress at investing in people, institutions and infrastructure must be made to set the country on a genuine path towards transformation;
- the medium term which will take the country toward its 2030 goalpost of reaching middle income status;
- The longer term beyond 2030.

With respect to the short term time-frame, the study substantially endorses the infrastructure priorities articulated within the Agenda for Transformation (AFT) including the critical emphasis on providing electrical power to consumers. This should be done through grid extension for large scale consumers and into urban centers where transmission and distribution can be extended in an affordable manner, but through renewable rural energy schemes for the more dispersed population. It also endorses the aspiration to connect all county capitals with paved roads but particularly encourages that this be achieved by means of a prioritized and clarified corridor growth strategy. As was identified in the review of SME Growth Strategy, there remains a need to prioritize the sequencing by which core and feeder corridors are tackled since it is unlikely that Liberia can achieve them all simultaneously. One key impediment is scarcity of financing while the other is likely to be limitations in overall supervision and absorptive capacity. The corridor development scheme must eventually expand beyond the core roads getting attention, notably those linking Monrovia-Ganta-Buchanan in a north-south triangle plus Buchanan-Monrovia-Tubmanburg-Mano River Bridge in an East-West fashion along the coastline. To further unite the country and bring isolated areas into the mainstream economy, there are at least three other domestic corridors that merit priority attention. The first is the highly populated border zone hugging the Sierra Leone and Guinea border within Lofa county whereby an intervention would aim to give the up-country towns of Foya, Voinjama and Zorzor better connectivity to Gbarnga and thus into the central triangle corridor connecting Monrovia. The second is the Harper-Fishtown-Zwedru corridor in the South East. This is an area which saw significant conflict in the past and has sporadically been re-ignited by local tensions or troubles in neighboring Côte D'Ivoire. For stability purposes and to replace conflict drivers with economic engagement, it is important for key roads to be paved in this region so as to remove the remote counties of Maryland, Grand Kru, River Gee and Grand Gedeh from their isolation. The third is the coastal corridor between Buchanan and Greenville ports, though the emerging presence of coastal shipping may make this corridor a less pressing priority. If the planned investment to refurbish Buchanan, Greenville and Harper ports is placed on a fast track during AFT implementation, complementary private investment in coastal shipping could increase traffic flows between Monrovia and these ports into the hinterland, and may enable public investment for this corridor to shift to a medium term time frame.

While the AFT "economic transformation" investment priorities are primarily focused upon infrastructure that serves a national integration objective, the study acknowledges that it is indeed important to consolidate national unity in order to preserve stability before embarking upon regional expansion and integration. At the same time, authorities are encouraged to begin actively designing the optimal regional roads network (in conjunction with MRU neighbors) that would benefit Liberia so this can be given priority should incremental funding become available. An additional suggestion put forward is that Liberian authorities consider deferring SEZ investment to jump-start capital-intensive industry to the medium or longer term. Instead, the equivalent portion of public investment capital might be productively reoriented to establishment of lower-intensity business parks in the short term in order to give a boost to the nascent indigenous private sector and develop an entrepreneurial class. SEZ investment might yield better returns from both economic and stability perspectives if it is deferred to a time when Liberia has rebuilt its domestic human capital and Liberian nationals are qualified to get SEZ jobs and/or participate in management.

The study also assesses affordability and concludes that it may be difficult to achieve all of the ambitions associated with the AFT plan in the short term. For this reason, some trade-offs in terms of quality standards applied to road network reconstruction and extension may need to be applied and emphasis upon coastal shipping solutions as an alternative to road transport in the coastal corridor might deserve higher priority attention during AFT. If so, it then becomes imperative to make a second generation of investments in the transport network during the medium term time frame that will, indeed, establish paved roads that connect Liberia to its neighbors and serve to integrate it within the broader MRU and ECOWAS trading communities.

With respect to the long term, the study identifies the fact that Liberia will face a strategic choice between investment in transport infrastructure (including rail, road, air networks and trade facilitation installations) and investment in power generation to tap the country's immense hydro-power potential. In the circumstance where affordability issues still force a tradeoff between these two heavy investment demands, the study reminds Liberia that its participation in the West African energy market makes it possible to defer electricity generation development for the much longer term. This would make it possible for Liberia to favor investments that favor physical integration within ECOWAS through transport corridors. These will enable Liberia to sustain a transformational path involving the national population in robust regional trade as well as the cargo transit industry serving landlocked countries. By means of this infrastructure strategy, Liberia can prolong and succeed in its long term path of endogenous transformation.

Introduction

The objective of this report is to propose infrastructure options and complementary measures to foster an inclusive era of growth in Liberia that contributes to national and regional integration in a manner that secures peace and stability for the long term future.

This report proposes an integrated infrastructure development plan for Liberia that could be implemented over the next few decades as part of the country's reconstruction efforts. The report is one of the instruments being deployed by the African Development Bank Group (AfDB) in its program of assistance to countries of the ECOWAS region, including Liberia. Similar reports have been prepared for Guinea and Sierra Leone respectively, both neighbors and fellow members with Liberia of the Mano River Union (MRU). A fourth similar report is under preparation for Guinea Bissau. All four of these countries experienced violent domestic conflict over recent decades, and are now rebuilding their nations and economies.

One objective of the infrastructure plan proposed here is to enable Liberia to deepen its links with its MRU and ECOWAS neighbors and, thereby, enhance the development benefits which can accrue from regional integration. A second objective is to formulate an infrastructure planning strategy which is explicitly cognizant of Liberia's status as a fragile state and to encourage the selection of investments which can best contribute to national and regional stability for the long term future. This Liberia report and those for the other countries are consistent with and will contribute to the AfDB's Regional Integration Strategy (RISP) 2011-2015 for West Africa, an evolving strategy under which the Bank aims to support regional integration efforts within the Economic Community of West African States (ECOWAS).

The plan proposed in the present report covers four infrastructure areas -- transport, energy, water, and information and communication technologies. These areas have been chosen because, as becomes clear in Chapters 1 and 2, they are the ones in which improved performance will be critical for future strong and sustained economic growth, characterized by the broad participation of the population which is essential for progress on social cohesion and political stability. Even though the need for rebuilding is a strong argument for an infrastructure plan, the plan proposed here does not merely envisage the replacement of that which was destroyed during the conflict. Rather, it takes a broader view, envisioning an infrastructure network that supports the country's new socio-economic development agenda of building a more prosperous, inclusive and stable Liberia. This plan recognizes that Liberia lacks the capacity to finance infrastructure investment on the scale of $500 to $600 million per year, the level desirable to address the many deficiencies in Liberia's public infrastructure. As such, Government will need to make trade-offs in how best to invest its own scarce investment capital and to encourage development partners to do the same. The intention is therefore to help GOLR select those infrastructure sectors and those projects within sectors with the best propensity to relieve binding constraints to inclusive, transformative growth.

The report recognizes two realities of today's Liberia: (i) the existence of a significant number of studies dealing with various aspects of the issues of interest here; and (ii) the heavy burden already shouldered by the national middle- and senior-level capacity available to confront these issues. Against that background, the report tries to trade off value added against the need on the part of the authorities to study yet another tome. It does so by paying attention to the ***integrated*** treatment of issues (infrastructure-regional integration-growth and stability); by making maximum use of the findings of successful studies already completed; and by identifying the completed studies to allow readers to refer to them if warranted.

Data problems have been a challenge in the preparation of the report. The civil war caused destruction of the country's archives doing away with much historical statistical and other information. National accounts data are also problematic. As a result, the analysis conducted for this report has often had to rely on data pieced together from various sources. The report has been able, in this fashion, to construct reasonably consistent pre and post-conflict data. It was not possible to do the same for the troubled period from 1989 to 2003. In general, data presented within this report should be viewed as approximate, designed to provide orders of magnitude on sizes and trends, but not pin-point accuracy.

The report is presented in three chapters. The first chapter sets the context for the whole report through diagnostic of the current situation. The chapter begins with a review of what made Liberia vulnerable to dissent that degenerated into the extended, all-consuming violence that the country witnessed over the period 1989-2003. It goes on to examine the extent to which vulnerability towards conflict remains, how much progress has been made to overcome that vulnerability and sets out findings on what bears most emphasis as Liberia implements its forthcoming poverty reduction strategy, the Agenda for Transformation. The report situates a review of current social and economic performance against the retrospective of Liberia's chosen pre-conflict path for socio-economic development, thus examining the nature and quality of governance as a core requirement for the nation to become an effective state going forward. In view of the place of infrastructure in the agenda, the chapter includes a review of the current status of the country's infrastructure network. It looks at the issues in each sub-sector including the cost and availability of services, reforms or lack thereof in the policy, legal and regulatory environment enabling or hindering the performance of each one. The chapter includes a review of the first poverty reduction strategy (*Lift Liberia* Poverty Reduction Strategy 2008-2011) and concludes by examining the extent to which regional cooperation exists between Liberia and its neighbors, highlighting the challenges and potential thereof.

The second chapter looks ahead to identify Liberia's ambitious plans for a profound transformation of its human, physical and institutional capital. For this reason it begins with an appraisal of the second Poverty Reduction Strategy, the Agenda for Transformation. It then looks at a basket of alternative strategies for securing growth, each of which is being employed or contemplated by the authorities. It describes each strategy, then defines and applies a set of filter criteria against which each is evaluated to highlight their relative potential to assist Liberia achieve genuinely transformative growth.

The third chapter sets forth recommendations on how Liberia should establish priorities for infrastructure spending over the short, medium and longer term horizons. This takes into account developments of a regional nature as well as national considerations. The analysis identifies a fairly complete roster of desirable infrastructure under a situation not constrained by lack of investment capital. This is illustrative in that it helps to evaluate the magnitude of Liberia's infrastructure gap under optimal conditions. At the same time, recognizing that Liberia must rebuild and transform its economy under conditions of capital scarcity, the study conducts an affordability analysis to set the context in which trade-offs must be weighed. Within this context it identifies the likely contribution of the private sector in filling the infrastructure gap. It then formulates recommendations on a strategic approach to infrastructure planning for short, medium and long term time horizons, seeking to prioritize a state role in those investments which can deliver the most transformational types of growth—not simply on the economic front, but with simultaneous gains in human and institutional acquisition of capacity. This part of the review pays particular attention to hard and soft aspects of infrastructure development as a means to address binding constraints to inclusive strands of growth.

Figure 1 **Map of Liberia Depicting Regional Location and 15 Administrative Counties**

CHAPTER 1

Diagnostic of the current situation

Introduction

This chapter sets up the context on the issues of concern in the report. It starts with a reflection on what made Liberia susceptible to conflict in the first place; ponders how the country moved from susceptibility to conflict to experiencing an actual civil war lasting more than a decade; identifies the elements of fragility in the post-war environment and reflects on what might be done to begin curb the fragility. Given the fact that Liberia's MRU neighbors were themselves experiencing unsettled times and had actors who participated in the events in Liberia, the chapter also examines the regional dimension of the conflict. [1]

The chapter continues with a review of how Liberia plans to put itself back together, in terms of bringing back peace, national reconciliation and security and rekindling strong and broad-based economic growth taking stock of lessons from the past. It reviews the social and economic condition of the country and examines the performance of key productive sectors of the real economy, taking into account applicable governance and policy frameworks. It examines Liberia's trade profile and reviews the nation's prior and forthcoming poverty reduction strategies. It then evaluates the current condition of the country's stock of infrastructure, given the impact of the war on what was already an inadequate asset but which must now play a vital role in the renewal.

The chapter also reviews the current state of Liberia's cooperation with its neighbors in confronting common problems, and promoting trade and exchange and investing in regional infrastructure. Not only are these critical to the pursuit of economic progress and social cohesion, but regional cooperation and integration can enhance Liberia's prospects for achieving stability. Enduring peace in Liberia depends both on domestic progress and upon regional stability; the quest for enduring stability cannot be achieved in isolation but must consider the impact of neighboring states. Regional infrastructure has a valuable role to play in mitigating many of the legacies of conflict. The comprehensive review of the status quo in chapter one sets the stage for subsequent chapters, which are concerned with an examination of Liberia's reasonable aspirations for the future, the roles of infrastructure and enhanced regional cooperation therein and a recommended infrastructure investment plan in light of these objectives.

1.1 Issues of Fragility in Liberia

State fragility entered the development lexicon only recently when it became clear that as many as 20 percent of nations have experienced at least 10 years of civil war since 1960 and that such conflicts create unique development challenges even when they are over[2]. With that awareness, thoughts turned to the need to identify those states explicitly to allow the development community to tailor its assistance to their special circumstances. Thus the label of fragile state began to be applied to states "with a weak capacity to carry out the basic state functions of governing its population and territory and that lack the ability or the political will to develop mutually constructive and reinforcing relations with society". As originator of the label in the context of establishing the Fragile States Principles (FSP)[3], the Organization for Economic Development (OECD) clarifies further that the fragile state typically faces problems of lack of security, weak (political) governance, limited administrative capacity, persistent humanitarian crises, social tensions, violence or the legacy of war. Moreover, – once there has been conflict, the probability of remaining fragile for an extended duration is extremely high, leading some scholars to assert that Africa's fragile states seem to be caught in a "fragility trap".[4]

As a country that is putting itself back together after 14 years of civil war, Liberia faces most of the problems characteristic of fragile states. There is nothing derogatory associated with the label; instead, the Fourth High-Level Forum on Aid Effectiveness (held in Busan, Korea in November 2011) emphasized the importance for development partners to recognize the special needs of fragile states, which resulted in adoption of a "New Deal for Engagement with Fragile States".[5] Recognizing itself as such a country, Liberia has recently volunteered

[1] This report comes after the 1989/2003 conflict. In reality, Liberia has seen many internal/civil wars since 1821. The one immediately prior to that of 1989/2003 occurred in the 1930s. For an account, see Levitt, J. The Evolution of Deadly Conflict in Liberia: From "Paternaltarianism" to State Collapse, Carolina Academic Press, Durham, North Carolina, 2005.

[2] Blattman, C. and Edward Miguel, Journal of Economic Literature, Volume 47, No. 1, March 2010, p. 4.

[3] An early operational enunciation appears in the OECD's Principles for Good International Engagement in Fragile States (known as Fragile States Principles) adopted by the Council of Ministers in 2007.

[4] *"Furthermore, fragility seems to be persistent: the probability that an African fragile state in 2001 remained fragile in 2009 was 0.95."* Stated by Andrimihaja, Cinyabuguma and Devarajan, in Avoiding the Fragility Trap in Africa. Policy Research Paper 5884, The World Bank, November 2011, page 1.

[5] The HLF Partner Country Position Paper specifies: "Fragile states need to move from fragility to agility. Capacity building here refers to state capacity building to enable the state to carry out essential functions. The challenge is more daunting and requires coordinated global efforts to address peace-building, state-building and humanitarian assistance in addition to various forms of development assistance. The impressive progress and political leadership demonstrated by the g7+ for example call for greater trust in their governments and shared risk management. It also calls for negotiating a package of transparent short and longer term assistance to support initiatives unlikely to be completed in the short run."

to serve as one of five countries responsible for piloting implementation of the New Deal. The New Deal aims to put the voice of fragile states and their people at the heart of their own country-led state building solutions with the support of their international partners. Nevertheless, it is perhaps sensible to treat fragility not as an inherent and enduring characteristic of particular nations but rather as a state of affairs that is a product of history, which would hopefully disappear once the legacies of the conflict recede and vulnerabilities to potential recurrence are overcome. In view of this, a thoughtful approach to observing the FSP in Liberia should start with better understanding the country's particular form of fragility: the backdrop to the violence; the economic final straw; and the legacies of the actual conflict.

1.1.1 Political Backdrop to the Liberian Conflict

Exclusion and Rancor from the Early Days

Liberia's conflict has its roots in the exclusion politics and associated economic policies of unequal opportunity practiced by the repatriated ex-slaves who founded the nation. Deposited on the shores of what became Liberia by the American Colonization Society (ACS) in 1820-22, the settlers constituted themselves into a self-governing commonwealth of three counties in 1839, Montserrado, Grand Bassa, and Sinoe, and went on to declare a sovereign, independent republic in 1847. The constitution adopted at independence was clear on the settlers' identity, declaring in its preamble: "we the people of the Republic of Liberia were originally the inhabitants of the United States of North America". The label of Americo-Liberians was fitting and the settlers maintained their separate identity, later converted into a rule of caprice and privilege over the original inhabitants.

The Americo-Liberians expanded their territory by taking land from the inhabitants of the hinterland in various ways. Some 60 years after the declaration of independence, the country was "unified" by "granting citizenship" to the inhabitants of the hinterland, some of whose ancestors lived in the area as far back as the 12th century. The system of political governance was modeled on that of America but its essence was more to protect the repatriates from undefined fears than to foster the development of an integrated nation. As a result, the natives remained essentially excluded from the political process during the first century and a half. When, in April 1980, 17 non-commissioned officers with native roots took political power by force, they were certain they wanted to destroy an unjust settler regime but unsure what to replace it with. In the event, they introduced their own style of governance without institutional restraints, which started Liberia toward decline. But the roots of conflict were much deeper and some would say that the journey towards conflict started much earlier and that the events of April 1980 merely accentuated the descent.

Injustice met with resistance early on. One instance was the opposition to independence—perhaps more correctly, the timing of independence —as a rejection of Montserrado County's unhealthy domination of the other counties[6]. The declaration of independence followed a flawed Constitutional Convention during which violence in two of the three component counties comprising the commonwealth prevented eligible voters from going to the polls. In Sinoe County, widespread violence prevented all eligible voters from voting while in Grand Bassa County, only some persons voted. Domination of the other counties by Montserrado County, which drew resistance at independence, continues through today and is evident in extreme inequality between relatively wealthy Montserrado and fourteen other poorer counties which constitute Liberia. More accurately, wealthy, urban Monrovia still dominates very poor rural Liberia.

Successive ruling elites of the state were never fully sure of their identity as Africans or non-Africans appointed by Providence to redeem Africans. The goals of the ACS did indeed include "christianizing" and "civilizing" the natives. One result was that the repatriates, who had been discriminated against in North America and presumed inferior to whites and the illegitimate light-skinned offspring of slave masters, created in their turn a virtual caste system in the new territory. The culture evolved a settler democracy in which, up to 1870s, the mulattoes were the ruling class, the darker-skinned repatriates were essentially second class citizens and natives were even lower. Power shifted from mulattoes to darker skinned repatriates in 1876 and they continue to figure among the elite until today.

With the elite behaving like colonial rulers, they not only lacked affinity with the territory and with the majority of residents, but despised both. This peculiarity influenced growth and resource distribution policies, and of service delivery. This black colonialism partly explains the "deadly conflicts" fought between the natives and the repatriates between 1822 and 2003[7]. Depending on how and who is counting and classifying them, there may have been nearly 90 "deadly conflicts" between 1822 and 2003. Liberia, unstable since the Americans landed, has been unable to achieve its founding ideals: secure the public welfare and protect the citizens it serves. Having failed to establish justice, domestic peace was not ensured and so the state could not promote the general welfare.

[6] Huberich, Charles H. The Political and Legislative History of Liberia, New York Central Book Co., 1947
[7] As elsewhere in Africa at the time, the native inhabitants also fought among themselves.

Exclusion was accompanied by repression of those outside the circle "of privilege. Political rule was highly personalized, and successive "big men" ruled with limited institutional restraint. Over time, rules and regulations were evolved, endowing the State with the appearance of a Western-style democracy. A client-patron system persisted behind this façade, with privileged but "smaller men" serving the interests of the "big men". The lot wielded the law and coercive elements of the State to restrict the political rights and opportunities of the others. Real and perceived enemies were singled out and destroyed. The occasional revolts by groups of the indigenous population, such as the Kru rebellion of 1915 against the hut tax, were put down harshly.

Given the fact that politics is also about the distribution of scarce resources, an economic system developed that served the interest of the privileged few.

Box 1 Political Milestones in Liberia's Evolution

- 1820-1822: Liberated slaves deposited on Liberian soil by American Colonization Society.
- 1839: Self-governing Commonwealth established in 3 counties.
- 1847: Declaration of sovereign independence of Liberia & adoption of a National Constitution.
- 1907: "Unification" announced through granting of citizenship to native inhabitants of hinterland.
- 1915: Kru Rebellion against hut tax.
- 1944-1971: William Tubman president till death.
- 1971-80: Regime of President William Tolbert.
- 1979: Rice Riots put down with violence.
- 1980: Samuel Doe seizes power in military coup after 133 years of Americo-Liberian domination. Tolbert & 26 supporters murdered followed by public execution of 13 True Whig leaders. Doe forms People's Redemption Council to govern.
- 1985: new constitution adopted, fraudulent elections install Doe as president, series of 5 counter-coup attempts begins; internal repression and executions begin along native ethnic lines.
- 1989: Period recognized as bona fide civil war begins with Charles Taylor assembling National Patriotic Front & leading rebel insurrection.
- 1990: Doe assassinated by splinter rebel group.
- 1991-1997 rebels split into factions, bloody civil war rages with interim gov'ts controlling only Monrovia. ECOWAS mounts military task force followed by UNMIL. Peace deal reached, 1995.
- 1997: Charles Taylor elected President, starts using 'blood diamonds' & timber exports to aid & abet RUF rebel movement in Sierra Leone.
- 1999: Armed insurrection re-commences by Liberians for Reconciliation & Democracy in NW & later by Movement for Democracy in SE.
- June 2003: Women of Liberia Mass Action for Peace persuade Taylor to join Ghana peace talks.
- 2003: Peace Deal, Resignation of Charles Taylor.
- 2005: Election of Ellen Johnson-Sirleaf, Africa's first woman president. Re-election in 2011.

It was linked in part with the need to maintain the identity of the repatriates as an aristocracy entitled to the lifestyle and other social habits of the aristocracy they knew in the Old South of the USA. The ideal of such a lifestyle included the view of the privileged ones as a leisurely class of landowners living off the toil of the less privileged. The economic policies and governance structures favored the exploitation of natural resources using foreign capital, and the misuse of public funds. Thus was created a divided nation, with political and economic abuse by the ruling class sowing the seeds of instability at its core from the earliest days.

Many of the characteristics of a fragile state were present. There was horizontal inequality alongside generalized poverty for the many. The politics of exclusion created severe identity fragmentation, with Americo-Liberians on one side and the indigenous people on the other. The latter were further keenly aware of their sub-identities as tribes or ethnic groups. There was a crisis of state legitimacy and authority, with frequent recourse to repression. State predation was widespread. A review of Liberia's economic development strategy deployed in the pre-conflict era helps to further understand the drivers of conflict.

1.1.2 Economic Backdrop to the Liberian Conflict

In its purest form, Liberia's 20th century path for socio-economic development was a matter of pragmatism. At the bottom of it was the sensible decision to create economic growth through use of the country's abundant natural resources of mineral deposits, forestry, and agricultural items favored by geography. The approach was equally pragmatic: the use of foreign private capital and technology to produce output, with sales made through the producers' networks to assured markets for raw materials that appeared in the decades following the Second World War. Liberia's approach followed the liberalism and belief in private capital that continued to be championed in Western capitalist democracies after WWII. This was in contrast to the activism of the developmental state favored by the majority of the newly-independent low-income countries. To the latter group, the Great Depression showed the failure of extreme laissez-faire policies, and the choice of State-led development had the extra appeal of being a complement to the political self-determination recently won. Liberia, without such a transition, must have found persuasion in the strong support for private international capital as a vehicle for development of natural resources around the world and under a liberal-access policy, as proposed by US political leadership. These considerations led to the decision to use multinational private capital (and technology in the case of iron ore) to exploit the country's natural resources for export markets.

Under the label of an Open Door Policy, foreign companies were granted concessions for the production of iron ore, rubber, forest products, and oil palm, for export. Investments were made by these concessions and capital formation ran as high as 25 percent on average during the period 1950-60. Here too, there was pragmatism – that of using economic policy to court needed political support. The generous concession granted to Firestone in 1926 is thought to have resulted in part from the view that "the presence of an important American investor would guarantee American protection of Liberia's sovereignty and territory from British and French encroachments". These concession enterprises flourished in the commodity boom conditions following the Second World War, and Liberia's GDP growth rose rapidly. From 1960 through 1974, nominal GDP rose 270% in nominal terms, achieving 5.4% average annual growth over the 1963-72 decade.[8] Even with large factor incomes paid to reward foreign capital and management, the Gross National Product (GNP) rose sufficiently to take the country into the ranks of the middle- income countries by the mid-1970s. Meanwhile, some employment was offered to the local population, but it was for low-skilled labor and remunerated with low wages.

This style of economic governance left largely untouched the twin concerns of distributing benefits from resource-based growth and transformation of the economy to introduce a broader base of activity. Infrastructure development was limited, particularly with respect to penetrating the country with networks and services, as the enterprises developed road and single-use rail networks especially to serve their own operations. Accompanying public investment by government remained modest and the rural milieu remained in isolation, segregated and with poor connections to the capital. The enclave nature of concession operations meant that linkages with the local economy were limited.

As a result, output growth fueled by natural resources did not engender domestic economic transformation or Liberia's capacity for endogenous growth. Natural resource exploitation under the Open Door strategy did not pull other sectors along, not even food crop agriculture, which occupies the majority of the population.

There was limited human development with education and health services remaining below sub-Saharan averages. The same applied to institutional development, as the neo-patrimonial practices preferred to run public policy with large room for personal discretion by those in authority rather than by established and transparent processes. One result was that income distribution became highly skewed (reflected in a Gini coefficient of 0.60 in the 1970s) as the enclave approach of resource-led economic development made its full impact. Another was the high vulnerability of the nation to movements in the prices of a handful of industrial raw materials, exhibited in performance of the economy in the 1970s as a result of its tie to iron ore. When iron ore prices fell, the weight of iron ore in GDP fell from about an average of a third in 1971-74 to one-sixth in 1979-81, as portrayed in Table 1.1 below.

Table 1.1

Liberia – Composition of GDP by Sectors, 1971-81 (Current prices, Percent)

GDP at factor cost	1971-74	1975-78	1979-81
	100.0	100.0	100.0
Externally Oriented	49.3	43.8	36.2
Iron Ore	31.6	27.9	15.7
Rubber	8.5	6.4	7.1
Forest Products	2.6	3.7	4.9
Other	7.5	5.7	8.5
Domestically Oriented	50.8	56.2	63.8
Manufacturing	5.8	7.6	10.2
Construction	4.4	6.6	5.9
Government Services	7.8	10.1	13.9
Other Services	32.7	31.9	33.1

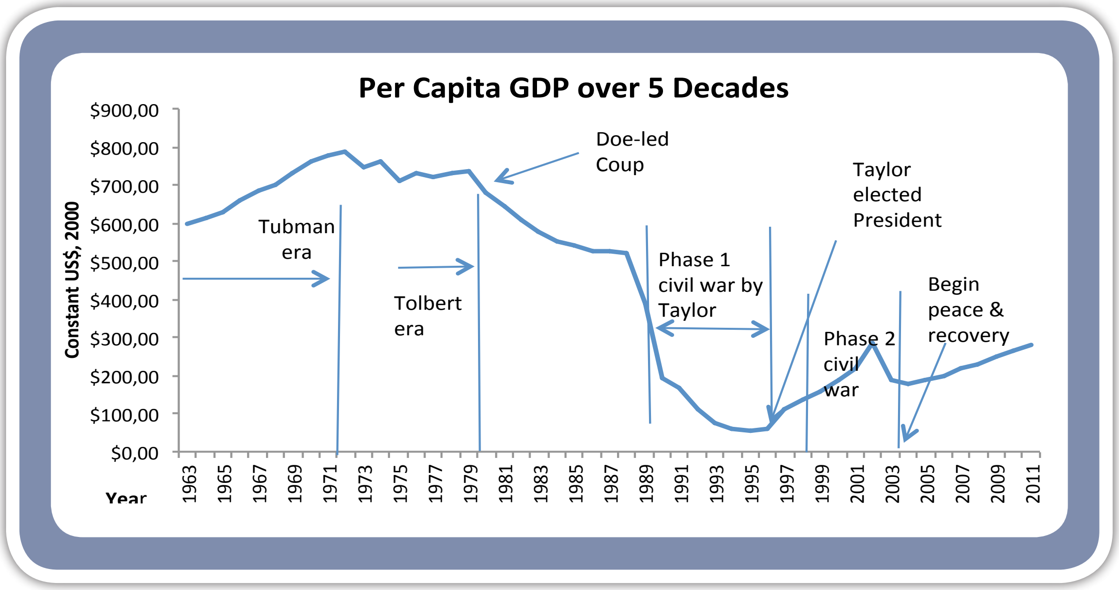
Source: World Bank, Liberia Sources, and Author's Computation

1.1.3 An Economic Shock and the Unraveling

Deteriorating economic conditions in the early 1970s and unsuccessful political action began the process of violent change. The new president, William Tolbert, who acceded to power in 1971, was less resolute in the use of repression against dissent than his predecessors. He did actually introduce some "managed" opening of the political space, by controlled opening of the ruling True Whig Party to younger members and the granting of permission for the equally controlled emergence of an additional political party. These steps were being taken at a time when global economic shocks reached Liberia in the form of high service costs on costly variable-interest debt and a slump in commodity prices. Together with the effect of expenditures on a lavish 1979 Organization of African States (OAU) Heads of State Summit, these circumstances produced sharp fiscal pressures that required austerity measures. One such measure, a decision in April 1979 to reduce the subsidy on rice and allow its price to rise started the violence.

[8] Liberia GDP Growth (Annual %), Africa Economic Indicators 2010. The World Bank, Washington D.C.

Figure 2 Liberia's Conflict and Economic Decline



Source: African Development Indicators, AfDB Enhancement

The indigenously-led movement challenging the established order found two pieces of ammunition in the turn of events with which they could push harder for change. First, they could point at the injustice of a higher burden on poor households as a result of the price increase. Second, they could underscore the point that, with price equality between imported and locally-produced rice, ordinary households were going to make an income transfer to the largest local rice farmer, the President of the Republic. Leaders of the dissent movement, who hitherto had acted in scattered ways, now rallied around a cause of political exclusion and growing poverty for the many, and called for mass protest against the rice price increase[9]. The protests turned to riots, and the President ordered that it be quelled by force. A number of the protesters were shot dead. Tension grew further when the leaders of the movement were taken into custody, with a promise to the nation that they would be tried on charges of treason, an offence punishable by death. To head this off, a group of 17 enlisted men with indigenous roots seized power on April 12, 1980, two days before the trials were to begin. Led by Master Sargent Samuel Doe, the men sang about the natives' eyes being finally opened and promised redemption and progress. In the end, they proved unable to improve political governance or change economic fortunes. Conditions rather deteriorated rapidly, setting Liberia on its downhill path.

The decline accelerated when in 1989 Charles Taylor started a rebellion and eventually fought his way to dominance by 1996. There was death and destruction as warlords fought the control of the state and resources of the nation. By the time Charles Taylor was eased out, any hope of a responsible government capable of performing the functions of the state and fighting poverty had completely disappeared. During the Doe era and throughout the period of struggle between Taylor and the other warlords, identity politics reached new heights. Doe started favoring people of his Krahn ethnic group, who took extreme violence to members of other Gio and Mandingo ethnic groups for their respective support of Taylor and Alhaji Kromah. These reinforced divisions among a nation's people and constitute a major burden on Liberia's future.

By the time a democratically elected government took power in 2006, some 250,000 people had died and a million were displaced internally and as refugees; infrastructure had been destroyed. Figure 2 reveals that livelihoods had been deeply disrupted, bringing gross domestic product down from some US$800 per head in 1971 to about US$150 in 2003 when the comprehensive peace agreement was reached in Accra.[10] The new government has been engaged in vigorous efforts to put the nation and economy back together from the abyss into which it had fallen.

1.1.4 The Liberian Conflict and Regional Spillovers

The events in Liberia fed into, and also received impetus from events in the Ivory Coast, Sierra Leone and Guinea. The failure to evolve political processes capable of arbitrating political contests was a common feature to all four countries. So was the use of political repression to stultify political competition. The countries are also richly endowed with natural resources, including deposits of

[9] For a good account on the progression, see Press, Robert M., "Candles in the Wind: Resisting Repression in Liberia (1979-2003), Africa Today, Vol. 55, No.3, Spring 2009, pp. 3-22.
[10] Gross Development Product per capita in The World Bank, African Development Indicators, 2010

alluvial diamonds and gold both of which are winnable under unorganized conditions. Once dissent broke out into conflict, these resources attracted external actors interested in trading in products and equipment that fueled the war. Finally, with porous borders, cutting through the same ethnic groups that used to be together, disorder was shared fluidly across the boundaries of the four neighbors.

The Ivory Coast became embroiled in the events in Liberia when it took sides early on, for its own reasons. The country's long-serving President, Felix Houphouet-Boigny, had a familial relationship with President Tolbert: the Ivorian President's step daughter was married to Adolphus, President Tolbert's oldest son. Following the 1980 coup, soldiers of the Doe regime forcibly entered the French Embassy in Monrovia to remove the junior Tolbert and had him killed. This episode was a factor in the Ivorian support for Charles Taylor, including assistance that gave Taylor's Libyan-trained soldiers access to Liberia from Ivorian territory. Other assistance to Taylor included diplomatic backing, such as Ivory Coast's support for the regime in the early stages of the 1989/2003 conflict from its position on the United Nations' Security Council.

Sierra Leone had a beginning like that of Liberia. From the establishment of a colony to resettle ex-slaves, it went on to become a nation governed by 'big men" under the neo-patrimonial logic and incapable of meeting the basic obligations of state towards the broad citizenry. The state weakened further when the economic crisis of the 1970s and the unsuccessful policy reform efforts of the 1980s worsened matters. Dissenters found a reason to challenge the government, and the Revolutionary United Front (RUF) took up arms against the Freetown regime in March 1991.

The RUF entered Sierra Leone from Liberia that month, going through territory controlled by Charles Taylor, signaling clearly that the conflict in Liberia would have an active regional spillover. Over time, Taylor's influence in Sierra Leone grew to the point of making it attractive for the RUF to establish a base in Monrovia for their operations, including for the trading of diamonds and transshipment of arms destined for Sierra Leone. These factors kept the war supplied on both sides with financial resources and military materiel.

For its part, Guinea became embroiled in the Liberian conflict when its then head of state, President Lansana Conte, joined other heads of state to chair a regional intervention force that was designed to try to stop the violence from engulfing the region. He was impelled to action because of the influx into Guinea of some 500,000 refugees fleeing the initial action of Taylor's rebel army in the northeastern border area of Nimba County through which Charles Taylor entered Liberia. Charles Taylor considered President Conte's move as a hostile act. To pay Conte back, Taylor allowed political opponents of the Guinea regime room to organize themselves on Liberian territory. Taylor's opponents were allowed to do the same on Guinean territory. From attacks on border villages, both sides managed to extend the fighting deep into the territory of the other, firming up thereby the regional dimension of the conflict.

1.1.5 Vulnerability to Determinants of Conflict

Like any country that has experienced violent conflict, Liberia will remain vulnerable to a possible return of civil war as long as the conditions remain that gave rise to conflict in the first place. Generally, dissent builds up when government is unable to meet its population's expectations about the critical functions of the state, manage changes in those expectations through the political process, or generally keep societal expectations and state capacity in equilibrium[11] . Various think-tanks and research organizations (as footnoted in the following paragraphs) have identified some of the factors that cause or are associated with these failures. Among those, the following are most likely to threaten Liberia's stability: growth without development, weak state legitimacy, trouble in the region, unemployed youth, gun and drug culture and severe identity fragmentation. Two additional flashpoints are food/rice insecurity and uncertainties about land titles. Some of these factors were present in Liberia prior to the 1989/2003 conflict, while others have been added or exacerbated as a consequence of the conflict.

Growth without Development

The concept of growth without development was coined by Robert Clower and a team of economists from Northwestern University when they conducted a survey and wrote a seminal book on the state of the Liberian economy in 1966.[12] The authors found that Liberia's economy offered private foreign capital "one of the most attractive investment climates to be found in the under-developed world" with a high rate of growth derived largely from concession-based production of rubber and iron-ore, surpassing that of almost every other country in the world and yielding a per capita income of $123 by 1960[13]. Despite this, the authors concluded that "Liberia is growing but not developing". While the country was achieving sustained increases in the output of goods and services, this 'progress' was not accompanied by technological advancement, institutional evolution,

[11] OECD, op cit.
[12] CLower, Dalton, Harwitz & Walters, Growth without Development: An Economic Survey of Liberia, Northwestern University Press, 1966, pages 23 and 118.
[13] This is equal to $644 in constant (2000) dollars.

expansion of human capital and a wider distribution of income. In short, massive FDI-led growth was not significantly improving welfare within the rural economy. One hard-won lesson brought home by the civil war is that households engaged in subsistence livelihoods gained little benefit from Open-Door growth, leading to the conclusion that broader linkages between the concession enclaves and rural economy are essential for reducing poverty.

Recognition of the risks inherent in a development strategy based solely on natural resources, especially when developed through FDI in an enclave-oriented manner, should help authorities avoid mishaps while formulating policies for a reconstructed Liberia. The case of Nigeria is a case in point. Oil was discovered in the 1950s. Throughout the 1950s-60s, the economy had a strong agricultural base, offering employment to a large share of the population. Inequality was therefore low, the top 2 percent of the income scale earning about 17 percent of the total income. The productive base of the economy narrowed subsequently, with oil being the main product as the vitality of other sectors dried up. Three decades later, in 2000, the top 2 percent of the scale had about 55 percent of the income. Other cases, good and bad, lend credence to the emerging generalization that "… countries with a large share of (narrowly-based) primary exports in their GNP have bad growth records and high inequality, especially if quality of institutions, rule of law, and corruption are bad". Compared with Nigeria, Liberia had a higher product and income concentration and for much longer. In low-income economies that produce traditional goods, it is the ability to discover and engage in non-traditional activities that provoke transformation. This is how Taiwan left behind rice and sugar in the 1950s and went on to become industrialized. The same was the case with South Korea, which exported practically no manufactures even in the early 1960s. More recently, it was the process through which Chile went from being principally a producer of copper to becoming an economy producing and exporting an array of goods, including manufactures. The job of engineering such a transformation remains a key priority as Liberia re-creates its future.

Weak State Legitimacy and problems of Patronage and Corruption

This feature of the state has been described as "institutional instability undermining the predictability, transparency and accountability of public decision-making processes and the provision of security and social services to the population"[14]. At first glance, it would seem that the current government and others to follow have the opportunity to endow the new Liberia with state legitimacy since they are starting on a clean slate, the conflict supposedly having swept away the old structures. Yet, old habits die hard. On one hand, given an emphasis on resourced-based growth during recovery, it will remain a constant challenge to ensure that rents from the natural resource economy are extracted for public good instead of private greed. On the other hand, violence has been a more common form of societal behavior than dialogue so political leaders must nurture confidence in democratic institutions and procedures among the population. A start has been made with the launching of a "Palava hut" campaign to encourage the airing of grievances in settings throughout the country in the first 150 days of the second Johnson-Sirleaf regime.

Concurrently, there is a need to continue rooting out the dominant political culture of patronage whereby the state bureaucracy became laced over time with loyal partisans, family members and friends of the elite, thereby weakening its capacity and efficiency. Building state legitimacy will entail deep-seated reform of the inequitable socio-political and economic system that brought the country to its knees and will require that the state be seen to be capably delivering on standard state functions of providing security, justice and other public services. According to the "Liberia Retrospective Analysis" prepared by national scholars for the High-Level National Economic Forum held in September 2011, national reconciliation is yet to come, and "with recommendations of the country's Truth and Reconciliation Commission still a matter of national debate, many victims of the war are yet to find closure. In addition, vestiges of old rebel command structures are still in place in many parts of the country. Given that many former combatants are unemployed and dependent on former commanders for basic livelihoods and mentoring, these structures could become fertile and recruiting ground for crime and violence."

New relationships must be established between the executive, legislative and judicial branches, and the court system needs reform from top to bottom. These are issues requiring legislative action, and the fledgling democracy, which deserves to be protected for its own sake, thus leaves room for actors from the past to retard progress. Movement has been slow on important law and order issues that would begin to repair Liberia's tattered state legitimacy and, while there may be disagreements about how to proceed on these planks of justice, there is also a dilemma which goes to the heart of the conditions of enduring fragility. The challenge is to maintain a balance between the imperative of peace building against the desire to avoid appearing to condone impunity. In the face of inaction, there is a risk that parties favoring either side of this delicate balance would consider the state feeble and its legitimacy contestable.

Unemployed Urbanized Youth and Criminal Distractions

Virtually all children and youth in Liberia above the age of 10 were traumatized in some way by the 14 year

[14] Andersen and Engberg-Pedersen, 2008.

civil war. Many are ex-combatants who have yet to reintegrate fully into society. Only about 3% express an interest in engaging in agriculture and they are reluctant to return to the rural milieu which was originally their home.[15] Consequently, the number of the unemployed youth has risen in Monrovia and the smaller urban areas, representing a further element of potential instability. The youth could become dissatisfied with their lot, blame the government for their failure to find jobs, and be tempted to resort to violence and crime. The urban areas of Liberia, especially Monrovia, are home to an estimated one-third of the national population. Portions of the urban population gravitated to their current location in the war years to escape what they saw as the relatively greater insecurity of the rural areas. Others followed when peace was on the way. Their motive was the search for a livelihood in the modern sector of the economy.

Children 14 and younger constitute slightly more than 47% of the population and "youth"-- officially defined as those between ages 15 and 35, comprise about 28% of the population, meaning that about 75% of Liberia's population is under the age of 35. Official data fails meaningfully to capture the size of the unemployed from this sub-population. Estimates put the number of unemployed at 4.7 percent of the active population but this fails to capture the true situation.[16] Our estimate is that around 340,000 members of the youth population live in urban areas in precarious conditions. This leaves out the population sub-group made up of domestic servants, and those working in low-capital enterprises and often depending for financing on informal credit and family income transfers. All told, these are material segments of the population that can be restive and quick to question the legitimacy of a government that cannot find them jobs and a livelihood. Some of these members may have belonged to the militia, with experience of using violence, or the threat of it, to extract what they want from others. For this reason idle youth are a worrisome source of continued vulnerability.

In an environment of deep poverty coupled with high income concentration and few jobs for youth, criminal activity looks tempting to many who lived outside the law during an era of conflict. The one criminal activity uppermost on most people's minds is the narcotic drug trade. The accumulating evidence from arrests of drug couriers offshore in West Africa suggest that Liberia can be an attractive corridor for those seeking to transship drugs to Europe. As happens in other places, beyond serving as a corridor for the trade in guns and drugs Liberia could itself develop an internal market in these items, along with their socially destabilizing effects. In addition, unemployment and poverty can lead Liberian nationals to participate as hired guns in disputes in neighboring countries[17]. The recent experience of conflict in the Ivory Coast lends credence to this point. Given their past experience with fighting a war in their own country, a number of Liberians were ready to fight outside their country as mercenaries. They were duly hired to participate in the fighting, and several hundred lost their lives in the process.

Conflicts over Land

Land and property disputes are a key threat to peace and stability in Liberia. This was verified through a conflict mapping survey conducted by the Truth and Reconciliation Commission in October 2008. Violent land confrontations have been occurring since the signing of the comprehensive peace agreement and these have resulted in several burned villages and intensified social cleavages. In the absence of clear systems of land tenure and arbitration systems to handle disputes, conflicts in this arena remain a tinder box for future problem. The Eighteenth Report of the UN Secretary-General states: "If not resolved, such tensions and conflicts could be manipulated for political and other motives, particularly in the period leading up to the 2011 elections." The International Crisis Group calls it "the most explosive issue in Liberia today. Land tenure issues are further examined in Section 1.2.6 on Liberia's renewable resources. However, ownership and usage rights are not the only simmering threat. Also looming is the threat of environmental degradation brought on by mono-cropping, slash and burn practices that deplete soil fertility and over-extraction of timber stands. These environmental threats deserve equal attention by policy makers in the coming years or current practices combined with climate change could seriously contribute to resource and economic impoverishment in Liberia.

Troubled Neighborhood

Liberia is located in a neighborhood that is extremely poor materially and suffers from very low government effectiveness. The four fragile states of Liberia, Guinea, Guinea-Bissau, and Sierra Leone had an average per capita income of US$280 in 2008, compared with US$796 for sub-Saharan Africa (with South Africa excluded). It is also a neighborhood with failures of

[15] Wood, Walker and Allemano, "USAID Liberia Youth Fragility Assessment," April 2009.

[16] This apparent underestimate of the real level arises from the definition used by the International Labor Organization (ILO) for the unemployed -- anyone who is actively looking for a job and has not found one. In reality, there are a large number of Liberians in the active-age group who would not show in the numbers of the unemployed because they are among the so-called "discouraged workers" who are no longer actively seeking work. Other may not have been counted among the unemployed although they are underemployed, working in casual service sector employment without regular remuneration. To attempt such an estimate, we rely on the literature on employment in urban populations. These studies have gone some distance and do provide some guideposts on thinking through how unemployment affects various classes, especially in less than boom conditions. In those circumstances, the lowest slab of the urban labor force, some 5-15 percent of the total, experiences open unemployment. They are usually people between illiteracy and primary school education. Next to these is a section of the labor force, usually numbering about 20-25 percent of the total. They are also illiterate or with primary school education, and are engaged in handicrafts, street trade and service, casual construction work, or in "underground" occupations. These two slabs of the labor force have been referred to as the survival sector; they receive income intermittently or not at all. Together, these two groups constitute some 25-40 percent of the urban labor force. If we follow LISGIS and assume that about half the active population of 1.7 million now lives in the urban areas, and our reasoning holds, that means 25-40 percent of 0.85 million members of the urban labor force are in the hustling or survival sector. That means around 340,000 members of the active population live in urban areas in precarious conditions.

[17] Reuters Africa reported on January 1, 2011 that "Ouattara's camp has accused Gbagbo of employing hundreds of Liberian mercenaries in deadly raids on pro-Ouattara neighourhoods. Gbagbo's camp denies the charge, but diplomats and security sources say there may be up 1,000 on his payroll."

political governance that place the countries in the middle of the 12 nations with the worst government effectiveness on the continent. The conditions of extreme poverty and state incapability have stirred up the conflict which each of them experienced.

The Ivory Coast, a neighbor that joined the MRU much later, is much wealthier in per capita terms (US$980 in 2008) than the rest. Yet, it had its own political failures that simmered over the years and boiled over in 2011 in violent conflict with a ferocity that surprised both the Ivoirians and foreign partners alike. Under these circumstances and given the porosity of borders, Liberia remains vulnerable to being infected by future strife spilling over from any of these neighbors.[18]

Severe Identity Fragmentation

Racial identity has been always been construed as a requirement for Liberian citizenship and both the 1847 and 1986 constitutions were categorical in emphasizing that “only Negros or persons of Negro descent” shall be permitted citizenship and property rights. Although this was justified on the basis of providing a home for the oppressed (formerly enslaved) children of Africa, it serves to convey to this day the state-sanctioned legitimacy of discrimination. The problems which accompany this legacy are as acute as ever because religious, language and ethnic fault-lines divide the country far more than common racial ancestry serves to unify it. This has been further strained by the fact that several Liberians left during the conflict and there is some animosity towards them when they return.

One legacy of war which is waged significantly along ethnic lines is that fragmentation of the society intensifies and people identify themselves first as belonging to a given ethnic group before considering themselves as citizens of the country. Liberia epitomizes this phenomenon and sharp cleavages within Liberian society have expanded. Like elsewhere in Africa, linguistic diversity is a characteristic of the country, with 16 indigenous ethnic groups speaking more than twenty languages in addition to English, the official language. Yet, with national identity holding little sway, tribe and language affiliate with identity feeding the tendency of different linguistic groups in the country to regard others as “foreign”.

The same is true for religious persuasion. Religious diversity had prevailed within Liberia whereby 85% or more of the population followed Christian and traditional beliefs and 12% followed the Islamic faith. Islamic Mandingo communities co-existed peacefully with Christian and non-Christian members of Liberian society before 1980 but religious identities were manipulated for political gain during the war, leading to the notion that Islam is “foreign” to Liberia. Despite State proclamation of equal respect for all religions in the country, serious atrocities were committed during the conflict, leading many Muslims to depart as refugees during the conflict. Upon returning to Liberia, many have developed a heightened sense of persecution when, for instance, their ownership of land in Lofa and Nimba counties is challenged as a result of their perceived “foreign” identity. Ethnic tensions thus persist between returning Mandingo, Dan and Mano in Nimba County, as well as between Mandingo and Lorma in Lofa and Bong counties. Conflict between the Krahn and Dan communities also persists in the north. [19]

The intensified fragmentation of identity and the move away from the concept of nationality as a unifying force that generates pride and a sense of belonging make the struggle towards national cohesion an even more arduous task. Writing for ThePerspective.org in 2006, Brahima Kaba characterized the debilitating atmosphere of distrust and dishonesty among various social and ethnic groups of the country as “forms of social illness” which are far more difficult to evaluate than the loss of physical assets. He concluded that “the healing and/or rehabilitation of these wounds constitute, perhaps, the greatest challenges for Liberians and their new leaders.”[20]

Food Security and Rice Sufficiency

Approximately half of Liberia’s population is either food insecure or highly vulnerable to food insecurity. Food security is a sensitive issue in most developing nations and a factor in political stability. In Liberia, the importance of rice in the national diet makes the availability of rice in desirable quantities, at affordable prices, the food security issue. As proof, it was a rice price increase in April 1979 that lit the match to spark the conflict. Several Rice Commissions set up over time have not found a durable solution to “the rice sufficiency issue”. The economics of rice is complicated, but it is the mixture with politics that makes it a tinder box. The current surge in commodity prices --especially grains-- could turn up the heat on the food security dimension of the poverty-inequality issue.

As with the politics of food everywhere, it is the urban or non-farming population that rebels when there is insufficiency or prices are judged too high. At the same time, it is in rural areas that imports have the potential to depress prices and play havoc with livelihoods of “voiceless” farmers. Consequently, Liberian authorities are faced with a delicate chore of formulating rice and general food security policy which achieves a fair balance between the interests of rural area producers and urban area consumers. This study delves further into the current state of rice production when appraising current performance of the agriculture sector and it looks at the future potential for expanded production in

[18] Table 1.3 in Section 1.2.1 provides further data portraying the comparative socio-economic status of all countries in the “troubled neighborhood”.
[19] Bertelsman Liberia Country Report 2010, pdf.
[20] Kaba, Brahima D.,“On Some Aspects Of The Current State Of The Liberian Economy: A Tentative Diagnostic And Assessment,” April 28, 2006, page 5.

examining alternative growth strategies in chapter two. The point here, however, is that a sufficient supply of rice at affordable prices is a vital ingredient for Liberia's national stability, especially for the urban population now dis-engaged from the agricultural economy. In short, rice sufficiency is a barometer of well-being across Liberian society and disruptions to supply or price levels are both potential triggers for instability.

1.1.6 Infrastructure Investment and Regional Integration to Bolster Stability

The Ministry of Finance makes clear in its FY 2012/13 Budget framework paper that the country must move away from the experience of "growth without development" towards one of "prosperity with fairness." This is indeed essential and these priorities are in evidence in the review of budget planning and poverty reduction strategies examined later in this chapter. At the same time, a central premise of the current study is that Liberia's stability can be enhanced by improvements in infrastructure, by increased participation in regional integration or by both aspects in combination. This section therefore revisits Liberia's vulnerabilities to elucidate how infrastructure investments and increased regional integration can mitigate Liberia's exposure to threats.

With respect to **mitigating poverty and reducing inequality,** it will be essential to ignite growth in the rural economy in order to avoid a recurrence of 'growth without development' in the future. To do this, Liberia's rural counties must, first and foremost, be brought out of their relative isolation and inhabitants must be connected to markets. Transport, power and communications networks will all contribute to this objective. Liberia's large and reviving concessions sector, including mining companies and agro-industrial operations, can be expected to contribute material levels of infrastructure investment in these spheres. In fact, the World Bank has estimated that mining concessionaires could be expected to invest as much as $5 billion on infrastructure in the coming years.[21] In this context, the important role of government will be to encourage installation of multi-use infrastructure and to ensure that financial considerations alone do not determine the dimension, standards and multi-modal potential of privately financed infrastructure. Economic considerations should also be brought to bear when making such decisions as whether a road or a railroad should be designed with domestic connections alone or with regional linkages in their design or not. The strategic opportunity for government and development partners in this context is to prioritize and allocate complementary investment in ways that bridge the gap between financial and economic viability. Both domestic and regional paradigms should be brought to bear in determining public sector investment plans. In some cases, rural populations may find cross-border markets for their produce to be more remunerative than domestic markets but a lack of cross-border roads could present a binding constraint. Planners are encouraged to take such considerations into account and this is a key feature of the infrastructure plan developed in Chapter 3 of this study.

Meanwhile, Liberia's participation in regional institutions such as the Economic Community for West African States (ECOWAS) can help to tackle the problem of **weak state legitimacy,** both to aid in securing economic benefits from cross-border infrastructure and also when membership is applied to help mitigate conflict flares arising in its **troubled neighborhood.** Given Liberia's vulnerability to strife in neighboring countries, it becomes evident that Liberia and all of the surrounding states in West Africa are co-dependent upon making consistent progress towards establishment and maintenance of peace and stability. This is an outcome that cannot be achieved by a single nation-state alone, and yet it is vital to each and every one.

At the same time, by becoming a more active proponent of regional trade through the Mano River Union (MRU) for instance, Liberian authorities can begin to demonstrate the gains to citizens from economic engagement with "foreigners." It is likely only by building positive economic bridges involving domestic cross-ethnic trade and integration on the one hand and cross-border economic engagement on the other that one can expect the severe prejudices standing behind **identity fragmentation** to break down. Initial steps taken to counter continuing ethnic fractionalization need to be reinforced. A promising initiative is the public education campaign currently under way that emphasizes the common destiny of all Liberians, and this ought to be sustained. Another is a plan that envisages undertaking a tribal/ethnic conflict diagnostic assessment, aimed at identifying specific areas of ethnic tension. The assessment will be used to design targeted programs promoting tribal and ethnic reconciliation and this is an initiative that must go all the way.

Regional institutions can also advance progress in specific sectors of the Liberian economy. Agricultural research is a costly endeavor but it is one which yields great rewards. To the extent that it can be undertaken on a regional basis, the cost to each country is reduced and the potential rewards are improved. A good case in point is Liberia's cooperation with the International Institute for Tropical Agriculture (IITA) and the Africa Rice Centre with whose help GOLR aims to increase rice production and improve **food security**.

[21] World Bank, "Infrastructure Policy Notes: Leveraging Investment by Natural Resource Concessionaires," background paper prepared for High-Level National Economic Forum, June 2011.

Infrastructure projects and regional integration can both help mitigate threats to and by **unemployed youth**. One avenue is the true-and-tested offer of employment on labor-intensive infrastructure programs. Such an approach is being used on the Harper-Fishtown road rehabilitation. The Liberia Youth, Employment and Skills Project approved in June 2010, approaches the problem in the same way. Lessons learnt from there can be used to scale-up the approach. The **battle against illicit drugs and guns** will be a tougher one to fight than in the other cases, as the gun trade is usually mixed with other illegal activities like money laundering and human trafficking. A first area to attack is the culture of wishing to possess and use drugs and guns. The various programs aimed at finding jobs and training for youth would go a long way to weakening the economic impulsion to resort to these activities. A second area to tackle is the reinforcement of the collaboration with neighbors in the fight against the trafficking in these items. Conventions adopted by the Economic Community of West African States (ECOWAS) and the African Union (AU) against the trafficking of small arms and light weapons provide the legal and institutional context for strong action. These Conventions are backed up by a similar one at the UN, in recognition of the international nature of the problem. Strict adherence to the prescriptions of these Conventions should make it possible to access expertise that is available under the auspices of the UN and the European Union (EU) for the fight against the traffickers. Meanwhile, better broadband infrastructure will improve connectivity between Liberia and MRU neighbors through participation in ECOWAN, the ECOWAS Wide Area Network and this will allow for better cross-border cooperation in the tracking, data sharing, preventions and prosecution of gun running, drug trafficking and money laundering.

1.1.7 Key Findings and Conclusions Regarding Fragility andStability in Liberia

The analysis of fragility in Liberia brings out four central findings regarding causes and consequences of conflict. The first of these pertains to the exclusion over the years of indigenous Liberians by the Americo-Liberians from meaningful participation in the political governance of the country and access to economic opportunities. This made for a divided country, one that was susceptible to get into conflict should an event occur to exacerbate the differences. The second central finding is that the enclave orientation of the Open Door economic development strategy failed to deliver the ingredients needed for transformative growth. In delivering 'growth without development' Liberia failed to achieve progress in human capital development, strong institutions and technological advancement. With deteriorating conditions for international commodities trade in the 1970s, policy responses adopted by the authorities made it appear as though further suffering was being imposed on the poor. This sentiment incited a challenge to the regime from the fledgling opposition, an event which triggered the military uprising, and launched the full scale conflict that followed. These observations lead to a third central finding that, in effect, governance has been the weakest part of Liberia's journey as a nation. The absence of capable and effective governance structures across spheres of economic and political life meant that the fruits of FDI-led growth were not reinvested for the public good and the drivers of conflict could not find mitigation or resolution through legitimate institutional mechanisms. Despite abundant natural resources, poor governance engendered Liberia with poverty, civil war and low human development. The fourth finding is that past history combined with consequences of conflict have created legacy problems which persist into the present. These render Liberia a fragile state, one that is highly vulnerable to a return of conflict. Threats include a large population of under-employed youth who may be more likely to encounter opportunity from illegitimate enterprise than from legitimate employment. Social, ethnic and identity fragmentation are still rife and there is a vital need to enhance national integration as a matter of priority. Factors which give rise to land disputes still exist and mechanisms for resolving them are still required. Food security, especially in terms of rice sufficiency, is another potential flashpoint of future instability. Government has had to manage policies of import supply, pricing, and subsidization with the goal of stability in mind. It has been difficult to set price policy in a way that reconciles the interests of the urban area consumer in seeing low prices with those of the local rice farmer in seeing prices rise. Authorities will need to formulate food policy in a manner that reconciles the respective interests of rural and urban populations.

The resulting weaknesses oblige Liberia to stay the course on the long, slow process of recovering as a nation-state, begun with the signing of the Accra Comprehensive Peace Accord in 2003. Recent research suggests that fragile states face especially difficult challenges to recover from the legacies of conflict and prevent their recurrence.[22] Not only do Africa's fragile states grow more slowly, they can get caught in a fragility "trap" leading some researchers to conclude the probability that a state which was fragile in 2001 was still fragile in 2009 was 95 percent.[23] Four lessons are therefore worth emphasizing in the context of the present study, highlighted in Box 2.

The challenge now is to harness the drivers of economic growth and steer them in a manner that avoids a repetition of past mistakes. This topic is explored further

[22] Paul Collier, "Breaking the Conflict Trap" and Douglass North, John Wallis and Barry Weingast in "Violence and Social Orders".
[23] Noro Andrimihaja, Matthias Cinyabuguma, Shantayanan Devarajan, "Avoiding the Fragility Trap in Africa," World Bank Policy Research Working Paper, November 2011.

in the next sections which take a deeper look at the structure and status of the economy today. Insights from analysis of the current situation and concerns about stability are then taken into Chapter two for a discussion about the most promising strategies for generating future prosperity in Liberia.

Box 2 Lessons About Fragility and Post-Conflict Recovery of Relevance to Liberia

- The most important task of leadership is to restore the confidence of citizens in societal capacity to change and to cultivate trust in the public capacity to govern. This requires moving beyond declarations and onwards to the delivery of "proof" whereby ordinary citizens can see the benefits of stability.
- It takes time to introduce institutional reforms that underpin a profound transformation of society and Liberia should be ready to exercise patience. Establishment of the rule of law and effective government can take one or two generations. The fastest twenty reforming countries in the 20th century took 36 to 41 years to reach thresholds of competency in these areas.*
- There is merit in appraising development investments with a stability perspective in mind in post-conflict situations to take the counter-factual threat of a return to conflict into account when evaluating the economic analysis of investment projects.
- Lastly, countries should not be expected to recover without help. Not only can the development community provide valuable assistance to fragile states, but countries should look to their political and geographic neighborhood to draw support, develop programs and implement joint solutions to common problems.

* World Bank, World Development Report 2011: Conflict, Security and Development, Washington D.C., 2011.

1.2 Liberia's Current Socio-Economic Situation

The previous section served to briefly narrate Liberia's genesis as a nation-state and its recurrent experience with conflict. This established important context for the present report, a central thesis of which is that regional infrastructure has a valuable role to play in mitigating the legacies of conflict.

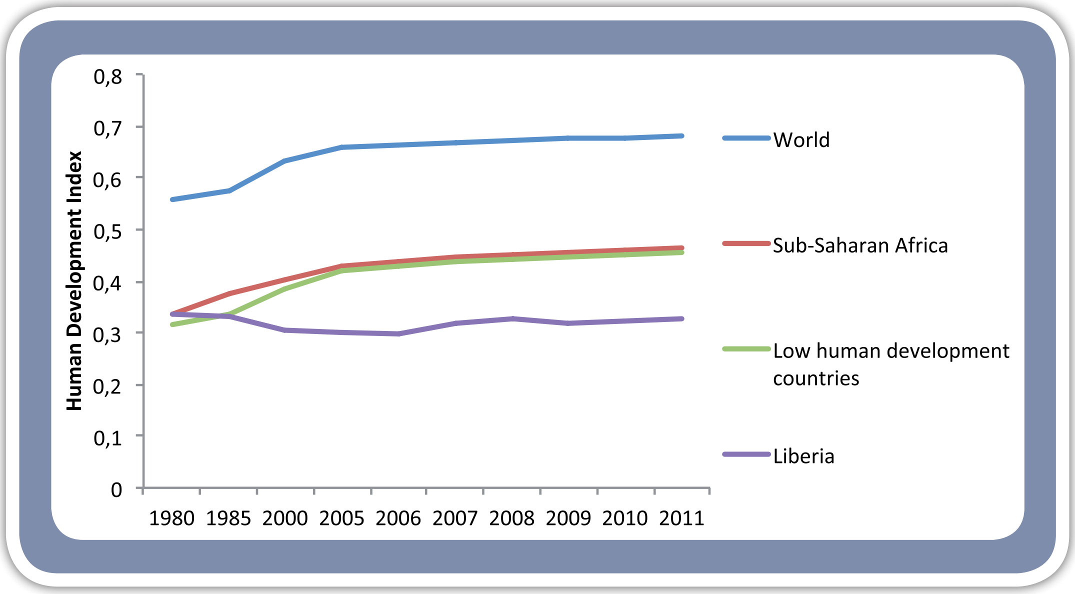
This section profiles the socio-economic situation of Liberia today. It begins with an appraisal of Liberia's condition after fourteen years of civil war in terms of social and economic indicators including the country's poverty profile and its ranking against the global Human Development Index. It summarizes the country's initial poverty reduction strategies, its recent macroeconomic performance and policy reforms including changes in public financial management that are underway. The report then examines reforms introduced in the sphere of political governance in order to get recovery underway and steer the country down a more stable path. It then turns to an examination of the productive economy and sectoral composition of GDP. Within the sectoral reviews, the study presents the current performance of each key economic sector to understand both their contribution to the economy and the binding constraints which prevent achievement of their full potential. In this context it also looks at reform measures and implementation strategies introduced to date or those which are planned or still required. It examines the status of the public administration as well as that of the financial sector and the private sector as key actors called upon to contribute to Liberia's future prosperity.

1.2.1 Socio-Economic Indicators and Benchmarks for Present-Day Liberia

By disrupting economic activity over an extended period, Liberia's civil war contributed to severe impoverishment of the nation. According to the 2007 Liberian Institute of Statistics and Geo-Information Services (LISGIS) Core Welfare Indicator Questionnaire (CWIQ) survey, 64% of the population was estimated to be living below the national poverty line measured on a purchasing power basis. The severity is higher when measured by headcount at the international benchmark of US$1.25 per day -- as high as 84 percent. At US$2 per day, the proportion rises to 95 percent[24]. Not surprisingly, poverty in the rural area exceeds that in urban zones and Table 1.2 portrays the relative geographic distribution of poverty based upon a monetary measurement of poverty.

[24] Monetary measures may not adequately capture all dimensions of poverty by omitting a perspective on asset ownership or depletion as well as access to mitigating services such as education, health services, clean water and the like. Nonetheless, it serves as a proxy for poverty measurement.

Figure 3 **Liberia's Evolution Against HDI Index**



Source : UNDP

Table 1.2 **Liberia's Poverty Profile, 2007**

Area	Number of Poor	Poverty Headcount (2007)	Share of Population
Greater Monrovia	288 695	49%	22%
Bong, Nimba, Lofa	660 129	68%	36%
Gbarpolu, Bomi, Grand Cape	206 547	76%	10%
Montserrado, Outside Monrovia, Margibi	262 678	59%	17%
Grand Gedeh, Sinoe, River Cess	181 713	77%	9%
Grand Kru, Maryland, River Gee	126 044	68%	7%
National	1 725 806	64%	100%

Source: 2007 CWIQ, LISGIS

Table 1.2 reveals two levels of concern: the fact that certain rural counties have a very high prevalence of people living in poverty while others are home to large absolute numbers of poor. In contrast, those living in or near Monrovia tend to be relatively better off and this could fuel destabilizing perceptions about an urban-rural divide. To mitigate this threat, it is clear that Liberia needs not just a poverty reduction strategy, but a growth plan that deliberately seeks to deliver development to the rural milieu.[25] While there is a need to address inequality, there is an equally important need to address "polarity" in the country whereby the re-introduction of concessions risks reviving and exacerbating a dual economy in Liberia.

In effect, Liberia went from being a middle income country in the 1960s and 70s to the bottom rung of countries on the Human Development Index, ranking 182 out of 187 in UNDP's 2011 rating. Figure 3 identifies that the world as a whole achieved upward progress against human development indicators during the past three decades with the HDI of Sub-Saharan Africa as a region increasing from 0.365 in 1980 to 0.463 in 2011. Liberia's decline contrasts with this trend; starting above the average achieved in Low Human Development countries in 1980 but on par with Africa, after which it declined steadily till 2006. With a rating of 0.329 in 2011, Liberia is situated well below the regional average but the uptick that begins from 2005 is in evidence.

Table 1.3 presents key socio-economic data on Liberia as compared to the other fragile states being studied as well as broader Sub-Saharan African benchmarks. All four fragile states are ranked among the bottom 11 countries against the 2011 Human Development Index as compared to Nigeria and Ghana which are ranked 20 and 40 places higher respectively. Adult illiteracy at 59% in Liberia is the highest among the four fragile states and the 2008 primary school completion rate was on a par with that in Guinea at about 62% about 15 percentage points lower than the rate reported from neighboring Sierra Leone.

What these data starkly reflect is not only the impoverished status of Liberia, but the fact that it is geographically situated within a troubled neighborhood.

[25] This level of poverty exists alongside significant horizontal inequality. Income distribution in the pre-conflict days was skewed because the underlying wealth in private hands had a highly skewed distribution. The effect of conflict on wealth was to destroy some assets and bring down the prospective income stream of their owners. To the extent that productive activities were disrupted, the other effect was to reduce incomes of those who depend mainly on labor income. Thus, ironically, income inequality improved in relative terms as a result of the conflict, but the potential for resurgence and for polarization between sub-groupings remains a significant concern. The Gini coefficient, computed with data over the period 2000-07, stands at 53 percent, confirming this view. Under the "Gini Coefficient", 0 and 1 represent ends of the spectrum with 0 representing perfect equality among citizens and 1 reflecting the extreme situation where all income is vested in one person.

Ivory Coast, also an MRU member state, has over five times the Liberian population, but over fifteen times their GDP, and this even after a period of turmoil. It must be recognized, therefore, that Liberia and its sub-regional neighbors have all lost substantial ground relative to other ECOWAS states that have avoided or mitigated conflict. Consequently, as other states such as Ghana have begun to shift their comparative advantage into competitive advantage, and are approaching the point of economic "take-off", Liberia, Sierra Leone and Guinea are starting over and Guinea Bissau is, once again, experiencing turmoil. Collectively, the Southwestern coastal fringe countries are way behind and they have much to gain from regional cooperation in regaining ground.

What these data don't adequately reveal is the status of women in Liberia. Women played a significant role in Liberia by uniting around the cause of peace and urging an end to the civil war. The election and re-election of President Ellen Johnson Sirleaf as Africa's first female president has added credence to the fact that woman have a vital contribution to make to the welfare of nations. Despite these facts, women remain economically disadvantaged in Liberian society. They face greater barriers to the ownership of land, particularly in polygamous and inheritance situations. This is problematic insofar as women comprise over half of the agriculture labor force and about two-thirds of the trade and commerce labor force. They are particularly engaged in the cultivation and trade of food crops and, as such, their productivity is vital to food security.

Table 1.3 Key Socio-Economic Indicators of Liberia and Neighboring Country Benchmarks

Socio-Economic Data		Fragile Countries of Study				Comparisons & Benchmarks		
		Liberia	Sierra Leone	Guinea	Guinea-Bissau	Ivory Coast	Nigeria	Africa
Population	2010	3 994	5 696	10 069	1 611	21 075	154 729	1 008 354
% Female Pop	2010	50.3%	51.3%	49.5%	50.5%	49.1%	49.9%	50.1%
Economically Active	2008	37.5%	37.7%	48.0%	37.2%	37.3%	30.9%	39.3%
% of which Female		40.2%	51.1%	47.1%	38.2%	30.4%	36.5%	41.2%
HDI Rank out of 177	2007	Not ranked	177	160	175	166	158	Ghana = 135
HDI Rank out of 187	2011	182	180	178	176	170	156	Ghana = 135
Infant mortality per 1000	2009	78	123	88	118	89	97	82
Life Expectancy, Female	2008	59.85	48.99	60.13	49.61	59.09	47.33	55.98
Life Expectancy, Male	2008	57.19	46.42	56.09	46.50	56.01	46.36	53.71
Poverty % below Nat'l Line	2007	63.8%	65.9%	53.0%	65.7%	N/A	54.7%	N/A
Primary Completion Rate	2008	62.3%	87.7%	61.7%	N/A			
Adult Illiteracy, Total	2010	59.1%	40.9%	39.5%	52.2%	N/A	35.9%	N/A
Literacy rate, females 15-24	2010	80.9%	43.9%	61.1%	71.0%	N/A	N/A	N/A
Literacy rate, males 15-24	2010	70.3%	64.4%		N/A	N/A	N/A	N/A
GDP Million, Current US $	2011	1.545	2.915	5.170	969	24096	244050	
GDP Growth Rate	2011	8.2%	6.0%	3.9%	5.3%	-4.7%	7.4%	
GDP Per Capita (2000) $	2010	342	435	477	508	1.043	1.465	

Source : African Development Indicators and The Little Data Book on Africa, World Bank 2011, IMF World Economic Outlook, 2012

The prevalence of high illiteracy rates makes it harder to target women farmers through traditional means[26]. Extension efforts prior to the civil conflict focused on food and nutrition, neglecting the commercial potential of agriculture. Until recently, girls have been disadvantaged relative to boys in the sphere of education. However, measures are being taken to redress these imbalances through gender development strategies spearheaded by the Ministry of Gender Development.

Liberia's educational system was weak before the war, but the conflict made it worse. The problem is serious at all levels, including tertiary education. Poorly trained teachers and high urban-rural and gender differentials in access and enrollment pre-existed but deteriorated further during the war. A whole generation of youth missed out on a normal education and it was only in 2009 that children born after 2003 began to enter classrooms for the first time. As the democratically-elected government took power in 2006, a framework entitled the Liberia Primary Education Recovery Program (LPERP) was launched to allow for implementation of the 2002 Education Law calling for free and compulsory primary education. With development partner support, this program achieved an immediate increase of enrolment in the primary sector, from 260,499 during the 2005/2006 academic year to 308,748 in 2007/2008.

[26] Ministry of Gender Development and World Bank, "Gender Aware Programs and Women's Roles in Agricultural Value Chains: A Policy Memorandum," May 2010.

The primary completion rate increased from 21% in 2002 to 62% in 2008. Between 2007 and 2010, female primary ***gross*** enrollment rate and female youth literacy rose by five and six percentage points respectively. While these statistics reflect an improvement, other data indicate that most primary school-aged children are still not in school and ***net*** enrollment rates actually declined for both boys and girls between 2007 and 2010. Schools have been refurbished or constructed and teacher training institutions are once again certifying educational professionals for Liberian classrooms.[27] The new secondary school curriculum was aligned with that tested by the West African Education Council and, three decades after joining that institution, Liberia will submit its high school students to WAEC examinations for the first time in 2012. At the highest levels, the country does produce international-grade scholars in given areas but the point is that many more are needed. Inward-looking tendencies can rob students at lower levels of the chance to stretch themselves. The debate about whether WAEC's standards may be too high reflects the current weakness. The change to make is one of culture -- a durable change in the way the nation looks at education and the development of human capital.

Liberia's health systems are slowly improving from a desperate state of disrepair in the after math of conflict. Out of the 325 health facilities available before the war, over 90% were partially or wholly destroyed and, in 2007, only 51 physicians and 297 nurse midwives of Liberian nationality remained. Consequently, lack of access to quality healthcare delivery was a major concern and received substantial attention by government and development partners in the first generation of post-conflict recovery priorities. Not surprising, healthcare is more accessible and of better quality in urban areas than is the case in rural areas. Nonetheless, except for progress in combating HIV/AIDS, Liberia is far from reaching the MDG health targets. Infant mortality is declining (dropping from 78 to 73 per 1,000 live births between 2009 and 2010), but is still far from the target level of 39. Mortality of children under five remains high at 114 per 1,000 versus a target of 64, as does maternal mortality which stands at 994 per 100,000 births against a target of 145. Approximately 60% of 1 year olds have been immunized against measles and further improvements will be needed in facilities, drugs, logistics and personnel before Liberia can meet the target of 100% coverage.

Given the many challenges it faces, Liberia's overall progress towards achievement of Millennium Development Goals has been mixed. Successes include combating HIV/AIDS (with a current prevalence rate of 1.5%), promoting gender equality and empowering women (as a result of which Liberia won the prestigious MDG Three Award in 2010), and in developing a global partnership for development. However, Goal 1 (eradication of extreme poverty and hunger), Goal 2 (universal primary education), Goal 5 (reduction in child mortality), Goal 7 (improvement in maternal health) and Goal 8 (environmental sustainability) are not likely to be achieved.[28]

1.2.2 Liberia's Interim and First Poverty Reduction Strategies

The Government of Liberia used the opportunity of preparing its 2007 Interim Poverty Reduction Strategy and then its full *Lift Liberia* Poverty Reduction Strategy (PRS-I 2008-2011) to set a new course for the nation. Consultations carried out with a cross-section of the citizenry helped to verify the aspirations of the people. This process revealed that the population placed great importance on the return of peace and security, growth of incomes and jobs in a revived economy and the availability of public services. On the basis of these inputs from society, government defined a four-pillar strategy to:

1. Consolidate peace and security,
2. Revitalize the economy,
3. Strengthen governance and the rule of law,
4. Rehabilitate infrastructure and resume delivery of basic services.

It also aimed to address cross-cutting concerns such as improvements in gender balance and opportunity for children and youth, paying attention to the threat of HIV/AIDS and threats to the environment.

Essential priorities under Pillar 1 were to establish and maintain national security which has so far been accomplished with significant help from the presence of UNMIL. Improvements introduced under PRS 1 have served to strengthen peace and improve security remarkably. This was and remains an essential requirement for success in the next phase. GOLR approached the objective of expanding peace and security in two ways. It began with assisting refugees and internally displaced persons (IDPs) to return and resettle in their original communities, and moved on to launching a program of rationalizing the forces of law and order. The efforts to resettle citizens facilitated the early return to original communities of about 108,000 exiled refugees and 325,000 registered IDPs. Several thousands more returned subsequently to their communities outside of formal programs. It also rationalized the forces of law and order, including the Liberia National Police (LNP), the National Bureau of Immigration (NBI), and the Armed Forces of Liberia (AFL) into which it has introduced a greater degree of female participation. In this process, government demobilized and reintegrated into civilian life over 90,000 ex-combatants (about 12 percent of whom were children) and deactivated or retired over 17,000 members of the AFL, the LNP, and the Special Security Service (SSS). At the same time, it began to recruit and train staff for the new AFL and LNP.

[27] "Education Sector Plan for Liberia: Commitment to Make a Difference." Liberia Ministry of Education.
[28] Government of Liberia and United Nations Development Programme, Progress, Prospects and Challenges towards Achieving the Millennium Development Goals, 2010

The continuing return of Liberians to their normal walks of life attests to the improvement as does the attraction of Liberia to returning diaspora and foreign visitors.

At the same time there was a vital and urgent need to revive the engine of economic growth under Pillar 2 and the fastest, most expedient way to achieve this objective was to re-open the economy to foreign direct investment. Therefore, under the second pillar of the strategy, Liberia invited back, or invited anew, private investment capable of tapping the nation's rich endowment in natural resources. The speed and volume of re-entry into Liberia has been impressive, resulting in inward investment on the order of $16 billion and resumption of a vibrant concession segment of the economy. While impressive, this has engendered concern by many, including the African Development Bank (AfDB) that "recent efforts to renegotiate agricultural concession agreements and negotiate new ones risk returning to old patterns of 'growth without development' or horizontal compartmentalization – the dual economy." Writing about the importance of helping Liberia move from fragility to stability through measures to hasten recovery of the agriculture sector, the AfDB concludes that, "It is urgent that such an approach is balanced by promoting rapid growth in vertical value chains in which all participants make money, right to the smallest-scale farmers."[29] This kind of concern has thus informed Liberia's preparation of its second poverty reduction strategy. This will carry the nation forward through 2017 and is covered in Chapter 2. Further analysis of Liberia's economic recovery under PRS 1 is contributed in the review of productive sectors in sections 1.2.5 through 1.2.8 below.

Pillar 3 focused upon initiatives to re-introduce the rule of law by creating institutions and a culture of participatory democracy. Progress against this pillar is reviewed under Section 1.2.3 on political governance reform.

Under Pillar 4, extensive measures were taken to begin the rehabilitation of infrastructure and to tackle poverty reduction through social programs delivering essential services. Measures pertaining to infrastructure—both physical and governance improvements—are detailed in section 1.2.4.

Budgeting for PRS 1 envisaged a cost breakdown that emphasized the overall importance of infrastructure and basic services. Table 1.4 presents data on the original costs estimated for PRS 1 updated by actual financing raised and the percentage of completion achieved by pillar. The program carried a high cost relative to the fiscal wherewithal of the Government and GOLR aimed to close the hefty financing gap through development partner financing as well as public private partnerships (PPPs). Grant financing from development partners was estimated at a baseline of $230 million in 2007 so the ex-post data suggest that Liberia succeeded in gaining an aggregate 13% increase in Official Development Aid during implementation of the plan. In addition, recognizing its strategy to close the financing gap, GOLR intentionally left out the cost of rehabilitating Mt. Coffee hydroelectric facility on the aspiration that a PPP would take up this responsibility. As private financing did not materialize during the interim, and the urgency of restoring power as an essential ingredient to support growth, this project has become a priority under PRS 2.

Table 1.4 Costs and Financing of PRS 1

Lift Liberia PRS 1		Deliverable Costing & Financing by Pillar					
Pillar		Est'd Cost, US $ Mn	Pillar Cost as % of Total PRS	Ex-Ante Estimate of Gov't Revenue[2]	Ex-Ante Estimate of Gov't Financing[3]	Original Estimate of Financing Gap	Donor Financing[4]
1	Peace and Security[1]	$252	15.7%				$11
2	Economic Revitalization	$141	8.8%				$121
3	Governance and Rule of Law	$224	13.9%				$499
4	Infrastructure and Basic Services	$995	61.7%				$150
	TOTAL	1.6 Billion		$842.7 Mn	$ 510 Mn	$1 102.10	$781.57
	1 Cost of UNMIL not included in PRS, nor the cost of Dyncorp security services provided by US Government						
	2 Assumed robust economic growth and an increase in revenue to 27% of GDP						
	3 Approximately 60.5 % of government revenue						
	4 Source: PRS 1 Final Report						

1.2.3 Macroeconomic Performance and Policies

The economy has responded well since the onset of peace. Since 2005, real GDP per capita has risen by an annual average of 3 percent and preliminary IMF estimates from November 2012 indicate a boost to over 8 percent in 2011. An early decision was made to operate fiscal policy on the basis of a cash budget and this discipline has kept aggregate demand conducive to maintaining a stable macroeconomic environment.

[29] African Development Bank, Agriculture and Agro-Industrial Development in a Post-Crisis Era: Case Study of Liberia, December 2011 page 60.

Table 1.5 Macroeconomic Performance Indicators

Indicators	2006	2007	2008	2009	2010	2011	2012
							Prelim
Real GDP Growth, %	7.8	9.4	7.1	4.9	5	6.4	8.8
Nominal GDP Market Prices (US $ Mil)	611.6	732.2	818.2	844.7	941.4	1155.3	1545.4
Inflation, Average Annual %		9	13.9	18	8	10	
Broad money (M2) % change	34.4	33.3	38	16.1	33.5	15.5	17.8
Velocity (GDP to M2)	4.3	3.9	3.2	2.9	15.5	2.3	2.3
Domestic Revenue as % of GDP	14.8	21.6	25.2	24.4	30.8	32.7	37.4
Fiscal Balance incl grants (% of GDP)	2.1	3.7	1.2	-1.7	0.7	-0.7	-1.4
Fiscal Balance w/out grants (% of GDP)		3.5	0.5	-4.5	-0.8	-4.7	-6.1
Imports (% of GDP)	-65.6	-83.4	-77.9	-68	-71.6	-80.4	-96
Exports (% of GDP)	27.9	29.9	13.2	18.2	22.9	29.2	45.2
Import coverage excl UNMIL (months)	1	1.5	1	3.2	3.4	2.1	2.1
Public external debt (% of GDP)	822.8	645.3	576	198.9	12.2	11.5	12

Sources: Liberian authorities and IMF Nov 2012 Article IV

The overall fiscal accounts have remained in balance or ended with small surpluses. However, since Liberia's economy is highly dollarized, with approximately 75% of the money supply sourced by US Dollars, budget-induced pressures tend not to affect the monetary system. Instead, a key function of monetary policy is aimed at reducing inflationary pressures since these are harmful to the poor and a damper to investment. Inflationary pressures in recent years are more the result of global increases in the price of fuel and food. Liberia's intent with respect to future monetary policy is to converge towards a single currency with Ghana, Sierra Leone, Guinea, The Gambia and Nigeria under the West Africa Monetary Zone. Liberia has met all four primary convergence criteria of the single currency program, including single digit inflation, a compliant fiscal deficit/GDP ratio, compliant CBL financing of fiscal deficit and gross external reserves to cover an adequate duration of imports.[30]

Sound fiscal policies of the new government have received support from the international community, including assistance in debt relief, with Liberia reaching the HIPC completion point in 2010. Initially, a new cap for external debt was set at an annual target of 3% of GDP (on a net present value basis) but because progress has been good in terms of revenue generation plus there is urgent need to front-load investment in infrastructure to drive further growth, Government recently agreed with IMF to increase its borrowing target to 4 percent of GDP in net present value terms, translating into a larger borrowing envelope of about $300–400 million (depending on sustained GDP growth and the level of concessionality to accommodate higher capital expenditure in the near term.[31]

The country is now benefiting from strong exports growth supported by a resumption of commodity exports and the restart of iron ore production after a two decade hiatus, but imports will continue to rise at an equal or higher pace given high current levels of capital investment by concessionaires and government to realize their large scale infrastructure projects.

With regard to the external sector, the prudent demand management policies have kept the exchange rate of the Liberian dollar with respect to the US dollar broadly stable. The current account deficit has averaged higher than 30 percent of GDP, but this largely reflects the absorption of significant amounts of post-conflict security and humanitarian assistance as well as of inputs required for the early construction program. The corresponding inflows on capital account to close the gaps were all grants and there have not been any major pressures on either the exchange rate or reserves. The Central Bank of Liberia maintains foreign exchange reserves to provide foreign currency liquidity to banks but, looking forward, IMF has encouraged a gradual expansion of reserve levels to counter external uncertainty.[32] Table 1.5 summarizes key macroeconomic indicators over recent years.

On macroeconomic policy and institutional fronts, Liberia is making impressive strides. Beginning in 2006, the new government mapped out several initiatives to upgrade public accountability and ensure transparent public financial management anchored on a new PFM law. This was passed in September 2009 and implementing regulations were issued in December of that year. The administration then embarked on the introduction of an Integrated Financial Management Information System and gained development partner support through a Public Financial Management Reform Project in 2011 to enhance budget planning systems, strengthen the legal

[30] Central Bank of Liberia Newsletter, June 2011

[31] IMF Article 4 Report, November 2012.

[32] International Monetary Fund, Eighth Review under the Three-Year Arrangement Under the Extended Credit Facility, May 2012

framework for project-based financial management, focus on revenue mobilization and administration and improve governance and transparency.

On the tax administration front, amendments to the Liberian Revenue Code were enacted in September, 2009 to reduce the scope for discretion in the granting of investment incentives. The administration's legislative agenda includes proposals to create an autonomous National Revenue Authority and replace the general sales tax with a value-added tax (VAT). Regarding customs functions, the ASYCUDA system has been implemented in Monrovia Free Port as well as Roberts International Airport and Liberia is pursuing further modernization of customs in consultation with the World Customs Organization.

Government has further empowered its Debt Management Unit to conduct regular analysis of debt sustainability, now placing all SOE debt under their jurisdiction before new enterprise debt is approved though further progress is needed to effectively bring SOEs into compliance under the new Public Financial Management Act. A decision was taken to merge the finance and planning ministries during the course of 2012 and a single economic analysis unit is being established to undertake more robust economic analysis, providing GOLR more complete capacity to monitor economic evolution, both rural and urban. This merger will make it possible to house the oversight of both planning and performance in the same institution and that will assist with the vital task of monitoring performance under the second generation poverty reduction strategy (PRS). A central part of fiscal strategy is to contain discretionary current spending and growth of the public payroll and efforts and underway to strengthen public financial management through the introduction of a Public Expenditure Tracking System (PETS).

Other fundamental changes underway in 2012/13 include the introduction of the Medium Term Expenditure Framework (MTEF) into the budget process whereby a three year rolling budget will be introduced including both operational and “strategic” or capital expenditure components under a legislatively-approved Public Sector Investment Plan (PSIP). Formulation of the budget will be re-framed around eleven budget “sectors” corresponding to priorities established within the forthcoming PRS. In this context, development partners are also being encouraged to make their aid pledges more transparent and predictable and the intention is for the budget to include and incorporate information about donor sourced flows within the budget framework. In addition, Treasury bills are expected to be launched in mid-2012 to help with liquidity management.

1.2.4 Political Governance Reforms Introduced During Recovery

Governance has become an important variable to cite in explaining failures in the development journey of many nations or the one to pin hopes on when suggesting what to do to alter their fates. Given Liberia's past weaknesses in this realm and its vital connection to peace building, there is merit in taking stock of the early reform measures introduced by government to build a fairer, more inclusive society. As such, this section is concerned with political governance which was the pillar 3 priority under PRS1 and it covers initiatives undertaken at both national and sub-national level.

Political governance is used to cover the ways through which political authority in a country is exercised, including the processes through which governments are selected, monitored and replaced as well as the processes through which the governors manage the political system, civil liberties and political rights. Changes in this area are imperative in order build more inclusive processes giving voice to all Liberian citizens.

The re-building of Liberia began in earnest with the installation of the new government, with a promising start on policies and programs to heal the societal divisions, restore the functions of state, and re-launch the economy. On the overarching objective of cohesion, the Executive has struck a tone that emphasizes unity, peace and harmony, and a mass education effort was begun to sustain that message. To restore the functions of state, the organs of public governance were reactivated, especially with regard to functions of security, law and order, and the administration of justice. Essential priorities were to establish and maintain national security, (accomplished with substantial reliance on the presence of UNMIL), to re-introduce the rule of law, to create institutions and a culture of participatory democracy and to tackle poverty reduction through social programs.

GOLR actions to strengthen governance and the rule of law began with laying down new codes of conduct for those at the top. It introduced a requirement that the President, all Cabinet Ministers, and all commissioned officers publicly declare their assets soon after assuming office, as part of a new Code of Conduct for all public officials. Also, recognizing that the concentration of power in the executive arm and within Monrovia was inimical to good governance, the authorities set about softening that concentration. Steps are under way to strengthen the Legislature by, among other things, giving it more power over budgetary issues, increasing its administrative budget to make it function better, and establishing a Women's Legislative Caucus with membership from both Upper and Lower Houses. To begin the process of decentralization, County Support Teams were established to support County Superintendents and Assistant Superintendents in all 15 counties. Children's Assemblies and a National Children's Parliament were also formed to ensure children's participation in governance issues.

The Governance Reform Commission was set up as an oversight body charged with setting up a national framework for legal and political reform and it has made far-reaching progress regarding the decentralization of power, regional participation and maintenance of national and regional balance.[33] These have been complemented with a donor-supported Governance and Economic Management Assistance Program (GEMAP), which provides international experts to support several key agencies of the government.

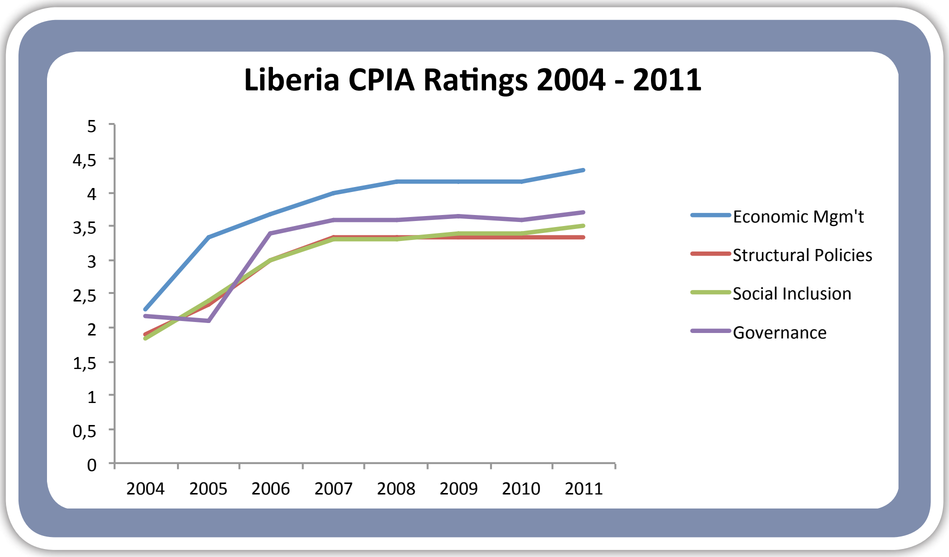
The restructuring of Liberia's political institutions began in 2006 with personnel audits to determine technical competency as a result of which the number of civil servants in ministries was drastically reduced. Over-staffing remains a severe problem however and efforts have been renewed to reduce thousands of ghost workers from the GOL payroll. Liberia's judiciary still faces serious shortcomings, operating under outdated laws and legal frameworks and continuing to rely heavily on donor funding. Reform has been on the agenda for several years given but judiciary effectiveness continues to be hampered by a lack of qualified personnel, poor case-flow management and corruption. Progress is slow but evident in the launching of a Judicial Training Institute in June 2008, from which a first batch of 21 judges, magistrates and lawyers was graduated in March 2009. This will be supplemented by graduates of a Professional Magistrate Training Program (PMTP) begun in 2010 with a class of 64 incoming college graduates. The Johnson-Sirleaf administration continues to face difficulties in increasing the capacity of its justice and security sectors to arrest, detain and adjudicate criminals and relies heavily upon UNMIL for maintaining national security and preventing residual armed combatant groups from resuming covert activity.

The President declared corruption to be "public enemy number one" early in her tenure putting in place an anti-corruption strategy, which included the establishment of an Anti-Corruption Commission with prosecutorial powers. She has tried to enforce a zero tolerance policy to the extent of her political leverage, taking a strong stance against impunity by initiating court proceedings against a number of former senior government officials who had committed certain offences. Where allegations of corruption against government officials and civil servants have been proven, government has reacted by suspending or dismissing the culprits, including high-level officials from the Central Bank of Liberia or County Superintendents. For example, all non-statutory members of Liberia's public corporation boards were removed in January 2009 amid public debate over levels of corruption and accusations of poor governance. The president also sacked the managing director of the Liberian Petroleum Refinery Company in 2010 for meddling with a tendering process. These examples help to convey the determination by leadership to root out corruption. However, the culture is deeply embedded and concerns have risen that officials sacked for corrupt practices have not actually faced prosecution.

Improvements have been made in the right of citizens to information with the passage of a Freedom of Information Bill in September 2010 but media rights are not yet guaranteed through legislation that would provide journalists with legal protection. Consequently, press freedom is still variable with cases of suppression and journalist harassment leading Freedom House to rank Liberia's press as "not free" in 2008, at 141 out of a total of 195 countries in its Press Freedom Ranking index.

All told, several sources monitor Liberia's progress vis-à-vis political governance, including the AfDB and World Bank's CPIA ratings, the Bertelsman Transformation Index and the Mo Ibrahim Leadership Index. Each is composed of different detail, but they all tend to reflect performance in areas of Voice and Accountability, Corruption Perception, Political Stability and Rule of Law, Government Effectiveness, Economic and Press Freedom as well as Environmental performance.

Figure 4 AFDB Country Policy and Institutional Assessment Ratings



Source: AFDB http:cpia.afdb.org

[33] Material in this section has largely been sourced from "Bertelsman Transformation Index, Liberia Country Report" 2012.

All sources indicates that political governance is on an improving trajectory in Liberia, as portrayed by AfDB ratings presented in Figure 4 for example, but that the achievement levels are still very low relative to a maximum score of six.

On a world-wide scale, the World Bank ranks Liberia's government effectiveness and regulatory quality in the bottom 10% of nations in 2009, political stability and rule of law in the decile above that and control of corruption and voice and accountability in the 30-40% decile.[34] All of these rankings are vastly improved from their low base in 2006. Applied in an African context, Table 1.6 presents Liberia's ranking on the Mo Ibrahim index of African Governance, revealing the country's relatively good performance with respect to democratic participation and human rights. Thus, while the country has most definitely improved against its own baseline, it continues to lag behind the performance of other countries in Africa and around the globe.

Table 1.6 Liberia's Rank on the 2011 Mo Ibrahim Index

	Rank/53	Regional rank/16	Score/100
OVERALL SCORE	36	11	45.4
SAFETY AND RULE OF LAW	33	11	46.9
- RULE OF LAW	47	15	28.6
- ACCOUNTABILITY	18	5	47.5
- PERSONAL SAFETY	24	10	47.5
- NATIONAL SECURITY	43	15	64.1
PARTICIPATION AND HUMAN RIGHTS	18	8	54.0
- PARTICIPATION	3	2	78.5
- RIGHTS	21	10	45.8
- GENDER	44	12	37.7
SUSTAINABLE ECONOMIC OPPORTUNITY	45	14	34.0
- PUBLIC MANAGEMENT	40	13	51.2
- BUSINESS ENVIRONMENT	43	14	34.0
- INFRASTRUCTURE	44	11	16.3
- RURAL SECTOR	50	16	34.6
HUMAN DEVELOPMENT	39	9	46.7
- WELFARE	43	14	39.2
- EDUCATION	21	5	54.1
- HEALTH	46	13	46.9

Sub-national-level governance relates to the processes through which the functions of the state are performed at the local, sector or activity level. Progress in the sphere of local level governance is essential if the social rifts within society are to be healed. As identified in the discussion on identity fragmentation, "perennial tension and unresolved conflicts continue to exist between the Lormas and Mandingos in Lofa County; between Gios, Manos and Mandingos in Nimba County; between Kru and Sarpo in Sinoe County, and between Kru, Sarpo and Americo-Liberian descendants in Sinoe County."[35] Efforts by the current administration have been made to enhance the visibility of public officials and strengthen coordination structures throughout the country, particularly at the county level though the efficacy of the state's authority remains limited in rural or remote areas. Obstacles include poorly trained officials, low incentives and low levels of infrastructure.

Nonetheless, Liberia has committed to advancing a profound shift in its approach to governance by approving a National Policy on Decentralization and Local Governance in 2011 that will recognize increased authority and decision-making responsibility outside of central government bodies. This will naturally require significant capacity building and, to that end, the Ministry of Internal Affairs has been implementing a multi-year capacity building strategy to improve capability at county-level. Initial measures towards local level decentralization were undertaken with the establishment of County Development Funds to finance local development initiatives. Regrettably, serious mismanagement of these funds has already occurred and while central government has been able to react, the imperative of demonstrating commitment at the local level remains of paramount concern. A traditional gap still exists between central government and the constituencies spread throughout the interior. Yet, recognizing the importance of local level engagement, GOLR has taken extra pains with its second poverty reduction strategy to conduct consultations across all counties to gain input and buy-in to the planned way forward. This is quite important given the slow pace at which a "peace dividend" is being felt at sub-national levels.

1.2.5 Sector Contributions to Economic Performance and Reforms to Date

Liberia's national accounts data are recognized by GOLR and its partners as having a number of weaknesses. Because comprehensive accounts data are not available, the IMF computes estimates of GDP by sector

[34] World Bank Institute, Worldwide Governance Indicators, Country Data Report for Liberia, 2006-2010.
[35] "Liberia Retrospective Analysis," Background paper to PRS II, August 4, 2011, page 22.

using the production approach, relying upon primary source data provided by LISGIS. MOF and the Fund acknowledge that "there is a high degree of uncertainty regarding estimates of the level and growth rate of real GDP, sectoral components, and all ratios to nominal GDP…." While collaboration is underway to profoundly improve the collection of such data, current limitations make detailed analysis of performance by economic sector problematic. Recognizing these limitations, the GDP share data in this section should be viewed as approximate but the trends of change over time should be reliable. The report does not try to disaggregate sectors too finely and thus, for example, the agricultural sector does not distinguish between the contributions of crops, livestock and fisheries sub-sectors. Nonetheless, as evidenced in Table 1.7, sector growth rates have gone through significant fluctuations beginning with severe contractions in 2003 and only now settling back to the steadier growth patterns. Greater fluctuations and quantum leap growth is evident initially in forestry and continuing mining where there had been a complete halt and the sectors are now experiencing recovery. These strong fluctuations are typical of an economy which has gone through severe contraction and are consistent with Liberia's status as a fragile state.[36]

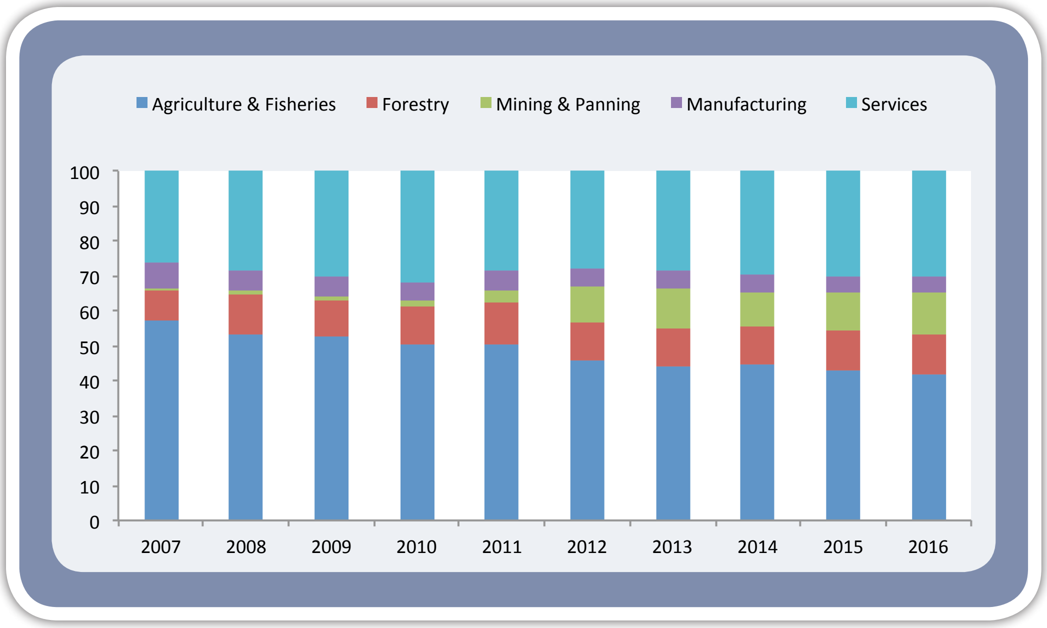
Table 1.7 Annual Percentage Growth by Economic Sectors contributing to GDP

GDP Growth %	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Real GDP Growth Rates by Sectors, Percentage change year on year										Prel
Real GDP Growth	-31.0	2.6	5.3	7.8	9.4	7.1	4.9	6.1	6.4	8.8
Agriculture & fisheries	-38.5	7.5	6.0	4.4	8.9	6.0	6.4	2.7	3.9	1.8
Forestry	-36.8	-40.3	-6.2	2.9	1.0	29.4	1.4	6.7	5.6	1.9
Mining & Panning	56.7	49.5	-15.0	0.0	289.8	109.4	6.8	46.4	93.1	153.9
Manufacturing	-11.8	97.7	8.2	16.0	12.9	-16.7	-3.8	3.1	3.1	3.1
Services	-7.9	19.2	9.9	12.0	10.4	7.6	6.9	5.7	5.3	5.2

Source: Compiled from GOL Sources, and updated with IMF 8th Review data

All sectors recorded some recovery in the first five years of the new administration in response to the program of economic renewal and Figure 5 portrays actual data for 2007 through 2011 together with forward projections formulated by the GOLR and IMF.

Figure 5 % Share of GDP by Sectors



Sources: GOLR, LISGIS & IMF

[36] Recent GOLR and IMF publications suggest that services may even have expanded to the point of over-taking agriculture in absolute terms but as all data sources do not confirm this finding, the report makes use of sector growth data from IMF 8th review and makes note of the fact that better National Accounts data will be forthcoming once a bona fide Household Economic Survey can be completed.

These reflect the expectation that the mining sector will grow at a faster rate than other sectors. While agriculture will also continue to grow, it will lose ground on a percentage basis to the mining sector as it begins to resume importance. To place this outlook into context, it is interesting to note that over the conflict years, agriculture (including fisheries) went from contributing about one-third of GDP in 1988-89 to almost two-thirds a decade later in 1998-99. Hence, as the total economy was experiencing significant contraction, agriculture grew as a share of the economy insofar because it offered the principal means of subsistence even though the effect of the conflict was to also reduce total agricultural output in absolute terms. Over this same period, mining (principally iron ore) went from one-tenth to almost nothing. The contribution of manufacturing suffered during the conflict and recovery is still experiencing delay. In the post-conflict era, services have expanded to where they are a prominent contributor to GDP reflecting the major impact of UNMIL presence in the country. The volume and composition of services in economy can be expected to change substantially in coming years with UNMIL withdrawal causing a decline, but hopefully offset by new growth being generated by the concessions sector and demand in the domestic economy.

The following sections present a deeper look at the current productivity in each of Liberia's primary production sectors, including renewable and extractive resource sectors, tourism, manufacturing industry and small business sectors. This analysis permits identification of the binding constraints which must be addressed to unlock greater potential as well as the key growth strategies that government is employing or formulating to drive respective areas of growth. Where key growth strategies by GOLR are revealed in this analysis, they are brought to light. Briefly stated, these include:

- Conversion of subsistence-oriented fisher-folk and agriculturalists to commercial orientation through stronger value chains and greater engagement in domestic and regional trade;
- Increased productivity and returns from plantation agriculture and mining resources through award of concessions;
- Development of small and medium enterprises through spatial development of strategic trade and infrastructure corridors, and
- Industrialization through establishment of special economic zones.

While the genesis of these strategies is explored below, deeper analysis of how they can best be implemented to drive future growth is the focus of Chapter 2.

1.2.6 The Contribution of Renewable Resources Sectors

This section looks at the status of Liberia's renewable resources sectors, including cash and food crops, forestry, livestock and fishing to contrast it with mining which is an extractive and non-renewable resource. "Green growth" provided by the renewable resources sector is considered by the AfDB to be an important objective for the continent, and is important to overall recovery given Liberia's strategy to encourage plantation agriculture. Smallholder agriculture provided the mainstay of the economy throughout the Liberian conflict, providing ordinary citizens with refuge and subsistence and revealing the resilience of the rural sector. It also raises the worrisome question of whether public policy might look away when other, more exciting things begin to happen. Before looking at performance by sub-sector, this section begins with a review of the nation's natural resource endowment and appraises the reform measures still needed in land use and land tenure policy.

Natural Resource Endowment for Agriculture and Forestry

Liberia's farmers are blessed with a favorable environment for agricultural production[37]. Liberia occupies a land area of approximately 111,370 km², of which 86% is dry land and the remaining 14% is covered by water. Land types present in Liberia include tidal swamps, coastal beach plains, flood plains, valley swamps, low and high hills, all of which have different land use capabilities.

Liberia is a tropical country situated in the narrow band of latitudes particularly suited to the cultivation of cocoa. Annual rainfall is approximately 1,700 mm in the north and above 4,500 mm in the south, one of the rainiest regions in the world. Most areas have a water surplus for five to eight months each year. Average temperatures vary between 24°C and 28°C, with relative humidity ranging from 65–80%.

Absolute shortage of land is not presently deemed by the GOLR to be a binding constraint to smallholder production given that the percentage of land area actually devoted to agricultural cultivation is low. However, this masks two underlying problems, one pertaining to "green growth" and the other pertaining to smallholder incentives. With respect to green growth, Liberia presently permits patterns of land use whereby the "renewable" potential of land productivity and forestry resources could be put at risk. In particular, large areas are being devoted to mono-culture plantations under rubber, palm oil and other concession contracts. These have the potential to reduce the bio-diversity of forest cover and introduce

[37] Source material for this section is largely drawn from MOA documents, including the "Liberia Agricultural Sector Investment Program" finalized in May, 2010 in fulfillment of requirements under CAADP.

environmental degradation over time. Government currently considers forestry, agriculture and fisheries resources to be included within its Extractive Industries Transparency Initiative and, going forward, may want to consider introducing pro-green growth measures within that program.

With respect to smallholder incentives, land tenure systems are mired in a complex web of inconsistent statutory and customary laws resulting in several types of land holding arrangements with different degrees of security. These range from deed holders with comparatively high security of tenure to squatters with no security. Customary occupation, renting, leasing and borrowing of land fall between these extremes. Insecurity of tenure, rather than shortage of land, thus emerges as a major impediment to modernization of the smallholder sector since the incentives for adopting modern production methods are low. Insight into this problem is portrayed in Text Box 3.

Table 1.8 Liberia's Natural Resource Endowment

Natural Resource Endowment		Liberia	
		Absolute	%
Total Land Area		111 370	100,0%
Dry Land Area (sq. km)	2010	96 320	86,5%
Wet Land Area (sq. Km)	2010	15 050	13,5%
Agricultural Land (sq.km)	2010	26 100	27,1%
Arable hectares	2010	400 000	4,1%
Est'd hectares of irrigable land		600 000	10% tapped
Forest Area (sq. km)	2010	43 290	44,9%
Average Annual Precipitation	mm	2391	

Source: African Development Indicators, World Bank
Source for Irrigation Land: Liberia National Rice Dev't Strategy

Box 3 Liberia's Smallholder Land Tenure Systems—How Security Affects Behavior

Type of Holding	Problems	Incentives
Deed holders	Lack of a registry creates confusion and insecurity of claims; Destruction of archives and confusion over legal adjudications means that value of a deed as a piece of evidence is lower than other forms of evidence to support a claim	Deed holders involved in a dispute, or who think others might have a counter-claim, will be more ware about adopting long-term technologies such as tree planting or investments associated with longer term strategies
Customary Tenure	Lack of confidence among smallholders regarding customary courts and their ability to fairly adjudicate land issues. Poor management of relationship between formal and customary law.	Where community has been stable with few resettled into area, relative security can encourage adoption and investment. History of taking of land for concessions renders resettled areas more apt to adopt ST strategies
Tenants	Tenants rent land; often for only one cropping season in order to ensure that permanent claims will not be pursued.	Tree crops or other perennial type crops are prohibited. Tenants are thus limited to annual crops only. Acute fear not to appear too successful as a farmer to avoid land and standing crop to be taken back by owner prior to the agreed upon time.
Borrowed Holdings	A highly insecure form of tenancy and the smallest infraction can see the borrower evicted	Not only are crops limited to annual varieties, a portion of yield must be provided to owner as acknowledgement borrower is not owner. Same as for tenants
Squatted Holdings	Squatting without eviction for 20 years can lead to ownership through the doctrine of "adverse possession" so this encourages an aggressive squatting	Tend to be most aggressive in pursuing forms of land claim involving tree planting or other improvements to prove adverse possession

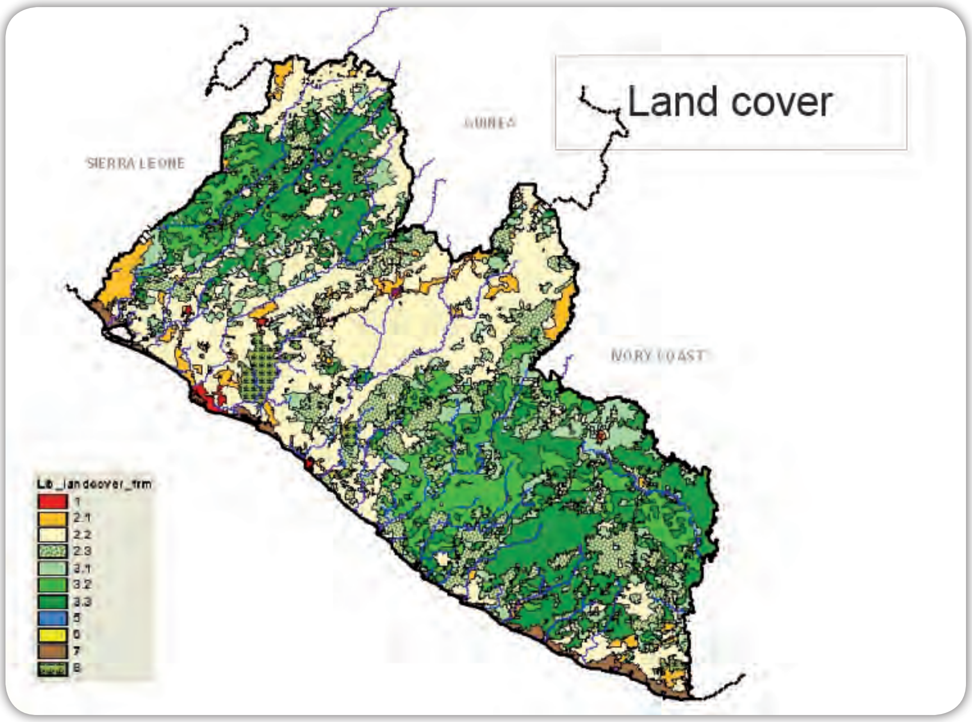
Adding to domestic complexities, the appropriation and allocation of land for foreign invested concession contracts by government is an emotionally sensitive issue. This is one which has long been associated with conflict and continues through to the present.[38]

As mentioned in the review of fragility, land remains a highly emotional issue in the country. Resentment is often directed towards foreign investors granted long term leases. Presently, with an estimated 21% of land area currently dedicated to concessions (including agriculture, timber and mining) and possibly rising to 38% of total land area found to generate win-win economic benefits between concessionaires and local communities. A Land Commission has therefore been established to propose and coordinate the long overdue reform of land policy, laws and tenure systems. This is the kind of governance institution that was absent in the past and that now needs to apply substantial wisdom and maturity in navigating an appropriate balance for the future.

[38] After granting Firestone one million acres of land in 1926, Government used the Liberian Frontier Force to evict people off their traditional land and those who refused to move were forced to work for Firestone as wage laborers. Although this degree of subjugation no longer continues, the imbalance in power and control over land use between rural citizens versus agricultural and mining companies awarded concession rights persists up to today.

Figure 6 presents the pattern of Liberian land cover in 2004[39] and Figure 7 shows the large spatial footprint claimed by Liberia's concessions sector.[40]

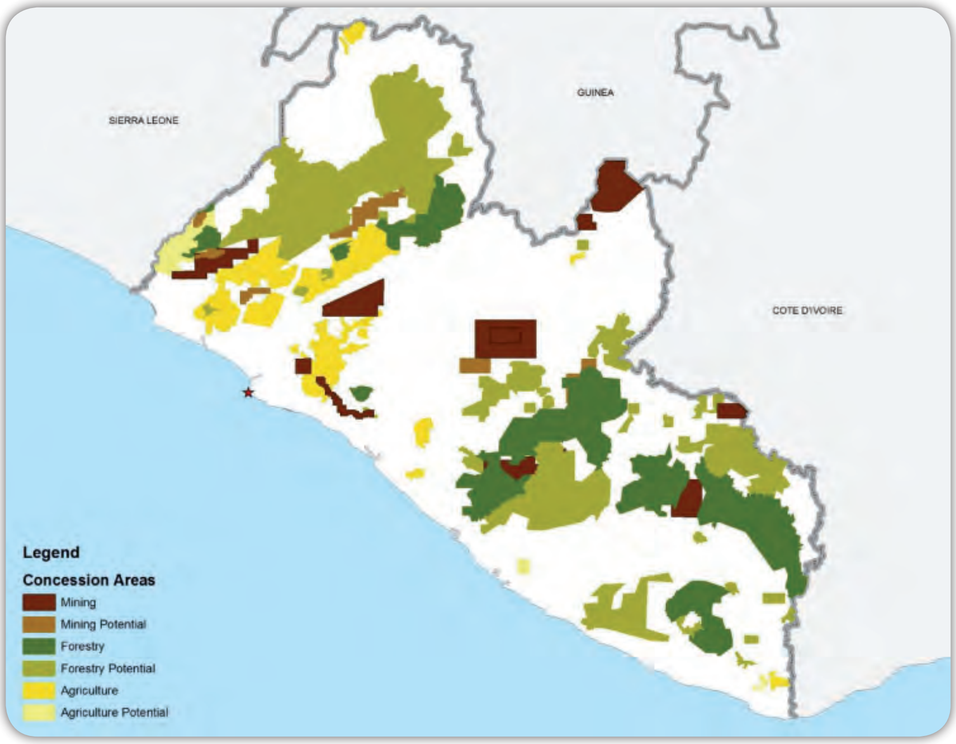
Figure 6 Pattern of Land Use in Liberia, 2004



Source: Bayol and Chevalier (2004), cited in CAAS, Volume 1, Page 38.

Land Cover Key: 1 = Urban Areas; 2.1 = Predominant Rural agricultural Domain; 2.2 = Agricultural Areas with small forest presence; 2.3 = Mixed agricultural & forest area; 3.1 = Agriculture degraded forest; 3.2 Open dense forests; 3.3 = closed dense forest; 5 = free water; 6 = Savannah or bare soil; 7 = Coastal ecosystem complex; 8 = agro-industrial complex.

Figure 7 Current and Potential Land Areas devoted to Concession Activity



[39] Cited in "Comprehensive Assessment of the Agriculture Sector, Volume 1" August 13, 2007
[40] Barra 2011 GIS analysis cited in World Bank, "Infrastructure Policy Notes: Leveraging Investment by Natural Resource Concessionaires," June 2011, page 65.

Structural Aspects of Liberian Agriculture

Traditionally, agriculture in Liberia was divided between three distinct production patterns, notably concessions, commercial farms and smallholder farming. These varied considerably in terms of organization, efficiency and output. They also varied by investor profile, with concessions being largely FDI-driven, commercial farms owned either by foreigners or by Americo-Liberian elites and smallholdings consecrated to indigenous peoples depending upon traditional geographic origins.

Concessions exist where foreign firms have obtained rights of use on large land areas (between 2,000 and 100,000 acres) to operate rubber and oil palm plantations. In its quest to revive the agricultural sector, GOLR has concluded several concession agreements with commercial investors in recent years for re-development of targeted sub-sectors in the agriculture and forestry sectors. Investor focus is now changing from rubber only to other sub-sectors such as rice, palm oil, cocoa, coffee, and bananas. Private commercial sector investment is estimated by MOA to have created 40,000 to 60,000 formal jobs in this sector, or 6% of the job market.

Commercial farms initially grew up in pre-conflict settings where rubber concessionaires were able to supply seedlings to out-growers and guarantee a market for their output, inducing the entry of Liberian entrepreneurs into the establishment of commercial farms. The number of Liberian commercial farms increased and some diversified into fruit, vegetable, coffee, oil palm, poultry, pig and other types of production. Estimates are that in 1971 approximately 5,000 Liberian commercial farmers cultivated nearly 200,000 acres (81,000 hectares) on 10 to 500 acre farms.

These suffered substantial destruction during the conflict, reflecting the anger at domestic social cleavage. This farm sector is only slowly beginning to revive.

Smallholders have traditionally engaged in subsistence farming to produce food principally for home consumption but they have also produced export-oriented tree crops as a source of household cash[41]. The remainder of this section addresses all sub-sectors with particular focus on the performance and constraints impacting smallholder agriculture. At present, "forest-based farming systems" dominate smallholder agriculture. These include tree crop-based systems in which vegetables and other food crops are produced mostly in the central belt of the country; root crop based systems including cereals production concentrated in the northern region plus fishing and mixed cropping along the coast.

Food Crops, Livestock and Poultry

Rice and cassava are the key food crops, with rice produced at a level about 40% of self-sufficiency for domestic consumption in contrast to cassava where production far exceeds domestic requirements. As revealed in Table 1.9, some 280,000 metric tons of paddy rice was produced in the 2008/2009 crop season. Though higher than the

Table 1.9 Pre and Post-Conflict Food Production Levels

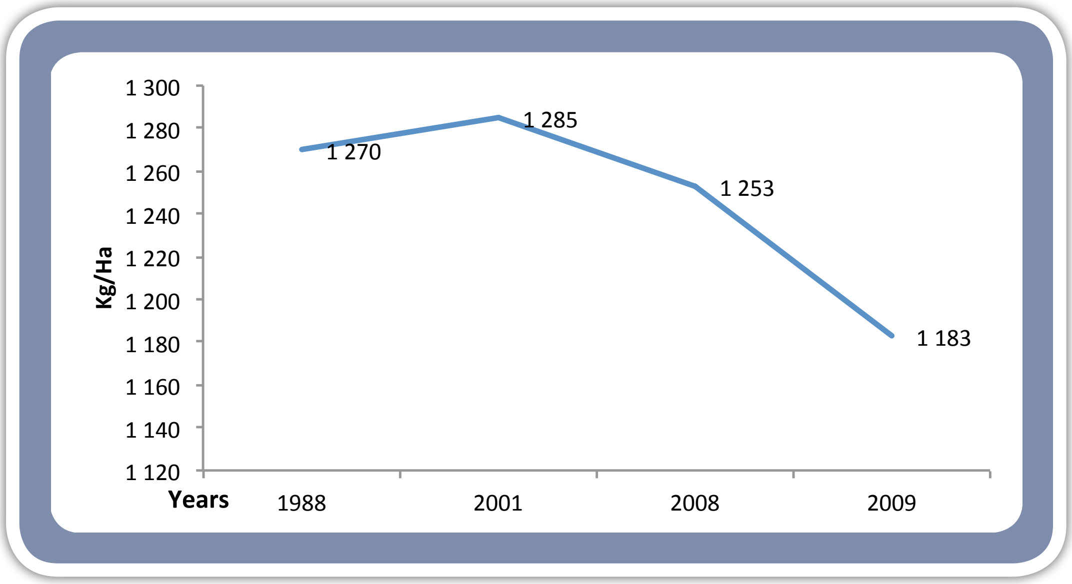
Crop/Area	Unit					Percent Change	
Production		1988	2001	2008	2009	Since '88	Since '01
Paddy Rice	MT	298 040	219 040	279 000	293 000	-1,7%	33,8%
Fresh Cassava	MT	409 840	373 390	496 290	495 300	20,9%	32,6%
Area Harvested							
Paddy Rice	Hectares	235 760	170 480	222 670	247 580	5,0%	45,2%
Fresh Cassava	Hectares	52 160	47 930	57 360	63 210	21,2%	31,9%
Yield per Ha							
Rice	KG	1 270	1 285	1 253	1 183	-6,9%	-7,9%
Cassava	KG	7 860	7 790	8 652	7 835	-0,3%	0,6%

Source: Ministry of Agriculture Statistics Unit, Crop Production Survey 2009

[41] ITTAS Consultancy Ltd., Post-Harvest Crop Assessment—Liberia Rice and Cassava, 2008.

level at the end of the conflict in 2003, the output in 2008/09 was still about 7% lower than the pre-war level of some 300,000 MT and Figure 8 identifies that yields, evaluated at four points in time, have actually been in decline. Many factors complicate this situation. At present, food crops are produced primarily for subsistence by farming households, with little surplus produced for sale in the market. Meanwhile, due to internal displacement and exodus of youth from farming livelihoods as a result of the conflict, a majority of the population actually relies upon purchases to meet their food security requirements.

Figure 8 Rice Yields have been on the Decline
Rice Yield - Pre & Post Conflict
4 points in time



In these circumstances, because rice represents such a large share of household food consumption, an increase in the price of rice will tend to increase poverty levels in the country as a whole, while a decrease in rice price will decrease poverty levels[42] . These conditions work against the use of price signals to encourage smallholders to increase output, so approaches focused upon use of improved technologies are required to stimulate increases in output instead. Constraints to rice production have included the lack of availability of higher-yielding improved seed varieties (such as NERICA, the "New Rice for Africa") as well as prevailing use of traditional low-input farming systems. During the recovery period, GOLR distributed 20.5 million tons of seed rice to farmers as well as 41,500 tools. In the medium term, higher supply of NERICA seeds or other improved rice varieties will be essential to increase yields and output, along with a change in land use patterns. At present, 86% of rice is grown in upland farming systems, with 12% in lowland rain-fed and 2% in irrigated conditions. The yield potential of the latter two systems is 75% and 300% higher than upland systems respectively, so investment in irrigation infrastructure could do much to increase national output.

Cassava has progressed much better than rice, with its output reaching about 500,000 metric tons during the 2008/2009 crop season and exceeding both the pre-war output (by about 21 percent), and the level at end of the conflict (by 30 percent). Interestingly, these trends show that Liberia is on course to recover its food supply levels, in the domain of the starches, such as existed before the upheavals began. The situation with respect to nutritional balance is, however, another story.

The production of livestock and poultry has recovered less well than the starches. Produced for the most part informally and in backyards of households, and therefore available to marauders, livestock and poultry suffered significantly during the conflict. The informality of the breeding, and the consequent reliance on own stocks for regeneration, has meant a slow recovery. Surveys conducted in 2008 put the estimate of cattle at 44 percent lower than pre-war levels, goats at 50 percent lower, and sheep at about 29 percent fewer, although pigs were judged to have recorded a large increase over the pre-war level (see Table 1.10). The surveys established that poultry is doing much better, with an increase of just under10 percent in 2008 over the pre-war levels.

[42] Clarence Tsimpo and Quentin Wodon estimate that an increase or decrease of 20% in the price of rice could lead to an increase or decrease of 3 to 4 percentage points in the share of population in poverty. "Rice Prices and Poverty in Liberia," included in Poverty and the Policy Response to the Economic Crisis in Liberia, The World Bank 2012.

Low productivity of smallholder agriculture in Liberia is caused by many factors. Prolonged conflict caused the displacement of farming communities who virtually retreated into the forest for security during the war and reversion to a subsistence orientation to a greater degree just for survival. Now that households are returning to work their land, major challenges include the lack of supporting infrastructure including rural and inter-regional road networks providing access to markets, along with a lack of drying, storage and processing infrastructure. On the policy side, incentives to transition from subsistence to surplus-oriented commercial production are constrained by poor market access and think markets. It is therefore a key impetus for GOLR's strategy to improve networks, strengthen the density of value chains and connect smallholders to commercial markets. On the production side, there is a shortage of improved seeds and planting material, rudimentary production techniques are the norm and underdeveloped supply chains exist to provide inputs and purchase outputs and connect producers with traders. Added to this are a severe lack of agricultural credit whereby, in 2011, agriculture accounted for only 3.3% of all commercial bank credit. Although a recent entrant into the banking sector has an interest in agricultural lending, they will take a greater interest in the commercial farming sub-sector.

Table 1.10 Poultry and Livestock Production

Livestock, Heads	1988	2008	2009	Percent Change	
				Since '88	Since '08
Cattle	14 830	8 370	8 370	-43,6%	0,0%
Goats	128 670	63 460	75 330	-41,5%	18,7%
Sheep	60 560	43 270	43 470	-28,2%	0,5%
Pigs	52 440	77 720	68 000	29,7%	-12,5%
Chickens	723 390	785 010	774 960	7,1%	-1,3%
Ducks	39 190	43 670	39 210	0,1%	-10,2%

Source: Ministry of Agriculture Statistics Unit, Crop Production Survey 2009

Tree Crops

As identified above, forest-based farming systems occupy a predominant place in Liberia's agricultural sector. As with food crops and other segments of the economy, output is just now beginning to recover from the conflict period as farmers return to their plots and commercial farmers and concessionaires re-engage in production. The paragraphs below touch separately upon each of the contributors to overall tree crop production, but Table 1.11 provides contextual overview on physical output trends across the various product categories with the exception of palm oil for which data is not available. As a general observation, output is recovering slowly due to the many constraints hindering smallholder productivity.

Table 1.11 Recent Production Trends from Forest-Based Agricultural Systems

Commodity	Unit	2007	2008	2009	2010	2011 Est'd
Rubber	MT	135 200	87 901	62 880	62 577	88 026
Cocoa Beans	MT	2 126	3 285	5 075	7 117	26 770
Coffee Beans	MT	N/A	124	130	379	215
Sawn Timber	PCS	610 864	1 036 879	826 095	543 793	382 334
Round Logs	M^3	N/A	N/A	N/A	7 251	74 208

Sources: MOCI, LPMC, FDA and Estimates by Central Bank of Liberia

Smallholder-dominated Tree Crops: Cocoa, Coffee

Cocoa and coffee remain the key smallholder cash crops. Liberian cocoa and coffee farms are usually small, averaging just about one acre. A majority of the farms were established in the 1970s and were abandoned during the civil unrest. Most trees are averaging 35 years old and now approaching the end of their productive lives. They are thus plagued by diseases and pests so yields and output have fallen further. Export trade in cocoa and coffee was quite devastated by the conflict; consequently tree-crops are taking a long time to recover. In the immediate pre-war period, Liberia was producing about 4,000 metric tons of coffee and 3,000 metric tons of cocoa (for 1988, official statistics recorded 4,116 metric tons of coffee and 2,946 metric tons of cocoa). Output in the 2006/2007 and 2007/2008 crop years was no more than 3,000 tons for cocoa and 100 tons for coffee and Table 1.11 makes clear that cocoa is recovering much more quickly than coffee. Even with this, some of the production sold in Liberia comes occasionally from elsewhere. The impact on GDP has been negligible, under 1 percent each year.

Clearly, cocoa and coffee have the same land, infrastructure and extension issues as do food crops. Improvements in these domains for the latter should benefit the former as well. Other issues at the farm level include land tenure disputes, which limit incentives to invest in improvements; limited extension service, and therefore knowledge of new techniques; low access to rural finance and, therefore, to tools. Yields are extremely low, about 145 kg/hectare, compared with some 800kg/ hectare in Ghana and the Ivory Coast. Additional issues are poor quality and marketing obstacles. Low use of fermentation, insufficient drying, harvesting of diseased pods, use of plastic bags for transport, and limited storage capacity, all result in poor quality, with presence of mold and foreign matter. Low quality became institutionalized when the Liberia Produce Marketing Corporation (LPMC) created a market for "fair average quality" cocoa that bears no resemblance to industry or international standards. Marketing arrangements also limit the development of cocoa and coffee, as the inefficiencies reduce returns to the farmer. Roads to producing areas are poor, and price information is rare at farmer level, tilting market power excessively in the direction of the few buyers. These factors result in the Liberian farmer getting the lowest share of the fob price in the sub-region.

One immediate priority is to explore the institutional options for regulating the marketing of tree crops generally, as a key way to ensure farmers get the return needed to sustain their incentives. To deal with the problem of low quality, it will be essential for regulators to work with the private sector on the supply of improved plant- stocks and mandatory certification of instruments used for quality and quantity assessment in the field (scales, hygrometers, etc.) to ensure that the products are meeting appropriate international industry grading, sanitary and phytosanitary standards. A way should be found to ensure the timely provision of market information and to agree on mechanism for the licensing and monitoring of buyers and exporters.

Oil Palm

Prior to the war, acreage under oil palm cultivation may have been as high as 27,000 hectares although total land allocated to the various operators was around twice that. Production was estimated at between 135,000 and 170,000 metric tons of crude palm oil and, at that time, generating enough palm oil to meet domestic household needs and may have made unrecorded exports to neighboring countries. Oil palm grows naturally, and rural households harvest and process the palm fruits.

Production has been situated in small-scale farms since the conflict, the large producers having shut down operations during the unrest and new concessionaires having recently entered. Production is essentially for domestic consumption, and currently runs at around 40,000 tons of crude palm oil. Suitable land is available and today's output is, in each case, well below the potential. Though it occupies an estimated 40,000 families and fills an important part of dietary needs, oil palm currently makes a limited impact on GDP and exports. Net imports of about 11,000 tons have been needed to supplement local production in recent years to satisfy domestic demand. There is regional demand (within ECOWAS) for palm oil that is unsatisfied and there are openings in international markets, as well. Growing demand for biofuel creates significant additional demand for palm oil, especially abroad, and may account for the recent entry by East Asian industrial concerns. A number of new concessions have been granted for the development of plantations, most importantly to subsidiaries of Malaysian and Indonesian giants. The conclusion of large scale concession agreements with the latter bodes well for higher production on the one hand, but environmental degradation likely to result from the replacement of biodiversity in the natural forest cover with monoculture.

Here, as in other tree crop subsectors, high among the constraints holding back progress are the absence over time of new plantings, problems with input markets, use of poor husbandry techniques resulting in poor quality of the product. The majority of the palm trees are old and of outdated varieties. Small holders have great difficulty accessing inputs. There is little downstream activity beyond limited processing for consumption. Still, the authorities believe in the potential of palm oil as a contributor to growth, a generator of inclusive employment opportunities, and a source of foreign earnings. There are about 27,000 hectares of plantations owned by Liberian parastatal companies which can be revived. Greater smallholder participation in the future of palm oil will surely add to making its growth contribution become a more inclusive phenomenon.

Rubber

In the pre-war years of 1987-88, rubber accounted for 6-7 percent of GDP. This proportion rose to 11-12 percent in the post-war years. The contribution of rubber to export earnings went from 20-24% in the pre-war years of 1987-88 to about 70% of all commodity exports by 2010, explained largely by the cessation of iron exports during war years and its delayed recovery. Even so, rubber output has actually been declining as demonstrated in Table 1.10, due to low international rubber prices and declining sap levels due to the advanced age of trees. This will begin to change and rubber certainly has further potential, with policies and strategies being set in motion to strengthen its contribution to national development. Liberia's rubber covers about 400,000 acres, of which concession rubber accounts for 40-45 percent with the remainder being small holders' rubber, a good deal produced in out-grower schemes where output is sold back to the concession owners. Because of its high cash generating potential, rubber is currently the preferred tree crop for small farmers. The Ministry of Agriculture estimates that in 2008, foreign-owned concessionaires and Liberian commercial farmers employed over 14,000 people through and contributed $40 million in wages to the economy.

Constraints to further development of rubber tree crop potential apply more to the smallholder farms than to concessions. There is an issue of age and quality of the tree stocks, and linkages with the rest of the economy are limited. Most rubber trees, on private as well as concession farms, have reached the end of their active lives, and need to be replanted. While the large concessions have been able to maintain production from their old stocks, the felling of trees for charcoal and "slaughter tapping" in the war years have reduced production in small farms. In addition, the stocks on most of the small farms that have seen new planting consist of unimproved germ plasm in contrast to the improved varieties planted on industrial estates. Finally, local processing is still limited to the production of latex and coagulum.

In their latest Agriculture Sector Strategy, the authorities plan responses that emphasize a rethink of strategies towards the sector and the creation of institutions to assist operators. The key steps planned include production of a strategy document, a Natural Rubber Development Strategy. The establishment of a Rubber Development Fund is projected. It will have responsibility of providing financial assistance to smallholders. The existing Rubber Development Authority will be transformed into a Rubber Advisory Service. In addition, the authorities envisage the implementation of specific actions to deal with the problems of ageing farms, low productivity and the absence of forward linkages. First, they would like to institute a way of providing to the industry essential inputs that lead to the cultivation of more high-yielding, early-maturing rubber trees. The second goal is to strengthen the training of farmers in best practices in planting, maintenance and application of chemicals (fungicides, insecticides, fertilizers, and herbicides). The third goal is the promotion of value addition over the long term by the production of a range of downstream rubber products. These are sensible goals, but the public sector role needs to be carefully designed. For instance, while the idea of a facilitating access to finance to farmers is a good one, creating a Fund in the public sector for that purpose warrants reconsideration. As already experienced in the 1960s and 1970s, borrowers with political connections often fail to repay. The planned new strategy should be used to study better approaches, including those that induce greater private lending into the sector.

Forest Products

During Liberia's 14-year civil conflict, logging and timber exports accounted for 50-60% of the country's foreign exchange earnings and contributed to 26% of GDP in 2002, up from a 15% share in the mid-1990s. There were high-value and mature timber stands available and ready to be harvested. Leaders of warring factions found ready partners who eagerly facilitated the harvest and marketing of the products. However, mismanagement of these resources and their use to fuel the conflict led the UN Security Council to impose sanctions on timber exports beginning in 2003. These induced GOLR to develop policies recognizing forestry as an "extractive industry" leading to compliance with the Extractive Industries Transparency Initiative and enabling the lifting of sanctions in 2006. Despite this progress, deforestation during the conflict has contributed to the severe destruction of forest resources and African Development Bank considers Liberia's forestry sector to be seriously threatened by unsustainable exploitation.[42] Estimates suggest that less than one third of the remaining forest area within Liberia is "undisturbed" and intact. This represents severe threat to the largest remaining segment of the Upper Guinea Forest ecosystem and unless contained could accentuate the negative effects of climate change in the sub-region and continued loss of biodiversity. Drivers contributing to the continuing high deforestation rate include:

- Encroachment by communities
- Unregulated logging, mining in forests and pit-sawing
- Unsustainable shifting slash and burn agriculture
- Poor sector supervision and uncontrolled cutting for use as fuel.

[43] African Development Bank, Forestry and Natural Resources Management Support Study for Liberia, June 2011

Liberia's forests have great value to the population as a source of fuel wood, food and other household needs if they can be managed sustainably. At its peak in 1989, the industry employed around 25,000 full-time workers. The major constraints to expansion is the lack of basic infrastructure such as paved roads, interconnected rail network, electricity and modernized seaport to handle exports. With the refurbishment of the port at Greenville, the export of logs will soon resume at substantial levels.

Fisheries

Liberia's fisheries sectors contribute about 3% of GDP and provide employment to an estimated 37,000 fishers and processors. Before the war, most industrial fishing companies had adequate processing facilities and were engaged in exporting frozen shrimp and fish to Belgium, Greece, UK, and the USA. Fish distribution and marketing from the coastal area to the interior was handled through a system of depots and agents, but this activity ceased due to civil strife and deterioration of roads. The marine sub-sector includes capital intensive and artisanal fishing in a 20,000 km² ocean domain, with artisanal fishing providing livelihoods for about 33,000 full time fishers, of which 61% are Liberian and 60% are female. Liberian fishers are mainly of Kru origin while the foreigners are mainly Fanti and Popoe who migrated to Liberia from Benin, Ghana, and Cote d'Ivoire. Recent additions of Gambian and Senegalese fishers are operating in the marine waters of Cape Mount County whereas Malian and Fulani fishers operate in inland areas. With improved connectivity to inland markets from better roads, Liberia's fisher-folk will gain expanded markets for dried and smoked fish which is in demand in the interior.

Marine fishing grounds hold considerable maritime fish resources such as tuna and other pelagic species. Crustaceans such as shrimps and lobsters are less abundant but fetch a higher value. The estimated maximum sustainable yield (MSY) of the continental shelf area was 180,000 MT per year before the war. Liberia also has approximately 1810 km of rivers, plus numerous perennial swamps and inland water bodies with high potential to increase production. The estimated MSY of inland fishery is 40,000 MT per year but it is estimated that illegal fishing costs Liberia about US $12 million annually. Aquaculture was developed in the 1970s and at its peak in the 1980s had developed about 450 ponds consuming a total area of about 17.5 ha across 159 communities around the country. However, most of these fell into disuse during the civil war and the output was estimated at only 39 MT in 2004.

Reform Measures Introduced in the Renewable Resources Sectors to Date

The authorities fully recognize that, while natural resources provide opportunities for growth and development, they can also be a source of economic failure and social conflict, if not used properly. They are also aware of the fact that country experiences vary and that avoiding the so-called "natural resource curse" requires "open" governance and sound economic policies.

On this basis, the government has adopted an approach to natural resource development that consists of putting in place institutions whose purpose is to promote good governance (transparency, rule of law) and overall good conduct among actors within the sectors. The country went further in this direction by acceding to the Extractive Industries Transparency Initiative (EITI), becoming designated as compliant in 2009. In so doing, it became the first African country to achieve this status and the first to include logging within the initiative.

The first set of actions promoting good governance was taken in the forest products sector. In early 2006, immediately upon assuming power, the government cancelled all forestry contracts and also reviewed 95 contracts and concessions granted by the predecessor National Transitional Government of Liberia and its predecessors. Subsequently, it passed a National Forestry Reform Law (NFR) in 2006 to strengthen oversight and regulation of the forestry sector. These steps paved the way for the United Nations Security Council to lift the sanctions that it had placed on Liberian timber exports and also facilitated the signing of a Voluntary Partnership Agreement with the European Union.

These steps, while promising, have not yet achieved the desired level of progress with respect to over-arching land reform, a critical priority which must be addressed in the coming years. For instance, the new NFR law specifies that "All forest resources in Liberia are the property of the Republic, except communal and forest resources privately owned which have been developed through artificial regeneration." Under this legal regime, timber assets and forestland have effectively become two separate types of property. The legal reality is that communities may hold formal title to their customary properties on which are included substantial forestlands, but they actually have no rights to exploit or extract the trees present on the land since the State has been given tenure pertaining to their prospection, utilization, and export. This dichotomy exemplifies the complex problems associated with land tenure and overlapping property rights in Liberia.

With respect to agriculture, Liberian authorities aspire to build a revitalized and modernized sector that contributes to shared, inclusive and sustainable growth and development. To achieve that goal, they plan to implement a number of policies in the sector generally, and add to these specific policies for each subsector. In 2006, GOLR issued a Statement of Policy Intent for the sector and a short term recovery plan. This was followed by a Comprehensive Assessment of the Agriculture Sector – Liberia project that reviewed the role and contribution of the sector to recovery and development. The findings were subsequently used to develop the

National Food Security and Nutrition Strategy (FNSNS) and the Food and Agriculture Policy and Strategy (FAPS). The NFSNS was adopted by government in 2008 to ensure that "all Liberians have reliable access to the food they need and are able to utilise that food to live active and healthy lives". The strategy prioritizes the needs of food insecure and nutritionally vulnerable and lays out actions Liberia must take to achieve that end. Liberia also published its FAPS in 2008 with the aim of taking Liberia from "subsistence" to "sufficiency" by 2015. FAPS identifies specific sector and subsector policies and strategies to revitalize agriculture, placing the accent on policies and strategies that will engage large number of smallholders in the sector. FAPS envisions "A nation with food and nutritional adequacy and security enabling a nourished population, thus contributing to optimal health, education and training, economic growth and development, and improved and sustained quality of life of the people".

Liberia has also committed to the Africa-wide Comprehensive Africa Agriculture Development Program (CAADP) for which it has developed LASIP, the Liberia Agricultural Sector Investment Program. Under this program, African states commit to trying to achieve a sustained pace of 6% annual growth until 2015. The investment plan includes four sub-components on: (1) food and nutrition security, (2) competitive value chain and market linkage development, (3) institutional development and (4) land and water development. Under component 3 the emphasis is to revitalize both research and extension systems beginning with restoration capacity in the Central Agricultural Research Institute. CARI will be encouraged to develop the supply of breeder seeds so that the private sector can engage in seed multiplication to improve the supply of improved planting materials. Connected with this, MOA plans to revitalize extension services by partnering with domestic universities and colleges. A National Agricultural Innovation System is to be established to support these efforts and Farmer-Based Organizations (FBOs) will be promoted.

In the area of farmer assistance with equipment, inputs and pest/disease management, the policies will tackle the issue of farmer access to tools and planting materials through the creation of a unit within the Ministry of Agriculture (MOA) to serve as interface with the farmer on acquisition and use. As to pest/disease management, the plans envisage the establishment of a Plant Protection and Regulatory Bureau within MOA to work with the extension services in offering the outreach to farmers.

In food crops, the focus is on rice. There the key policy under the Liberia National Rice Development Strategy (LNRDS) is to aim at "sustainable" self-sufficiency, with reliance on improved technology including mechanized cultivation. In the tree crops subsector, the plans are to increase both production and productivity in rubber, oil palm, and cocoa and coffee, with an emphasis on raising the competitiveness of small farms. This will be approached by creating linkages between out-growers and processors; improving land utilization and providing essential inputs; and strengthening investment incentives. The policies and strategies indicted above are likely to be very demanding of the conceptual and management capacity in government. In addition, GOLR is having difficulty meeting the CAADP target of recurrent 6% annual growth in agriculture. As regards CAADP's recommended investment target of 10% of annual budgets devoted to the sector, Liberia is allocating approximately 3% of its ordinary budget to this sector and is making large, complementary investments in rural feeder roads to fill the gap.

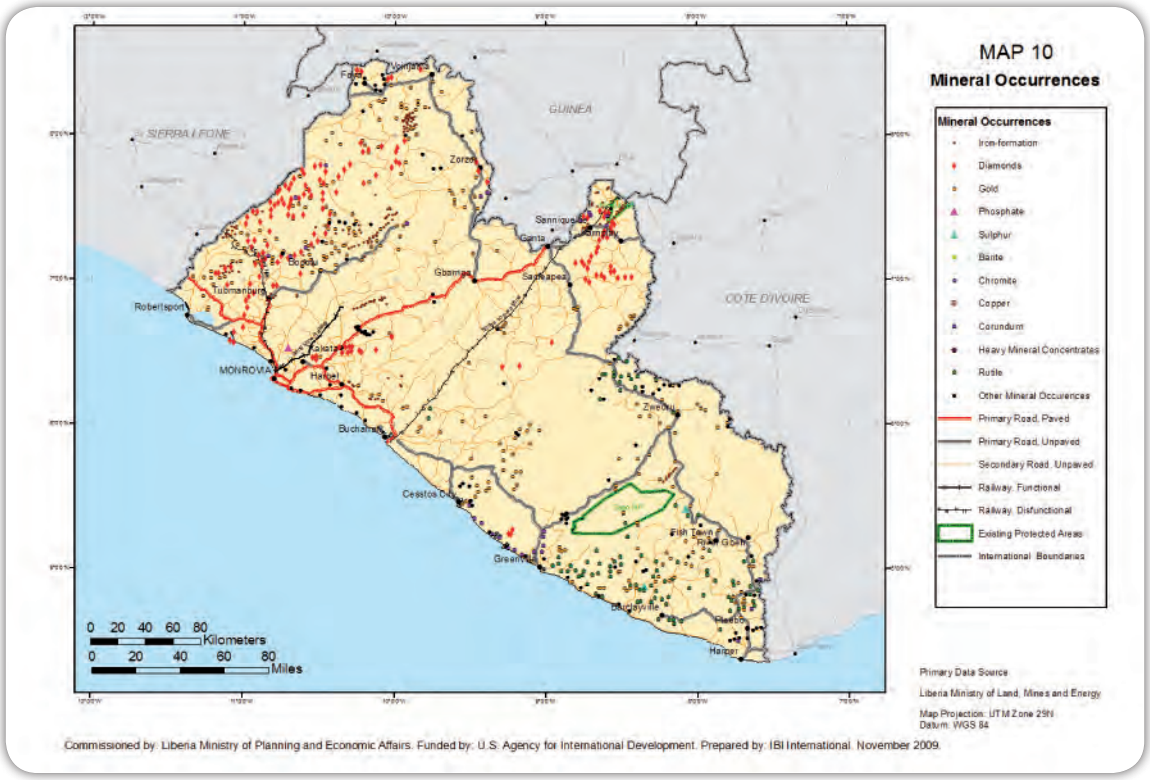
All in all, while all these reforms and initiatives are essential for tapping the latent value from renewable sectors, they all depend upon successful and enduring reforms in the sphere of land tenure. None of them go far enough yet in tackling this issue.

1.2.7 The Contribution of the Non-Renewable Extractive Sector

Liberia is a mineral rich country, not just in ores and precious stones, but recent discoveries of off-shore oil have also been made. Discussion of the latter is included in the energy sector review under infrastructure. Iron ore, diamonds and gold are the principal minerals, although reserves of other metals such as copper, zinc, platinum, uranium, columbite-tantalite, bauxite, rutile and phosphate have also been found. Figure 9 depicts the geographic spread of nation-wide mineral potential identified by the Ministry of Lands, Mines and Energy.

In the pre-war years, the mining sector contributed more than 60 percent of export earnings and about 25 percent of GDP, the large bulk of which pertained to iron ore exports. The war put a halt to practically all formal mining activities but artisanal diamond mining continued during the conflict with as many as 150,000 carats per year that may have been produced. Alluvial artisanal gold production has also resumed in the post-war years, albeit at a level lower than that of diamond, with output estimated at not more than 30 kilograms. When iron ore production ceased during the war period, the installations went idle and part was pillaged, including the infrastructure.

Figure 9 Liberia Ministry of Lands, Mines & Energy Map of Mineral Potential



The end of the crisis has seen the influx of many mining companies. Licenses have been awarded to more than 120 companies for mineral exploration and, as was depicted in Figure 6, large areas of land are now under formal concessions governed by "Mineral Development Agreements." Indeed, the award of land concessions was a principal strategy deployed by Liberia in its initial post-conflict recovery period in order to regenerate a flow of foreign direct investment and get the economy moving again. The reactivation of activities began with the reopening of the erstwhile LAMCO works in Yekepa, and two virgin deposits, all in the mountains of Nimba under a Mineral Development Agreement (MDA) signed in 2007 with the new concessionaire, Arcelor-Mittal. They made the necessary investment to re-open the mines, are in the process of refurbishing the Yekepa-Buchanan railway line which will transport the ore to the port, and are making repairs to the port of Buchanan in preparation for the shipments. Other concessionaires have signed MDAs with the government to develop mines at other sites, the main ones of which are presented in Table 1.12.

Table 1.12 Major Mining Sector Concessionaires

Investor Name	Commodity	Location	Size	Contract Termination
Mittal Steel Holding A.G. and Mittal Steel Holdings (Liberia) Ltd.	Iron Ore	Nimba County	617 Sq. Km	2030
China Union (Hong Kong) Mining Co., Ltd. and China Union Investment (Liberia), Bong Mines Co., Ltd.	Iron Ore	Bong Reserves in Bong County	619 sq. km	2034
AmLib United Mineral Inc.	Gold, Diamonds	River Cess, Grand Gedeh, Monserrado	1,743 Sq. Km	2034
BHP Billiton	Iron Ore	Kitoma, Goe Fantro reserves	2,373 Sq. Km	2035
Putu Iron Ore Mining and Mano River Iron Ore Ltd.	Iron Ore	Putu Reserves	Not known	2035

Source: Ministry of Finance, Bureau of Concessions

The first ore shipment from the re-opened mines took place in July 2011, and exports are expected to grow exponentially in the coming five years. The output effect is estimated to raise the share of mining in GDP from about 3% in 2010 to about 20% during the period 2012 - 2015. Being a capital intensive activity, the various mining projects are expected to create a relatively small number of direct jobs, although their investment activities in infrastructure will generate several additional temporary jobs. The new iron ore concessions are planned to be the center of a new development strategy based on development corridors. This approach is conceived to avoid the shortcomings of the enclave nature of past concessions, including narrow local direct income base and low indirect income generation through the stimulation of activities in the zones occupied. The idea is to have concession-sponsored infrastructure (roads, rail, ports, power and water) catalyze activity in other sectors within viable logistics proximity. Explicit provisions are being made in concession agreements to that end. The inclusiveness and infrastructure spin-off features of the concessions sector are further explored in Chapter 2.

Meanwhile, artisanal and small-scale mining, mainly of gold and diamonds, has also grown but the job creation and sector size statistics are not well documented. Recovery rate from alluvial gravels for gold is minimal at 30-40%, reflecting inefficient practices; health and environmental hazards from mercury are deemed to be substantial.

Sector Governance

The future of mining holds good promise if high standards can be maintained in sector governance so as to avoid the resource curse and a narrowing of the national economic base. Cognizant of these challenges, and the fact that minerals are a finite resource, the administration has been working to update the legal, institutional and regulatory framework for the extractives sector. Sector policy comes under the jurisdiction of the Ministry of Lands, Mines and Energy. The new administration inherited a New Minerals and Mining Law adopted in 2000 during the regime of Charles Taylor. Interestingly, this law was promulgated by the Ministry of Foreign Affairs, revealing that its overall orientation was to position Liberia as a secure and attractive destination for foreign direct investment in mining activities. The law established that “Minerals on the surface of the ground or in the soil or subsoil, rivers, streams, watercourse, territorial waters and continental shelf are the property of the Republic of Liberia and anything pertaining to their Exploration, Development, Mining, and Export shall be governed by this Law.” It set out terms by which mineral reconnaissance, exploration and development would be authorized under Class C, B and A mining licenses respectively, awarded and overseen by an inter-ministerial committee. It also established that Class A development licenses would need to be accompanied by conclusion of a Mineral Development Agreement negotiated between the parties. The law provides, for instance, that a duly executed and authorized MDA will be binding upon the Government of Liberia and that Government may agree and be bound by terms set forth in the agreement:

- matters in the discretionary authority of the Minister, including matters that are, or could later be, subject to changes in regulation;
- fixing the fiscal and tax obligations of the other party for a period of 25 years, with 5 year periodic reviews to consider modifications if conditions have substantially changed;
- guaranteeing the right of the other party to be free from currency or other exchange controls with respect to proceeds of export sales and repatriation of earnings;
- Other terms it considers conducive to investment in the minerals and mining sector, including guarantees that subject itself to international arbitration and guarantees against nationalization or appropriation.

This law effectively established the principle that detailed terms pertaining to mining investments in Liberia are governed by negotiated MDA contracts in the absence of a developed regulatory regime. While incorporating the reciprocal rights of the contracting parties for transparency, it makes room for Liberia to protect its economic, social, and environmental interests. The renegotiation in 2006 of the iron ore concession with Arcelor-Mittal foreshadowed the application of these safeguards. The same applies to the renegotiation of the concession contract with Firestone Rubber Company, to increase the benefits for the Liberian people. Comparable new agreements have been reached to re-start oil palm production. While the use of MDAs is an attractive tool, they are not a guarantee that local communities will benefit from FDI in the resources sector. A key problem with them is that each one is a distinct contract and is thus governed under the terms of negotiated contract law to the extent that sector legislation is still in formulation. This allows for variability according to the negotiated outcomes.

Under the new administration, the legislative environment was strengthened by adoption of an accompanying Public Procurement and Concessioning Act (PPCA) in 2006 to set out a transparent and competitive auction system by which known mineral assets would be offered for concession. Under this act, a Concessions Commission was created and conferred with supervisory authority over all “concession entities” whether they are in the extractive or renewables sector. While this layer of governance has no doubt brought improvement, it still left the principle of statutory MDA contracts intact and, as such, vulnerable to the power of skilled negotiators, albeit in the context of heightened competition. With further experience in the sector, Liberia moved ahead in 2010 to adopting a Mineral Policy in 2010 to refine and further clarify GOL objectives and governance arrangements in the sector. Within the policy, the need to standardize MDAs is acknowledged in order to cut down on negotiated deviations from fiscal, environmental and other provisions. The policy further commits to fleshing out a minerals regulatory regime and states that MLME will assess the future relevance of MDAs once that is completed, acknowledging that this could permit Liberia to move towards better international practice with a system of exploration and mining licenses backed by comprehensive regulations which could obviate the need for MDAs.

Other governance improvements introduced in the new policy include explicit articulation of GOL intentions that the minerals sector must contribute to broad-based economic growth. In this respect, the policy aims to promote:

i. the re-investment of the resource rents into sustainable activities;
ii. the use of mineral infrastructure (logistics, power, water, telecoms, etc.) to underpin growth in other sectors;
iii. the maximization of down-stream linkages ("beneficiation") through the establishment of mineral-based value addition industries;
iv. the development of the up-stream linkages by establishing mineral supplier (inputs) industries (services, capital goods, consumables); and
v. the optimization of skills & technology linkages and the facilitation of "lateral migration" into non-resource-based sectors/activities.

The policy also acknowledges that mining makes intensive use of land and that conflicts in land use can arise and thus commits to establishing downstream mechanisms and processes for evaluating and arbitrating between alternative land use options, including recognizing the land use rights of local communities and securing appropriate compensation and resettlement arrangements if required. In addition, the policy obliges all mineral operations to conduct environmental and social impact assessments and develop management plans for approval by GOL. These must include provisions to redress physical impacts upon mine closure as well as measures for sustaining community livelihoods thereafter.[43] Finally, as noted above, the deliberate intention to develop spatial corridors off the back of concession-sponsored infrastructure is acknowledged. One possible weakness in the administration of this objective is the fact that the Concessions Commission has authority over concession entities and the activity they undertake, including infrastructure. While this makes life relatively simpler for foreign investors, it deprives the nation of bringing other expertise to bear in the oversight of concession operations such as the Ministry of Transport responsible for infrastructure standards, Ministry of Public Works charged with planning, coordination and delivery or Ministry of Commerce and Industry charged with MSME development. GOL might want to give some thought about how to bring the expertise of these Liberian institutions inside the "ring fence" of entities overseen by the Concessions Commission. Meanwhile, Table 1.13 demonstrates that one can already observe that Liberia has taken some lessons from its past experience in the structuring and award of new mining concessions.

Table 1.13 Contrast in Mining Concession Terms by Era

Attribute	Pre-Conflict Concess (ion (LMC	Post-Conflict Concessions
Exploration Period	3.5 years	3 to 5
Term	80 years	25 years
Area	3 million acres	247,000 acres
Taxes	Exploration tax, surface tax and royalties faded away to eventual total tax exemption	Tax code and better negotiations ensure that GOLR will get higher income
Infrastructure	Self-provided; self-serving	Self provided but with more emphasis on multi-use
Social services to employees	Not specified	Education, health, improved water for employees + contribution to community development now required

1.2.8 The Contribution of Other Productive Sectors of the Economy

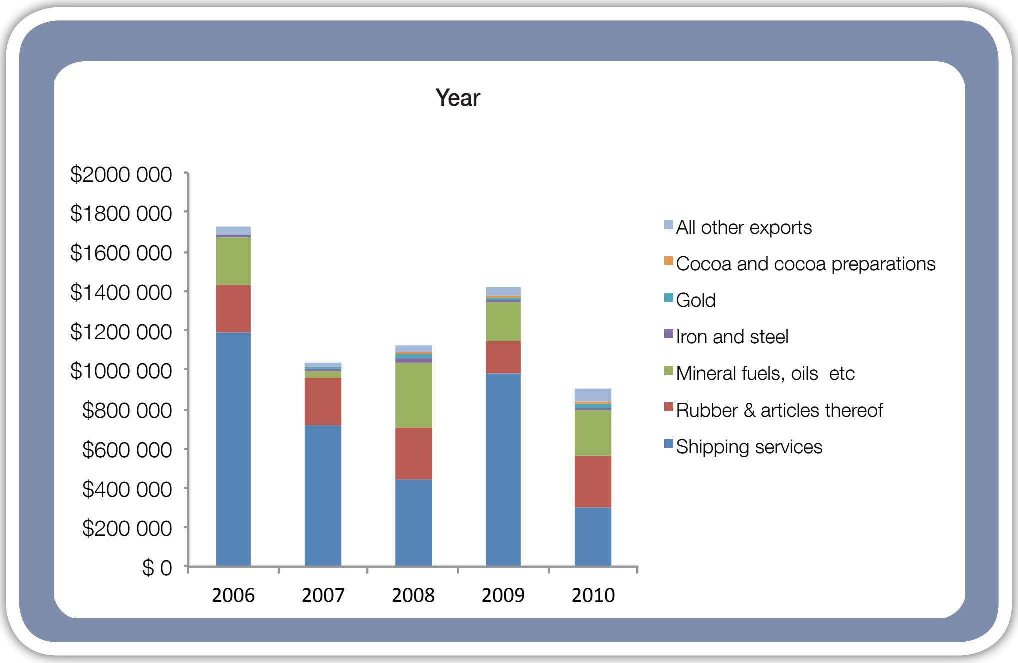
Liberia's miniscule industrial sector is characterized by a few large, generally monopolistic, manufacturing firms that produce a limited supply of goods for the domestic market. Outputs include cement, beverages, paints and varnishes, plastic and rubber products. Many enterprises were destroyed during the war and the sector is currently estimated to employ about 2,785 people, representing 0.25% of the nation's labor force. Government views industrial development as an important priority to create linkages with the extractive industries sector, thereby diversifying the economy and generating large scale employment. To that end a National Industrial Policy was developed and published by the Ministry of Commerce and Industry in February 2011. An expressed aspiration of Government is create Special Economic Zones to accelerate attraction of domestic and foreign investment into industrial processing and export development. The intention is to create jobs and also to provide for linkages between the renewable and non-renewable extractive sectors and encourage greater value added through industrial transformation. A forward look at the implications of this strategy is taken up in Chapter 2.

[44] One wonders how well the local content provisions are being implemented or supervised in practice and whether there are any complementary measures to incentivize local content other than the statement in the Procurement and Concessions Act that "The development of local small, micro and medium-scale enterprises (SMMEs),especially in the procurement of goods and services, will be encouraged". The National Investment Commission is reportedly working to upgrade the local content provisions, particularly in the oil and gas sector and this seems an important priority.

With respect to tourism, Liberia is endowed with many potential assets which require further development. These include 380 miles of virgin oceanfront, with sandy beaches punctuated by clean-flowing rivers and deeper inland the country has much of West Africa's surviving virgin forest which could offer potential for eco-tourism. However, Liberia is not recognized as having scenic attractions to draw international tourists, unlike Sierra Leone which had a vibrant influx of beachcombers from Europe in the years before their own conflict. Although the Ministry of Information, Culture and Tourism (MICAT) has drafted a list of 80 potential attractions nationwide, Liberia has essentially no international tourism industry and this absence is likely to persist for the coming years.

Liberia also has a unique history of serving as a preferred locale for international ship registry, the materiality of which, relative to other commodity exports is evident in Figure 10. Presently, approximately 3,750 ships sail under the Liberian flag, second only to Panama on a global scale and carrying an estimated 33% of US oil imports. The registry contributes on the order of $20million per year in revenues. However, the reality is that the industry is not presently creating jobs for Liberians. The Liberian Registry is administered on behalf of the Government of Liberia by the Liberian International Ship & Corporate Registry (LISCR, LLC), a U.S. owned company headquartered in Vienna, Virginia.[44] Whether Liberia can regain participation and maintain competitiveness within this services domain is not evident.

Figure 10 Importance of Shipping in Liberian Exports



Source: Int'l Trade Center

1.2.9 Current Situation and Reforms in Liberia's Private, SOE and Financial Sectors

Private Sector Development and Reforms to Improve the Climate for Business

Liberia emerged from its devastating civil war with a decimated private sector and the need for an improved business climate. Yet, Liberia knew from its past history that an attractive business environment is essential to attract investment. Consequently, the authorities launched into a reform program under PRS 1 designed to improve the conditions for business. By 2010, major progress had been achieved on the following fronts :

- Legislative Reform: Ten pieces of legislation have been passed, included a revision of the Investment Act, the first commercial code and the establishment of a commercial court;
- Business Registration: A new "one-stop shop" has streamlined the processes for business registration, reducing by half the number of steps to register a business and reducing the time required from 99 to 20 days-- leading more than 7 thousand people to register or re-register their business;
- Trade logistics simplification through streamlining of import and export procedures, including automation and revision of the customs code;
- Improved trust between government and the private sector achieved through public-private dialogue.

[45] "Country remains a Minnow in Marine Sector," published in *Doing Business in Liberia,* Financial Times, September, 2012.

As a result of these and other measures, Liberia was named as the "best global and regional reformer" of the year in the World Bank's Doing Business Survey for 2009. This recognizes that Liberia has made enormous effort to create a stronger enabling environment for private sector growth. Table 1.14 bears testimony to the areas where progress is being made and the areas which continue to present problems.

Table 1.14 Improving Business Climate

Ease of Doing Business	2011	2012
Ranking out of 183 Countries	155	151
Starting a Business	71	35
Getting Electricity	152	153
Dealing w/Construction Permits	126	123
Registering Property	176	176
Getting Credit	139	98
Trading across Borders	117	116
Enforcing Contracts	165	166

World Bank: Doing Business 2012

Meanwhile, two contrasting facts bring home the dichotomy which characterizes the private sector in Liberia. On one hand, Liberia has attracted $16 billion in FDI since the end of the conflict. On the other, Liberia's overall ranking on the 2012 DB index stands at 151 out of 183 ranked countries and it places the country higher than Ivory Coast (167), Guinea Bissau (171) and Guinea (179) but lower than Sierra Leone at 141. What these numbers actually show is that Liberia (and its neighbors) appears attractive to the foreign private companies able to respond to the natural resource potential on offer, but the sub-region as a whole is actually very under-developed with respect to an indigenous private sector. As such, it must be recognized that Liberia's suffers from horizontal inequity in its private sector, with power and privilege exerted by foreign and domestic elites and poorly developed capacity within the indigenous segment of society. Consequently, the "private sector" in Liberia has been characterized as having four segments, categorized according to whether the output is oriented towards domestic versus external markets and whether it operates in an environment which presents significant competitive pressure versus the opportunity to extract high "rents".[45] This paradigm is captured in Figure 11. The bottom right quadrant includes Liberia's indigenous fishing, farming and artisanal mining communities on the one hand, along with predominantly Lebanese and Indian permanently resident "foreigners" who own and run small retail establishments, hotels and restaurants on the other. What is vital to Liberia's future is that entrepreneurs from this quadrant are helped to develop and move into the competitive quadrant in the top right. What this segment requires, aside from favorable policies and upgraded skills and education, is better infrastructure. Small businesses need better, cheaper communications, better roads and transport infrastructure to reduce the cost of bringing goods to market plus lower cost production facilities to make their outputs competitive with imports Additionally, the bottom left quadrant should be presented with greater competition from new entry over time and the concession terms offered to the top left quadrant must extract taxation benefits, employment generation as well as the transfer of skills, networks and technological know-how. Recognizing the importance of developing the indigenous private sector, the Ministry of Commerce and Industry published its Implementation Framework for MSME Development in July 2011, placing major emphasis on the need to develop micro, small and medium enterprises, a new generation of entrepreneurs (including youth and women) and spawn a culture of entrepreneurship in the economy. Chapter 2 takes a deeper look at this key strategy in reviewing the approaches which offer best promise in generating inclusive, stability-enhancing growth.

Figure 11 Depiction of Liberia's private sector

	High-Rent Market Terms	Competitive Market Terms
Export-Oriented	Iron ore, gold and diamond miners, tree crop concessionaires, forestry concessions; **Est'd 12% GDP**	Smallholder tree crops, specialized agricultural product exporters, **Est'd 8% GDP**
Domestic-Oriented	Legislated & natural monopolies (eg. petroleum distribution/ utilities), protected sectors (cement), **Est'd 22% GDP**	Importers, traders, retailers, subsistence farmers and small tradesmen **Est'd 58% GDP**

Restructuring the SOE Sector

Reforms in the State Owned Enterprise (SOE) sector were also initiated during PRS 1 and this is an important complement to private sector development in order to reduce the crowding out that is often generated by monopolistic state enterprises.

The authorities are aware that much of the past economic mismanagement and corruption occurred in state-owned enterprises (SOEs) and other parastatal agencies. Plans to reform the SOE sector will not only engender greater efficiency in the public sector but should stop crowding out private business and create more room for SME growth.

The government's objective for SOEs, parastatals and regulatory agencies is to aim for a more complete restructuring in two parts. First, it plans to dissolve or privatize SOEs, parastatals and regulatory agencies that are moribund, unnecessary or more appropriate for private ownership. Second, there are plans to continue

[46] Eric Werker, "Private Sector Development in Liberia," October 20, 2010.

improving efficiency and economic governance within those that remain. For each SOE, parastatal or regulatory agency it will consider the full range of options, including liquidation, full privatization, privatization with appropriate regulatory controls, public-private partnership to leverage private sector capital for investments, retaining public ownership with a private sector management contract, or retaining public ownership with mechanisms to ensure improved operational and financial performance.

The first phase has consisted of establishing the criteria against which the performance and the appropriate reform for each SOE/parastatal/regulatory agency will be judged. The criteria to be considered include: (i) the appropriateness of government presence in the activity; (ii) existence of market failure which may be rectified by government intervention, bearing in mind the potential for government failure to outweigh market failure; (iii) access of marginalized groups to basic goods or services under full private ownership; (iv) strategic reasons for government involvement; and (v) opportunity and financial cost of government involvement. The second phase will consist of the following steps: (i) undertake assessments to determine the appropriate course of action for each SOE/parastatal/agency, the timing within which any restructuring should occur, and the process by which restructuring operations will be implemented; (ii) drAFT the necessary legislation to effect the rationalization of relevant SOEs for liquidation, privatization, public-private partnership or appropriate regulatory controls, and then facilitate its enactment and implementation; (iii) design and implement restructuring plans for SOEs, parastatals and regulatory agencies that are not to be liquidated, privatized, or transformed into public-private partnerships, to strengthen their management and governance, enhance their efficiency, and improve their operational and financial performance, possibly through the use of performance contracts or regulatory mechanisms; and (iv) undertake periodic assessments as to whether the existing structures of remaining SOEs, parastatals and regulatory agencies continue to be consistent with the government's objective of dissolving or privatizing those that are moribund, unnecessary or more appropriate for private ownership.

Concrete interim actions have begun to stem further losses. A number of SOEs and autonomous agencies identified as slated for dissolution now receive only minimal budget allocations while the dissolution is prepared.

These include the Agriculture and Industrial Training Bureau, the Bureau of State Enterprises and the National Food Assistance Agency. In others, the application of the GEMAP framework has been engaged, and the initiatives seek to improve financial and operational controls and practices. Others, such as the Liberia Petroleum Refining Corporation, have been internally restructured and have dramatically improved their financial and operational performance.

Overall, however, more progress is needed on SOE compliance with the Public Financial Management Law and the IMF indicated recently that a strategy is still needed to reduce and manage the fiscal risks posed by the SOE sector.[46]

Financial Sector Development and Reform Measures

An efficient financial sector is essential to realizing the private sector development goals articulated above as well as to poverty reduction, economic growth and social progress in general. The financial sector is dominated by the banking system, comprising the Central Bank of Liberia (CBL) and five commercial banks with 13 branches, mainly in Monrovia (with branches in Margibi, Bong, Nimba and Grand Bassa counties). There are also non-bank financial institutions — 20 insurance companies, 118 licensed foreign exchange bureaus, three money transfer/remittance entities and five microfinance institutions. Liberia has a dual currency arrangement, with the Liberian and US dollars as legal tender, and a market-determined exchange rate. While either currency can be used for any transaction, the IMF reports that most economic activity takes place in U.S. dollars, including the payment of taxes and government expenditures.[47] The financial sector is narrow and underdeveloped, characterized by limited financial instruments, a low level of financial intermediation, and limited trust among the public. Most transactions are cash-based, and there is room for modernization that could lead to efficiency gains.

There is a shortage of credit for SMEs and for the agricultural sector in particular. A number of systemic and institutional constraints have contributed to a low level of financial intermediation for these segments, including a high volume of non-performing loans, ineffective judicial procedures for loan recovery, high intermediation costs (especially in rural areas), inadequate credit risk management systems, few adequately trained personnel, and non-transparent corporate governance practices.

Central Bank efforts to cap interest rates also have the effect of reducing bank profitability, further constraining the supply of SME financing. In order to increase the reach, quality and sustainability of microfinance services to Liberian micro-entrepreneurs, GOLR's MSME policy statement asserts that, "In line with the National Strategy for Financial Inclusion and the Micro Finance Regulatory and Supervisory Framework for Liberia, Government will promote further growth of outreach, product offerings and sustainability of microfinance institutions in Liberia."

The government's financial sector reform strategy focuses on promoting competition and efficiency in the system to allow it to more effectively support

[47] International Monetary Fund, "Program to Support the Agenda for Transformation," PPT prepared for July, 2012 discussions
[48] International Monetary Fund Working Paper, "Dedollarization in Liberia—Lessons from Cross-country Experience," March 2009

development of the private sector, including in rural areas. This will call for, among other things, intensifying supervision and regulation of commercial banks and non-bank financial institutions, strengthening prudential controls and improving the credit risk assessment capacity of commercial banks, rationalizing non-performing loans, and improving the existing legal frame-work for enforcement of financial contracts for the recovery of loans. The central goal for the reform strategy is to drive towards a stable, sound and market-based financial system that supports efficient mobilization and allocation of resources to foster sustainable economic growth and poverty reduction.

Specific renovations to the system that would permit the attainment of this goal are many and demanding. Among them, the government plans to focus on the following: (i) modernizing the payments system; (ii) ensuring that commercial banks are fully capitalized; (iii) exploring ways to address over time the issue of the capitalization of the Central Bank of Liberia; (iv) encouraging a sustainable, well-managed microfinance sector as a means of broadening and extending financial services, especially to rural areas; (v) strengthening the legal framework to facilitate the collection of debt and enforcement of financial contracts; (vi) developing the necessary legal and regulatory environment to ensure that alternative frameworks for access to finance (such as leasing and equipment finance) can occur; (vii) laying the groundwork for developing markets for short-term securities and other money market instruments; (viii) improving transparency and efficiency in information-sharing among financial institutions on the creditworthiness of potential borrowers; and (ix) strengthening depositor protection and improving confidence in the financial system.

1.2.10 Capacity and Reform Measures in Liberia's Public Sector Administration

As was explained in the analysis of fragility, Liberia's dominant mode of governance for over a century was to overlook the value of human capital and ignore the potential of all members of society. This, followed by fourteen years of conflict, means that the country's stock of educated professionals and civil servants has been severely depleted. Literacy and skills among the majority of Liberia's population are dramatically low, particularly in the case of women. The entire generation of war-affected youth missed its opportunity for education leaving them ill-equipped for work and in many cases psychologically traumatized or physically disabled.

Moreover, "brain drain" caused the exodus of many of Liberia's trained professionals and others were killed in the conflict. Whereas all of these problems contribute to weaknesses in the public civil service, the final problem which plagues efficacy is the culture of patronage and nepotism discussed earlier.

To address these issues, GOLR created a National Capacity Development Unit (NCDU) in 2007 in the Ministry of Planning and Economic Affairs and adopted a National Capacity Development Strategy (NCDS) in February 2011 to reform, right-size and professionalize core institutions of the State[48]. Civil Service Reform (lead by the Civil Service Administration) and Public Sector Reform (lead by the Governance Commission) are under way, having started with a "Multi-Functional Review" to establish the current baseline staffing in all public and civil service entities and contrast this to the skills and competencies required. Starting from a base of 29,184 civil servants[49] in 2008, a sector-specific human capital development plan has been established to move Liberia through three time-bound phases of expansion in the national work-force, including recovery (2008-2011), transformation (2012-2015) and sustainability (2016-2020) phases. The task ahead is enormous and the importance of this key human capital development strategy cannot be overstated. One critical skills gap relates to the engineering, planning, construction and management skills required to implement large-scale infrastructure development to improve communications, resuscitate the ports system, repair and construct new power grids and build roads. These must also be complemented by public-private partnership knowledge and transactional experience in closing investment deals. While the gap between human capital requirements versus domestic supply has been calculated for many sectors including health, agriculture, mining, security and education sectors, the needs of these four principal infrastructure sectors has not been estimated. The exception is the ports sector, where the National Port Authority estimates a need to increase of staff by 57% across all levels to give it the capacity to carry out the revitalization works envisaged under its next generation poverty reduction strategy. This represents a substantial order of magnitude which is, without doubt, a valid proxy of the type of gap applicable to the requirements for roads, power and communications sectors.

While manual labor gaps can be closed in the shorter term, it is evident that the supply of engineers, planners and managers must come from longer term investments in education, both through scholarship programs overseas and the upgrading of Liberia's own academic and Technical/Vocational Educational facilities.

Associated with this plan are measures to expand the capacity of Liberian educational and training institutions to orient their programming to produce expertise in the needed areas. Target changes for realizing a more efficient civil service include, (i) right sizing the structure of the civil service to

[49] Ministry of Planning and Economic Affairs and UNDP, "Liberia National Capacity Development Strategy," Feb, 2011

[50] Source: Civil Servants Census, CSA January 2008 extracted from LISGIS survey of civil service institutions in 2005, corroborated with additional analysis conducted with CSA in 2008. Cited in National Capacity Building Strategy.

secure more staff members at mid-level with analytical and supervisory capabilities and fewer staff members at lower level; (ii) clearing out unqualified personnel who entered through the spoils system; and (iii) re-instituting merit-based recruitment. To meet urgent requirements during the recovery period, support to the civil service and public sector has been supplied through a variety of innovative programs to attract highly qualified Liberians to work in the civil service (using competitive salaries and performance-based recruitment) including the Senior Executive Service (SES), the Transfer of Knowledge of Expatriate Nationals (TOKTEN), and the Liberia Emergency Capacity Building Service (LECBS). These have supplied emergency, stop-gap measures to address human capacity shortfalls and provide the requisite leadership to drive Liberia's reform agenda, all of which need to be regularized within the national budget beginning with the second PRS. While there is a lot of discussion about the vital importance of civil service reform, it appears that progress has been stymied due to the political sensitivity of reducing ghost workers and laying off incompetent personnel. Hence, while the NCDS exists on paper, further progress is needed with implementation.

In the sphere of local administration, whereby public services in health, education and social programs are delivered to the populace, institutional capacity is also weak. Hence, Liberia's Governance Commission has been leading the participatory process of defining decentralization policy to empower local governance mechanisms to manage their own affairs. County-level governance structures are being reinforced by support from County Support Teams (CSTs) and all counties in Liberia have developed their own County Development Agendas to complement the PRS.

1.2.11 Key Findings Regarding Liberia's Current Socio-Economic Situation

This review of Liberia's socio-economic situation and initial poverty reduction strategies has brought to light four key findings:

- First is the observation that civil conflict caused Liberia to drop from a position as one of few middle income Sub-Saharan countries in the 1970s to its current level among the bottom rung on the human development scale. Brain drain has compounded these problems and Liberia now has a major challenge to re-build the capacity of its public sector administration and also nurture creation and expansion of an indigenous private sector.
- Second, Liberian authorities recognized that their pathway out of fragility would need to rely as much on consolidating security and the rule of law as it would upon revitalization of the economy and delivery of basic services. Given that many of the institutions and mechanisms essential to these functions were lacking or profoundly biased before the war, this has implied a wholesale effort at creating governance capacity anew, and not simply the resurrection of old structures.Under the Sirleaf Johnson administration, this process of governance improvement is underway in both political and economic spheres.
- Third, the extent of poverty, human dislocation and diminished activity in the economy presented Liberia with an urgent need to revive the economy. The administration relied upon reviving traditional engines of growth, including that from the mining concessions and commercial plantation sectors which were better able to respond to a reopening of the economy. These segments will soon resume exports on a large scale, at which point their contribution to growth and commodities trade will far out-pace, and possibly dwarf, the GDP contribution and pace of growth in the smallholder sector. This leads to the conclusion that government strategy going forward needs to focus a maximum of investment on those areas that will (a) expand the potential for endogenous growth in the smallholder and domestic private sector, and (b) foster linkages between concession enclaves and domestic communities to create employment, encourage the contribution of local content, transfer knowledge and build the capacity of Liberia's people.
- Finally, the "Lift Liberia" poverty reduction strategy correctly identified that the country's severely depleted infrastructure base represents a key binding constraint to resuscitating further growth in the country, with power and road investments representing the highest priority targets for urgent investment. This chapter continues with a deeper look into the current status of infrastructure and what more needs to be done before proceeding to an examination of promising growth strategies for the future in Chapter 2.

1.3 The Current Status of Trade

This section focuses on the role of trade, both regional and international trade, in the new development agenda. The underlying premise is that Liberia stands to gain from improved trade performance in terms of its stimulus to growth and job creation, both of which would contribute to stability. This assertion does not overlook the fact that there is still active ongoing research into determining whether trade causes growth or the reverse. It is based rather on the recognition that: (i) under the most conditions of most developing economies, the causation runs from trade to growth under certain conditions; and (ii) the growth impact of trade depends on the terms of exchange between the trading partners, and needs not always be favorable to each partner.

Where growth is concerned, we posit here that expanding trading opportunities would raise GDP through: (i) higher demand raising capacity utilization, and improving resource allocation; and (ii) learning and technology transfer raising productivity. In the subsections that follow, we examine Liberia's current performance with trade overall as well as within the region, as a basis on which to work out proposals for the future.

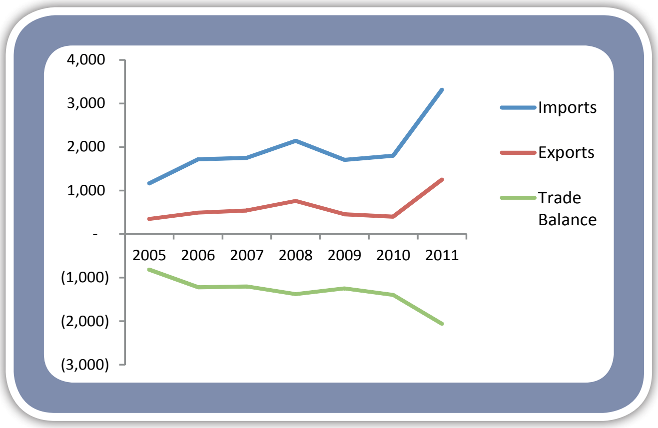
1.3.1 Liberia's Performance in International Trade

Liberia has generally had a highly open economy, with its exports in particular highly concentrated in composition and by destination. During the 1970-80s, the openness index (ratio of merchandise trade, the sum of exports and imports, to GDP) ran close to 100 percent. In the case of exports, this was mainly a reflection of the very high share of the natural resource content of the country's output. The iron ore, rubber and timber were exported by the concessions through their multinational channels to their traditional markets. The picture changed slightly towards the end of the boom period in iron ore production, bringing the ratio down some – to around 70 percent just prior to the beginning of the war.

This high level of openness has also been due to a significant extent to high import levels. In the period of the 1960s through the late-80s, the high import levels were partially due to a brisk transit and re-export trade with the rest of the West Africa. The Freeport of Monrovia, the use of the US dollar, and liberal trade policies supported this vocation, which provided incomes and jobs to many Liberians. Another peculiarity of the Liberian trade system is the role of its open ship registry. Owing to the large number of ships registered in Liberia and flying its flag, the non-factor services attributed to these ships add to exaggerating Liberia's services portion of trade.

The high openness of the Liberian economy continues in the post-conflict era and Figure 12 identifies the current trend of a negative trade balance (inclusive of the shipping services segment).

Figure 12 Liberian Trade Flows 2005-11 (US$ million)



Source: African Development Indicators, World Bank

Liberia's merchandise trade-GDP ratio averaged 87 percent between 2008 and 2011, the highest in the MRU (see Table 1.15).

Table 1.15 Comparative Trade Ratios in MRU States

Data 2007-2008	Liberia	Ivory Coast	Guinea	Sierra Leone
Merchandise Trade/GDP	130%	74%	68%	40%
Export of Goods & Services/ GDP	29%	48%	27%	21%
Import of Goods & Services/ GDP	50%	39%	30%	36%

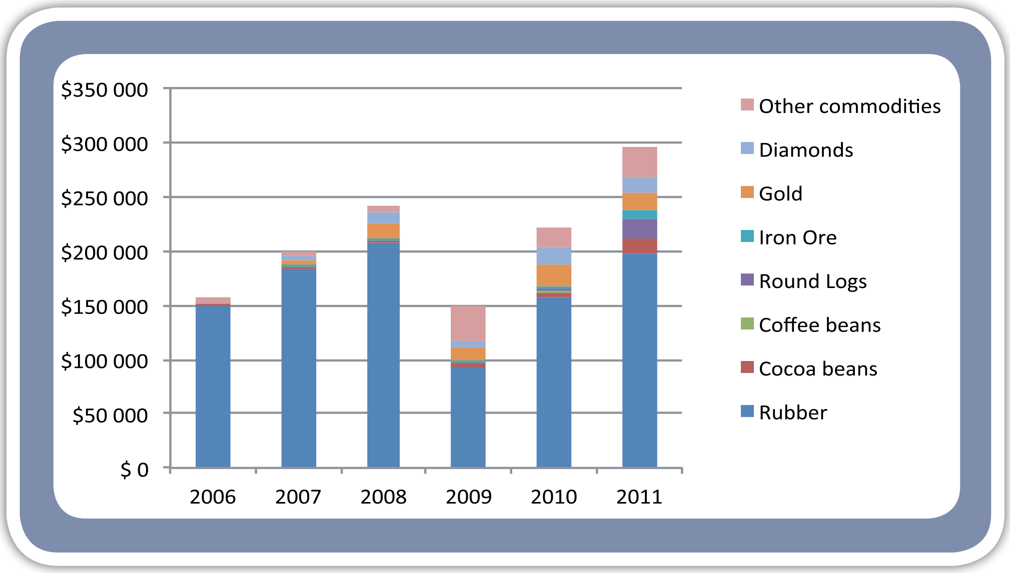
Source: African Development Indicators, World Bank

While its exports performance is only stronger than Sierra Leone's in the MRU, this is expected to increase once more concessions based production comes online. Liberia also leads the MRU in imports of goods and services relative to GDP, at 99 percent—a factor which is exaggerated currently by the high level of UNMIL imports. These numbers suggest that Liberia is building back to a level of trade performance which could have an element of providing transit and re-export trade to other parts of West Africa. The interesting question is whether this phenomenon creates the basis for taking steps towards encouraging higher sub-regional trade in imports passing through Liberia. This will depend in part on the competitiveness of Liberia's multi-modal transport infrastructure after refurbishment, including the extent to which concessionaires contribute to establishing multi-user road and rail installations and GOLR persuades MRU neighbors to make use of the same.

As it happens, there seems to be a modest cost advantage to other parts of West Africa procuring some imports through Liberia. In 2010, the average cost of shipping a 20-ft container of imports to Liberia was US$1,212. The cost was US$2,707 in the case of the Ivory Coast, US$1,391 in the case of Guinea, and US$1,639 in the case of Sierra Leone. This shows that Liberia may be able to rediscover at least part of its past vocation of being as an entrepot for regional import trade as long as the costs associated with re-exporting do not use up the difference in c.i.f. values.

Figure 13 presents the recent trend in commodity exports. This shows that, indeed, production is beginning to expand and exports are beginning to follow. The prominence of rubber in the commodity export mix is currently very pronounced, but this will recede when round logs, iron ore and cocoa begin recovering and the total volume of exports expands. Liberia's principal trading partners were Europe and the USA before the conflict, but Table 1.16 identifies that Asian countries are now entering the picture. This diversification will increase when Chinese and Indian mining interests reach the export phase and when Malaysian and Indonesian plantation interests begin exporting palm oil and other agricultural products.

Figure 13 Composition of Commodity Exports Recent Trends US $, 1000s



Source: Ministry of Commerce & Industry

Table 1.16 Pre and Post Conflict Trading Partners

Export Partners	1984	2012
Europe	60,6%	20,8%
N. America	20,2%	41,4%
Other	19,2%	0,7%
Asia	No detailed information	36,1%
ECOWAS		1,0%
TOTAL EXPORTS:	100%	100%

Comtrade Data for 1984, MOCI for 2012

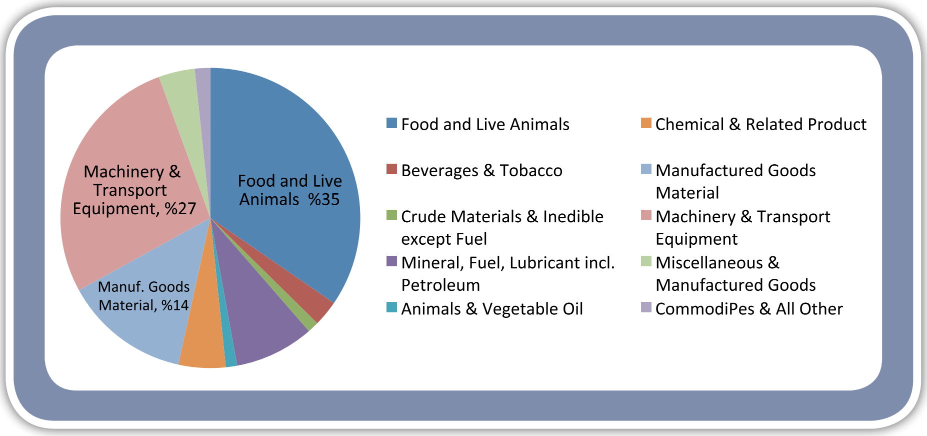
As is evident from the negative trade balance depicted in Figure 12, Liberia relies heavily upon imports both for foodstuffs (especially rice) and petroleum products as well as for machinery and transport equipment.

The net gap will persist for the next three to five years as investors continue to bring in a high volume of specialized equipment for mining and infrastructure construction, but will gradually decline as one-time import of capital goods subsides and progress in the agriculture sector reduces the dependence on food imports. Liberia has recently resumed the collection of imports data and Table 1.17 and Figure 14 present import data for 2011.

Table 1.17 Liberian Imports for 2011

DESCRIPTION	2011, Calendar Yr	% of Total
Food and Live Animals	$246 642 858	35%
Beverages & Tobacco	$19 830 335	3%
Crude Materials & Inedible except Fuel	$8 651 128	1%
Mineral, Fuel, Lubricant incl. Petroleum	$60 967 684	9%
Animals & Vegetable Oil	$8 695 003	1%
Chemical & Related Product	$36 181 250	5%
Manufactured Goods Material	$96 805 497	14%
Machinery & Transport Equipment	$195 488 116	27%
Miscellaneous & Manufactured Goods	$27 813 093	4%
Commodities & All Other	$11 922 988	2%
TOTAL	$712 997 952	100%

Figure 14 Composition of Imports, 2011



Source: Division of Foreign Trade, MOCI

1.3.2 Liberia's Performance in Regional Trade

Liberia's trade with the rest of Africa is quite small and that with her ECOWAS neighbors is smaller still. UN COMTRADE statistics suggest that Liberia's main regional trading partners include Burkina Faso, Mali, Nigeria and Senegal, but the lack of data on trade with MRU neighbors suggests that the majority goes unreported due to the informal nature of cross-border exchanges and a lack of capacity to track that which is occurring. Official data suggests that trade has been flowing mostly one-way from other MRU countries into Liberia across inland corridors. For example, almost 20% of Liberia's $673 million import bill in 2009 was sourced by the Republic of Guinea and this likely reflects their competitive advantage in producing livestock. [50] Cocoa and coffee also come into Liberia from Eastern Sierra Leone, but this is caused primarily due to the better road connections to the port of export on the Liberian side. However, anecdotal information suggests that Liberia is an important sub-regional supplier of palm oil and this trend is likely to increase as production of this commodity expands in the coming years. Another apparently unique Liberian product which is in demand is Liberian pepper, which is exported by air in reasonable quantities to Nigeria. Consequently, current levels of regional trade may be unimpressive, but there is significant potential remaining to be tapped.

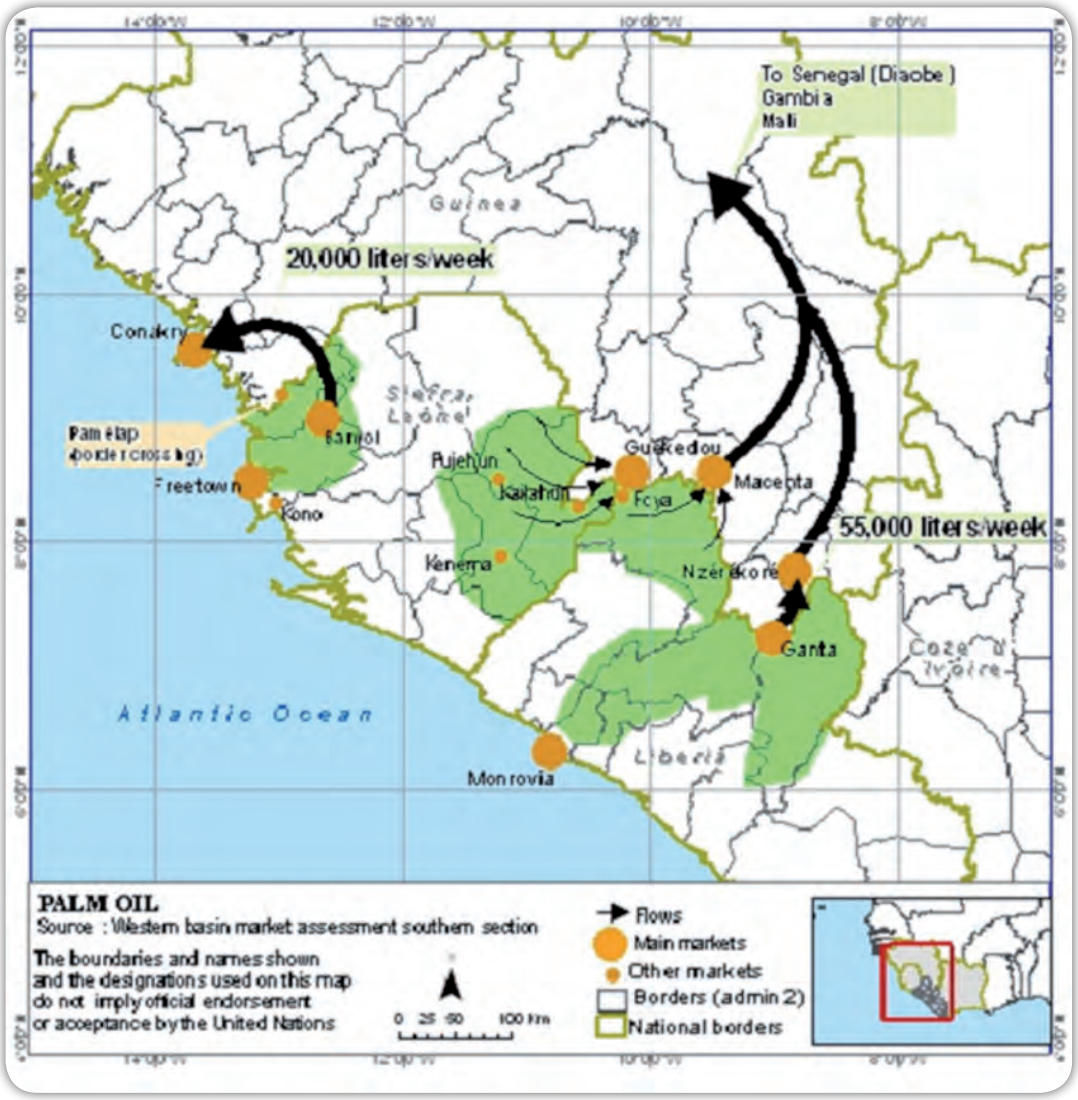
Liberia's engagement in cross-border trade suffered severe contraction during the conflict. While this is not revealed in statistical trade data, it is reflected in the devastation of regional markets that used to serve Sierra Leone, Guinea and Liberia plus those serving Liberia and Ivory Coast. A particular example is the disruption of the trade which previously took place in a cluster of markets that connected Western Liberia with Eastern Sierra Leone and Guinea. As depicted in Figure 15, five regional markets were located in Koindu in the East of Sierra Leone, Guékédou in Eastern Guinea plus Foya, Kolahun and Voijama in Western Liberia. This market cluster previously conducted a vibrant trade in agricultural produce and livestock, with a rotating schedule of days in the week during which each one with its dominant specialty would be open. Resumption of trade and revitalization of this market cluster has been retarded by security concerns in addition to the fact that road infrastructure providing access to these locations in was badly affected in Liberia and Sierra Leone during the war.

Nonetheless, there is cause for optimism about the resumption of regional trade. For instance, the town of Ganta (depicted as Ghanta in Figure 15) has emerged as a strategic location from which sub-regional markets can be served. As the most populous city in Nimba county and lying just south of the Guinea border, Ganta is at the crossroads of Grand Gedeh, Bong and Montserrado Counties and can become a viable hub and transit point for people, services and goods.

Figure 15 Market Cluster Formerly Linking Guinea, Liberia and Sierra Leone

[51] Government of Liberia Ministry of Planning and Economic Affairs, "Developing Liberia's Economic Corridors, Volumes 1 and 2", August 2011, page 28.

Figure 16 Sub-Regional Trade in Palm Oil



The Ganta border crossing is about a ten-minute drive from the City of Ganta and, aside from catering to Guinea-Liberian trade, also serves as a trans-shipment point for goods coming from further in the West African interior, bound for the Monrovia National Freeport.

Furthermore, a 2010 food security survey estimated that the wholesale palm oil market in Ganta handles some 90,000 liters of palm oil every week during the marketing season, of which 60 percent was exported to Guinea.[51] If true, those volumes would make Ganta one of the largest palm oil markets in the sub-region. Figure 16 shows a pattern of flows in palm oil across borders from Liberia.

Whereas one might conclude that the similarities between MRU economies limit opportunity for inter-regional exchange, there is sufficient diversity in food crop varieties (particular bean varieties, cassava derivatives, or cooking oils) among neighbors to the east (as between Ghana, Togo, Benin and Nigeria) to conclude that there is scope for more trade to develop within the MRU. Food scarcity in all the MRU countries further supports the conditions for expanded regional trade.

To enable further expansion several binding constraints must be addressed. Constraints lie equally on the underdevelopment of agriculture as well as the poor infrastructure in support of regional trade. Liberia's smallholders currently produce limited marketable surplus and their conversion from subsistence to commercial orientation is a key strategy which must accompany trade expansion. An additional impediment is the fact that inadequate cross-border roads have made it difficult for the sub-region to discover complementarities and trade opportunities. To address this critical gap, Liberia is not only embarking on a major crusade to expand its road infrastructure, but plans to do this in the context of strategic corridor development. While the growth potential from corridor development is explored in chapter 2, it needs to be noted that roads alone are not sufficient to close the

[52] "Cross Border Trade and Food Security: Liberia and Sierra Leone," FEWSNET and USAID, May 2010, page 20.

regional infrastructure gap, as markets and one stop border facilities are also required. At the same time, Liberian businesses point to a lack of trade support services and inappropriate government policies as major obstacles to trade. Slow application of trade protocols contribute to this problem. Despite ECOWAS's free movement convention, difficulties of passage from one country to another still persist.

1.3.3 Trade Initiatives

Liberia is currently faced with a large array of trade cooperation initiatives. The Ministry of Commerce and Industry has governance responsibility for trade. It has developed a Framework for a Trade Policy and Strategy and a Liberia National Industrial Policy and Strategy to guide efforts in these spheres. The aspiration is to strengthen cooperation with neighboring countries in the Mano River Union and with ECOWAS. At the sub-regional level, there is interest in revitalizing the four-member MRU. Meanwhile, ECOWAS is negotiating an Economic Partnership Agreement with the European Union on behalf of its members including Liberia, and the country is proceeding through phased adoption of the Common External Tariff (CET) in favor of regional tariff harmonization. This initiative faces delay due to concerns from regional partners on compensatory measures to cushion their economies from potential revenue losses. Furthermore, Liberia is developing its trade and investment relations with the United States in the context of the Africa Growth and Opportunities Act (AGOA). At the global level, Liberia has applied to the World Trade Organization (WTO) to begin the process of accession.

Ensuring that Liberia is prepared to benefit from other dimensions of the ECOWAS custom union framework, such as the ECOWAS Trade Liberalization Scheme, necessitates investing in improved trade policy formulation, administration and facilitation, all of which require improvement. Government is therefore grappling with practical issues that have the most immediate impact on the population and its trading capacity. Consequently, a laboratory for testing imports was established in 2011 and plans recognize that the country has a long way to go to establish quality standards and certification systems for commodity exports. A key remaining issue includes working out efficient yet socially acceptable policies for determining the price of sensitive imported products such as rice or cement. The regulatory regime for trade needs to be modernized, international best practices employed and predictability and transparency in trade procedures established. These are all works in progress.

1.3.4 Key Findings and Conclusions Regarding Liberia's Trading Profile

Liberia has had a high degree of openness to international trade, both in the past and at present.

The trade balance is currently negative and this reflects both a high degree of reliance on imports and the lag in resumption of exports. The trade balance can be expected to decline when the concessions sector gains greater momentum and agricultural output reco vers. Liberia had a certain degree of cost competitiveness as a hub for re-exports into the sub-region in the past and it remains to be seen whether this advantage can be regained. Current statistics do not adequately capture the patterns of regional trade, but there is evidence of informal cross-border trade in food commodities and it is clear that Liberia serves as hub for the supply of palm oil to the wider region. Binding constraints to expanded regional and international trade are portrayed in Box 4. To reverse this situation,

Box 4 Continuing Constraints to Liberian Trade

	Global Trade	Regional Trade
Security Constraints	Fragility and vulnerability to threats that could re-generate instability place Liberia at a disadvantage relative to other ECOWAS countries on the global trading stage	Local skirmishes and specific incidents of insecurity result in temporary or repeated border closings. Transporters seeking to keep goods moving face a choice between costly delays or the cost of bribes to make progress on "closed" transit routes.
General Constraints	Lack of adequate quality management systems to make products compliant with EU and other global market standards; Lack of export packaging and poor market information systems	Lack of a common currency to facilitate trade. Differences in payment systems, making cross-border payments cumbersome and a lack of procedural harmonization and phytosanitary standards
Infrastructure Constraints	Poor state of roads and lack of all-weather access. Poor equipment for crop drying resulting in mold & quality problems.	Lack of common border facilities and hospitable, all-weather markets for trade. Inadequate road links to border locations & weigh stations & scanning equipment.

Table 1.18 Indicators on Liberia's Stock of Infrastructure with Comparative Benchmarks

Infrastructure			Mano River Union Countries			Comparisons & Benchmarks		
Source	YR	Liberia	Sierra Leone	Guinea	Ivory Coast	Guinea-Bissau	Nigeria	Africa
Roads								
Total Network (km)	2	10664	11555	44348	80000	4383	193200	
% paved	2	5,38%	8,90%	9,79%	8,12%	32,79%	15%	18,30%
Density: km/1000 ha arable land	3	27,9	21,12	27,71	28,5	11,51	5,85	
Railways		3 rail lines, 2600 km.						
Rail Lines, total route km.	2012	Under rehabilitation & Privately operated by mining companies	Private only	3 private mining lines: 382 km	Active, 693 km		3528	
Ports		Monrovia port: container & general cargo concession						
Principal Port: Container Operations	2012		Freetown: Concession Operator; Mineral ports under licensed use	Conakry port: commercial; Kamsar: mineral	Port of Abidjan	Port of Bissau: Commercial, mining, fishing, petrol cargo		
Principal Port: Bulk Cargo		Buchanan & Harper for mineral & Greenville for lumber bulk cargo	License Use					
Power								
Total Generation capacity	2012	23 MW but 5.7MW peak load capacity	50 MW	200 MW	553 MW	13 MW		
of which hydro production		0,0%	77,2%	53,0%				15%
of which thermal production		High Speed Diesel	22,8%	47,0%				
Electrification ratio		LEC Serves about 1% of Monrovia	<10%	40,0%		<10%		
Electric power consumption			17 MW	48MW effectively available				
Electricity consumption per cap kWh	2006	Low supply from grid; most private generators	30,50		175	ECOWAS Avg = 88 kWh/year		
Communications								
Main Line density		Converting to wireless	0,52	0,52	1,73	0,29	0,86	2,83
Mobile density	2011	24,0	31,0	38,0	50,7	31,8	41,6	35,5
Internet Users	2011	N/A	16 000	90 000	660 000	37 100	11 000 000	60 901 474
Internet Penetration (density)	2011	1,5%	0,27%					
Price basket for internet (US$/mo)	2011	$1 200,00	$1 500,00		$67,71	$74,95	$50,29	$39,20
Telecoms investment w/PPI		17 000 000	26 300 000	18 000 000		39 500 000		
Water & Sanitation								
% pop w/Access improved sanitation	2006	32,0%	11,0%	19,0%	24,0%	33,0%	30,0%	38,4%
% Rural Pop w/improved water	2006	N/A	32,0%	59,0%	66,0%	47,0%	30,0%	50,9%
% Urban Pop w/improved water	2006	72,0%	83,0%	91,0%	98,0%	82,0%	65,0%	
1/Source: African Development Indicators data uses most recent data available for each country.								
2/ Liberian source = MOPW from 2011 Master Plan; Other country data from World Bank ADI								
3/ Road km/1000 ha arable land. Presents most recent data available: Guinea = 2003; G-B = 2007; Lib = 2001 ; SL = 2011, Nigeria = 2004								
4/ NPA Data from Sierra Leone; ADI Indicators from 2006 for Ivory Coast								

Liberia needs to orient its infrastructure investments so that it focuses not only on domestic integration, but increases connectivity with the region and the rest of the world. It also needs to continue improving its trade policies and capacity for trade facilitation and, of critical importance, develop agricultural value chains oriented towards markets rather than only subsistence. This will have to change as a pre-condition for expanded trade within the MRU which is desired by GOLR.

1.4 The Current Status of Infrastructure and Reforms Introduced to Date

The importance accorded to infrastructure in this exercise lies in the assumption that enhanced infrastructure facilities would contribute to Liberia's future socio-economic progress in at least four ways. First, better infrastructure services as end products in household consumption (such as water and energy) would raise consumer welfare directly, thus assisting poverty reduction. Second, enhanced infrastructure services entering into production (such as energy, water, and transport) would raise output, incomes, and employment and help reduce poverty. Third, enhanced infrastructure services in the regional context would contribute to economic progress by creating linkages and scale advantages. Finally, improvements in the infrastructure facilities linking communities (such as roads and telecommunications) would strengthen the sense of belonging to the same nation and thereby help national cohesion. This is important particularly in the case of trade in goods and factors, where the removal of policy barriers between national markets needs to be complemented with physical links.

The report recognizes that the effect of improved infrastructure in the Liberian economy will depend upon which role it plays. Generally, infrastructure works as a complement to labor, although it can also operate a substitute for labor when factor proportions are changed. Where it works as a complement to labor, the quality of labor needs to meet the required standards since infrastructure delivers its impact through raising productivity or helping to achieve cost savings. In the paragraphs below, the report takes stock of the present volume, quality, access and cost attributes of the current state of the infrastructure network and services in Liberia. This will provide the basis for suggesting conclusions on the adequacy of the country's stock of infrastructure both for its own needs and also for sub-regional use. In addition, the report recognizes that improved infrastructure requires accompanying measures to improve the governance institutions and policy framework at sector levels. These aspects are discussed at the end of Section 1.4 after an overview is provided on the current status of each infrastructure sub-sector. This section begins by presenting Table 1.18 to provide an overview of Liberia's stock of infrastructure in comparison to MRU neighbors and regional benchmarks.

1.4.1 Overview of the Road Transport Sector

Liberia's public road network falls short of the country's needs both in coverage and quality. The domestic network remains largely underdeveloped and access to the isolated south-eastern part of the country is particularly limited, increasing the isolation of that area. The 2010 CWIQ Survey 2010 indicated that only about 45 percent of households—nationwide, rural and urban— have access to an all-season road within 5 Km. Important paved roads connect Monrovia to the interior and a few reach as far as Guinea, Sierra Leone, and Côte d'Ivoire borders but they are in severe disrepair. Some roads reach to the borders, but do not extend effectively across them as is the case with the Liberia's road two coastal road segments. West of Monrovia, a segment of the Trans Africa Highway is passable up to the Sierra Leone border and across the Mano River Bridge but the "highway" does not continue on the Sierra Leone side. Coming into Liberia from Côte d'Ivoire to the East there is presently no bridge across the Cavally River and traffic must cross by ferry—a major impediment to regional trade. Private roads are built by rubber and lumber companies and are mostly un-paved, though current concession contracts with mining companies will likely result in an expansion of multi-user paved roads.

Estimates differ by source on the actual extent of Liberia's road network, with one estimate before PRS1 putting the total at 9,916 km and the updated Transport Master Plan putting it at 10,664 km in 2011. Drawing from the latter, the classification and surface type is presented in Table 1.19 and the network itself is depicted in Figure 17. About 60 percent of the classified network was in good to fair condition in 2010. This compares with 80-86 percent in the broad category of benchmark countries. In any case, the reconstruction of the roads network has been a major priority in recent years drawing in about $500 million in investment under PRS1. Financial support of the international community has been instrumental in this effort, and an appreciable degree of progress was achieved to restore a minimum level of functionality as indicated in Table 1.20.

Table 1.19 Liberia's Road Network

Estimated Road Network, Km in Class							
Primary		Secondary		Feeder	TOTAL		
Paved	Gravel	Paved	Gravel	Gravel	Paved	Gravel	Gd. Total
574	1 752	0	2 636	5 702	574	10 090	10 664

Source: Ministry of Public Works, with re-estimates by GOPA, GIZ

Figure 17 **Liberia's Road Network and Links to Major Air and Seaports**

Source: MPEA: Liberia's Vision for Accelerating Growth, Monrovia, 2010.

Table 1.20 **Road Works Achived Under PRS 1**

Type of Road	2006 Baseline	PRS 1 Targets	Achieved
Primary Paved Road	734	100	100%
Primary Laterite Road	1130	1187	100%
Secondary Laterite	2350	300	100%
Urban Laterite	-	150	100%
Urban Paved	-	69	100%
Feeder Roads	5702	400	100%

Source: MOPEA Deliverables Tracking; MOPW

Transport costs remain high, averaging $.20 per ton kilometer due to areas of poor road conditions and inadequate bridges. Unit costs per passenger-kilometer are even worse in low density rural areas where poverty rates are highest. This reflects one of many dilemmas faced by GOLR in reconstructing the road network because traditional measures of economic rates of return do not justify investment in low density rural areas.[52] Yet, from a stability perspective, it is vitally important to remove such areas from their social and economic isolation and include them in the exercise of national recovery and unification. Another major constraint to the sector is the high cost of road construction, with the cost of constructing paved roads about 16 times as high as for laterite roads. Yet, laterite roads deteriorate quickly and have annual maintenance costs estimated at over one-third their initial investment cost. In these circumstances, short term affordability versus longer term sustainability of road sector investments present a difficult trade-off to the authorities.

The following additional observations on network quality are made about a network that is undergoing active reconstruction. One set of judgments about adequacy can be based on how Liberia compares with its MRU neighbors, on one hand, and with the average country in sub-Saharan Africa, on the other. The volume and quality of Liberia's road infrastructure do not compare in a straightforward manner with either of these. Compared with the endowments of its neighbors, Liberia's does marginally less well than either Guinea or Sierra Leone in terms of the proportion of network that is paved roads. If judged by the criterion of the proportion of roads that are paved, Liberia clearly has some catching up to do if it is to at least match standards in its neighbors and the rest of sub-Saharan Africa. The picture looks different from the angle of density, or number of kilometers of road relative to reference measures such as space of national territory. In terms of density, Liberia's network measures 27.9 kilometers per 1000 square kilometers of arable land. This is about the same level of density as in Guinea but a little higher than in Sierra Leone. In contrast, the Liberian situation is a little worse when measured as density in terms of all land space. The relatively smaller land space of the MRU countries makes for a better density than the average for sub-Saharan Africa. On the other hand, topology makes their density worse than the average for sub-Saharan Africa, as measured in terms of the ratio of kilometers of road to all land.

A number of qualifiers are appropriate as riders to the density observations above. First, the network in Liberia is in worse shape, and needs more rehabilitation, than in most of its comparators. This is the combined result of two phenomena. The first is the insufficient attention paid over time to building a strong network.

As an example, there has been a history of inadequate engineering of roads. Tertiary roads, in particular, were often tracks, which later were widened into roads. The result was limited provision for culverts and this left the roads disposed to being washed away after a few seasons of heavy rains. The second phenomenon is the neglect and deterioration that the network suffered in the conflict years.

Second, road density relative to traffic loads does not favor Liberia. This is illustrated in vehicle counts. In 2010, average annual daily traffic (vehicles per day) on paved roads was about 600 for Liberia, compared with about 1,400 for resource-rich economies and about 1,300 for low-income countries generally. In the same year, the average annual daily traffic (vehicles per day) on unpaved roads was about 20 in Liberia, compared with about 50 in resource-rich economies and about 40 in low-income countries. Third, as a high rainfall country, Liberia's many bridges tend to wash out or become impassable. It has been estimated that further investment in bridge construction would yield the highest economic returns to investment in the roads sector.[53] Finally, analysts

[53] World Bank, "Liberia Infrastructure Policy Notes Prioritizing Investment for Diversification", background paper prepared for Liberia's High Level Economic Forum, October 2011.
[54] World Bank, Ibid. Estimates are that each bridge repaired saves delays that valued at US$1.90 per truck attempting to cross each bridge.

need to think more broadly when they judge adequacy/inadequacy of the network for development as routing is also important, notably which road goes where, what cross-border linkages are provided and what institutional governance accompanies the infrastructure to make it possible to achieve sustainable economic goals. Clearly, despite low traffic levels, there is a need to remove the Southeast from its current isolation and, in addition, there is a need to upgrade the quality of the Trans African Highway link from Zwedru into Côte D'Ivoire.

According to the Ministry of Agriculture, there are few trucks to transport goods in the country and, given the orientation to subsistence farming rather than production of marketable surplus, there is a weak market for trucking services. The Liberian trucking fleet was decimated during the conflict. Today there are an estimated 20–30 trucking companies in Monrovia with a total trucking capacity of less than 2000 MT. Truck carrying capacities are generally low, ranging from 5–20 MT per vehicle and most of the fleet has been imported as used vehicles into Liberia. These factors together with the poor state of roads contribute to Liberia's high transport costs and work to undermine Liberia's comparative advantage and reduce the competitiveness of its agriculture sector vis-à-vis other countries.

Government formulated four strategic objectives for the roads sector during PRS1, notably:

i) Rehabilitate primary roads to assure they are usable year-round, plus open more secondary and feeder roads around the country;
ii) Work in partnership with mining, logging and agricultural companies to rehabilitate or construct feeder roads as part of concession agreements;
iii) Rehabilitate all primary and secondary roads joining Monrovia to the 15 provincial capitals of Liberia so as to better integrate the country and reduce the isolation which exacerbates ethnic, sectarian, religious and social divisions, and
iv) Rebuild the public and private capacity for sustained construction and maintenance of roads

This strategy and related targets for the road transport sector remain relevant and will be carried forward into the next PRS plan. Discussion of PRS 2 is taken up in Chapter 2 and suggestions for road infrastructure priorities for the longer term are made in Chapter 3.

1.4.2 Overview of the Air Transport Sector

Liberia currently has more than 12 airports, including airstrips, serving domestic and international traffic. The major ones are Roberts International Airport (RIA) and James Spriggs Payne Airport. Others are minor airports, such as those in Foya, Greenville, Harper, Voinjama and elsewhere. The Roberts International Airport serves international traffic and Spriggs Payne serves regional carriers. The Liberia Civil Aviation Authority (LCAA) regulates the development and management of both domestic and international air transport infrastructure.

The state of infrastructure in the sector is poor. The facilities (runways, aprons, and terminal buildings) were not very developed to start with, and they sustained further destruction during the conflict. As a result, the sector's number one problem is the inadequacy of facilities. In addition, navigation and firefighting equipment are in sub-standard conditions. Frequent power cuts and inadequate storage (warehousing) facilities are other constraints.

Over the period 2006-07, the government set to work on the installation of a refurbished system of ground and navigational equipment at RIA, acquiring and installing rescue and firefighting equipment, and renovating passenger terminals and expanding the runway. A key near-term goal for the government was to upgrade RIA's capacity to international standards. Other plans include: (i) construction of a new international terminal building; (ii) installation of pipe-borne water, sewage, apron and taxiways to handle forecast passenger traffic of 350,000 per year from 2010 to 2020; (iii) construction of a new runway with updated navigational equipment and lights (pending determination of commercial feasibility); (iv) construction of a cargo terminal to service the West African hub; and (v) reacquisition of Liberia Domestic Airport Authority (LDAA) property illegally occupied by squatters.

1.4.3 Overview of the Maritime and River Transport Sector

Liberia has a long coastline, which stretches from Grand Cape Mount County past Monrovia to the South East of Liberia and ends at the extremities of Maryland County, on the border with the Ivory Coast, some 350 miles. In addition to coastal waters, Liberia has three great lakes, Piso, Sherman, and Teleh, as well as major rivers such as St. Paul leading into the Mano River, St. John and Cavalla. While these endowments would ordinarily be utilized to support trade and also provide freight and passenger transport in areas which are not currently served by other means of transport, the extensive presence of rocks in the rivers seems to make that unattractive.

Liberia has four seaports: Monrovia, Harper, Greenville and Buchanan, the location of which is portrayed in Figure 15 above. As a result of the civil war, facilities have deteriorated; cargo handling equipment is either inadequate or unavailable; and there is an inadequacy of marine crAFTs. There are navigational hazards owing to wreckages of sunken ship, insufficient navigational aids, and port infrastructure and facilities have not been maintained for some time. Monrovia currently handles almost all of Liberia's seaborne trade though the port of Buchanan is used for lumber exports and cement imports. Greenville is not presently operational due to a sunken ship constricting the harbor and a need for dredging and Harper is presently being used on a small scale to service UNMIL imports and provide services for coastal shipping. Coastal shipping is just beginning to revive and this mode of good transport will compete effectively with roads until such time as road connections to the South East are brought up to a better quality standard. The private sector is taking the lead to fill this niche in the market.

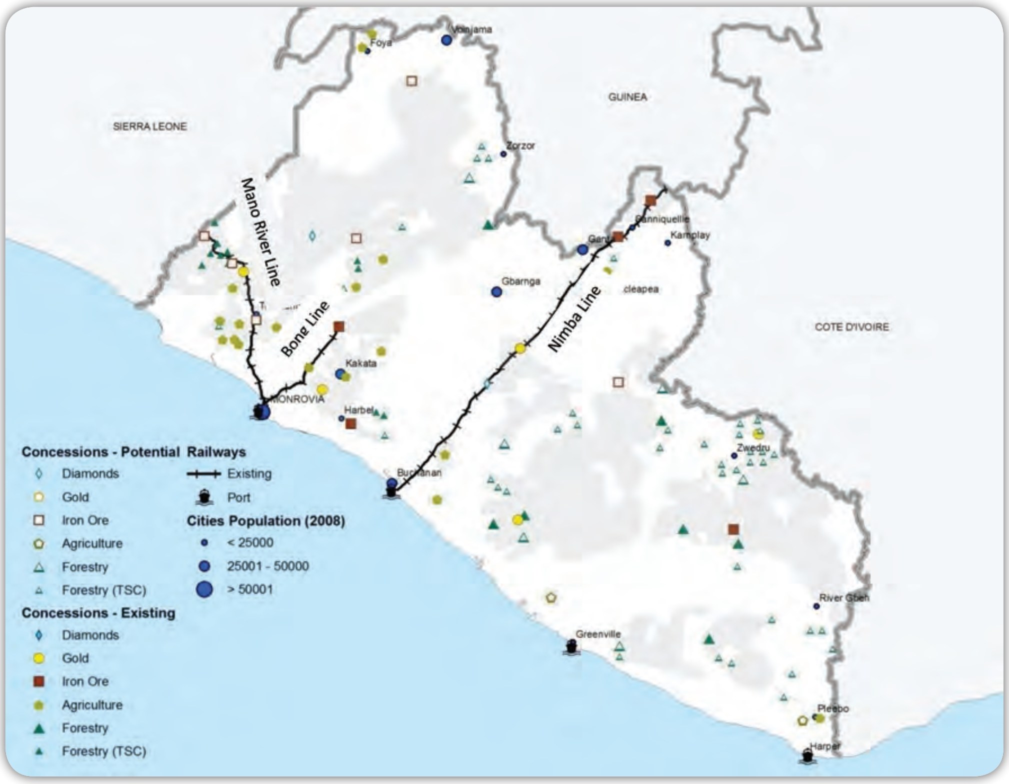
The rehabilitation and development of the National Port Authority (NPA) capacity is essential for development and overall peace and security in Liberia. Yet nearly all of Liberia's supply of fuel, food and essential imports are handled by NPA. NPA has been vested with the mandate to oversee all seaports in the country, and it is choosing to employ the landlord model of management, having awarded a BOT concession for the port of Monrovia and securing investment from concessionaires for upgrades to Harper and Buchanan ports. Government has assessed requirements for rehabilitating ports on an emergency basis, and has completed dredging of the Freeport of Monrovia to a new and more acceptable level of almost 11 meters. It has also completed a downsizing of NPA staff but, as revealed in the National Capacity Development strategy, it requires a new complement of staff with more sophisticated skills. Discussions are underway with respect to legal issues around the warehouses within the Freeport, a number of which have been sub-leased at exorbitant prices in relation to those paid under the original NPA leases. With support from the GEMAP, progress is being made in the installation of stronger systems of financial control and management in the operations of the port. Once reopened, Greenville will likely resume its pre-conflict role of serving as the primary timber export port and it could also develop as a significant export portal for palm oil and rubber, depending upon negotiations concluded with concessionaires.

1.4.4 Overview of the Rail Transport Sector

Prior to the war, Liberia had three operating rail lines, a "Mano River" line running from the river border with Sierra Leone inland to Monrovia, another running from Bong County to Monrovia and a third from Yekepa in Nimba Country to the port of Buchanan. These are depicted in Figure 18.[54]

These lines were originally built mainly to transport iron ore from the mine heads in the Western cluster and in Bong to the port of Monrovia as well as from the mines in Nimba (near the Guinea border) to the port of Buchanan. The Mano River line was largely destroyed and dismantled during the conflict and though it would offer the utility of serving the "Western cluster" mining region when that is ultimately re-developed, a large part of the land pertaining to this line has been turned over

Figure 18 Liberia's Rail Lines Existing Prior to the Conflict



[55] Barra, 2011 GIS Analysis cited in World Bank paper entitled "Liberia Infrastructure Policy Notes Leveraging Natural Resource Concessions" prepared for Liberia's October 2011 High Level Economic Forum.

to other uses. Consequently, rehabilitation of this railway will be complicated due to land acquisition challenges. The Nimba railway is due for rehabilitation under the terms of an MDA with Arcelor Mittal, the company which has resumed exploitation of the former LAMCO mines in Nimba. GOLR is requiring that the line be reconstructed to allow for multiple uses, as a result of which the investment cost will be considerable. Given this, Arcelor Mittal is exploring the feasibility of doubling the capacity of the railway and building a new offshore iron ore jetty at Buchanan in conjunction with other mining companies that many eventually develop a new mine at Kitoma or, alternatively, those that will be operating nearby across the border in Guinea. China Union is rehabilitating the Bong mines (formerly operated by German company Thyssen), for which it is operating the Bong railway with limitations. The capital expenditure required for the Bong railway and connected mineral pier in Monrovia is estimated at around $350 million and China Union will have the obligation to undertake this infrastructure investment. Consideration is being given to construction of a new railway to the Putu range in coming years to evacuate the large scale find of iron ore found in the Putu mineral deposit.

The incompatibility of rail tracks was a problem which existed before the conflict which made service interchange difficult. Low availability of locomotive wagons and spare parts was another, resulting in long delivery and turnaround times. Long delivery times were the norm due to reduced speeds from poor gauge and track conditions, traffic disruptions due to derailments, inadequate and defective signaling and communication facilities and poor locomotive reliability. Planning coordination issues such as these may not get the degree of attention warranted in the private refurbishment approach currently being employed and this matter will be discussed further in chapters 2 and 3.

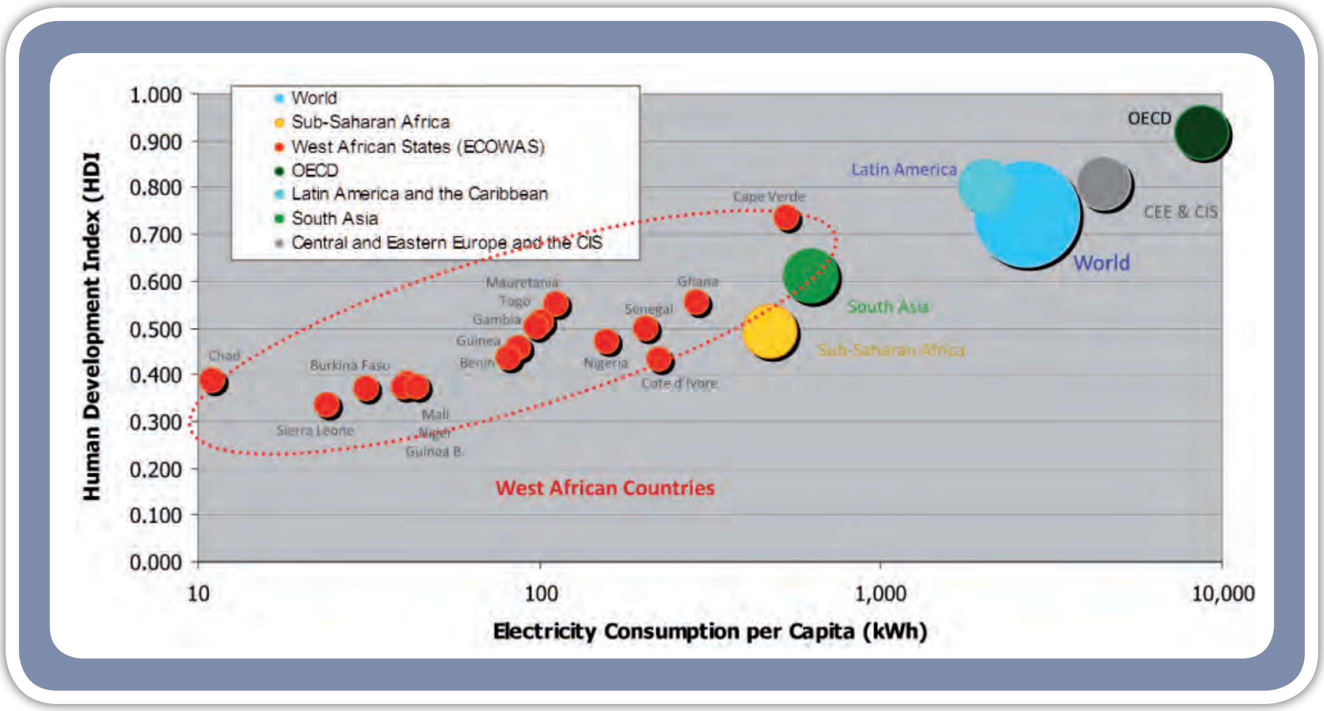
1.4.5 Overview of the Energy Sector

The energy sector of Liberia includes four main sub-sectors, including:

i. The power sub-sector, with Liberia Electricity Corporation (LEC) at center;
ii. the petroleum sub-sectors, including upstream petroleum, with National Oil Company of Liberia (NOCAL) at center and downstream petroleum, with Liberia Petroleum Refining Company (LPRC) at center;
iii. the rural energy sub-sector, with Rural and Renewable Energy Agency (RREA) at center; and
iv. energy sector governance, with Ministry of Lands, Mines and Energy (MLME) at center.

Energy infrastructure is one domain where Liberia is vastly disadvantaged relative to the rest of sub-Saharan Africa and the world, especially in the sphere of electrical power. Liberia has possibly the highest cost electricity on the continent and in mid-2011, Liberia's rate of access by the population to publicly provided electricity was close zero, with Liberia Electricity Company effectively serving about 1% of the Monrovia urban population. Comparable rates were 28.5 percent for sub-Saharan Africa, and 6% and 43.7% respectively for MRU neighbors Sierra Leone and the Ivory Coast. At present, West Africa's per capita consumption of electricity is among the lowest in the world and, within ECOWAS, Liberia figures at the bottom. Figure 19 shows that Liberia did not have sufficient electricity consumption per capita to even be plotted when this graphic was prepared in 2010, but

Figure 19 ECOWAS HDI and Electricity Consumption Compared to Other Parts of the World



it would be situated close to Sierra Leone if included on this grid. This emphasizes the important relationship between low electricity consumption and low human development.[55] The implication is clear: investments in Liberia's power sector are critical to improving national welfare, especially if measures are taken to improve rural access to power. Liberia's insufficiency is the result of low public investment in the sector in the past, made worse by the destruction of installations during the 14-year civil war.

Prior to the war, the national power utility Liberia Electricity Corporation (LEC) operated a Monrovia power system as well as a rural electrification system. The Monrovia power system functioned with Mount Coffee Hydro Power Plant, contributing 64MW of generation capacity plus a gas-turbine thermal power plant, contributing 118MW of total generation. Both were totally destroyed in the conflict. The Monrovia system supplied electricity to Monrovia and some outlying areas, including Kakata City, Tubmanburg City and Buchanan City. The rural electrification System operated eleven individual diesel stations. The conflict resulted in looting and vandalism of energy infrastructure, including power plants and substations, transmission lines, as well as petrol storage tanks and depots. The reliance upon private generators is widespread. With the worst over by 2005, steps were progressively taken to restore the electricity power sector. Approximately 23 MW of power is now provided to parts of Monrovia and this has been achieved with capacity installed and emergency programs supported by development partners. Transmission is based on a 66kV transmission grid and the distribution grid consists of both 33kV and 22kV grids with connections limited to about 3100 customers as at December 2011. All of this is currently provided through costly high speed diesel generation. Consequently, as depicted in Table 1.21, Liberia currently suffers with the highest cost of electricity both in the sub region and possibly on the African continent, presenting Liberia with a severe impediment to economic growth. To introduce management efficiencies within the recovery program, MLME signed a management contract with Manitoba Hydro (MHI) in July 2010 and this is yielding good progress. An operating profit was produced in the first year of the contract and efforts are underway to upgrade information systems, commercial systems and the technical and management capacity to LEC staff.

Several new projects are now under consideration. The first envisions a reactivation of the previous hydropower system. To get this under way, a contract was awarded in 2008, with the aid of the US Trade and Development Agency (USTA), for a technical feasibility study for the rehabilitation of the Mt. Coffee Hydroelectric Facility. The study looked into the reconstruction of the power plant itself and the construction of a storage reservoir at the confluence of the Vai and St. Paul rivers. It recommended the installation of four turbines, with an individual capacity of 16.5 MW each, into the existing pits, and the construction of the powerhouse, intake structure, and substation. In addition, plans are on the books to have Liberia benefit from imports of electrical energy from exporting sources in the West Africa sub-region, through connecting itself to the West Africa Power Pool. A first one of these is the regional initiative to create a West African energy market by building a transmission line linking the Ivory Coast, Liberia, Sierra Leone, and Guinea (known as the CLSG), with the objective pooling the power resources of these four countries and providing access to least cost (hydro) power options in the sub-region. It is important that Liberia reconstruct Mt. Coffee in order to connect it to the CLSG transmission line and regional grid. Other options are also under study, including expansion of Mt. Coffee's capacity and possible installation of new hydro-electric plans on the Mano, St. Paul and Cavally rivers. Above all, the GOLR now considers the reconstruction of Mt. Coffee to be a national emergency and it is the highest priority infrastructure project currently on the books.

Table 1.21 Liberia's Electricity Tariff is Very High

Country	Avg Price US cents/ KWh	Total Cost per unit, US cents/KWh*	Historical Cost Recovery Ratio %
Benin	13,63	13,73	99,28
Burkina Faso	20,07	23,56	85,19
Cape Verde	22,81	23,34	97,73
Ghana	13,24	13,24	100
Liberia	54,00	32,80	100
Niger	23,95	43,20	55,44
Nigeria	4,41	7,55	58,42
Senegal	14,23	23,87	59,6
Sierra Leone	42,00		

* Incl. historical capital & operational costs per unit, but ops only for Liberia

Source: Government of Liberia, LEC and AICD, 2008

Box 5 Mt. Coffee Plant Destroyed in Conflict

[56] Energy and Power Study to Facilitate Interregional Trade and Exports in the ECOWAS Region, Background Working Paper prepared for AFDB RISP, November 2010.

In the meantime, the impact of power shortage on households and the business sector is severe. By 2012, few rural or urban residents had proper access to electricity and the bulk of the population depends on firewood, charcoal, candles, kerosene and palm oil, placing substantial pressure on the nation's supply of bio-fuel. Businesses are obliged to buy generators, maintain them, and pay for expensive fuel. The lack of reliable energy sources puts great strain on Liberia's forest resources, on one hand, and constitutes a severe constraint to the growth of enterprise and the delivery of social services, on the other.

The downstream petroleum sector is involved in licensing the importation of petroleum products and managing publicly owned petroleum storage facilities. This sub-sector is strongly market-driven, with private sector importing, distributing and selling petroleum products under the regulatory control of the Ministry of Commerce. The upstream petroleum sector is in a phase of exploration phase for oil and gas resources which is being achieved through exploration licenses and production sharing contracts with numerous international oil companies. To date, twelve of seventeen offshore deep-water blocks have been awarded and the remaining blocks are pending award. A first discovery of oil was confirmed in February 2012 and tests are now underway to evaluate the quality and quantity of the find.

To streamline the petroleum sector, GOLR plans to review and determine the most appropriate structures (public or private) and functions of the National Oil Company of Liberia (NOCAL) as well as that of the Liberia Petroleum Refining Corporation. It plans further to institute measures to improve product quality and profitability of the downstream petroleum sub-sector and expand and improve the petroleum product delivery service to rural Liberia. Debate is now occurring over amendments needed in the energy policy and petroleum sector legislation to address an institutional conflict of interest whereby the NOCAL currently functions both as an operator and a sector regulator. Measures are being contemplated to remove this conflict and adopt appropriate institutional separation of duties.

Work is just getting started for rehabilitation of the rural energy sector, with the RREA operating under Executive Order No. 23 since January 8, 2010 and a Bill to formally legislate its establishment being finalized. The RREA is preparing a national rural and renewable energy master plan and the agency will soon be implementing one micro-hydropower rehabilitation project in Yandohun, Vahun District, Lofa County plus various renewable energy pilots in Lofa, Bong and Nimba counties.

1.4.6 Overview of the Water Sector

Few water and sanitation facilities survived the war and conflict significantly undermined the delivery of water and sanitation services. Access to safe drinking water and adequate sanitation facilities fell from 37 percent and 27 percent of the population in 1990, respectively, to 17 percent and 7 percent respectively in 2003. Poor access to safe drinking water and sanitation services are major causes of illness and poverty. The impact of inadequate drinking water and sanitation services is greatest on the poor, who are badly served by the formal sector. Many people, particularly women and children, fetch water over long distances or pay high prices to vendors. In addition, water- and sanitation-related sicknesses put severe burdens on health services, keep children out of school, and undermine investment in agriculture and other economic sectors.

While significant progress has been made since the end of the war, still only 25 percent of Liberians have access to safe drinking water on a national basis (60% in the urban areas) and 32 percent have access to human waste collection and disposal facilities. Regarding solid waste management, the government has also begun to introduce improved management practices in Monrovia with the establishment of 120 collection points with waste skips and pad in place. Weekly haulage of solid waste in Monrovia increased from 980 m3 in March 2007 to 2,125 m3 in November 2007. Under this arrangement the secondary collection of solid waste from communal dumpsites has been outsourced to private service providers to collect the backlog and current daily generation of 700 m3.

The Monrovia City Corporation (MCC), which previously provided this service, has now assumed the role of a facilitator responsible for providing guidelines and monitoring adherence to them. In addition to this arrangement, primary collection of waste from households and other sources to communal dumpsites is being undertaken by community-based enterprises and other groups. This has provided jobs in solid waste management, while also reducing environmental and health hazards and enhancing the appearance of communities. There remains, however, no reliable landfill site in Monrovia and its environs.

Liberia is endowed with high rainfall and nine perennial river systems, many of which it shares with its neighboring countries. Indeed, Liberia's borders with Sierra Leone and Côte D'Ivoire are both demarcated by river basins. Water is also an essential requirement for agriculture and, fortunately, there is no shortage that would constrain expansion of this sector. Irrigation infrastructure currently estimated at about 1000 developed hectares is very limited relative to FAO's estimate of a potential for about 600,000 irrigated hectares. Irrigation investment could serve to increase crop yields and food security by enabling multiple harvests in a single year, especially of rice, but a more integrated approach to addressing land tenure constraints would be needed in order to tap this potential. Liberia does not currently have any policy document on comprehensive water resources development except for dislocated pieces of legislation on land, mining, forestry and water supply that relate to water resources.

1.4.7 Overview of ICT Sector

Prior to the war, the predecessor to Liberia Telecommunications company, (LIBTELCO) had a network capacity of about 10,000 telephone exchange lines, of which 80 percent was in Monrovia. By the end of the hostilities, this exchange had declined to fewer than 7,000 fixed lines and the country is now migrating to use of wireless technology.

During implementation of PRS-1, Government took measures to reform the governance of the communications sector, establishing key institutions with a division of responsibility between policy, regulation and operations functions. The Ministry of Posts and Telecommunications was given the mandate to handle policy related matters, the Liberia Telecommunications Authority (LTA) given a mandate as independent regulator and the Liberia Telecommunications Corporation (LITELCO) remained the national operator. Concurrently, licenses were granted to market entrant mobile phone operators such that phone services are currently provided by LIBTELCO plus and four others, notably LoneStar, Comium, Cellcom and LiberCell. As these were granted before the advent of sound regulation, market dominance by a few operators has become apparent, bringing to light the importance of ushering in broadband internet in the context of an open access policy framework. At present, access to cell phones is high with estimates that over 50% of Liberian households owning a mobile device by 2010.

Internet penetration is presently very low, estimated at about 0.5% due to high cost reliance upon satellite technology. Plans are underway to connect Liberia to the Africa Connect Europe submarine cable through which the country will finally gain access to high speed broadband internet. This offers the promise of greatly reducing the cost of internet services, increasing access and connecting Liberia into the regional ECOWAS Wide Area Network.

1.4.8 Policy Reforms and Governance Strategies in the Infrastructure Sector to Date

Tables 1.22 (a) and (b) provide an overall portrait of the legal, policy and institutional endowment applicable to Liberia's key infrastructure sectors at present.

Table 1.22 (a) The Governance Framework Applicable to Liberian Infrastructure Sub-Sectors

	Transport	Power	Telecommunications	Water & Sanitation
Policy	National Transport Policy & Strategy (NTPS) published Nov. 2009	A national energy policy has been approved but it has yet to be implemented. Calls for reorganization of MLME	Telecommunications sector policy established preceding adoption of legislation. Policy Framework for High Speed Broadband published	Intention to set up a National Water Resources and Sanitation Board to oversee the sector. It seems that policy is required.
Legislation	New legislation established Liberia Airport Authority to supervise & manage all airport facilities. NTPS recognizes "need to adopt" Open Skies Yamoussoukro decision	Parts of the policy need to be made into laws to provide for establishment of the Rural and Renewable Energy Agency and the Energy Regulatory Board	A Telecommunications Act was adopted in 2007. Promotes a private sector-led, competitive environment overseen by a permanent independent regulator	No specific information available
Regulation	Liberia Civil Aviation Authority: responsible for aviation safety & regulation of air transport	No sector regulator until the ERB is established. Discussions underway on what regulation to be delivered by whom. Thoughts are that MLME can be technical regulator and ERB to be economic regulator	Liberia Telecommunications Authority was the first regulatory entity established post conflict It is independent of Ministry and reports directly to the Pesident	NWRSB is to implement sector policy and provide technical support to municipalities and rural water and sanitation boards
Strategy	NTPS seeks to change role of GOLR and promote market-based competition in transport sector w/a larger role by private sector in financing, and operating transport infrastructure	Energy Sector Plan developed for PRS 2, covering grid power, rural energy, petroleum sector. As most power demand will come from mining concessions, strategy encourages them to invest in generation and sell excess into eventual regional grids	Sector objectives are to create an environment that promotes investment, relies on competition & market forces to foster sector growth and encourage wider access to telecoms services by the Liberian population	Liberia's objectives are to increase access to safe water supply and sanitation, to improve solid waste disposal and to improve national standards of hygiene

Table 1.22 (b) The Governance Framework Applicable to Liberian Infrastructure Sub-Sectors

	Transport	Power	Telecommunications	Water & Sanitation
Institutions	Ministry of Transport responsible for sector policy development & regulation	Ministry of Lands, Mines & Energy is oversight ministry.	Ministry of Post and Telecommunications has authority for sector policy & legislation	Ministry of Public Works responsible for provision of improved water and sanitation
	Ministry of Public Works: Responsible to construct roads	Liberia Electric Corporation is state-owned operator, with mandate to "generate, transmit and distribute electric power throughout the nation" and, as such, the sector is vertically integrated. Focus is on re-installation of capacity before structural reform of the sector.	Liberia Telecommunications Corporation is incumbent SOE	Environmentally sound land-fill established for Monrovia but no such programs for other parts of the country, including inland urban centers
	National Ports Authority--SOE with mandate to own & manage all seaports in Liberia		Four other private mobile telephony operators are licensed and present in the Liberian market	Existing participants in the WASH sector include Liberia Water and Sanitation Commission (LWSC), MPW and the ministries of Education (MOE) and of Land, Mines and Energy (MOLME)
	Liberia Airports Authority independent statutory body supervised by LCAA			
	Other sector players: MOJ responsible for traffic law and enforcement; MOF collects vehicle import taxes; MOL issues transport union licenses; MOCI issues Vehhicle Import Permits; LISGIS collects data on transport sector & GSA in charge of transport utilities			
Tariffs	Transport services are high cost, making Liberia less competitive	High at 54 per Kwh	Market determined with monitoring regulated by LTA	
Status of Private Participation	Monrovia port currently under private concession. Private companies investing to refurbish Harper & Buchanan ports	Liberia Electricity Corporation currently operated under a Management Contract w/ Manitoba Hydro	Four mobile operators are competing in the market place.	Collection of solid waste in Monrovia has been outsourced to private operators

Transport

Liberia's leaders are well aware of the need to rebuild the country's infrastructure, especially roads, to reconnect communities and facilitate the movement of people and goods across the country. Surveys and consultative meetings throughout the country have made the point that roads are priority to: (i) create new economic opportunities for the rural poor, including unemployed young men and women and persons with disabilities; (ii) increase the income they earn from their work; (iii) enhance security, facilitate decentralization of government services, and open access to health and education; and (iv) reduce the costs of the products that rural communities purchase.

Consequently, the transport sector received a great deal of emphasis during implementation of PRS 1 and this was under-pinned by promulgation of a National Transport Policy and Strategy finalized in 2009. The vision of the policy is to provide a framework for an efficient, safe, affordable and people-centered transport system in Liberia through market-based competition in the sector. The new policy views roads and bridges as pivotal links to overall development, including the integration of the nation and the empowerment and inclusion of women in society. To address various issues within the road transport sector, the policy identifies the need to create an improved road infrastructure maintenance function including the introduction of road fund financing mechanisms, and to introduce axle load controls to cut down on overloading and excess road wear. Emphasis to date has been on the domestic road network due to affordability issues and the imperative of integrating the country. However, longer term planning which places emphasis on Liberia's connectivity with its neighbors will make an important contribution to meeting stakeholder expectations learned through surveys.

Liberia adopted new legislation to establish the Liberia Civil Aviation Authority, vesting it with responsibility for aviation safety & regulation of air transport. It has also established the Liberia Airport Authority and given it authority to supervise & manage all airport facilities, including RIA.

Rail transport in Liberia would improve if a number of steps were taken. First, harmonizing policies with neighboring countries would enhance trade relationships and raise the contribution of rail transport to growth. Second, harmonization of technical standards and multi-use parameters under MDAs would extract better value from private sector investment. Third, enhancing of safety of railway operations and developing common standards for customer services would help capture increased amounts of transit traffic.

Energy

To address the problem of energy supply, the government formulated plans under PRS 1 to work towards several goals. At first, GOLR's objective was to develop a comprehensive national energy policy (NEP), a sector strategy and an energy master plan for which it would pass accompanying legislation. The policy was drAFTed and received stakeholder buy-in and Cabinet endorsement in 2009. Policy directions were to include plans for liberalizing the electricity sub-sector, involving "unbundling" the LEC and setting up conditions for privatization of one or more generation, transmission and distribution units in the future. The plans also included the establishment of an independent regulatory agency to be responsible for approving tariffs, system reliability, quality standards, and dispute resolution. Plans also envisaged the restructuring of the Ministry of Lands, Minerals and Energy (MLME) and the reinforcement of its capacity to meet the emerging challenges in the energy sector.

Yet, as work advanced on various components affecting implementation of the drAFT NEP, the sequential next steps did not materialize into a finalized sector strategy and energy master plan as originally envisaged. Instead, they gave way to preparation of sub-sector master plans and other reform documents, including:

- a Rural Renewable Energy Agency function and energy master plan development
- an LEC electricity master plan (recently done by MHI for the Monrovia system) and
- a NOCAL petroleum law reform initiative.

As a result, other plans for liberalizing and reforming the sector – including "unbundling" of LEC to allow for eventual privatization of power generation, transmission and/or distribution and the establishment of an independent energy regulatory board have stalled. In some quarters this slower pace of sector governance reform is viewed as a symptom of entrenched fragmentation in the sector, a problem which betrays a lack of political will to tackle vested interests. Others would differ, viewing the more measured approach as taking care to ensure that rural interests in renewable energy supply are given equal consideration in formulating governance arrangements and implementation priorities for the future. It appears that Liberia's various development partners may have taken different sides on this debate and, as a consequence, some partner funding for energy sector reform has dried up.

Water, Sanitation and Hygiene

Ministry of Public Works currently has responsibility to oversee the improvement of water sector infrastructure, but its priority during PRS 1 was on roads and transport sector improvements. Consequently, for several decades Water, Sanitation and Hygiene (WASH) responsibilities have been shared amongst several ministries and agencies of government. Urban and Rural WASH responsibilities are split between the Liberia Water and Sewer Corporation (LWSC) and the Ministry of Public Works respectively. The Ministry of Lands, Mines and Energy (MLME) assumes policy, regulatory and sector coordination responsibilities while the Ministry of Health & Social Welfare focuses on the preventive aspects of WASH. Given this overlap within the sector, it suffers from the lack of a coherent, over-arching policy and supervising governance authority. For that reason, GOLR has given thought to establishing a National Water Resources and Sanitation Board to oversee the sector. A "White Paper" on Water Supply and Sanitation Policy (WS&SP) endorsed by the Cabinet in 2009 suggested the creation of a National Water Resource and Sanitation Board (NWR&SB) to be supported by a National Water Supply and Sanitation Commission (NWS&SC). The Policy further proposed that the Division of Environmental and Occupational Health at the MH&SW be transformed into a Bureau of Community Mobilization and Hygiene Promotion while the Community Services Division at the Ministry of Public Works is transformed into the Bureau of Rural Water Supply and Sanitation. All three would be jointly supervised by the NWS&SC and these arrangements would eventually lead to the establishment of a new Ministry of Water and the Environment. Debate is still on-going as to whether this is the appropriate institutional governance for WASH as there is some argument in favor of avoiding any interim arrangements and moving robustly towards spin-off from MOPW and establishment of a full-fledged Ministry of Water and Environment. [56]

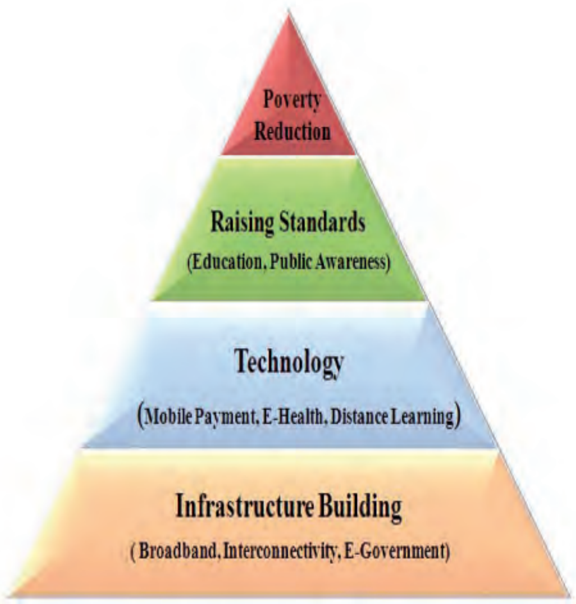
ICT

Liberian authorities recognize the potential role of ICT in poverty reduction. They began by adopting the Telecommunications ACT of 2007 to redefine the role of government agencies including the Ministry of Posts and Telecommunications as policy-maker, the Liberia Telecommunications Authority (LTA) as regulator and Liberian Telecommunications Company (LTC) as the National Operator. The policy addressed issues of policy, regulation and enforcement, liberalization, fair competition, security issues and, very importantly, the principle of universal access. This was followed by the

[57] Ministry of Public Works, "Five Year Infrastructure Plan," 2012

adoption of a national ICT policy, the vision for which is presented in Figure 20.[57] The policy aims to ensure that services and systems are people-centered, accessible and cost-effective. Strategic objectives include:

Figure 20 Liberia's Vision for ICT Development



- Encouraging private sector involvement in the deployment of telecommunications infrastructure and ICT networks in county headquarters and all major cities of the fifteen counties with social, economic, commercial and financial activities by 2013;
- Provision of universal access and service access to rural communities with a minimum of five thousand (5,000) inhabitants by 2013;
- Creation of a Universal Access Program Governing Board with oversight responsibility for the program.

1.4.9 Summary of Current Initiatives with Respect to Regional Infrastructure

The sections above identify Liberia's current plans and initiatives for revitalizing its numerous infrastructure sectors. Plans for the energy and communications sectors make evident that Liberia is embracing the opportunity offered by regional integration and it is clear that the country's domestic investments are complementary to and place a high degree of reliance upon important investments of a regional nature. Although the Transport Master Plan for Liberia also endorses the importance of refurbishing regional roads that connect with neighboring countries as part of restoring the "primary roads network" affordability issues come in to play in the timing of investments. At present, it appears that the critical priority is to upgrade roads along domestic corridors as these have greatest capacity to generate near term economic growth by connecting concessionaires to ports and supporting the conversion of agriculture to commercial market orientation. On the governance front, it is clear that harmonization of policies and adoption of standards reflecting regional norms is essential if Liberia is to gain maximum benefit out of participation in regional projects. The investment initiatives and associated governance priorities are identified in Table 1.23 below.

Table 1.23 Regional Infrastructure Projects and Associated Governance Initiatives

	Transport	Power	Telecommunications	Water & Sanitation
Regional Infrastructure	Liberia's Transport Master Plan espouses a priority to refurbish the primary road network between present and 2030. Included in the primary road network are road links that connect to Sierra Leone, Guinea and Ivory Coast but timing and affordability are not yet clear.	Liberia plans to participate in Cote D'Ivoire-Liberia-Sierra Leone-Guinea CLSG Transmission line project and the creation of a West African energy market under the West African Power Pool	Liberia is participating in a West African Regional communications grid including the ECOWAS Wide Area Network by establishing a landing station to be supplied by the Africa Connect Europe consortium	Though Liberia shares several trans-boundary water basins and river courses with neighboring states, no specific water basin initiatives are underway.
Regional Governance Issues being Addressed	National Transport Policy Statement recognizes key role of improved transport infrastructure & services for MRU and ECOWAS dev't. National policy encourages measures towards legislative harmonization for efficiency and improved interstate connectivity. Liberia has pledged to adopt West Africa axle load regulations.	Institutional arrangements for CLSG include the establishment of a Special Purpose Vehicle to be owned by the partner governments but operated by a private sector entity. IFIs involved in the financing are still working out the governance and regulatory arrangements between national and regional interests.	Connection to a submarine fiber optic cable will provide more affordable bandwidth to Liberian internet users and will enable regional connectivity into ECOWAN. This will help regional governments share information and coordinate on security and other matters. Important that "open access" policy maintained.	Fragmentation of institutions and responsibility in the sector. Urgent governance needs relate more to capacity building in municipalities.

[58] Policy Framework for High-Speed Broadband Connectivity for Liberia, Ministry of Posts & Telecommunications

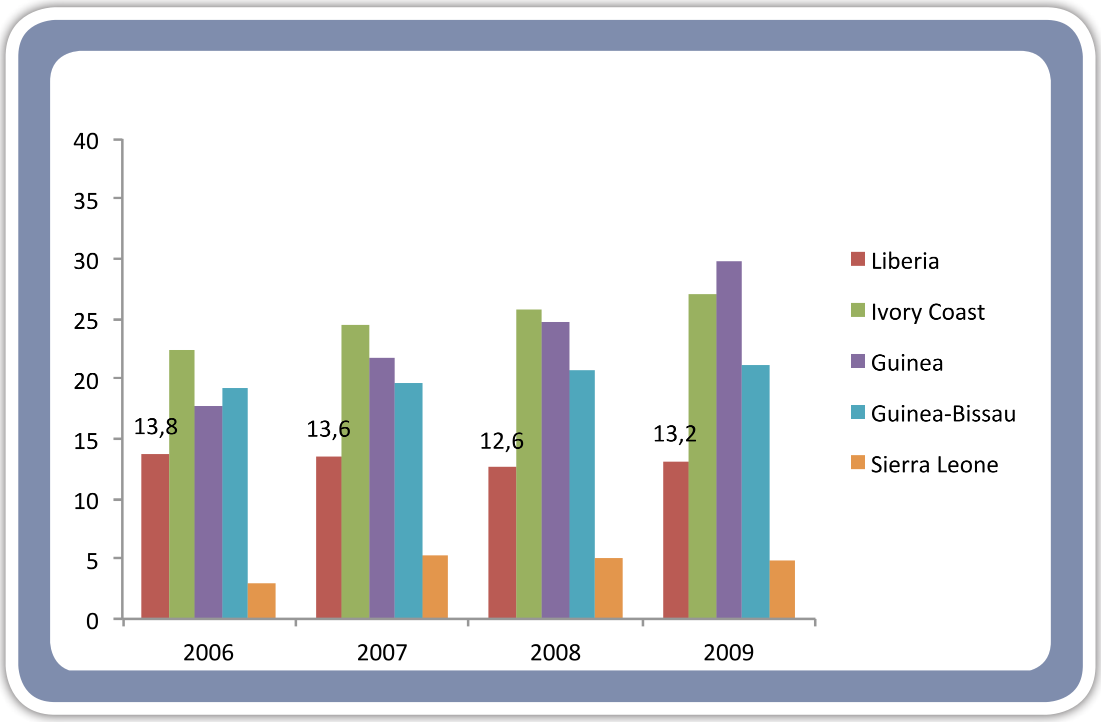
The more recent ICT policy statement also expresses the commitment to put in place a mechanism to divest the LTC SOE in line with the intention to promote private sector led growth in the sector.

1.4.10 Key Findings Regarding the State of Infrastructure in Liberia Today

The review above emphasizes that Liberia's infrastructure is in a woeful state in all of the sectors reviewed with conditions only slightly better than neighboring Sierra Leone. This finding is confirmed by Liberia's relatively low ranking on the African Infrastructure Index portrayed in Figure 21. This index was established by the ADB to compare all countries on the continent with the top-ranked country which, for the 2006-2009 period was the Seychelles.

Underinvestment in the past meant that the network coverage was inadequate while insufficient maintenance caused progressive degradation in parts and reduced service quality. Destruction during the war caused many infrastructure installations to cease to function. Rehabilitation work since the end of the war has restored parts of the infrastructure network to functionality.

Figure 21 Liberia's Performance against Infrastructure Index of other African countries 100 = Max = Seychelles



In road transport, conditions are such that some roads, especially in the southeast, remain impassable and city streets are potholed; and portions of the rural network get swept away altogether during the rains. In air transport, the runways, aprons and terminal buildings of airports have suffered decay, and navigational and emergency equipment are in poor condition. Only Roberts International Airport has seen some reconstruction of the runways, aprons and terminal buildings as well as a renewal of some equipment. Regarding rail transport, prospects are underway for the gradual reconstruction of Bong and Nimba lines through MDA agreements. In the case of maritime transport, the ports are plagued with the problem of poor basic structures, navigational hazards from sunken wreckages and inadequacy of cargo handling and similar equipment. Only the Freeport of Monrovia and the Port of Buchanan have been reactivated and rehabilitated; the ports of Greenville and Harper are still to follow. Power infrastructure, which was limited before the war, was nearly completely wiped out by the time the conflict ended. The LEC is gradually building back its coverage and services and the current demand level estimated to be about three times the level of supply. The review also established the inadequacy of infrastructure for the provision of water to meet the production and sanitation needs of households and businesses. Safe water is available to about 60% of urban households. The status of ICT infrastructure reflects the effects of the war on older fixed-line installations, on one hand, and influence of new technology, on the other. Mobile devices have largely replaced the old fixed network and planned connection to ACE along with a terrestrial landing station will make it possible for Liberia to build out the domestic backbone for internet services distribution.

As the enormity of the reconstruction task becomes apparent, GOLR is becoming more aware that the FDI and concession participants in the economy will generate most demand for services in the short to medium term and that, the mining concessions in particular have a valuable role to play in financing the cost of road, port, rail and electricity installations in the future. The implications of this finding are resumed for further discussion in chapters 2 and 3.

The framework for infrastructure deals with the association of various stakeholders (private sector, communities) in its development and maintenance; with its insertion in allied development activities; and with sensitivity to environmental concerns. The framework provides for ensuring that infrastructure development ties in closely with the broader objectives of growth, employment and the meeting of basic needs. The framework provides for the use of participatory approaches to the largest extent possible in the development and maintenance of the assets. It also provides for a close link between designs and the protection of the natural environment.

1.5 Current Initiatives and Benefits Available from Regional Integration

1.5.1 Liberia's Participation in Regional Organizations and Policy Frameworks

The belief that Liberia is an outpost of western civilization and not an African nation state influenced its original role in Africa, including its approach to regional and sub-regional integration. That belief translated into a self-imposed isolation from the rest of Sub-Saharan Africa for an extended period. This, in turn, meant a failure to benefit from scale advantages by cooperating with selected development activities with neighbors and the broader West Africa region.

One clear example of that failure is in education: Liberia does not share much in the areas of curricula or examination/accreditation systems with educational institutions in other African countries. In 1972, Liberia joined the West African Examinations Council (WAEC), which manages examinations for pre-university education in Anglophone West Africa. This was two decades after the creation of the WAEC. Three decades later, Liberia still does not participate in full range of the activities of the WAEC. Another is the electrical power system: Liberia's system was the 110 volt/60 Hz cycle variety used in the USA, which foreclosed integration with the 220 volt/50 Hz cycle system in the rest of West Africa, including the MRU. The change from 110 volt/50 Hz cycle system to one of 220 volt/60 Hz cycle was finally made in 1992.

In the post-conflict era, Liberia has made substantial efforts to re-engage with neighboring countries and revive its participation in regional institutions. Thus, for example, President Johnson-Sirleaf presently presides over the Mano River Union which unites Liberia around trade and environmental cooperation issues with its three neighbors—Cote D'Ivoire, Guinea and Sierra Leone. Many of Liberia's updated policy statements, including those in transport, trade and energy, make reference to Liberia's aspiration to engage more proactively with the MRU and with the Economic Community of West African States (ECOWAS). An example is in the sphere of monetary policy whereby Liberia is actively engaged within the West African Monetary Zone convergence initiative to move towards a single currency. Another example is in the petroleum sector whereby Liberia and Sierra Leone are coordinating on fiscal and policy incentives. If taken to a next level, this kind of collaboration could extend to gaining joint benefit from the economies of scale required to service the petroleum sector as it grows.

Nonetheless, there are more benefits which Liberia can draw from increased attention to and participation in regional initiatives. The following section serves to illustr ate this potential.

1.5.2 Why Liberia Should Engage in More Regional Integration

It is becoming generally recognized that regionalism in the 21st century should help achieve many more benefits than just those obtainable from trade in goods and service. In the case of Liberia, regional cooperation should perhaps focus more now than before on the goals of shared gains from security and infrastructure development. In particular, the context of regional fragility is an important consideration given the collective fragility of the southern coastal fringe countries in West Africa and the shared threats of illegal trade in drugs, arms and gems which plague the region. When a conflict-prone state resides next to a stable state, the attraction of cross-border infrastructure investment is inherently more compelling if the stable state sees the benefits of collaboration and is willing to sponsor investment therein. The examples of South African investment in Mozambique's aluminum industry and the Maputo-Durban trade corridor bear testimony to the benefits which can arise. One of the poorest countries in the world at independence, Mozambique has emerged from decades of conflict to become one of Africa's best-performing economies thanks in part to its favorable neighborhood. Liberia does not have this advantage. In Liberia's case, situated as it is within a less stable regional environment, the stakes are different. Yet, collective action is needed to maintain stability and to change the investment climate in the entire sub-region. It is essential that the States located on the Southwestern coastal fringe develop a shared conviction for achieving future prosperity which can differ dramatically from the past. Mutual and collective interests can be safely explored through the States' membership in the MRU.

Cooperation to Manage Regional Threats

Over the past two decades, the Mano River basin has been an unstable sub-region. Liberia was at the epicenter of this instability, as the Liberian civil war extended to neighboring Sierra Leone. Guinea and Cote d'Ivoire have also suffered instability. In view of this regional context to its problems, Liberia should perceive its national security policy in the context of sub-regional stabilities since fragility of immediate neighbors poses a potentially significant problem. In the absence of regional stability, trade between neighboring countries breaks down, national economies stagnate and poverty is not reduced. Refugees add to national problems of resource allocation and distribution.

Liberia has the essentials covered in this area, opting for reliance on international collaboration to meet the many security threats from transnational organized crime. To that end, it plans to work to cement the growing bilateral and multilateral security cooperation between member states of the MRU, ECOWAS, and the African Union. The government also plans to have the Armed Forces of Liberia positioned, in due course, to participate fully in international peace and security arrangements including the ECOWAS Standby Force, African Union Standby Force, UN Peacekeeping and others, so as to advance their professionalism. Finally, the government plans to seek the support of countries within ECOWAS and the African Union, as well as UNMIL and other international partners, to assist the Liberia National Police in becoming better integrated into the greater sub-regional security, intelligence and law enforcement effort.

Opportunities Presented by Growth Clusters

Regional cooperation would enable Liberia to achieve economic gains by collaborating with its neighbors on the use of the resource endowments that link it naturally to the neighbors, including the physical environment and the wealth in it. The collaboration can take the form of sustainable use of common resources (fisheries), scale economies in sharing investments needed to exploit mineral and petroleum transformation and complementarity in unlocking forward and backward linkages between primary production and processing sectors.

In recognition of the scope for growth gains from regional cooperation, the MRU secretariat, GOLR and USAID have each been working on strategic plans to promote economic activity based on identified growth corridors. In the case of the MRU secretariat, this has taken a broader sub-regional perspective to identify growth triangles that would serve to stimulate economic activity in the shared but neglected interior zone to counteract a traditional bias towards emphasis on respective capitals. Its initial thoughts bear on the following growth triangles areas covering all four countries:

- Ivory Coast, Liberia growth area, covering South-east Liberia and South-West Ivory Coast;
- Liberia – Ivory Coast-Eastern Forest-Guinea;
- Eastern Sierra Leone-North-Western Liberia-Western Forest Guinea;
- Southeast-Sierra Leone-South West Liberia-Coast line.

Underlying the growth triangles is the recognition that, though similar in many respects, the countries can achieve complementarities in aligning the capital, technology and human resources of more developed regions with the land, natural resources and labor of less developed areas, if willing to look beyond borders. The selected growth areas exhibit potential for addressing key issues for effective cooperation among the MRU countries especially in the areas of agriculture, energy, mining, cross-border trade, and fisheries. This strategy requires a de-concentration of political power at the center and empowerment of the business nodes along corridors to encourage a trading orientation in the hinterland.

Recognizing that governments do not steer FDI investment but do have latitude to shape the incentives, Liberia could take more assertive measures to encourage investors to formulate their infrastructure investment plans from a regional, rather than purely national perspective. This could make sense in cases where a given investor has interests across borders and is seeking least cost solutions for transport to seaports, downstream industrial transformation or the like. Whereas a private company is rarely in the position to broker a bilateral cooperation agreement between neighboring countries, Liberia can avail itself of the legitimacy of membership in regional institutions to help in such a quest.[58] While one could argue that this might result in Liberia losing out on the direct returns from FDI-supported infrastructure if it is located across a border, our assertion is that the multiplier benefits of greater economic integration could more than outweigh the opportunity loss and Government should remain open to the possibilities. Interest in a sub-regional perspective is illustrated by the regional approach being taken by an investor such as China Union to iron ore extraction in both Guinea and Liberia.

Rewards of Reputational Recovery from Bad to Good Neighborhood

One legacy of the war that Liberia has to reckon with in the post-war era is the reputation of being an unstable country. This reputation translates into political and economic uncertainty, resulting in higher perceived riskiness of investments. This perception makes investors incorporate short horizons and discounted returns into their analyses of the attractiveness of investment opportunities. As it happens, several of Liberia's neighbors (the Ivory Coast, Sierra Leone, Guinea and Guinea Bissau) also have that problem, and would be interested in acquiring a more positive investor perception of their neighborhood. This change in reputation is something that can be pursued as a regional goal.

[59] An example might be the case of cross-border mineral deposits where a mining company has investment interests across both borders.

Research on post-war economic conditions has shown that positive international attitude towards a post-conflict country helps moderate perceptions of its riskiness. The positive attitude of the international financial community (development partners, followed by private investors) towards Liberia appears to support that thesis and the same applies to Sierra Leone. The situation has been less clear in Guinea Bissau but is evolving in Guinea and the Ivory Coast. In any case, a regional approach to recovering the reputation of the sub-region as a good destination for investment capital would pay handsome dividends.

Efficiency Gains from Harmonized Policies and Procedures

Policies and procedures work efficiently when they do not engender costs simply because economic agents and goods cross from one jurisdictional authority into another. An important area in which this point applies is trade costs. Research on trade costs have established that policy and non-tariff barriers together in developed countries can raise the price of a traded good by as much as 170 percent, and that this mark-up is higher still in developing countries.[59] The non-tariff barriers, in particular, arise from differences in institutional procedures, language, currency and "informal taxes" engendered by bureaucratic excesses as goods cross borders. It is thus in Liberia's interest to harmonize trade policies and procedures with its neighbors of the MRU in order to avoid needless additions to its trade costs.

Another area in which to seek to harmonize policies (and procedures) is that of re-export trade in politically sensitive products. Rice is an important case. Liberia and her neighbors face important social and development issues in relation to the rice sector. The government has a keen interest in keeping the price down for the urban consumer, where much of the rice consumed is imported. At the same time, there is a long-standing goal of raising the production of local rice. Yet, low rice prices undermine the incentives to produce locally. The situation is further complicated by the fact that some locally-produced rice (and possibly some imports) is exported across the border into neighboring countries. The neighbors also have their own dilemmas of this sort. This is clearly an area where improved policy coordination can help efficiency within Liberia and in the neighboring countries in their shared quest to graduate from import-dependence to self-sufficiency and eventual capacity to produce surplus and trade.

Benefits of Scale for Research, Serving wider Markets, and Infrastructure

Access to regional markets can help Liberian producers achieve larger scales of production than if they focus on the domestic market alone. The integration can also offer opportunities for industrial processing of raw materials, with the larger scale being the basis of plants achieving the minimum critical sizes required for survival of the activities in question. Industrial plants in other ECOWAS countries can be profitable processing outlets for raw products from Liberia's tree crops. Other relations that strengthen on the heels of increasing economic exchange could help create the socio-political links that help the cause of stability in Liberia.

The growing integration of economies would make it possible for countries to achieve similar scale advantages in the sizing and use of infrastructure. A crucial area is the production of human capital. Students trained in an accredited educational institution in one country can fill a job opening in another. Similarly, with integration, results of research conducted in a regional organization or even one country could find application in other countries. One example is Africa Rice, where Guinea and Sierra Leone are reasonably active but Liberia has been a relatively late-comer to enjoy the benefits of varietal breakthroughs. Another is the program of cooperation on cocoa and coffee, that was agreed between Ghana and Liberia in March 2011, under which Ghana would provide Liberia with improved cocoa planting material and in turn receive help on coffee varieties from Liberia.

Liberia's Aspirations for and Expectations from Regional Integration

Liberia remains committed to regional integration, even if delays have occurred in the implementation of particular protocols as a result of the civil war and of limited public administrative capacity. It remains an active member of the MRU whose main objectives are to expand trade by elimination of all tariff and non-tariff barriers to sub-regional trade. After the near-collapse of the MRU during the conflict years, new strategic thinking emphasizes making the MRU focus on three goals: (i) maintenance of peace and security in the sub-region; (ii) supporting growth by the implementation of a growth triangle/growth areas approach; and (iii) acting as an implementing arm of the ECOWAS.

Liberia remains active within ECOWAS as well. In the socio-political domain, the interventions mounted by the ECOWAS Monitoring Group during the war years were pivotal in helping bring about peace. Liberia recently benefitted from the support and vigilance of the ECOWAS Elections Monitoring Group, which continued until free and fair democratic elections were successfully held at the end of 2011

1.5.3 Key Findings Regarding Regional Integration

Key frameworks have been set in place to guide Liberia's future domestic policies both with respect to sector priorities and for macroeconomic governance.

[60] Anderson, J., and E. van Wincoop, (2004), "Trade Costs", Journal of Economic Literature, Vol. 42, pp. 691-751.

The former pay particular attention to private sector development, agriculture, natural resources, and infrastructure while the latter have articulated plans to use sound fiscal, monetary and exchange policies to maintain price stability and promote competitiveness. The evolving policy framework also provides evidence that Liberia attaches great value to using regional cooperation to widen its market space, achieve economies through exploitation of scale advantages and confront security problems with potential for spillover. However, these plans fall somewhat short of measures that would promote physical integration with the sub-region and regional policy aspirations are not yet evident in the investment plans which the country has for the future. On one hand, this can be understood from the frame of reference yielded by the analysis of fragility at the start of this chapter. That analysis reminds us that it is critically important for Liberia to improve its domestic integration by re-legitimizing the full ethnic and religious diversity of its population, by including them more effectively in political processes and in providing them with expanded economic opportunity. On the other hand, a greater degree of regional cooperation and physical integration will indeed provide an important catalyst for expanding economic opportunity for all Liberians and if that can accelerate the pace of domestic poverty reduction, the prospects for stability can be enhanced. The costs and benefits from expanded regional collaboration and regionally dimensioned infrastructure are further explored in Chapters 2 and 3 of this report.

CHAPTER 2

Looking ahead: strategies for inclusive growth in Liberia

Introduction

Chapter 1 looked backwards in time and reviewed both the genesis and consequences of Liberia's history of conflict as well as the post-conflict measures taken to restore stability and launch economic recovery. It reviewed the socio-economic status of Liberians and took stock of the current performance in productive, trade and infrastructure sectors including reforms introduced to date. It identified key results achieved under PRS 1 and added an appraisal of Liberia's level of engagement in regional initiatives to identify what more it could stand to gain.

Key insights and conclusions from the analysis undertaken in chapter 1 include the following:

- Contributing causes of Liberia's civil war were the exclusion of indigenous Liberians from meaningful participation in political governance and economic opportunity. Grievances were further fueled by deteriorating economic conditions that made it appear as though extra suffering was being imposed on the poor, thus inciting a challenge to the regime and the launch of full-scale civil conflict. This political history was accompanied by the phenomenon of "growth without development" whereby the regime's open-door economic policy generated horizontal inequality in society and failed to create social mechanisms for wider distribution of national wealth and institutions through which grievances could be addressed in non-violent fashion. The nation therefore remains vulnerable to several threats including the presence of a large, urbanized population of unemployed youth, insecurity of food supply (especially rice), conflicts over land and potentially contagious conflicts in the region. In addition, Liberia is particularly vulnerable to patterns that might indicate a return of growth without development and, as such, must especially avoid a situation where concessions function as enclaves or where patronage and corruption undermine the legitimacy of the state.

- The economy hit bottom in the 1990s, descending from a pre-conflict position as a middle income country. Recovery growth was kick-started under PRS1 by reviving the strategy of FDI-led development of the mineral sector as well as plantation style agriculture. The smallholder sector is showing signs of recovery but is constrained by land tenure problems, inadequate technology and infrastructure. These and other impediments work to inhibit an essential behavioral conversion from subsistence orientation to commercial agriculture. Consequently, the current drivers of growth are predominantly exogenous with only a modest part of recovery attributable to endogenous sources.[61]

- Africa sits at the bottom in the global rank of infrastructure by continent and Liberia is in the bottom tier therein. Government is very much seized with the need to redress this situation and is making infrastructure recovery a priority, especially with respect to roads and electricity. The review of productive sectors of the economy reinforces the clear conclusion that insufficient and poor quality infrastructure is a major constraint to current performance across the board.

- Liberia and its neighbors are no longer on a level playing field with leading Sub-Saharan African nations. Moreover, the legacy of conflict along the coastal fringe means that Liberia cannot substantially alter its investment climate in isolation. Active participation in MRU and ECOWAS can help to overcome these disadvantages. The convening power of the MRU could be helpful for organizing closer cooperation between the States in the implementation of ECOWAS policies and regional integration initiatives.

- Liberia has embarked upon a wide agenda of policy renewal, striving to update its policies, legislation and institutions for the new millennium. While significant progress has been made, more remains to be done, especially in the area of land tenure reform where measures are needed on both legislative and institutional fronts.

The present chapter turns to the future with a focus on growth strategies to guide the way forward. Included in this analysis is a review of accompanying modes of economic governance. Economic governance covers the creation of institutions that govern economic and social interactions among the citizenry, the processes through which government formulates and implements policies to deliver public goods, the processes that govern relations among parties in society and in ensuring the enforceability of contracts among them. Good economic governance will not only deliver growth but also equity, a dimension which is vital for Liberia's stability.

[61] "Exogenous" means generated by external forces while "endogenous" means created from within. Endogenous growth theory holds that economic growth can be nurtured through appropriate policies to derive primarily from endogenous sources (in contrast to external forces) and that investment in domestic human capital plus domestic knowledge and capacity for innovation must be prioritized to become significant contributors to economic growth which can be sustained for the long term growth of an economy.

The chapter begins with an overview of Liberia's new, second Poverty Reduction Strategy, the Agenda for Transformation (AFT) for FY 2013 through 2017, which has been formulated with substantial reflection on the type of growth Liberia wants to achieve. In particular, Liberia aims to achieve growth that delivers development benefits to all its citizens in the future. While this ascribes to the principles of endogenous growth theory, the report will refer to it as an "inclusive" growth strategy, indicating one which both benefits and ***involves*** all Liberian citizens. The distinction is important. The Open Door policies applied in the 1950s and 60s certainly aimed to deliver benefit to Liberians by ushering in FDI to generate economic growth but it did not seek to ***involve*** the majority through participation in economic activity. Retrospect identified that this approach generated growth without development, so in order to reverse the situation, new PRS strives to directly involve citizens in the change ahead, thereby building the capacity of citizens in the process.

The chapter then conducts a deeper appraisal of four key economic growth strategies which Liberia is currently employing or contemplating in order to deliver inclusive growth. These include:

1. Industrialization through special economic zones,
2. Commercialization of smallholders through multiple interventions including enhanced conditions for trade,
3. Natural resource concessions (NRC) for mineral, plantation agriculture and agro-forestry development, plus
4. MSME development to expand the indigenous private sector.

Together, these strategies touch upon most sectors of the productive economy—mining, forestry, agriculture, trade, industry, services and commerce-- the concurrent success of which will help Liberia to deliver its growth objectives.[62] Yet, each implies different risks and rewards, suffers from different binding infrastructure constraints and generates different degrees of influence on the fundamental task of transformation. Therefore, the purpose of this exercise is to encourage reflection on how Liberian authorities can bring out the best transformational impact from each distinct strategy by prioritizing infrastructure investment and allocating it according to the most appropriate future time frame. This is done by establishing a set of filter criteria, each of which is defined and justified in relation to the key concerns of the study, notably the capacity to generate inclusive growth of the type that reduces Liberia's vulnerability to threats, supports profound transformation and helps the country graduate beyond fragility forever. The strategies are first described, the filter criteria are defined and then each strategy is evaluated against the filter criteria. This permits the strategies to be ranked by priority for two types of state-sponsored intervention: (1) measures that improve the governance over the sectors or actors involved, including through policy reforms and institutional strengthening and (2) publicly financed infrastructure. In this regard, the analysis looks closely at the constraints inhibiting optimal contributions from each growth strategy and the specific types of infrastructure investment and accompanying measures which could relieve them. The analysis builds in a regional perspective and takes into consideration factors which would favor unilateral national versus inter-dependent regional action over future time frames.

The analysis presented in Chapter 2 will permit further delineation in Chapter 3 of an infrastructure investment planning strategy for Liberia. It will help to confirm Liberia's total infrastructure requirements over the short to medium term that will serve to deliver and reinforce the transformational impact desired under AFT. Insights provided by the ranking of growth strategies will permit further reflection on the affordability of infrastructure in these time frames, the contribution to be expected from FDI and the relative priorities remaining for public and development partner investment spending across Liberia's infrastructure sectors.

2.1 Achieving Transformation: The Imperative for Inclusive Growth

Beginning in 2011, Liberia launched a longer term visioning exercise entitled "Liberia Rising – 2030" to establish a vision to restore the country to prosperity based on growth ***and*** development by 2030. This vision includes the ambition of taking the country back into the ranks of middle-income countries by that date. Attaining such a target would require consistently high rates of growth in per capita income and GDP without increasing unequal distribution. The growth target is ambitious and may be difficult to achieve, especially in a stability-enhanced manner. At the same time, Liberia's history teaches that equitable delivery of benefits through just systems of governance is as important as economic growth. Hence, in aiming for the growth goal of MIC status by 2030, it bears emphasizing that the journey is as important as the destination. In other words, the developmental quality of Liberia's growth path is of primary importance and because the goal itself is lofty and ambitious, this study asserts that infrastructure planning to reinforce transformation should be programmed over a longer time-frame than the AFT period alone.

2.1.1 PRS 2 - the Agenda for Transformation

PRS-I ran its course by December 2011 and, by that time, certain challenges ensuing from emergency-phase resumption of Liberia's pre-conflict economic development strategy were beginning to emerge.

[62] It is clear that the four strategies chosen for scrutiny are not the only strategies which GOLR is employing for recovery and transformation. Other strategies include, for example, a national rubber development strategy, an oil palm plantation job creation strategy, a tourism development strategy, a rice development strategy, a communications strategy and the national capacity development strategy. However, the aspirations of these strategies are in many ways encompassed in the four which are chosen for analysis.

With this experience and in the context of the 2030 vision, Liberia formulated its second Poverty Reduction Strategy for 2012 to 2017. Entitled the "Agenda for Transformation: Steps Toward Liberia Rising 2030," the new strategy will provide the transition between emergency recovery (PRS 1) and a future that broadens prosperity for society at large by 2030. Hereinafter referred to as AFT, the strategy is intently focused on the fundamental challenges and drivers of transformation. It recognizes, explicitly, that transformation must take place in aggregate on human, institutional and economic levels and that all three factors must contribute to delivering a capacity for sustained growth over the long term. As such, at its core the AFT embraces three strategic spending priorities:

- investment in infrastructure,
- investment in people and
- investment in institutions

In preparing the new strategy over the course of 2011, substantial effort was expended by Liberian public, private and civil society to reflect backwards on lessons learned from past mistakes so these can be avoided and peace can be preserved in the future. Abundant, thoughtful policy analysis work was contributed by development partners during the course of the year, and all contributors were invited to participate in 3-day high level National Economic Forum held in September 2011 to sift through, contemplate and prioritize the appropriate strategies and objectives for AFT. Like PRS 1, the new plan includes four pillars but rehabilitation of infrastructure is now included under Pillar 2 "Economic Transformation" in recognition of its essential role in removing binding constraints to growth. Table 2.1 contrasts the components of Liberia's first and second PRS strategies.

Table 2.1 Liberia's First and Second Poverty Reduction Strategies

Pillar	Liberia Poverty Reduction Strategy 1 "Liberia Rising 2008 - 2011"	Liberia Poverty Reduction Strategy 2 "Agenda for Transformation 2012-2017"
1	Consolidating Peace & Security	Peace, Security & Rule of Law
2	Revitalizing the Economy	Economic Transformation
3	Strengthening Governance & Rule of Law	Human Development
4	Rehabilitating Infrastructure & Delivering Basic Services	Governance and Public Institutions
Cross-Cutting Themes	• Gender equity • Peacebuilding • Environment • HIV and AIDS • Children and Youth	• Gender equity • Child Protection • Disabled • Youth Empowerment • Environment • HIV and AIDS • Human Rights • Labor and Employment • Conflict Prevention • Developmental Capacity

[63] "Agenda for Transformation: Steps Towards Liberia Rising 2030" April 2012.

The change in emphasis signifies that peace-building efforts will be sustained as a central pillar under AFT, but will be buttressed by the three strategic pillars of investment with much greater emphasis on the importance of investing in human capital concurrently with physical reconstruction. Fundamentally, Liberia seeks to:

- Upgrade its human capital
- Improve its institutions, and
- Invest in infrastructure.

The underlying goal for AFT is not just to give Liberia a five-year spurt of growth, but to endow the nation with a *capacity* to grow over the longer term which can be achieved only if its infrastructure, human and institutional endowments are all transformed at a concurrent pace. As such, AFT aims to deliver inclusive growth. The inclusiveness of the journey, in terms of delivering benefits to the poor, the youth and the wider rural population, is considered to be vitally important and it has led Liberia to the conclusion that it will now lend substantial attention to the drivers of endogenous growth. The goals of each pillar are formulated within AFT as portrayed in Box 6.[63]

Box 6: Pillars of 'AFT'-- Agenda for Transformation

Peace, Security and Rule of Law: To create an atmosphere of peaceful co-existence based on reconciliation and conflict resolution and providing security, access to justice, and rule of law to all.

Economic Transformation: To transform the economy to meet the demands of Liberians by developing the domestic private sector, including with resources leveraged from the FDI in mining and plantations; providing employment for a youthful population; investing in infrastructure for economic growth; addressing fiscal and monetary issues for macroeconomic stability; and improving agriculture and forestry to expand the economy for rural participation and food security.

Human Development: To improve quality of life by investing in: quality education; affordable and accessible quality health care; social protection for vulnerable citizens; and equitable access to healthy and environmentally friendly water and sanitation services.

Governance and Public Institutions: To create, in partnership with citizens, transparent, accountable and responsive public institutions that contribute to economic and social development as well as inclusive and participatory governance systems.

Cross-Cutting Interventions: To mainstream attention to eight key cross cutting areas of concern, (notably Gender Equity, Protection of Children and Inclusion of Disabled, Youth Empowerment, Environment, HIV and AIDS, Human Rights, Labor and Employment and Conflict Prevention) across all sectors for society's overall productivity and well-being, with particular emphasis on the vulnerable segment of the country's population.

To the extent that these aspirations result in a true change from the past, the new course ***must*** take hold in the near term and whereas physical and institutional changes represent substantial fiscal and intellectual challenges, the human development goals pertaining to the population at large represent the biggest philosophical change and, in some respects, the thorniest binding constraint. While chapter 3 of this report will present recommendations specifically relevant to Economic Transformation on how Liberia should plan to invest strategically in infrastructure over the short to long term, these are informed by holistic analysis in this chapter that includes attention to the other imperative dimensions of change. In order to deliver on AFT objectives, government is deliberately adopting an expansionary fiscal policy to finance projects with highsocial and economic returns. In line with the fiscal reforms identified in Chapter 1, GOLR has prepared a Medium Term Expenditure Framework covering FY 13 through 15 which includes a drAFT Public Sector Investment Plan transparently published and made available on the MOF website.[64] This has the benefit of communicating national priorities to the populace and development partners and Liberia is currently encouraging its partners to pledge support to the programming priorities established for AFT.

With the planning phase now complete, there remain two types of challenges pertaining to AFT: the first are issues relating to implementation and the second are the fiscal challenges including the question of affordability. This chapter focuses on the former issues while chapter 3 will examine affordability in order to recommend prioritization and sequencing of infrastructure investments for future time-spans. Both chapters contribute a perspective on plausible time frames to guide future planning. The short term is taken to coincide with the planned duration of AFT, notably FY 13 through FY 17. The medium term is taken to coincide with the interim period post-AFT and arrival at 2030, the year set for achievement of Liberia 2030 goals. A longer term time frame is also introduced to cover the decade thereafter from 2030 to 2040. The inclusion of a longer term time frame in this analysis is deemed essential for the following reasons:

1. Human capital development can be expected to take a full generation and this means that, assuming Liberia will succeed in transforming its human capital base between now and 2030, the country will be positioned at the start of the 2030-2040 decade with much greater competitiveness than it currently has, including greater potential for entrepreneurship, innovation and leadership. These are key ingredients which can take
2. the nation into a new era of greater regional and global engagement which opens up exciting new vistas for investment and industrial transformation.
3. For its own stability and that of the region, Liberia must achieve a greater degree of domestic integration before it can afford to set aggressive goals with respect to regional integration.
4. Yet, substantial change is now underway all around Liberia both on the continent and by the fastest growing countries in ECOWAS, bringing with it fundamental changes in the region's competitiveness and its architecture for trade and infrastructure. Liberia needs to be aware of those changes and position itself now to become a vibrant contributor to these trends in the 2030-40 decade.

With the priorities set and the roadmap now marked, Liberia's focus will move from planning to implementation. It is therefore time to focus on Liberia's organizational capability to move from policy design to implementation. In that vein, the rest of this chapter takes a deeper look at key growth strategies that Liberia intends to pursue during the AFT period to help focus the intervention of the state on priority infrastructure investments and accompanying measures that will best extract the transformational benefits it seeks. In so doing, the analysis focuses especially on economic transformation and the time-frames that might best apply to achieving the goals ahead.

2.2 Strategies for Delivery of Transformative Growth

The AFT objective under the economic transformation pillar is to generate jobs and income beyond that of the concessions and public sector and, more generally, to transform the economy into a structure whereby the contribution generated by domestic labor and investment has grown substantially. At the same time, GOLR will sustain its recovery-phase growth strategies, notably Natural Resource Concessioning (NRC), so it is important to identify how its dominant strategies can also engage a significantly larger portion of Liberia's populace. Success against this objective will require concurrent progress in addressing cross-cutting concerns identified in AFT, including labor and employment, gender equality, youth empowerment, prevention of child abuse, fair treatment of those with HIV/AIDS and safeguards to the environment. Such measures would permit women and youth, in particular, to either participate in or benefit from the strategy in terms of employment, production, income generation and consumption. Although GOLR will employ a multitude of strategies in the pursuit of growth, four are selected here for deeper appraisal. The reason is not to accept or reject them, as it is clear that all will be employed, but is to shed light on their relative constraints, risks and rewards and to stimulate reflection on how each can be implemented in a manner that best taps Liberia's potential for transformative growth.

The conclusions have a direct bearing upon the prioritization and staging of infrastructure investment which is culmination of this analysis and the topic of chapter 3.

[64] www.mof.gov.lr-- National budget website

Text-Box 7 Industrialization through Special Economic Zones

Principal features: Under the Industrial Policy statement finalized in February 2011, MOCI articulates the rationale and goal for the nation's industrialization strategy, a key feature of which is a state-sponsored role in "kick-starting" industrial development through the creation of physical zones designated for industry, including export processing zones, special economic zones or industrial estates. The rationale for industrialization is two-fold: (i) the need to diversify the economy and (ii) the desire to add value to natural resources traditionally extracted and exported from the country, thereby creating forward and backward linkages and jobs in the domestic economy. The goal of industrial development is to expand manufacturing and processing industries to the point where Liberia develops a comparative advantage for supplying the domestic market or for export. This is based on recognition that a dynamic manufacturing sector can fuel a country's transition to middle income levels by generating employment that contributes to wealth creation for Liberia's own citizens. The policy recognizes the importance of private sector led investment in industry, but articulates that the role of the state is to lay the foundations that catalyze business entry into industrial manufacturing by addressing externalities and market failures which private firms cannot overcome. It sets out an action plan for the public sector which includes measures to improve access to credit, streamline regulations and trim the potentially monopolistic shadow of SOEs. The policy also commits to reflecting on how best to establish infrastructure-enriched production zones and whether to do this through direct foreign investment, PPP or other approach. A concrete step towards zone establishment is apparent from inclusion of a $5.36 million budget provision for this purpose in the GOLR funded Sector Projects portion of the MTEF, with a first tranche of $361,460 for a preparatory phase approved in the FY 13 budget.

Economic Sectors engaged: Manufacturing and agribusiness processing enterprises are implicated in the industrialization strategy. Manufacturing has contributed about 6 to 7 % of Liberia's GDP in the post-conflict period and the sector is currently limited to a few large firms (cement, beverages) as well as smaller firms producing paints and varnishes, household products, mattresses, industrial oxygen and other items in demand in the domestic market. Expansion of this sector is especially favorable for food and wood processing and other forms of agro-industry because the inputs are available domestically.

Integration potential: Industrialization offers great potential to improve Liberia's domestic integration as well as its integration with MRU and the wider ECOWAS region. The cause of domestic integration would especially be helped if there is a dispersion of industrial platforms not just at coastal locations but also deeper inland, closer to primary production areas. The cause of regional integration will be helped through export trade. To begin with, Liberia's industrial policy will aim for import substitution, but the small domestic market will eventually constrain expansion, so steps will be taken to increase Liberian industries' access to regional and international markets.

Target participants and beneficiaries: The intention is to create jobs for Liberian nationals. MOCI estimates that less than 3,000 people are currently employed in the manufacturing sector and that most manufacturers are small, employing very few people. Hence, the strategy emphasizes the potential to create jobs, especially those for youth, women and other disadvantaged groups. With respect to investment, however, the policy states that "the only way to overcome the country's serious resource constraint is by attracting investment, domestic and foreign, and it therefore welcomes investments both domestic and foreign in Liberia." Given timing issues and the current state of impoverishment within Liberian society, it is likely that most investment in the industrial sector will come from foreign sources or from a very thin national segment. As such, this strategy basically sees a majority of foreigners as direct participants in industrial sector investment from which Liberian citizens will be beneficiaries through job creation.

Infrastructure Constraints: Manufacturing and processing concerns have a vital need for uninterrupted supply of electricity and the means to move goods from production to consumption centers if they are to be competitive. Many countries have found that it is faster and more effective to develop an industrial base within specific infrastructure platforms where power, water, and ICT services can be provided on a dedicated basis without being exposed to the interruptions and quality problems of the nation's public utility networks. This model is particularly attractive to Liberia due to the destruction of infrastructure during civil conflict. Other essential infrastructure includes roads connecting zones to ports and port facilities for exports.

Governance issues and other constraints: Other constraints impeding industrial development include legal and regulatory barriers, the presence of SOEs which could crowd the entry of private enterprise in various sectors, a labor force deficient in the skills required by industry and a lack of information and coordination to create linkages between primary output sectors and opportunities for business.

Text-Box 8 Smallholder Commercialization including Enhancement of Trade

Principal features: Liberia's dominant source of comparative advantage lies in its abundant endowment in natural resources. Moreover, approximately 50% of GDP and a majority of livelihoods (1.7 million) are currently provided by the agriculture sector and, as such, Liberia's farming smallholders constitute the largest contingent within the domestic private sector. Recognizing these facts, GOLR is prioritizing development of domestic resource-based sectors and the Food and Agriculture Policy Strategy specifically calls for private sector led growth to improve food self-sufficiency and agricultural exports. Essentially, this approach recognizes that there is a need for State-led intervention to encourage smallholders to transition from subsistence oriented production aimed at home consumption to commercially oriented behavior aimed at producing marketable surplus. While tree crops, including cocoa, oil palm and rubber have always been viewed by smallholders as a source of cash, there was traditionally less emphasis on surplus production and marketing of food crops, domains in which women have contributed a dominant share of labor. The LASIP program (which flows from FAPS) has therefore been designed to raise agricultural productivity, strengthen sector institutions and make markets work for households and communities. It will do this through smallholder commercialization strategies and through PPPs such as out-grower schemes linked to concession plantations. Recent additions of a Cassava Strategy and a Rice Development Strategy apply the same principles into specific commodity chains, while other programs under collaboration with development partners are focused on developing fisheries, timber and rubber wood processing value chains, relying upon the same principle of stimulating smallholder commercialization.

Economic Sectors engaged: Smallholders are involved in food and tree crop production, fisheries, forestry and livestock, the sum of which account for over 62% of the economy. When trade services are added, it is plausible that 75% of present-day GDP is implicated in this strategy.

Integration Potential: Smallholder commercialization offers the best overall potential to improve Liberia's domestic integration through internal trade if roads, storage and market infrastructure bring producing areas out of isolation and enable surplus produce to be delivered to areas of domestic demand. This, by itself, could be highly transformative for Liberia on both social and economic fronts since the prevailing habit in the country is for a large percentage of urban food consumption, including rice, to be satisfied by imports. The cause of regional integration will also be helped, not through the cash crops sub-sector (except for oil palm), but by expanding trade in food commodities with MRU and ECOWAS. Liberia has already established itself as a regional supplier of palm oil even though domestic demand outstrips supply. Liberia also produces more cassava than it consumes and the African market offers the greatest growth potential for use of cassava as human food.

Target participants and beneficiaries: Under this strategy Liberian participants and beneficiaries are directly targeted, with Liberia's small scale farmers being participants and Liberia's non-farming consumers being beneficiaries once marketable surplus is produced on terms that compete with imports. Women in particular stand to benefit from this development strategy given that they play the major role in marketing of food commodities.

Infrastructure Constraints: On the production side, constraints include a lack of rural infrastructure (such as for drying and grading of commodities), a paucity of irrigation or water control infrastructure plus the lack of post-harvest storage facilities. In addition, the lack of power prohibits the transformation of primary production into value-added foodstuffs and exportable products so reliable supplies of renewable rural energy dispersed into strategic zones in the interior would remove a key constraint. Meanwhile, the lack of modern communication technology isolates smallholders from market information and opportunity so there is a need to establish domestic internet backbones to build off the international connection and penetrate the rural milieu with broadband services. On the marketing side, farmers are constrained by insufficient and poor quality feeder roads and other road links in the national roads network including those across borders coupled with inadequate supply of transport services and all-weather market infrastructure. There is also a need to reduce freight costs at ports and improve trade facilitation.

Governance issues and other constraints: Farmers indicate that their biggest constraint outside of roads is the lack of rural credit and the need to rely upon informal financing mechanisms. Security of land tenure is also a major constraint preventing adoption of better land and water management practices and modern farming systems by smallholders. On the trade side, there is a need to facilitate trading across borders in order to reduce smuggling. Traders face inadequate capacity of producers to generate surplus that can be traded on a reliable basis to supply market demand, an environment of incomplete trade protocols, cumbersome regulations and customs procedures, plus inadequate knowledge about market demand, whether locally or for export.

Text Box 9 Concession of Natural Resources through FDI

Principal features: Although the GOLR does not have a formally articulated Natural Resource Concessioning (NRC) strategy, deliberate effort was made to jump-start post conflict economic recovery by inviting foreign direct investment back into the natural resources sectors. The MLME Mineral Policy statement recognizes that mining, in itself, is not a sustainable activity insofar as it depletes a finite national asset. "However, mineral extraction can indirectly become sustainable in so far as it catalyses sustainable economic activity in other, sustainable, sectors, through maximising the economic "linkages" whilst the resource is still extant." As such, a core element of GOLR's NRC strategy, applicable to both the non-renewable extractive and renewable sectors, is to husband the resources in a manner that is grounded in local conditions and accountable to advancing the common national interest for present and future generations of Liberians. Objectives include: (i) generating resource rents so they can be reinvested into sustainable activities; (ii) incentivizing private investment in concession-supportive infrastructure accessible to other users to underpin growth in other sectors; (iii) maximizing down-stream linkages ("beneficiation") through establishment of mineral-based value addition industries; (iv) developing up-stream linkages through supply chains and local content connections and (v) optimizing development of national capacity through transfer of skills and technology.

Economic Sectors engaged: This strategy engages the industrial mining sector, the plantation agriculture sector (including oil palm and rubber), timber and forestry concessions and, in the future, the petroleum sector. Mining currently accounts for 3% of GDP but is expected to grow to 20% of GDP by 2020. Together with the agro-forestry plantation sector, mining and agriculture concessions will contribute the majority of all Liberian exports for the short and medium term until smallholder agriculture revives and/or SMEs and industry become export competitive.

Integration Potential: Historically, Liberia's concessions have tended to work against national integration because they functioned as enclaves, were largely unregulated and were permitted to establish their own armed security units to enforce their territorial integrity. Under a changed governance environment with the advent of new Mineral Development Agreements, concessions have the potential to improve national integration by exerting demand upon local value chains to source local content and by investing in multi-use infrastructure which could serve to bring peripheral areas out of isolation. Regional integration is highly relevant to the industrial mining and petroleum sub-sectors because resource deposits cross national boundaries and are being simultaneously developed within the entire sub-region. Inasmuch, the sub-region has much to gain from pursuing a regional approach to infrastructure that serves extractive companies. Specifically, installing multi-modal transport networks connecting rail and roads across borders to seaports could do much to reduce transport costs to industry and to other users. The competitiveness of the sub-region as a location for value-addition from mineral processing could likely be enhanced if Liberia were to cooperate with Sierra Leone to attract the very high levels of capital investment required for this purpose but this is an aspiration which must be reserved for the longer term future when the sub-region has proven itself to be a less risky investment location and is able to provide the huge power supply required for mineral transformation.

Target participants: The direct participants in the concessions sector are, for the most part, foreign public or private providers of direct investment. As capital intensive enterprises, mining companies provide modest levels of direct local employment but plantations can generate proportionately higher levels of employment for agricultural labor either through direct jobs or by way of out-grower sourcing schemes. To the extent that concessions are effective at channeling a degree of their spending into domestic value chains there can be a degree of direct indigenous participation in the concessions growth strategy.

Target beneficiaries: By far the biggest potential from a concessions growth strategy is to generate tax and other revenues which can be invested in other forms of productive capital to catalyze other, future drivers of sustainable economic growth. As such, all Liberians are indirect beneficiaries of the nation's Concessioning strategy,t only to the extent that fiscal gains are captured and deployed for the public interest.

Infrastructure Constraints: Concessionaires face numerous infrastructure constraints in terms of the availability of reliable power, roads, railroads and port access. For the mining companies, concession contracts generally require that these be self-provided, but on a basis that permits multi-user access. Consequently, there is a critical state role to plan and coordinate between public and private infrastructure installations in order to maximize the establishment of efficient multi-modal transport networks and regulate multi-user access. For the plantation concessions, there is a greater degree of reliance upon publicly-sourced infrastructure and adequate port facilities are presently a constraint.

Governance issues and other constraints: There are simmering conflicts between communities and concessions whereby the former need to see social and economic benefits accruing in order to peacefully tolerate land use and local presence by the latter. Measures are needed to monitor the compliance of concessionaires with the local content and CSR components of their contracts and national regulations. Measures are also needed to monitor compliance of concessionaires with environmental regulations and sustainable "green" practice.

Text Box 10 MSME Development through Corridor Development

Principal features: Under the Small, Medium and Micro Enterprise Policy statement finalized in March 2011, MOCI articulates the rationale and goal for the nation's MSME strategy. The rationale for developing MSMEs is to provide an enabling environment for the emergence of a domestic corporate private sector which can eventually contribute substantially to endogenous sources of growth, job creation and exports. The goals of MSME development are both to reduce poverty by increasing economic growth and to decrease income inequality so that growth enables a more equitable distribution of income. Government recognizes that many organizations and programs already exist to build the capacity and target the needs of MSMEs. Consequently, the role of the state is primarily to help this host of service providers improve and expand their service offerings by promoting networking to share information and forge partnerships, by gathering business information and making it available to the public and by addressing the specific constraints that MSMEs face. Complementary features for implementing MSME development include the planned establishment of a National Industrial Development & Financing Organization (NIDFO) as well as a corridor growth strategy to crowd in investment along geographic axes where users can share infrastructure and benefit from synergies. The NIDFO is expected to provide support services to the nascent MSME and industrial sector through a combination of business incubation, incentives, financing, training and information outreach programs but alternatives for addressing MSME financing constraints are offered.

Economic Sectors engaged: MSMEs have the potential to work across most segments of the economy, from processing to trade to services to tourism development. The large majority of Liberia's enterprises were established within the past five years, a majority of which are in the informal sector. Most are small, each employing 10 or fewer people, but together they constitute the largest employer in Liberia.

Integration Potential: MSMEs will be primarily domestically oriented for the near to medium term and their growth will contribute more to national rather than regional integration.

Target participants: This growth strategy targets direct participation by Liberian nationals and residents-- men, women, youth and marginalized individuals with entrepreneurial drive and open to learning business skills to complement knowledge or vocational skills which they may already have. This strategy aims to develop entrepreneurship and MSMEs in all urban centers and across all fifteen counties of Liberia. In so doing, the following institutions will also be engaged: Liberia Business Association (LIBA), the Chamber of Commerce, the Liberia Women Chamber of Commerce, the Fula Business Association, Concerned Liberian International Business Organisation (COLINBO), the Lebanese Cultural Union and the Association of Indian Businessmen in Liberia and the Bankers' Association.

Target beneficiaries: Liberia's youth are particularly likely to gain their livelihoods in the informal sector and the growth of MSME's is more likely to attract them for employment opportunity than is agriculture. Woman and marginalized individuals will also be targeted for inclusion.

Infrastructure Constraints: MSME productivity depends critically upon reliable power supplies which can be adequately met with renewable rural energy. As with manufacturing industry, MSMEs can be beneficially clustered into business parks but in this case the optimal approach is to erect common facility buildings where a space-leasing approach can help to reduce overheads and also promote networking and supply chain linkages. In addition, modern information and communications technology is imperative for MSMEs to connect producers markets and deliver better information about market trends, prices and demand as well as promote better networking within clusters. This requires penetration of the interior with domestic backbone for broadband service delivery, going beyond connectivity for Monrovia. Finally, availability of roads and transport services giving producers reliable and competitive access to seaports (and possibly airports in the more distant future) are other constraints which must be relieved.

Governance issues and other constraints: Liberia needs to keep making progress on the ease of doing business. A survey of key constraints to local firms reveals different priorities by size of firm. Whereas medium firms (20 – 100 employees) cite access to land, corruption and tax burden as their three largest complaints, small firms cite access to finance, criminal disorder and electricity supply as their most pressing problems. There is a complementary need to improve the capacity of the justice system to allow for resolution of commercial disputes and to improve the skills depth and breadth available in the labor market to meet the demand of enterprise. The incidence of petty corruption on the part of government officials, particularly during inspections and at checkpoints, also needs to be reduced.

2.2.1 Introduction of Key Growth Strategies

The four strategies of focus were briefly identified in the diagnostic of current conditions in chapter one, reserving detailed review for this chapter. While all have merit and warrant attention during the transformation agenda, it may be too costly to pursue all with equal attention, particularly as they imply a demand for public investment in infrastructure. These include:

- Industrialization through Special Economic Zones
- Smallholder Commercialization through Multiple Measures including Enhancement of Trade
- Concessioning of Natural Resources through Foreign Direct Investment
- MSME Development through Corridor Development Initiatives.

Together, the four strategies have a bearing upon all major productive sectors of Liberia's economy and, together, will account for the majority of GDP growth in the future. In addition, the four strategies overlap or are complementary and measures to improve one strategy can deliver benefits to another. For example, Natural Resource Concessioning provides the opportunity for development of infrastructure to serve identified corridors. Corridors can, in turn, aid the development of the smallholder and MSME sectors. By focusing on the transformative attributes of each, some guidance emerges to inform respective priorities for the state and its development partners during implementation. In the paragraphs which follow, each strategy will be described with respect to its principal features, economic sectors implicated, domestic or regional integration potential, the participants and beneficiaries targeted plus governance or infrastructure aspects constraining their full growth potential. Where applicable, the strategies are appraised with respect to how a green orientation can be infused in the quest for growth.

2.2.2 Introduction of Filter criteria

In this section we define a series of filter criteria, listed in Text Box 11, which are used to appraise the four key growth strategies for their implications on most appropriate time frames for investment in infrastructure and essential accompanying measures. The sum of these criteria, if each were maximized in an ideal world, would contribute to inclusive, stability-enhancing growth in Liberia, in line with the objectives for transformation. Yet, because growth strategies are applied in the real world, these filter criteria are used to provide insight into how the risks of each of the four highlighted Liberian growth strategies can be mitigated and their potential rewards maximized. After defining the essence of each type of criteria, the following section applies them case by case to the four principal strategies to explore their relevance to each specific one. Where they provide insight as to the role of the state in prioritizing important accompanying measures, these are developed in the present chapter. Where they identify the priority role of the state or donor partners in financing public infrastructure, these are pursued in chapter three. When each is applied to a specific growth strategy, it is given a rating of high (H), medium (M) or low (Low) to indicate the degree of influence or impact that a given strategy has on each criterion.

Box 11 Filter Criteria Applied to Strategies

1. Economic Clout
2. Builds human capital through direct involvement of Liberian citizens
3. Benefits Liberian citizens indirectly
4. Engages domestic private sector
5. Timing of growth coincides with capacity gains
6. Encourages green growth
7. Promotes internal economic or physical integration
8. Fosters regional integration
9. Reduces exposure to threats

Economic Clout

This filter criterion looks at the sectors that would be engaged by a given strategy to review their relative contribution to GDP in terms of current absolute share and rate of growth as well as future potential for growth. When considered together, one can appraise the potential "clout" a given strategy might exert on the aggregate economy in rough orders of magnitude. This does not, by itself, correlate with jobs created or livelihoods generated that engage Liberian citizens directly or indirectly, particularly given capital intensive and enclave sectors, but it is helpful in establishing its position within the overall economic landscape. Because GDP data provides a backwards look in time, it may ignore the future potential of a given sector and especially where there are binding constraints that inhibit sector performance, current results cannot be taken as a predictor of future performance. These aspects are taken into account when appraising a given strategy against the criterion of economic clout.

Builds Human Capital through Direct Involvement

This criterion begs the question of whether and to what extent Liberians will directly participate in implementation of a given strategy, bearing in mind that the AFT includes a Human Development pillar and GOLR's objective is to engineer a structural shift in the economy whereby economic growth is "inclusive" of the population and delivers development benefits. This filter criterion will thus examine the extent to which Liberians directly participate in each appraised growth strategy as this process, in itself, will aid in transferring skills and knowledge to the local population, a key result needed for transformation of Liberia's human capital. In like manner, it will examine the extent to which Liberian institutions and civil society organizations will contribute to the execution of a given strategy so as to build the capacity and relevance of Liberian public and non-government institutions.

Benefits Liberian citizens indirectly

This criterion recognizes that even if Liberians do not participate directly in the execution of a given strategy, they stand to gain indirect benefits if the tax revenues, infrastructure and other public goods generated by the strategy are directed in a manner that serves the public interest. This criterion therefore seeks insight as to the risks involved in indirect benefit flow from each appraised growth strategy and the safeguards which might reduce them.

Engages indigenous private sector

Both before its civil war and since the advent of peace, Liberia has been masterful at attracting foreign direct investment for capital formation needed to effectively tap the country's vast natural resource endowment. In that respect, Liberia has created an investment climate which is investor-friendly, offering numerous safeguards against state expropriation and meddlesome public intervention. At this juncture, however, given GOLR's vision of an economy fueled by endogenous growth outside the concessions sector in the future, it is important to foster engagement of the indigenous private sector. Application of this filter criterion evaluates each strategy in this regard and identifies what else might be done to further this objective.

Timing of growth coincides with capacity gains

As explained above, this study seeks to contribute a perspective on plausible time frames to guide future planning, both for expectations about the rate at which structural transformation can be expected to take hold as well as the pace at which infrastructure should be planned and implemented. Of relevance here is the fact that the National Capacity Development Plan envisages that it will take a "generation" – often estimated as a 30 year time-span-- to endow Liberia with the human capital it requires to be competitive in labor supply and become capable of generating innovation on a domestic basis. As such, this criterion forces reflection on the optimal timing for state intervention with respect to a given strategy in terms of synchronization of advances on the human, institutional and infrastructure development fronts. Concurrent progress on all fronts is essential in some cases to achieve a higher degree of success, especially with respect to the "inclusiveness" of returns from investments in infrastructure. Accordingly, all growth strategies will be appraised against this filter criterion.

Encourages Green Growth

"Green growth" is important for sustainability and climatic stability. This is particularly relevant from a regional perspective given that Liberia, Sierra Leone and Guinea harbor the region's primary rainforest ecosystem and the protection thereof is vital to preservation of the high rainfall environment to maintain the hydrology and hydro-electric potential which these MRU states can tap for their own benefit and that of the region. Green growth can be achieved in Liberia without compromising the rate and inclusiveness of economic growth. As such, this perspective is added into the look forwards especially with respect to choices regarding infrastructure.

Promotes internal integration

This criterion appraises a given strategy against its potential for or limitations to promoting greater domestic integration from physical, social, economic or psychological perspectives. Recognizing that the fragility analysis in chapter one emphasizes the importance of making progress to de-fragment Liberian society, this criterion starts from the snapshots provided in strategy descriptions and asks what relevant infrastructure investments or accompanying measures might improve the propensity of a given strategy to improve prospects for domestic integration.

Fosters regional integration

This criterion appraises a given strategy against its potential for or limitations to promoting greater regional integration from physical, social or psychological perspectives. It seeks to identify those infrastructure investments or accompanying measures which can improve the desired development outcome of greater regional integration which is beneficial to Liberia.

Reduces exposure to threats

This criterion reflects on the findings from the fragility analysis conducted in chapter one whereby Liberia was identified as being vulnerable to a range of continued threats which have the potential to destabilize the country or introduce flare-ups in conflict. It asks questions about the extent to which a given strategy can serve to mitigate or exacerbate exposure to these threats and, by extension, what can be done to reduce such risks.

Methodology of Growth Strategy Appraisal through Use of Filter Criteria

Essentially, the filter criteria defined above represent desirable developmental outcomes that all contribute to the enormous task of transformation. Some of these have been explicitly identified by GOLR as being important (such as building human capital and engaging the domestic private sector) and others of which have been identified as central concerns of this study, notably green growth, stability and regional integration. By applying all filter criteria defined above to each of the four growth strategies one by one, and attributing "high", "medium" or "low" ratings in each case, an aggregate picture emerges about the degree to which each given strategy performs in delivering the developmental outcomes desired. A high rating means that the strategy performs well in delivering the transformational development result of a given filter criterion, whereas a low one means that it does not. Ratings are identified up front, backed up by analysis and narrative rationale which follows, provided with reference to quantitative and qualitative considerations as applicable in each case. After each strategy is appraised against the sum of all filter criteria, a summary paragraph draws out key insights on the type of infrastructure package that would most effectively address the binding constraints impeding each one. After all four strategies are appraised, their rankings are tallied and contrasted to make recommendations on the optimal role of the state, both with respect to accompanying measures and to take forward in the elaboration of an infrastructure plan for Liberia in chapter three.

Overall, it is clear that Liberia, historically and to the present-day, welcomes foreign direct investment. In addition, the nation strives to regain middle income status by 2030. While FDI can be beneficial, it is also clear that Liberia needs to select an implementation path that balances the long-term national interest with the need to promote investment. In addition, one of the lessons on fragility articulated in Box 2 in chapter 1 is that transformation takes time and patience should be exercised in the pursuit of results. This study assumes that Liberia will continue to deploy its traditional economic growth strategies, while introducing new initiatives to build human, institutional and physical capital and so transform the structure of the economy. It is the careful and balanced deployment of all of these strategies which can, ultimately, deliver middle income status with equity to give Liberia stability and prosperity for the long term. The following sections therefore seek to identify the trade-offs and illuminate issues of balance.

2.2.3 Application of Filter Criteria to Industrialization Strategy

Economic Clout of Industrialization
Rank: Low for the Short Term

Manufacturing currently contributes little to Liberia's economy (estimated at 6 to 7% of GDP in the post-conflict period) and it has a sluggish rate of growth averaging 2.1% over 2006-2009 as compared to other segments of the economy[65]. In addition, IMF projections indicate that the share of manufacturing is expected to hold even with future aggregate growth at best, possibly contributing 5% of GDP by 2016. Hence, the value of an industrialization strategy pertains to the longer term future rather than to the immediate growth impact it can be expected to deliver to Liberia. Yet, chapter 1 provided the reminder that it is the ability of low income countries to discover and engage in non-traditional activities that provokes transformation, citing the examples of Taiwan and South Korean industrialization from origins as sugar and rice producing economies. The industrialization policy recognizes that the "emergence of a dynamic manufacturing sector has typically marked a country's transition from low to intermediate income levels." Consequently, even though industrialization is ranked low against this criterion, it is important to begin now to foster conditions for industrialization, particularly if Liberia is to eventually generate growth from internal sources. The following paragraphs consider how this might best be approached.

Direct Involvement of Liberians
Rank: Medium

The earlier description of this strategy identifies the fact that most investment needed for industry will come from foreign sources. This would especially be true if speed were applied in establishing industrial zones in the near term. The Investment Act of 2010 reserves the ownership of certain enterprises exclusively for Liberians, including the supply of sand, the making and sale of ice, block making and retail sale of rice and cement as examples. It also stipulates that foreign investors may invest in ice manufacturing, production of stone and granite products, water purification plants, bakeries, commercial printing and a few other examples given certain conditions.[66] The first element essentially reserves some spheres of low capital non-industrial ventures to Liberian business of the MSME variety whereas the second element incentivizes entry by foreign investors into areas of potential competitive advantage on condition that they involve a local joint venture. Clearly, many of the more substantial types of manufacturing or primary goods processing industry are thus left open to purely foreign investment and ownership. As such, the primary means by which Liberians will directly participate in an industrialization strategy in the short to medium term will come in the way of formal sector jobs which industry is in the best position to create. This brings to light the labor provisions in the Investment Act which, subject to the labor law, specifies that:

- Foreigners of any nationality may be employed in Liberia but remain subject to Liberian laws;

[65] This is likely a valid conclusion, notwithstanding lack of precision in national accounts data.

[66] Other permitted co-investment areas are limited to advertising agencies, cinemas, poultry production, entertainment centers not associated with hotels, sale of animal feed, operation of heavy duty trucks and sale of pharmaceuticals. Where such of the listed enterprises is owned exclusively by non-Liberians, the total capital invested shall not be less than US$300,000; and, where such of the listed enterprises is owned by non-Liberians in partnership with Liberians and the aggregate shareholding of the Liberian is at least 25%, the total capital invested shall not be less than US$ 300,000.

- Labor relations between foreign-owned enterprises and their employees shall be regulated by their own labor agreements if they do not establish lower standards than required by Liberia; and

- Investors shall have the right to employ any persons, including foreign nationals, in accordance with domestic labor law in order to conduct their investment and business activities.

These provisions come with a double-edged sword. On the one hand, they make it feasible for foreign investors to overcome skill gaps in the local labor force and thus increase the attractiveness of Liberia as an investment destination. On the other hand, there seems to be little in the laws themselves to encourage or oblige firms to directly hire and mentor under-studies to transfer skills and eventually jobs to Liberian nationals.[67] It would seem that such incentives are to be built, case by case, into contractual agreements with investors, in which case the specifics are open to negotiation. Thus, for example, the National Investment Commission Act of 2010 which legislated the establishment of the NIC, vests them with authority to "promote and assist in the development of foreign direct investment in all sectors of the economy of Liberia other than those sectors in which foreign direct investments is prohibited," and to "participate in the evaluation and award of concession or other development rights with respect to assets of the Republic" in this regard. The NIC Act further specifies that they may "facilitate the training of Liberian nationals to meet the demands for foreign-invested businesses" in furtherance of their mandate. This is a good aspirational statement, but it has no teeth and the accountability of NIC to deliver gains in job creation and skills transfer is not evident. This may not be sufficient to induce bona fide gains from an industrialization strategy to deliver a rise in Liberian employee incomes and an upgrade in Liberian human capital. Consequently, in dispensing the state role through implementation of an industrialization strategy, greater emphasis might be warranted on attention to human capital objectives of inward investment. This is a key reason why the industrialization strategy is rated "medium" against this human development filter criterion.

Liberia's mining sector provides a good example of how aspirations can be converted to monitored achievements. Relevant provisions published in the 2010 Mineral Exploration Regulations include three relevant examples, including.

- "The Ministry may from time to time second up to two professionals (mining engineers or geologists) from the Ministry to a Licensee's operations …,"[68]

- "A Licensee must provide on a continuing basis for the training of Liberian employees in order to qualify them for skilled, technical, administrative and managerial positions. A Licensee must employ and give preference to the employment of qualified Liberian citizens for skilled positions as and when such persons become available. A Licensee must advertise in at least two Monrovia newspapers for all such positions expected to have a term of at least one year, and must maintain written records as to the number of local candidates applying and why they were determined to be unsuitable,"[69]

- "A Licensee must comply with applicable Law setting forth the duties of an employer and the rights of employees and may not hire non-Liberian citizens for unskilled positions."[70]

Investors and NIC should both be required to transparently report on the human capital dimension of industrialization progress and this will help move the industrialization strategy from a ranking of medium to high.

Benefits Liberian citizens indirectly
Rank: Medium[71]

Although Liberia stands to realize indirect gains from the taxation of industry, the proceeds of which can be used to serve the public interest, this should take a lower priority than the attainment of direct income and skills gains from an industrialization strategy. At the same time, it must be recognized that industry is more likely than SME development or smallholder commercialization to produce indirect benefits for Liberian citizens, consequently industrialization strategy ranks "medium" against this criterion. In the case of industrialization and Concessioning strategies, both should generate fiscal flows to government in the form of surface rents, turnover royalties and/or corporate income taxes, all of which are effectively "rents" in exchange for the right to operate. Any time that benefits transfer indirectly to citizens through the hands of the state, numerous risks of diversion are encountered and this is why the "medium" ranking is conditioned on government efficacy. Diversion risks are commonly characterized as graft or corruption, and indeed this label is valid. However, it is worth dissecting the diversion risk with a finer sieve to identify remedies that might be brought to bear. Two aspects are explored here: Premature Load Bearing and Foreign Corrupt Practices. This analysis is equally relevant to the Concessioning strategy.

[67] The National Employment policy has been reviewed but author could not get hold of the Decent Work Labor Law to verify this assertion.
[68] Clause 8.8.a, "Secondment of Ministry Employees" under MLME Mineral Exploration Regulations, 2010
[69] Clause 9.1, "Employment and Training" Ibid
[70] Clause 8.7.(b) "Health, Safety & Labor" Ibid
[71] Medium ranking depends heavily on the effectiveness of government in collecting and redistributing revenues

Premature Load Bearing. The capacity to deliver real change from past practices is weak in societies that score low on governance indicators as is the case with Liberia. This can be exacerbated when too many demands are placed on new or reforming institutions in a short period, the result of which can be a loss of legitimacy and a decrease of public trust in that institution of the state. This is a risk which GOLR will want to avoid. Premature load bearing can occur when there is a large divergence between what is in a public agent's private interest and the public interest which they are supposed to serve.[72] An example might be that customs reform results in higher import tariffs for raw materials required by a given manufacturing firm. The importer may offer the customs official a side payment to reduce what is owed, resulting in private gains to the importer and the agent, but a loss to the public coffers. Where the reform itself is accompanied by complexity, ambiguity makes collusion that much easier. Considerations like these apply across a range of state activities from policing to justice to public financial management; different tasks create different load bearing pressures and inducements to deviate from organizational standards. When those pressures overwhelm capacity and especially when they place stress on individual components, they can fail. A mitigation strategy which GOLR might want to consider is to promote an exercise in transparent reporting that crowds in oversight by Liberian non-Government institutions with a valid interest in the integrity of these particular state functions. As such, peer oversight mechanisms might involve a cross-section of foreign investors and indirect beneficiaries, including representatives of the Sierra Leone business community such as Liberia Business Association, the Chamber of Commerce, the Liberia Women Chamber of Commerce and similar institutions. This will simultaneously improve the dialogue between Liberian business and the public sector, helping to build trust and align their interests around additional reforms which might be appropriate.

Foreign Corrupt Practices: The bribery example provided above serves to illustrate that corrupt practices require two parties and there is thus an equal need to combat corruption on the supply side. Although much has been said in recent years about corporate social responsibility and business ethics, it is clear that governments cannot assume that the CSR movement is a guarantee of integrity on the part of foreign business. In fact, very few countries have national legislation that penalizes companies engaging in foreign corrupt practices; the United States is one which does and the UK adopted a Bribery Act as recently as 2010. These will have a greater deterrent effect on corporate behavior than would the absence of any sanctions. Multilateral development banks also have stepped up measures to disbar organizations engaged in corrupt practices and the OECD sponsored a Convention on Combatting Bribery of Foreign Public Officials in International Business Transactions. The latter has since been ratified by 34 OECD member countries plus five non-members but not China or India. OECD has issued "Good Practice Guidance" plus a publication entitled "Recommendation on Tax Measures for Further Combating Bribery of Foreign Public Officials in International Business Transactions". OECD tools such as these offer valuable reference and institutional resources for Liberia. Another tool available to Liberia is to build incentives for corporate adherence to international anti-bribery norms into procurement, for example by awarding points for such aspects when conducting formal competition for award of concessions or other development rights associated with market entry into Liberia. Given Liberia's need to improve governance systems that to transparently generate indirect benefits from industrialization and channel them without corruption into public goods, the industrialization strategy is ranked "medium" against the indirect benefit criterion.

Engages domestic private sector
Rank: Low

The paragraphs above identify the fact that industrialization, if launched in the short term with the aid of infrastructure-enriched zonal development, will likely preclude broad and direct involvement of the domestic private sector. Only when the SME sector has developed to a greater stage of maturity can it be expected that supply chain requirements will operate in favor of establishing bona fide local content linkages. From a synchrony perspective, it would therefore seem advisable to allow the fledgling SME sector to emerge in the first instance before moving full steam ahead with the stage of committing public sector investment in SEZ platform infrastructure.

This logic may already have been brought to bear by Liberia when it decided in 2008 to decline an offer by the Government of China to establish an SEZ in the proximity of Buchanan port. Under an SEZ pre-feasibility study, IFC advice was that GOLR adopt a unified, national SEZ legal framework rather than pursuing a concession-by-concession approach with the logic that "a proactive strategy allows host countries to evaluate all SEZ proposals consistently on a case-by-case basis in accordance with uniform economic development criteria" noting that "lack of uniformity, which can contradict the host country's national economic policy in a particular transaction, typically leads to zone regime failure." In line with a decision to slow the passage of SEZ legislation specific to Buchanan, the President dissolved the steering committee and directed that the initiative be managed as part of government's overall investment promotion strategy. As responsibilities have evolved and

[72] This concept is drawn from works by Pritchett, de Weijer, Kaplan and Lund, and cited in World Development Report 2011: Conflict, Security and Development, The World Bank 2011, page 101.

MOCI has been tasked with industrialization, it therefore seems appropriate to suggest that an appropriate next step would be for MOCI to revive and follow through on drAFT SEZ legislation developed by IFC in recent years. The delay has likely been beneficial as eventual legislation can now be situated in the context of national development objectives set out in the AFT.

Timing of growth coincides with capacity gains
Rank: Low

The industrialization strategy ranks poorly against this criterion for the obvious reasons that capacity is low both in terms of the education and skills base in Liberia's labor pool and in the nascent development stage of its indigenous business sector. Text Box 12 extracted from the Ministry of Labour's National Employment Policy identifies the magnitude of this problem.[73] Although there is a severe lack of jobs, until the labor force has a better base of education, there is likely to be a situation where foreign workers would capture the better jobs created through industrialization. Thus, until public investment in education can begin to yield results and SEZ or related legislation ushers in incentives for human capacity development and eventual indigenization of jobs, growth from industrialization is likely to exaggerate the income disparity in Liberia rather than reduce it.

Text Box 12 "The Monrovia Challenge"

Although there is an adult (15+) labour force of more than 1.1 million, of these only 160,000 have a Secondary education or more. The unemployment rate (broadly defined to include those who would like to work but are not actively seeking work because 'there is no point') is 11%. Yet, half of the country's unemployed live in Monrovia. Added to this there is very low labour participation in Monrovia (58%) as against 72% for country as a whole. This suggests a severe lack of job opportunities in the capital.

Encourages Green Growth
Rank: Low

Green growth and industrialization can go together, but only if the policy environment deliberately encourages this objective. This relies principally upon green industrial policies which aim to reduce pollution, encourage utilization of renewable or non-emitting power sources and improve the efficiency of production and processing facilities. The policy environment can be enabled through tax breaks, incentives for research and development and green innovation on new ways to solve environmental problems through technological innovation.

At present, Liberia has no policies on green aspects of industrialization.

Promotes internal integration
Rank: Low

Industrialization through zones is a strategy which accepts the premise that domestic infrastructure networks are poor and, rather than wait until the general level is raised in the country, installs zone-specific utility services such as power, water and communications to service industry within a narrow platform. Although this is a pragmatic approach, it cannot be construed as a strategy which serves to unite the country through physical or economic integration. This would especially be true if zones were eventually located only in and around Monrovia or at coastal port locations. While the latter locations would make sense for export processing zones by reducing transport costs of final goods, they would likely serve to accentuate urban migration. Mitigation measures might be to add other SME-supportive zones located in urban centers within the interior. This idea is explored further under the MSME strategy review below.

Fosters regional integration
Rank: Medium

Liberia's mineral policy aims to bring beneficiation of minerals into the economy to add value to these raw materials. Sierra Leone has the similar objective of introducing transformation industry into its mineral sector, thus encouraging the pelletization of iron for example, or the production of aluminum as is done in Guinea. These goals can only be achieved with very high levels of capital investment and very large and reliable supply of power. The likelihood that the world's few large mining companies would establish transformation plants in both countries is fairly low. However, it seems plausible that a joint effort by Liberia and Sierra Leone to establish a mineral processing zone might succeed in bringing such industry to the sub-region. This would need to be configured so that both countries would gain economic benefit from the collaboration, yet provide a degree of simplicity for the eventual investor(s). An example might be that Liberia designates a plot of land for a zone on their side of the Mano River border to cater to the facility while Sierra Leone develops the transport links for export from a Sierra Leone mineral port nearby. (Feasibility analysis for establishment of such a port in the vicinity of Sulima is presently under study in Sierra Leone). Under the collaboration protocol, laborers from both countries would be eligible for employment. This is the type of scenario under which industrialization and regional integration could mutually benefit and contribute to economic growth in the sub-region.

[73] Government of Liberia, Ministry of Labour, "Employment Policy", April 2009, page 8.

Reduces exposure to threats
Rank: Medium

The biggest risk of an industrialization strategy in Liberia is that it accentuates Liberia's exposure to the vulnerabilities of patronage and corruption. Another conflict exposure that could arise is with respect to land dedicated to industrial zones, though this could be mitigated through just compensation and appropriate relocation measures. On the other hand, the potential of industry to create jobs and develop human capacity has tremendous potential to reduce the nation's vulnerability to the threats posed by poverty and unemployed youth. It is essential that the workforce gain the opportunity to participate directly in jobs for industry to swing from a destabilizing to stabilizing influence.

Findings on Soft and Hard Measures to Reduce Constraints to Industrial Growth

In applying the nine filter criteria to appraise the Industrialization Strategy, several findings emerge with respect to the Industrialization Growth Strategy. Table 2.2 identifies the specific infrastructure gaps which the public sector would need to address, either directly or through PPPs, for an SEZ-enabled industrialization strategy to successfully relieve constraints to industrial growth.

A bigger constraint actually resides in the human capital pre-requisites for successful industrialization notably with respect to limitations in the supply of managerial talent and skills gaps among the Liberianwork force. The alternatives of importing foreign expertise or expanding Diaspora involvement in SEZ operation work against the inclusive growth thrust of AFT and could even exacerbate tensions by creating jobs that are not accessible to the population at large. While recognition of such issues helps to identify important soft accompanying measures that GOLR should contemplate, it also explains why the study concludes that the timing is not optimal for the launch of SEZ-enabled industrialization. It might be preferable to first make advances with respect to MSME development and sequence the introduction of heavier industrialization at such time as Liberia has expanded the skills base of its population.

Table 2.2 Summary Soft and Hard Measures to Improve Efficacy of Industrialization Growth Strategy

	Accompanying Measures to Improve Governance and Development Results	Infrastructure Requirements to Relieve Constraints to Growth
Industrialization via Zones	Revisit draft SEZ legislation and situate in the context of national development objectives set out in AfT poverty reduction strategy; incorporate MSME-oriented zones including EZBs and EZTFs	ZONES: Physically delineated zone(s) equipped with dedicated supply of power, water and telecommunications. Each of these utility services could be purpose built or generated through zone-specific infrastructure instead of relying upon grid-based service delivery.
	Place great emphasis on attention to human capital objectives of inward investment and build these into zonal development regulations before embarking upon investment in infrastructure platforms to support industrial SEZs.	ROADS: Roads which specifically connect zones to ports or airports
	Adopt explicit mitigation strategies to reduce patronage and corruption by developing peer oversight and inclusion mechanisms engaging civil society organizations with appropriate interests in the public good	PORTS: Export-processing zones will need access to good quality port facilities
	Build incentives for corporate adherence to international anti-bribery norms into national procurement processes	GRID-BASED POWER: Grid-based power would be essential to supply a mineral processing zone should that eventually be developed
	Obligate Investors, NIC and other GOLR oversight organts to transparently report on the human capital dimension of industrialization progress.	

work force. The alternatives of importing foreign expertise or expanding Diaspora involvement in SEZ operation work against the inclusive growth thrust of AFT and could even exacerbate tensions by creating jobs that are not accessible to the population at large. While recognition of such issues helps to identify important soft accompanying measures that GOLR should contemplate, it also explains why the study concludes that the timing is not optimal for the launch of SEZ-enabled industrialization. It might be preferable to first make advances with respect to MSME development and sequence the introduction of heavier industrialization at such time as Liberia has expanded the skills base of its population.

2.2.4 Application of Filter Criteria to Commercialization of Smallhoders

Economic Clout of Smallholder Commercialization
Rank: High

Chapter 1 identified that traditional agriculture offered refuge and survival livelihoods during Liberia's conflict, revealing the fundamental resilience of this sector. Even now the sector contributes more than half of GDP and engages over 1.7 million people. It is thus evident that smallholder agriculture, including crops, artisanal fishing and the raising of livestock offer the greatest overall potential to raise incomes and reduce poverty.Yet, there is a need to modernize smallholder behavior and improve productivity in order for incomes to rise. Solutions will lie more with intensification of agriculture than extension of areas devoted to production, particularly given the material portion of land being allocated to mining, plantation agriculture and, in due course, industrial estates. Although the sector is likely to grow more slowly than mining and possibly services in coming years, it is obvious that a smallholder commercialization growth strategy has a high degree of economic clout.

Involves Liberian citizens directly
Rank: High

At an individual level, the process of commercialization will confront farmers with many new stimuli and demands for behavioral change. For this to occur, some conditions are necessary, but may not be sufficient to deliver impact. Two essential conditions are an improvement in security of land tenure and increased exposure to market demand. The state has a critical role to play in addressing both of these constraints. Box 2 in chapter 1 highlighted a range of sub-optimal coping strategies that Liberian farmers adopt to deal with the issue of insecure tenure, the sum of which add up to a deliberate subsistence orientation and avoidance of producing marketable surplus. Liberia must get serious about land tenure reform if it is to obtain genuine transformation in the smallholder sector. Any changes in land laws or regulation must be accompanied by improved institutionalized measures to mediate conflicts over usage and ownership. Because such institutions require deep knowledge of both customary and modern land tenure systems, some countries (Rwanda and Afghanistan) have found it helpful to empower local communities and involve elders and women in the mediation function. Nonetheless, due to the high degree of internal displacement, out-migration and resettlement during and after the war, with identity fragmentation at an all-time high, Liberia must find a way for state or local institutions to also participate in brokering recourse and justice in order to fairly balance all interests. At the same time, the state must take actions to remove production zones from their isolation. The LASIP program is taking action to do this in two appropriate ways, (1) by connecting farmers into value chains, both for input supplies and for the marketing of their output, and (2) by increasing road density in the country. In the circumstances, it seems vital that Liberia make best efforts to fulfill its CAADP commitment to devote 10% of annual budgets to agriculture and strive for sustained 6% annual growth in the sector.

Outside of these, intensification of agriculture requires several traditional practices to change. Top among these, aside from use of improved input packages including seeds and plant stock, is the abandonment of slash and burn cultivation and other practices that are increasing land degradation in Liberia. It is important that Liberia promote a green growth approach to agricultural development by introducing incentives to promote soil conservation and improved water management. These are essential in order for farmers who bear the costs of long term conservation to share directly and visibly in the environmental benefits that will accrue to society as a whole. However, security of tenure must precede farmers' efforts to improve conservation practices.

Benefits Liberian citizens indirectly
Rank: Medium

The very nature of Liberia's agriculture sector at present is that it benefits those participating, but few others given the general lack of marketable surplus. However, as a commercialization strategy begins to produce larger amounts of marketable surplus, the first and most obvious benefit to others in Liberia will be higher food security and possibly lower food prices. In this respect, smallholder commercialization has potential to benefit not only sector participants, but the whole of Liberian society.

Engages domestic private sector
Rank: High

Agriculture offers links both to MSMEs for processing as well as to transporters, middlemen and traders engaged in supplying the sector and finding markets for production surplus. It is evident that progress in smallholder commercialization will yield high benefits against the AFT objective of expanding Liberia's indigenous private sector.

Timing of growth coincides with capacity gains
Rank: Medium

There is, without doubt, a dire need to impart capacity gains into Liberia's farming households, but also to the local and national institutions charged with leading the process of modernization. This is an area where Liberia, through LASIP, has correctly identified the importance of strengthening institutions, including farmer based organizations plus those charged with extension, research and training. Because of present weaknesses in MOA, CARI and Liberian institutions of vocational and higher education, Liberia is opting to get help from global and regional institutions such as IITA and Africa Rice Centre to leverage regional public goods achieved with respect to new crop varieties, crop management practices, and the like. At the same time, Liberia is encouraging competitively recruited NGOs and private sector firms to crowd in to value chains and flesh out key functions such as multiplication of improved NERICA[74] seeds, high yielding varieties of cocoa seedlings and

[74] NERICA is a New Rice for Africa developed with African Development Bank support by the West African Rice Research Association, WARDA.

the like. This process will take some time, but as those capacity gains are made, and the private sector responds to opportunity on the supply side, the rate of growth expected from smallholder commercialization can be expected to accelerate.

Encourages green growth
Rank: High

The smallholder commercialization strategy is ranked high against the green growth filter criterion because success in this sphere of economic activity relies upon sound agricultural practices that seek to improve land management, preservation of soil quality and climatic hydrology. All of these measures are central to Liberia's CAADP program.

Promotes internal integration
Rank: High

As mentioned above, a core necessity of smallholder commercialization is increased density in the road network. Not only is LASIP addressing this need through reconstruction of feeder roads, MOPW's road master plan includes the objectives of connecting all fifteen county capitals to the primary roads network and bringing all rural residents within five kilometers of an all-weather road. These measures will contribute a great deal to the physical aspects of integration. When combined with the strategy of encouraging farmers to produce surplus which can then be marketed to consumption centers through domestic trade, this approach will also help with social and economic integration in Liberia.

Fosters regional integration
Rank: High

The MRU was established on the premise of developing trade within the sub-region but chapter 1 revealed that present levels of regional trade are quite low. Nonetheless, trade in food commodities is the most promising means by which trade flows will grow in the sub-region and the important priority is to revitalize traditional trade corridors with supportive infrastructure and favorable border conditions that encourage a formalization of trade. Liberia's engagement in cross-border trade suffered severe contraction during the conflict and this resulted in the devastation of regional markets that used to serve Sierra Leone, Guinea and Liberia. A particular example is the disruption of the trade which previously took place in markets connecting Sierra Leone and Guinea with Western Liberia as well as those connecting Eastern Liberia with Côte D'Ivoire. Such market clusters around Liberia's borders previously conducted vibrant trade in agricultural produce and livestock, drawing in traders from as far as Mali. A resumption of trade has been retarded due to many factors connected to the sub-regional dimension of conflicts. However, a resumption of trade is a promising way to repair some of the social and ethnic cleavages which ripped these areas apart during the violence.

Regional cooperation will be highly beneficial to transformation in the smallholder sector and is one of the spheres in which the AU, ECOWAS and member states are most active. Most of the states in the sub-region have finalized CAADP compacts under which the continent is seeking to drive a green revolution in order to improve food security in Africa. Liberia and its neighbors stand to gain from agricultural research being conducted regionally as mentioned above, but even bilateral relations have potential to lift productivity. For example, Ghana has traditionally been one of the largest suppliers of cocoa into world markets but, like Liberia, has been facing a problem of aging tree stock and dwindling yields. Ghana's research institutions have had a head-start in tackling this problem and have now developed a new cocoa variety that begins yielding within 18 months of planting. This improved technology could make a big difference in overcoming farmer hesitancy to renew aging cocoa tree stands, as the incubation period before yields could be reduced by more than half compared to traditional varieties. At this point, Ghana is only in a position to supply improved seedlings for domestic renewal, but with better regional trade conditions, it seems a matter of time before the private sector understands the opportunity of expanding supply to service wider regional demand.

Reduces exposure to threats
Rank: High

The biggest risk arising from smallholder commercialization pertains to conflicts over land use and this is why progress in land tenure issues is the biggest governance priority for this strategy. The resumption of trade in areas previously ravaged by conflict needs to be approached with care so that conditions foster a reduction in social cleavages rather than exacerbate them. Otherwise, progress with smallholder commercialization has much to contribute in the quest for peace and stability since it can directly contribute to poverty reduction, food security and, in the right governance conditions, to growth with development. Although Liberia is finding it hard to attract displaced, urbanized youth back into agricultural production, they are attracted to trade as a livelihood and production will become more attractive as commercialization proves its potential to generate profitable livelihoods. The expansion of marketable surplus therefore improves the potential for job creation that can productively engage more youth.

Findings on Soft and Hard Measures to Reduce Constraints to Smallholder Commercialization

In applying the nine filter criteria to appraise the Smallholder Commercialization Strategy, several findings emerge with respect to binding infrastructure gaps and essential soft accompanying measures that need to be addressed. These are summarized in Table 2.3.

Table 2.3 Summary Soft and Hard Measures to Improve Efficacy of Smallholder Commercialization

	Accompanying Measures to Improve Governance and Development Results	Infrastructure Requirements to Relieve Constraints to Growth
Smallholder Commercialization	Foster conditions for regional trade, including measures to ease the crossing of borders, plus adoption of quarantine and phytosanitary standards under which improved germplasm from neighboring countries and regional multiplication schemes can permit imports int Liberia.	ROADS: Restoration of the total «agriculture road network» to improve road density, including rural roads, primary and secondary plus arteries leading to border crossings to bring farmers into greater proximity of local, national and regional markets, thereby inducing incentives for production of marketable surplus
	Land tenure reform is essential for successful smallholder commercialization. Legislative and institutional reform are both needed, including processes that drawn from communities and customary forms of conflict mitigation. Inclusion of women is essential	OFF-GRID RENEWABLE ENERGY: Power supply will help with the processing and transformation of agricultural outputs produced by smallholders, particularly cash crops. The level of demand would be better served through renewable rural energy sources than grid-based sources
	Facilitate cross border trade by consolidating trade-related services at border points	MARKETS & BORDER FACILITIES: **Trade supportive infrastructure** including covered markets and storage depots at strategic inland locations, plus border crossing facilities to encourage the formalization of cross-border trade
	Ratify ECOWAS Trade Liberalization Scheme and Implement Common external Tariff	IRRIGATION FACILITIES: Irrigation infrastructure to enable increasing productivity in rice production
	Reduce cost of transportation along corridors & ports by reducing inspections & checkpoints corruption and reduce volume of goods smuggled across borders	ICT: Broadband internet will improve availability and stimulus of market information for the smallholder sector and will help remove them from isolation and improve connections to buyers and input suppliers

The core factor which must lie at the root of behavioral change among smallholders is better incentives for surplus production. Unless surplus produce becomes tradable, there is no rationale for farmers to become more ambitious. If conditions for trade become more hospitable and the potential gains become evident, farmers (both male and female) will see the merit in striving for improved productivity and output. All of the soft accompanying measures thus point to aspects that will help improve conditions for trade.

Concurrently, the physical environment must evolve, not merely to enable trade in global exports of cash crops as has been the traditional orientation, but to encourage domestic and regional trade in food crops. Ironically, food insecurity provides an important source of demand for regional trade in food crops, allowing it to play a role in contributing to cross-border integration and market development. However, it is essential that associated market, trade and transport infrastructure gaps be simultaneously addressed. Rather than reinforce the traditional pattern of building infrastructure to convey goods to ports for global export, it is important that public infrastructure investment serve the development of growth corridors within the interior and across inland borders to neighboring countries. Improvements in the supply of power to smallholders will enable them to add value to their outputs, whether through drying (to enhance preservation and reduce post-harvest losses) or to transform primary goods into secondary products (such as juice from fruit) and the like. Small scale sources of renewable energy will go a long way to addressing these power requirements and can be delivered much more quickly and affordably than investments required to expand distribution through the national power grid.

2.2.5 Application of Filter Criteria to Concessioning of Natural Resources

Economic Clout of Natural Resource Concessioning Rank: High

By engaging the industrial mining sector and plantation agroforestry (oil palm, rubber, timber and other possible crops) the Concessions sector will contribute the major drivers of growth during the time-frame for Liberia's Vision 2030. Table 2.4 presents medium term growth projections published by IMF in its 8th Review of Liberia's Extended Credit Facility, confirming expectations of high growth in these sectors.

As such, exogenous sources will remain the principal drivers of growth certainly during AFT and likely throughout the vision period, but it is the productive reinvestment of natural resource rents generated from the National Resource Concessioning (NRC) strategy that will permit endogenous growth capacity to be created. Consequently, it is vital that the execution of Liberia's NRC strategy be achieved in a manner that contributes to transformation.

Table 2.4 Medium Term Growth Outlook

	2013	2014	2015	2016
Annual % Change	IMF Projections			
Agriculture & Fisheries	3,6	4,1	4,3	4,4
Forestry	2,0	6,1	6,2	6,3
Mining & Panning	11,7	10,4	22,5	17,5
Manufacturing	3,2	3,5	3,6	3,7
Services	7,0	7,1	6,0	5,4

Involves Liberian citizens directly
Rank: Low unless Enforced

Generally speaking, concessions generate few jobs, little local demand, and few economic spinoffs for local populations unless deliberate interventions incentivize better outcomes. Left to their own devices, Concessions will function as enclaves. The exception is where out-grower schemes such as with rubber and oil palm plantations are employed. The former has traditionally practiced by large rubber-producing firms such as Firestone and the new investors in oil palm plantations are being encouraged to develop similar production models. Nonetheless, the isolationist orientation of Concession enclaves was observed during Liberia's 20th century history and is a major reason why the country experienced growth without development. Consequently, the state must remain vigilant to foster conditions for much greater direct interaction between ordinary Liberians and Concessions in the present era. This involvement should be fostered on three fronts: direct economic engagement, direct capacity building and participatory governance. Each front is reviewed below.

Direct Economic Engagement. Economic engagement will come primarily through supply chain linkages that induce Concessions to source content locally and thus create jobs. This is why, for example, MOCI's policy for MSME development calls for promoting concession agreements that contain sound and practical arrangements to link smallholders with large investors in commercial agriculture and mining. Importantly, the policy calls upon MOCI to monitor and document implementation of such agreements in several locations to learn more about what works for replication. This oversight function is vital, not just for learning but also for enforcement. However, the institutional framework for exercising oversight is ambiguous in that there are many organs of government having a legally authorized interest in the "developmental" performance of concessions. What can happen in such a situation is that no specific organ is explicitly charged with or takes responsibility for monitoring performance. A brief review of the institutional landscape helps to clarify the situation. On the economic front, five organs of government have a direct interest in and are authorized to engage with Concessions, notably the NIC, MOCI, MOA and MLME plus the newly created National Bureau of Concessions.[75] At a general level, the National Investment Commission Act of 2010 establishes a cross-ministerial Commission to oversee investment matters, including the evaluation and award of concessions. The CEO of NIC serves as Chairman of the Commission and the Minister of MOCI is a legally appointed member while Ministers of MOA and MLME are not. The Commission is served by a permanent Secretariat which constitutes the organizational core of NIC. The latter are charged with receipt and analysis of investment incentives and with coordinating the inter-ministerial technical committee to vet investment proposals. It is through the technical committee that MOA and MLME are included in NIC operations, even though MOA and MLME are the organs that actually negotiate and sign Concession contracts or Mineral Development Agreements with companies. What seems surprising is that there is essentially no emphasis in the NIC act obliging the Commission to monitor, enforce and report on the developmental aspects of FDI. Even though the institution is vested with authority to perform and modify contracts, the emphases with respect to their reporting obligations are "To collect, collate, analyze and efficiently disseminate information about the economy, investment opportunities, the investment climate, sector-relevant operational environments, sources of investment capital and incentives available to investors." As such, the NIC Act fails to establish a clear expectation that GOLR's primary FDI oversight organ has responsibility to monitor the developmental results that Liberia seeks.

Fortunately, MLME has made advances to fill this gap by introducing local content and social responsibility provisions within the 2010 Mining Exploration Regulations. Clause 9.2 on "Liberian Goods and Services" specifies:

> *(a) When a Licensee purchases goods and services related to Exploration to be performed under its License, it must give preference to the maximum extent practical to materials and goods produced in Liberia, and to services provided by Liberian citizens resident in Liberia or entities incorporated or formed in Liberia where Liberian citizens resident in Liberia are entitled to receive 60% or more of all profits from such entities, provided that such goods and services are comparable in quality, terms, delivery, service, quantity and price, or better than, goods and services obtainable from other sources. Subject to the foregoing, a Licensee may freely contract with any Person. A Licensee is responsible for maintaining records sufficient to demonstrate its compliance with this Section. (b) A Licensee must include the provisions of Section 9.1 and this Section 9.2 in all contracts with third parties for the performance of any Work, and require their inclusion in all subcontracts under such contracts.*

[75] This leaves aside, for this discussion, the legitimate roles of Ministry of Finance and Economic Planning, Ministry of Justice, Ministry of Labor and others.

While encouraging, there are a few caveats. For one, the comparability clauses provide a difficult competition standard for Liberian SMEs and though these probably safeguard Liberia's aspirations to join the WTO, the burden of proof is laid on the buyer and a competent writer could likely justify any amount of import-oriented purchasing. This means that real progress against this objective will revert to a matter of goodwill or good corporate values by the mining company itself, reinforcing the notion that supply side CSR standards by incoming investors should be included during evaluation stages of concession procurements. Second, the provisions cover exploration and not yet operations and they strenuously emphasize the content, time and form of technical reporting with all of section 6 devoted to geological aspects of exploration and zero coverage of developmental reporting. This conveys the sense that social obligations of licensees were tacked on more as after-thoughts rather than core ministerial concerns, though this will hopefully be improved in issuance of exploitation licenses or regulations. Also, because mining operations were initially revived through the use of MDAs, the nature of which are contractual and sometimes inclusive of "stabilization clauses" which keep them immune from subsequent regulation, the extent to which improved regulation can actually bind corporate behavior under concession agreements is not clear.

Finally, it is not clear whether MOA applies similar expectations to Concession agreements that it signs and whether there is monitoring being conducted in the agro-forestry sub-sector to follow the generation of direct economic linkages between plantations and the domestic economy. Overall, it seems that there would be greater benefit from the Concessions sector if the expectations around economic and social benefits were more clearly articulated, then monitored, enforced and reported upon to the general public by the appropriate organs of government on a regular basis. The type of reporting called for and provided under Liberia's EITI initiative covers fiscal transparency but not economic or developmental transparency.

Direct Capacity Building. Section 2.2.2 provides an example of how the mining regulations oblige licensees to build the capacity of Liberian nationals, both through secondment of Ministry personnel and through on the job mentoring. These are highly favorable for improving Liberia's human capital, especially if they are equally applicable within MDA and Concession agreements. What is not clear is whether the MOA has applied such measures within the plantation and forestry Concessions and, if not, efforts should be made to introduce them.

Participatory Governance. Under Clause 9.3 "Local Community Enhancement Obligations" the Mining Exploration regulations obligate a licensee to encourage economic and social development in or adjacent to its area of operations for which purpose it *"must provide for meetings on a regular basis between representatives of the Licensee and of local communities affected by its Exploration operations for the purposes of reasonably minimizing any adverse impact of such operations upon local communities."* Reform measures of this nature to bring local communities into contact with Concessionaires are not only appropriate; they represent a fundamental change in the approach to enclave governance and bring in the social dimension of inclusive growth. It is important that plantations and timber concessions promote the same conditions, but indications are that this is currently a source of concern. Current governance weaknesses in logging activities serve to make the point that greater progress is needed on the participatory governance front.

Because "conflict timber" helped to finance Liberia's civil war, after the UN imposed sanctions on "conflict diamonds" in 2001, there was a need to bring fundamental change to forestry sector governance after the civil war. In 2006, responding to subsequent UN measures to sanction timber exports as well, GOLR received kudos for revoking existing timber concessions and introducing new forestry legislation. In fact, Liberia was the first African country to comply with EITI and to include the renewable resource of timber as an "extraction" resource within its compact. Although the new legislation outlined sustainable practices to be followed by timber concessions, it also introduced the concept of private use permits (PUPs) for private landowners on smaller areas of land. Various non-government organizations monitor and report on developments in Liberia's forestry sector and they express concern on a number of fronts.[76] The award of timber concessions have been tainted with irregularities, with companies permitted to bid for contracts despite failing the qualification criteria and, in at least three cases, companies having been allocated logging concession rights on land already deeded to communities. With land law reform still a work in progress, the Community Rights

Act defines customary land as owned by the communities living on it whether or not specified in a formal document. Yet, Liberia's constitution permits the expropriation of land "in the public interest" and it is clear that local voices and representation should be brought to bear in determining what that public interest is. Furthermore, it is asserted that logging companies are gaining control over large areas through the use of PUPs, often without permission from local communities, and they now account for nearly half of Liberia's logging concessions. To rectify this trend, it is suggested that communities be involved in negotiations with concessions right from the start before agreements are signed. Too much power may be left in the hands of central institutions which do not appreciate local level impacts and the perception is that they are often the source of corruption in the diversion of community funds.

[76] This analysis is culled from material compiled by Fern, Save My Future Foundation and Global Witness organizations as well as citations from the UN Panel of Experts on Liberia, UN Security Council S/2009/290.

Table 2.5 Fiscal Flows Reported from Concessions in FY 2010

Sector	# of Taxpayers filing EITI reports	# of Taxpayers not filing EITI reports	Value of taxes declared by Gov't	Value of taxes declared by Taxpayer	Difference to Reconcile
Mining	32	-	$37 072 257	$23 277 554	-$13 794 703
	-	45	$1 310 603	-	-$1 310 603
Forestry	17	-	$11 497 768	$11 481 487	-$16 281
	-	3	$679 685	-	-$679 685
Agriculture	12	-	$12 097 404	$11 942 732	-$154 672
	-	2	$202 454	-	-$202 454
Oil	6	Nil	$9 035 942	$9 094 662	$58 720
Original Totals:			**$71 896 113**	**$55 796 435**	
TOTALS:	**67**	**50**	Original Total Requiring Reconciliation		-$16 099 678
			Amount Successfully Reconciled		-$14 711 350
		TOTAL FISCAL RECEIPTS EXPECTED in FY 2010:			**$71 896 123**
	Percent Increase:	102,95%	Comparison to FY 2009:		$35 425 320
Memorandum: **Total Tax Revenue Raised by Central Gov't in FY 2010**					**$288 000 000**
FY 2010 Concession Receipts as % of Total Taxes:					24,96%

Sources: 8th IMF Report on Liberian ECF and 3rd LEITI Report

Benefits Liberian citizens indirectly
Rank: High

The overriding rationale for exogenous, FDI-led development of natural resources relates to the indirect benefits which can accrue to Liberian citizens. These are derived by (1) capturing fiscal flows, (2) by reinvesting them for the public interest and, (3) especially in the case of Liberia, by causing concessionaires in the mining sector to invest in infrastructure for private and public use. Accountability is important in order for this strategy to contribute to "inclusive" growth. The first two elements are explored here and the third is explored under the domestic integration filter further below. To avoid repetition, issues of government effectiveness in "capture" versus "divergence" of fiscal flows are covered in section 2.2.3 and are not repeated here. Yet, they are particularly relevant to GOLR's Concessioning strategy and it bears repeating that unless the state can execute its responsibilities with minimal corruption, the rationale for this growth strategy completely dissolves.

Capturing Fiscal Flows. Money from foreign direct investment in concessions should reach the Liberian people in two ways. First, concessions revenue should flow into the national budget. Second, mining concessions must contribute to social development funds, while agricultural concessions are to contribute to county development funds[77]. The sheer materiality of current and future fiscal flows causes GOLR's natural resource Concessioning strategy to rank highly against criterion of indirect benefit. As mentioned earlier, Liberia's EITI framework for transparent reporting of fiscal flows offers reasonable safeguards in this context. For instance a combination of IMF and LEITI reporting data from FY 2010 presented in Table 2.5 shows that revenues from concessions was equivalent to one quarter of total government tax revenues raised in FY 2010. Of this, 53% was generated by mining companies, 13% from oil and approximately 17% each from forestry and agriculture concessions. Hence, the materiality of concession revenues is indisputable. However, problems encountered in reconciling records and receipts serve to reinforce the conclusion that monitoring serves as an enforcement mechanism without which the returns would undoubtedly be lower.

The latest EITI report covering FY 2010 achieves a high degree of reconciliation between taxpayer records, central government records (MOF) and other government unit records, leaving a net discrepancy of only $1,388,328 or 1.9% not fully explained[78]. Yet, the report reveals numerous challenges, including poor accounting records and reporting habits by taxpayers and a lack of coordination between central MOF offices and those located at peripheral locations like ports and airports. Whereas 67 tax-paying entities complied with reporting requirements and submitted LEITI reporting

[77] Clause 9.3.(b) "Local Community Enhancement Obligations" of the Mineral Exploration Regulations stipulates that a licensee must expend an amount equal to at least 2% of its approved budget each year on construction, maintenance or rehabilitation of schools or clinics in or affected by its License Area and that it must consult with local officials and traditional leaders as to the facilities that will benefit from this expenditure.

[78] Moore Stephens, "Report on the Third LEITI Reconciliation Exercise, Covering the Period July 1, 2009 to June 30, 2010" May 3, 2011

templates in a timely manner during FY 2010, 50 others did not and it was necessary for the compliance auditors to chase each of the latter to track down and verify data reported by MOF. Only half submitted their tax template accompanied by an audit certificate and, even on the public sector side, Government Agencies should have been certified by the Auditor General but this was not possible due to inadequate evidence to support an audit opinion. In reporting on the Assessment and Collection of Revenue from Entities within the Extractive Industry in Liberia for FY 2010, the AG stated: "*Due to the failure of the supervising ministries / agencies to submit their respective templates providing information on concessionaires' assessments, liabilities discharged and tax payments lodged at the Central Bank of Liberia, as well as the non-integrity of data maintained by the MOF on concessionaires' assessments, liabilities discharged and tax payments lodged at the Central Bank of Liberia, I was not able to determine complete assessments made on the concessionaires for the Fiscal year 2009/10, the amount discharged as well as the outstanding liabilities of the concessionaires at the close of the Fiscal Year*" .

The FY 2010 LEITI report makes clear that Liberia has made progress each year in the implementation of transparency reporting, and this is occurring on both public and private sides. Thus it is clear that competency is slowly being built for this purpose. The LEITI reporting exercise and the general commitment to transparency is clearly one which can build state legitimacy over time. If it were feasible to apply the same kind of monitoring and reporting to community level fiscal reporting and also to reporting of economic benefits, these would further enhance the credibility of the state with the people of Liberia.

Reinvesting Fiscal Flows for the Public Interest. PRS 1 stated that *"Concession revenues received by the Government will be used to promote public welfare by financing investments in roads, education, health, water, and other areas such as infrastructure and basic services."*[79] Although progress was made, it was not possible to do all that PRS 1 called for. In fairness, it is in the coming period that the payoff from over $20 billion of FDI attracted during the Lift Liberia period will begin to yield returns. Five years on, Liberia's new AFT identifies that *"the anxiety and expectations of the citizenry has been fast exceeding the capacity of the state to deliver the long awaited and promised dividends of peace. It further recognizes that "As a result of the severe destruction to the fabric of the Liberian culture and economy, its total reconstruction will take much longer than expected by ordinary Liberians."* These concerns weigh heavily on the leadership and are behind GOLRs new orientation towards fundamental transformation of the economy and society. In so doing, AFT clearly defines that the "public interest" will be served through investment in infrastructure, people and institutions. In fact, "*Infrastructure investment will be the number one priority in the next growth strategy because investment in this area has the great potential of enhancing economic growth and spreading development to a vast majority of the population."* This explains, in large measure, why the present study is devoted to an infrastructure action plan elaborated in chapter 3. It not only strives to look at the totality of Liberia's infrastructure needs, but to establish a rationale for ranking the priorities for state intervention recognizing an overall scarcity in public investment capital. All four growth strategies reviewed in this chapter have important infrastructure needs, however, they score differently in terms of their capacity to generate inclusive growth and they do not perform equally in terms of "spreading development to a vast majority of the population." The benefit of a Natural Resources Concessioning strategy can be justified if its proceeds are used effectively for investment in infrastructure that best serves the public interest.

Engages domestic private sector
Rank: Low

To the extent that Concessionaires comply with Local Content provisions in mining or agro-forestry regulations, GOLR's NRC strategy will engage the domestic private sector. However, the analysis in the "direct benefits" section above identifies the conditions and loopholes that make such provisions difficult to monitor and enforce. Accordingly, this strategy ranks poorly against the objective of engaging and building the domestic private sector in comparison to other strategies such as smallholder commercialization and MSME development which have PSD as their main focus.

Timing of growth coincides with capacity gains
Rank: Low

Liberia's human capital is not yet at the point where it can take full advantage of the inflow of investment into the concessions sector and its institutions are also struggling to keep up with the monitoring and oversight requirements presented by the voluminous inflow of FDI. These explain why the NRC strategy ranks poorly against this criterion. Overall, there is a timing mismatch between investors' willingness to enter Liberia and Liberia's capacity to take full advantage of this opportunity. It does, however, provide the learning laboratories in which to grow the needed skills.

On the human capital side, sections above describe the efforts being made in the mining sector to ensure that Liberian employees and Ministry personnel gain skills under mining company mentorship programs. The extent to which this is replicated by forestry and agricultural concessions is not clear but should be energetically pursued within existing frameworks.

On the institutional capacity building side, the steep learning curve is especially evident with respect to contract negotiations, and there is evidence that Liberia is getting better all the time at securing beneficial terms. For instance, the most recently negotiated concession contract for the Putu mining site shows more sophistication in its requirements than earlier ones, going beyond a

[79] Government of Liberia, "Poverty Reduction Strategy," page 65.

stock third party principle to suggest that infrastructure be developed in a manner that readily permits scaling-up by a third party. This progress is partly because of cumulative practice, with NIC having concluded hundreds of deals, and other learning has occurred because Liberia has cooperated with Sierra Leone and Guinea to harmonize fiscal incentives in the mining, oil and gas sectors. This form of regional collaboration is a very positive development as it will help all the countries avoid a rush to the bottom when competing for investors. In a way, it might be said that nations—like humans—learn best from their own mistakes and, on that score Liberia has been both teacher and pupil. For example, the use of competitive bidding for the Western Area mining concession was thought to be, in and of itself, a process which would guarantee a fair outcome rewarding the state with the best possible result. In fact, though the competitive process made a decision to award the Western Cluster Project to a given firm, two deficiencies were noted obliging the awardee to bolster itself with better financial and technical capacity before concluding an MDA. In the subsequent search for a corporate partner, the awardee firm was able—in effect—to run an additional, private round of competition and this permitted the extraction of a larger amount of "consumer surplus" from the deal. In finalizing the MDA, submitted to the National Legislature for ratification in August 2011, the original awardee became a 49% shareholder and was reported to make a windfall gain of $50 million in cash by giving its Indian joint venture partner the majority 51% stake. This kind of event was never anticipated, would have been embarrassing to the state and most certainly opened it to criticism. Without doubt, the transaction also imparted various lessons about bidding terms, evaluation and award processes, along with negotiation improvements to make in the future.

Encourages Green Growth
Rank: Medium

In the past, Liberia took few safeguards to the closure stage of mining sites and the restoration of the environment. Liberia's new mining regulations and mineral development agreements are much more explicit now in terms of the environmental impact and standards expected both during mine operation and upon mine closure. The true test will come at the time when mines under current exploitation reach the end of their economic life. As applied to plantation tree crop concessions, however, there are concerns that the expansion of mono-culture will reduce Liberia's biodiversity and resilience to degradation of land resources and for this reason the NRC strategy is rated "medium" against the green growth filter criterion.

Promotes internal integration
Rank: High

As identified above, a key benefit to Liberia of the NRC strategy is that is being employed to induce private investment in infrastructure. Improved power and transport networks will go a long way to improving domestic integration by expanding economic opportunity possible in the presence of power supply and by improving physical connections throughout the country. Concessionaires, especially mining companies, have substantial requirements for infrastructure, including power, roads, rail, port, water and communications. Unlike small firms, however, they can afford the investment. The business model for non-renewable extractive industry therefore builds in the assumption that infrastructure services will be largely self-supplied and the investment absorbed as a cost of doing business. Consequently, Liberia has been deliberate about building infrastructure investment obligations into mining concession contracts. On one hand, it has contemplated the notion that spatial development corridors could be developed with the complement of concession-financed infrastructure. Further discussion of this approach is covered in section 2.2.6 on the MSME growth strategy which follows. On the other hand, GOLR has taken measures to specify terms within contracts and MDAs by which privately financed facilities must be designed to serve multiple users. Thus, for example, Arcelor Mittal located in Nimba County is charged with the contractual obligation to rehabilitate the former Nimba railroad line to Buchanan port and is further required to design its functions to serve non-mineral cargo users.

In preparation for the high level economic forum held in October 2011, a study was done on how Liberia could make best use of private concessionaires' investment in infrastructure.[80] This identified that investments by mining concessionaires could amount to US$5 billion representing a huge amount as compared to public sector investment which had, until recently, been on the order of US$90 million per year. Fortunately, the level of public investment in infrastructure is due to increase significantly under the new PSIP covering FY 2012/13 through June 2015, with the drAFT plan forecasting public sector investments of $499,516,670 and development partner investments adding $862,038,466 for a total of just under $1.4 billion. Nonetheless, the point is valid and private spending will remain at a multiple of public investment and this study made numerous recommendations about ways in which GOLR could extract greater benefit from public-private coordination in this sphere. The study explored scenarios whereby concessionaires purchase infrastructure services from the country; the country purchases infrastructure services from the concessionaires or third parties provide common infrastructure platforms to serve concessionaire needs. This valuable information is further explored in the context of chapter 3.

The other consideration, which is also very significant, is that of the market for infrastructure services, whereby the study estimates that mining operations will in fact contribute the majority of demand along with willingness

[80] World Bank, "Infrastructure Policy Notes: Leveraging Investments by Natural Resource Concessions," June 2011.

and capacity to pay for such services. This reliable source of demand thus offers the prospect of rendering infrastructure investment financially and economically viable. For instance, it is estimated that mines could represent more than 80% of national power demand, more than 90% of national demand for port capacity and close to 100% of demand for rail freight. In addition, an estimated one-third of Liberia's feeder road network will eventually lie on land managed by mining, forestry and agriculture concessionaires. These statistics serve to underline the strategic opportunity that Liberia has to leverage concession investment in infrastructure for the national public interest.

At the same time, two recommendations merit attention and reinforcement. First, the study recommends that GOLR establish a mechanism whereby concessionaires as a group can be consulted on their infrastructure needs and plans so as to optimize the benefits from coordinated planning. To this we add the suggestion that the lead coordination role assigned to NIC for public private partnerships be revisited to create mechanisms by which appropriate policy and technical planning concerns be brought to bear by other implicated state organs. Specifically, it is important that MOT and MLME be involved in policy and planning considerations, and that LEC and MOPW have input to technical aspects of public and private network design. In particular, it seems important to establish or strengthen an economic analysis unit within a key infrastructure ministry which can evaluate the economic cost-benefit of infrastructure alternatives and compare them to financial cost-benefit results relevant under private financing scenarios.

Second, the precision with which concession contracts treat infrastructure development requirements varies by contract and key economic issues are dealt with differently by sector, thus there is a need for better consistency and standardization. Table 2.6 reproduced (with expanded and updated content) here from the Leveraging Study brings this matter to light.[81]

Fosters regional integration
Rank: High

As identified above, the divergence between economic and financial analysis (EIRR vs. FIRR) of long-lived infrastructure can be very large. Yet, marginal public investment has the potential to convert an unattractive financial investment into a net beneficial economic investment. A clear example of this pertains to the rail sector where, for instance, companies will naturally conduct an FIRR evaluation and conclude that the investment required to extend railroads across borders is non-viable. On the other hand, economic analysis

Table 2.6 Overview of key infrastructure provisions in concession contracts

	Electricity	Ports	Roads	Railway
Rehabilitation of existing infrastructure	No existing infrastructure	China Union has obligation to rehabilitate infrastructure at Freeport of Monrovia and Arcelor-Mittal at Buchanan port	Putu Mines has apparently been assigned responsibility for rehabilitation of the Greenville – Zwedru Road	China Union and Arcelor-Mittal both have obligation to rehabilitate existing mining railways from Bong & Nimba respectively
Construction of new infrastructure	Right to construct whatever is needed, in some cases plans must be submitted in feasibility report	Right to construct whatever needed with prior Government approval. BHP Billiton, Putu and Golden Veroleum have explicit right to construct new ports.	Right to construct whatever needed with prior Government approval. Roads outside concession area become public property.	BHP Billiton and Putu both have the right to construct new railroads.
Third Party Access to Concession infrastructure	Concessionaires can (and in some cases should) supply excess energy to Government and potentially other third parties.	Required as long as facility has excess capacity and third party does not interfere with operations.	Required. Can only be denied with Government authorization in case of clear operational or security concerns. Right to toll Heavy Goods Vehicles for road damage.	Required, typically as long as spare capacity exists, there is no interference with existing operations, and associated costs are covered by third parties. Provisions weakest in the case of Arcelor-Mittal and strongest in case of Putu.
Concessionaire access to public infrastructure	No public infrastructure exists at present. Rights of access to future transmission not explicit but implied by the right to sell excess power	Government will give concessionaire priority access to relevant public facilities and facilitate purchase of adjacent land.	Right assured. No obligation to pay for repair or maintenance of such roads unless they are sole user.	No public infrastructure exists.

[81] "Road Infrastructure—A Catalyst for Economic Growth," power-point presented by MOPW at National Economic Forum, Monrovia, September 2011.

suggests that the presence of a regionally integrated railroad linking Guinea's iron ore mines to ports on Liberia's coast would generate export cost savings on the order of US$1 billion. The MRU states will only get one chance to enhance their connectivity and integration off the back of privately sponsored infrastructure investment and it seems highly opportune to maximize its potential.

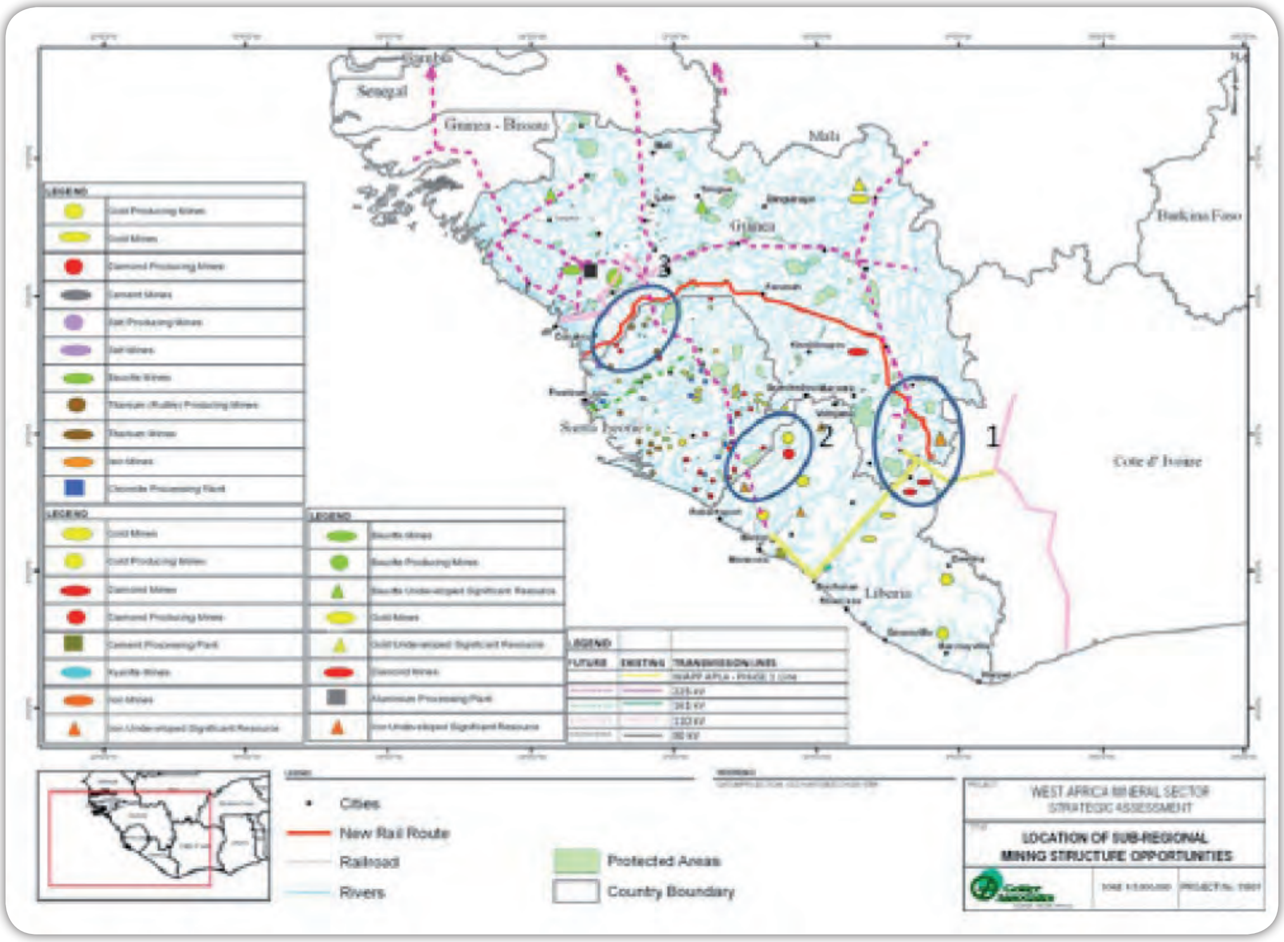
Aside from this fact, by supplementing roads with rail, the region would move in the direction of "greener" infrastructure by reducing pressure on reliance of high carbon emission vehicle transport for the longer term. The externality of a cleaner environment resulting from inclusion of rail into the region's transport network is a regional public good which will benefit all MRU states and ECOWAS if it serves to mitigate the impacts of climate change. Both of these examples clarify the fact that, while the Liberia and its neighbors have great potential to derive benefit from private finance of infrastructure, the approach carries simultaneous limitations in the design and dimensioning public goods when FIRR is the paramount decision criterion. This underscores and justifies a fundamental role of the state to bring a regional integration perspective into infrastructure planning.

A regional integration approach to developing infrastructure platforms that support mining concessions is especially relevant within the MRU because of the fact that several mineral deposits are located along borders. Figure 22 identifies three specific locations where cross-border deposit clusters present the opportunity for a regionally coordinated approach to infrastructure planning.[82]

Reduces exposure to threats
Rank: Low

The overall risk profile of the Natural Resource Concessioning strategy is high, meaning it scores low against the criterion of reducing Liberia's vulnerability to threats. This conclusion is valid without even considering the risks of Dutch Disease or the natural resource "curse" to long term growth trends in Liberia. It re-exposes the country to the risk of growth without development and it expands fertile ground in which demand or supply side corruption can thrive. It also accentuates the possibility of conflict over land without have unambiguous propensity to supply jobs to unemployed youth or improve food security. All of these risks can be mitigated through improved governance. This analysis has made clear that fiscal governance and transparency are important but economic governance with transparency is equally vital if Liberia is to measure its progress against the transformation objectives within AFT.

Figure 22 Mineral Clusters Span Borders Between MRU Countries and All Require Infrastructure



[82] West Africa Mineral Sector Strategic Assessment: An Environmental and Social Strategic Assessment for Mano River Union, The World Bank Report No. 53738, March 31, 2010

Findings on Soft and Hard Measures to Reduce Constraints to NRC Growth Strategy

In applying the filter criteria to appraise the NRC growth strategy, Table 2.7 makes it evident that most public attention should be focused upon the soft accompanying measures needed to improve or better enforce the inclusion targets of these potential enclaves. Meanwhile, except for a critical public role in the generation of power and in the planning and regulation of private infrastructure installations to address multi-purpose uses, the major private participants in the NRC strategy should look to themselves to address their binding infrastructure constraints. On the other hand, the demand exerted by private concessionaires for power and ICT services will help to drive the market for any such infrastructure invested in by the public sector and so contribute to making public utilities in these spheres financially viable.

Table 2.7 Summary Soft and Hard Measures to Improve Efficacy of NRC Growth Strategy

	Accompanying Measures to Improve Governance and Development Results	Infrastructure Requirements to Relieve Constraints to Growth
Natural Resource Concessions via FDI	Establish accountability for monitoring and reporting of economic gains by government institutions involved in concession oversight. These should include targets and reporting obligations pertaining to human capital development as well as local content linkages and contributions to community welfare.	POWER: Mining concessions present substantial and increasing demand for power to support operations. There is merit in having their requirements satisfied by public investment for generation as their source of demand will serve to strengthen the national power utility. However, it may be that transmission and distribution linkages to specific mining locations will require the private sector to finance installations
	Introduce community participation for monitoring of CSR and local content commitments by Concessions	RAIL: The larger mining concessions have a need for rail to provide more economic transport of bulk minerals to ports. These should be privately financed inasmuch as possible with the public sector attending to coordination, standardization and multi-user regulation & planning.
	Continue strenghtening data systems and reporting mechanisms for fiscal transparency under EITI.	PORTS: All concessions are export oriented and have a need for port infrastructure catering to their particular type of bulk product-- whether minerals, logs or agricultural commodities such as rubber or palm oil. Mining operations should finance their own installations whereas plantation concessions will need port access via public sector investment improvements.
	Strengthen MLME/MOPW coordination role for planning & multi-modal linking of concession-sponsored infrastructure	ROADS: Primary and secondary arteries to connect Concessions to Ports. Rural roads within concessions to cater to mining and/or plantation agriculture development needs
	Adopt explicit mitigation strategies to reduce patronage and corruption by developing peer oversight and inclusion mechanisms engaging civil society organizations with appropriate interests in the public good	ICT: Concession operations require reliable telecommunications and internet and these needs could be met through privately financed satellite if not supplied through grid-based infrastructure; yet, concessions would offer viable demand for private expansion of domestic internet backbone.
	Improve oversight capacity for monitoring of environmental impact & mitigation	

2.2.6 Application of Filter Criteria to MSME development

Economic Clout of MSME development Rank: Medium

Unlike the Smallholder Commercialization strategy, it is valid to conclude that MSMEs currently exert low overall impact on Liberian GDP even without being measured in the national accounts data. Yet, this sector accounts for the majority of formal and informal employment by enterprises. The strategy does not expect huge quantum gains in terms of economic output, but it is the most promising sector in which to root the capacity for entrepreneurship and promote a transformational change in the domestic orientation towards business away from protected monopolies and large SOEs and towards market signals that induce competitive behavior. This sector will likely experience a high rate of growth relative to its own low current base, but it will not exert a material impact on the nation’s aggregate economic growth rate for the medium term. For these reasons the MSME is ranked “medium” against this performance criterion, because it is clearly not high, but will probably perform better than industrialization in the near term because it can take off more quickly.

Involves Liberian citizens directly Rank: High

The MSME growth strategy ranks high against the criterion of direct citizen participation because job creation for Liberians is its fundamental purpose.

Under the MSME policy, the MSME division of MOCI will strive to achieve this objective by fostering subcontracting between microenterprises and larger companies and linking them with concessions to meet their local content purchasing commitments. They will also help the multitude of NGOs, donor projects and development agents in country extend support to build the capacity of FBOs and other microenterprise associations to deliver services to their members, thereby providing the opportunity for bulk purchasing of inputs and economies of scale in reaching markets. As noted earlier, MSMEs are the largest generator of off-farm livelihoods in Liberia.

Benefits Liberian citizens indirectly
Rank: Low

This sector is not expected to generate material fiscal flows through tax revenues since the majority of enterprises are currently in the informal sector and therefore have a low participation rate in formal systems of taxation. Even though GOLR will encourage formalization of enterprises, this is likely to be resisted in the near term; those firms which do will not make material contributions that compare to public revenues raised by the concessions sector.

Engages domestic private sector
Rank: High

Again, the MSME growth strategy ranks high against this criterion because its fundamental purpose is to directly stimulate conditions for developing and expanding the domestic private sector. In that vein, a Corridor Growth Study was conducted in 2010 and 2011 on behalf of the Ministry of Planning and Economic Affairs on the rationale that employment is the key to poverty reduction, especially if it keeps income within counties.[83] Specifically, MOPEA determined that Liberia needs a strategy focused on investing rents from extractive industries into sectors that engage more Liberian citizens directly and, for this purpose, the associated public sector investments need to be strategic and catalytic. In this context, a paradigm shift in national economic planning was introduced to embrace the concept of spatial development corridors as a means to crowd in economic growth. This approach recognizes that Liberia has attracted major foreign investments situated along concentrated transport axes within the country and their presence (as described in the Concessioning strategy) will serve to contribute to the expansion of infrastructure investment serving these corridors. This trend provides favorable economic conditions to attract further domestic private enterprise bringing with it the advantages that an infrastructure-enriched corridor promotes market creation; corridors reduce costs and improve efficiency thus contributing to competitiveness. Included in this study was the evaluation of twenty specific investment opportunities along specific growth corridors (identified under 'domestic integration' below) with suggestions on appropriate state intervention to catalyze activity. Among the business opportunities identified were two types of zone development, notably Economic Zones for Business, Trade and Commerce (EZB) and Economic Zones for Tourism and Hospitality (EZTH). The former would include such improvements as transportation terminals, warehousing, and common facility structures to accommodate agricultural goods processing, labor-based crAFTs and manufacturing and trade-oriented business. EZB's were specifically recommended for Kakata, Gbarnga, Ganta, and Sanniquellie. The latter would include such activities as recreational tourism, eco-tourism, resorts, and scenic area development to spur the development of a tourism industry within Liberia. Where grid based power supply is not available in dispersed towns, renewable energy sources are likely adequate to meet the needs of emerging SMEs in the interim. In all cases, the clustering of mutually-supportive activities under efficient conditions could permit private domestic investment to be better served by public sector investment in essential infrastructure and utility services. What is notable about these zones is that they are fundamentally different from those contemplated under the industrialization strategy, which are more oriented towards high capital manufacturing enterprise. These zones offer a favorable environment in which to incubate the skills of Liberia's future business leaders and potential investors in industry.

Timing of growth coincides with capacity gains
Rank: High

Even though Liberians need more education as a general rule along with exposure to principles of entrepreneurship and business, many already have the technical and vocational skills on which to build their business. As such, they can be encouraged to learn by doing, to move ahead in pursuing the livelihoods they know how to manage for personal gain. With the right supporting conditions to help them acquire complementary skills in finance, accounting, purchasing, inventory control, sales and other business fundamentals and with availability of microfinance or credit guarantees, Liberians can move from being sole practitioners to becoming business owners and employers in their own right. For these reasons, the MSME growth strategy ranks high against the criterion of timeliness. To keep pace with opportunity, it is important that GOLR keep a priority on public sector investment in all levels of education, including formal and non-formal modes of training plus primary through tertiary including vocational and academic institutions.

[83] Ministry of Planning and Economic Affairs, "Developing Liberia's Economic Corridors, Volumes 1 and 2," August 2011. Study conducted by Sibley International with funding support from USAID.

Encourages green growth
Rank: High

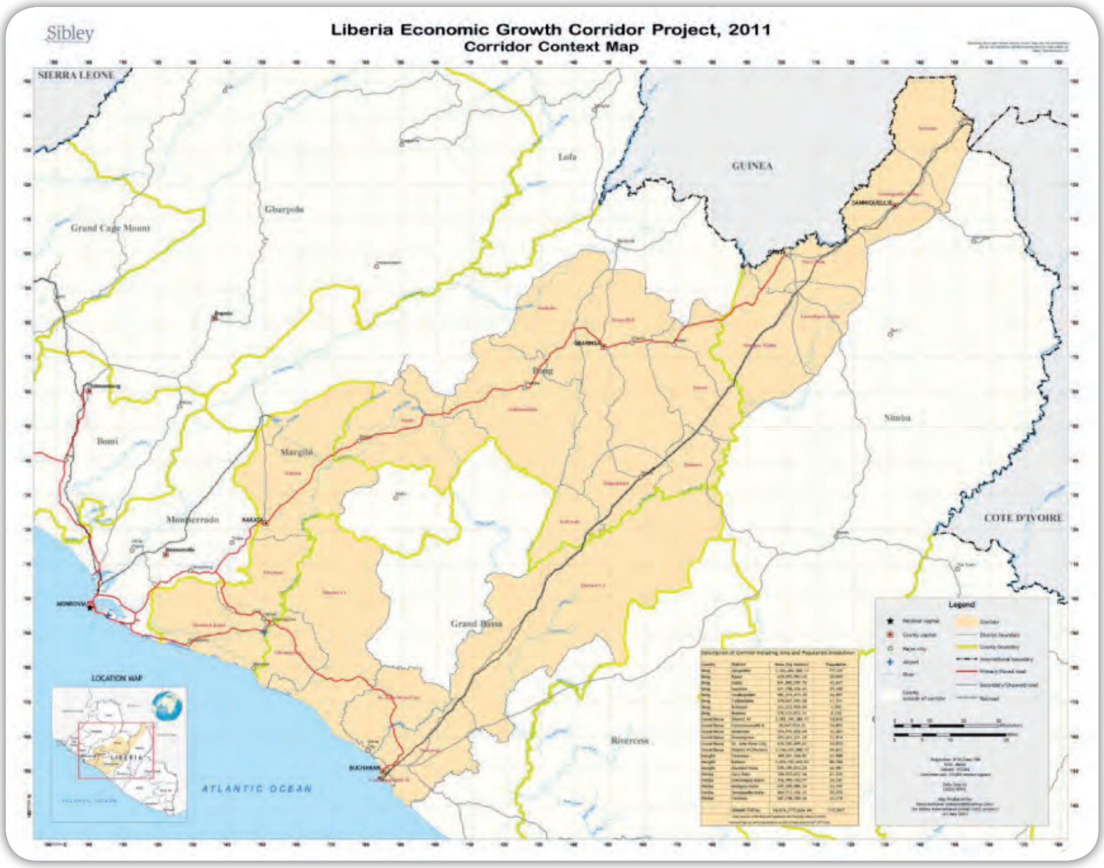
Renewable energy sources are appropriate for the scale of power demand by most MSMEs and the synchronous development of both—supply and demand for renewable energy -- can be enabled to progress in a manner that provides a mutually reinforcing cycle. In comparison to other countries where grid based energy has penetrated more deeply into the interior, this Liberian "disadvantage" actually favors the adoption and implantation of green energy and associated innovation. For these reasons, the MSME strategy is rated "high" against the green growth filter criterion.

Promotes internal integration
Rank: High

Especially if the MSME growth strategy is coupled with the MOPEA corridor growth strategy, it will strongly reinforce internal integration by creating growth poles in the country's interior and by crowding in economic growth along transport axes. The first phase of the Corridor Growth study identified five different spatial development axes which offer promise within Liberia. The second identified two specific corridors in particular-- not to rule out the others-- but to suggest a place to start and to demonstrate the utility of the growth corridor concept in two very different environments. One is an existing "backbone" of the Liberian economy involving the Monrovia-Ganta axis which currently serves about 43% of the population as a major domestic trade route. The other, Buchanan-Yekepa is characterized by the presence of major transport infrastructure, including the Nimba railroad to be rehabilitated by Arcelor-Mittal and a parallel road. The study describes the territory of Liberia's growth corridors as a triangle, the northern end of which is anchored in the mining concession community of Yekepa, the south-western end which reaches the Margibi County boundary with Montserrado County, and the south-eastern end which fronts on the sea at Buchanan:

> *"All or parts of the four counties lie within the corridor territory - Nimba, Grand Bassa, Bong, and Margibi. The primary basis for the triangular shape of the corridors is the presence of nationally-significant transportation routes that make up "spines" of mobility. The western-most corridor boundary parallels the road running from Montserrado County to Nimba County (referred to … as "National Route #2"), and a further 40 km beyond Sanniquellie by unimproved roads to a terminus at the former LAMCO Iron Ore Concession boundary at Yekepa. This corridor's 2008 population was estimated at roughly 485,000. A second corridor runs southward from Ganta along the route of the privately-constructed railway that connects the Mt. Tokadeh ore mine with the port of Buchanan. Although roads do exist in portions of the area south of Ganta, there is no well-defined highway "corridor" as such, though there is a road running more or less alongside the railway line. Fewer than 35,000 persons lived in this corridor in 2008.*

Figure 23 Economic Growth Corridors Proposed for Liberia



[84] Growth Corridor Study, Ibid, page 4.

The third, most southerly, corridor runs along Roberts AirPort Highway to Monrovia's International Airport and thereafter continues southeastwards. Its population was estimated at less than 200,000 in 2008. This corridor passes through parts of Margibi and Grand Bassa Counties, ending east of the seaport of Buchanan. This southerly road [is]…referred to as "National Route #1." [84]

Figure 23 provides a map of the triangular growth corridors proposed for initial public investment support by MOPEA. These would serve the cause of domestic integration by improving connections between center and periphery and improving the relevance of the north to Liberia's economic growth.

Fosters regional integration
Rank: Medium

Figure 23 identifies that the Buchanan-Yekepa corridor could easily be enhanced to open the country to further international trade with Guinea and beyond. In particular, Chapter 1 analysis on regional trade identified the importance of Ganta as a prominent export hub for palm oil into the region. Ganta is the second largest city in Liberia strategically located at the crossroads of Bong and Nimba Counties, Ivory Coast and Guinea. Women from all these areas bring goods to sell in the Ganta market or to store in makeshift warehouses for transport to other markets, making the city a bustling commercial center. For these reasons, one of the public investments that could promote further MSME development and regional integration identified in the Corridor Growth study relates to rehabilitation of the Ganta Terminal of the Federation of Road Transport Union of Liberia. FRTUL was established in 1982 as a national member-run organization with offices in all fifteen counties. Their objectives include provision of passenger and cargo transport services among other functions. In Ganta, FRTUL previously served this function through a terminal equipped with lodging, storage, warehousing facilities and secure parking for transport service providers. During the civil conflict, FRTUL's Ganta terminal facility was severely damaged, leaving travelers without good services in this strategic trade center. Rehabilitation of the facilities sited on a four-acre property within Ganta would relieve the congestion and provide more favorable conditions for trade.

At the same time, Figure 24 identifies the strategic relevance of a Monrovia-Foya corridor which, with cross-border trade and transport infrastructure could expand Liberia's markets to better serve Sierra Leone. The same is true for the Harper-Pleebo corridor which could be extended to make the connections with Côte D'Ivoire markets much more effective and economically rewarding.

Figure 24 **Alternate Depiction of Liberian Trade and Transport Corridors**

Reduces exposure to threats
Rank: High

The MSME development strategy performs well against virtually all vulnerability areas and, considering that it is the least likely strategy to produce conflicts over land use, is the best ranked performer against this criterion. On no account could one conclude that Liberia's stability will be shaken by emphasizing growth in the MSME sector; on the contrary, MSME development can be expected to usher in a virtuous cycle of skills gains, employment, income and stability.

Findings on Soft and Hard Measures to Reduce Constraints to MSME Growth Strategy

In applying the nine filter criteria to appraise the MSME growth strategy, Table 2.8 highlights key recommendations for soft measures and hard infrastructure needed to boost its efficacy. On the governance side, transport corridor planning is of critical importance to establish the sequencing by which each corridor is addressed so that partner financing can be mobilized against a transparent planning horizon. This is essential because it must be recognized that not all core and feeder corridors can be tackled during the same time frame, both for reasons of affordability and due to matters of absorptive capacity. In addition, the study urges caution in vesting NIDFO with a direct role in financing provision to SMEs and recommends an approach that leaves this primarily in the hands of private financial institutions intervening only to reduce their risk (such as through guarantees) or other incentives that expands their appetite to fill this gap in the market. Meanwhile, it is recommended that the public investment intended for SEZ-enabled industrial development be re-channeled in priority to the establishment of business parks or common facility infrastructure zones to provide a hospitable environment for expansion of MSMEs.

Table 2.8 Summary Soft and Hard Measures to Improve Efficacy of MSME Growth Strategy

	Accompanying Measures to Improve Governance and Development Results	Infrastructure Requirements to Relieve Constraints to Growth
MSME Development via Corridors	Give credence to the investment proposals identified in the MOPEA Growth Corridor study and encourage engagement by counties and domestic private sector to seize the opportunities created by public investment that will create favorable conditions for private initiative.	OFF-GRID RENEWABLE ENERGY: Power supply is essential for fostering domestic MSME development, though the level of demand could be satisfied for the interim by renewable rural energy sources
	Maintain public sector investment for education at all levels and through all types of vocational and academic institutions. Fund the MSME unit in MOCI to enable it to fulfill the coordination function proposed under the National MSME policy.	COMMON FACILITY INFRASTRUCTURE PLATFORMS: This would be a modest type of zone in which MSMEs could co-locate, lease space and have shelter, security and storage facilities.
	Establish NIDFO National Standards Institution plus measures to secure Copyright and Intellectual Property protections	ROADS: Restoration of primary and secondary roads along key corridors, coinciding with the «current» or «potential concession networks»
	Improve enabling environment for informal enterprises including registration, tax administration, increased supply of low cost business development services, strengthening of business associations and measures to secure leasing rights under contracts.	ICT: Broadband internet will improve market information for the MSME sector and will improve connections to buyers and input suppliers

2.3 Findings and Conclusions on Priorities for Transformational Growth

The analysis of Liberia's fragility in chapter one brought to light legacies from the conflict that persist to the present day, highlighting the nation's enduring vulnerability to threats. Bearing in mind that one of the objectives of the present study is to identify sources of growth that will improve stability; this chapter has emphasized the selection of growth strategies and corresponding infrastructure investments that can deliver growth while making a genuine contribution to reducing Liberia's exposure to threats. The study concludes that the NRC strategy has the greatest propensity to increase Liberia's exposure to conflict-generating threats,particularlyifconcessions operate as enclaves or fail to adequately create jobs or likelihood linkages with neighboring populations. This threat would be magnified to a national level of concern if public accountability for resource rents were to be brought into question, emphasizing the critical importance of sustained transparency under EITI followed up with convincing communication and demonstration that public NRC revenues have been redeployed to the public good. In contrast, the MSME development strategy is appraised to be low risk in terms of its propensity to ignite the drivers of public sensitivity and conflict. Table 2.9 aggregates the findings from appraisal of the four chosen growth strategies in this regard. It concludes that the MSME growth strategy poses few risks of re-introducing conflict, whereas the others require greater vigilance and greater discipline to mitigate the drivers of conflict (such as land disputes) or to better enforce "inclusion" through deliberate measures to draw out optimum economic benefit and overcome inherent adverse qualities.

By far the most risky growth strategy is that of natural resource concessioning, but as the appraisal made evident, it is also the most lucrative in terms of its capacity to generate infrastructure benefits and fiscal resources for public investment that can be redirected for the public good. The fundamental virtue of this strategy is that it offers a means to an end—that 'end' having been clearly defined in AFT as a path which vests in Liberia the capacity to generate internally-led growth in future generations. Even though the new strategy places emphasis on other measures designed to encourage endogenous growth, it is important that the NRC strategy not be neglected during implementation— not just to avoid its potentially negative attributes, but to truly engage it as a participant in the Liberian economy expected to contribute towards inclusive economic growth. This explains why the study ranks Natural Resource Concessioning as the strategy warranting highest priority attention of the Liberian state in exercising its governance responsibilities, but least priority for allocation of public infrastructure investment capital.

Table 2.9 Overall Risk Profile of Appraised Growth Strategies

Exposure to threats	Growth without Development	Unemployed Youth	Food Insecurity	Patronage & Corruption	Conflict over Land	Identity Frag-mentation	Overall Risk Profile
Industrializa-tion via Zones	Premature launch could prevent higher domestic par-ticipation	Reduces threat if provides unskilled jobs	Reduces if ex-pands incomes through jobs	Increases exposure to threat	Possible Increased exposure to threat	Must provide jobs in center and periphery to reduce this threat	Medium
Commer-cialization of Smallholders via Trade	Reduces threat by high levels of direct citizen participation	Reduces threat if accompanied by increased trade & youth participation	Reduces threat by direct expansion of marketable food surplus	Exposes to petty levels	High expo-sure to threat among s/ holders & be-tween them & other uses	Trade conditions could mitigate or exacerbate	Low- Medium
Natural Re-source Con-cessions via FDI	Increases expo-sure to threat	Reduces threat to extent it pro-vides unskilled jobs	Mitigates threat if concessions pur-chase food sup-plies locally; build supply chains	Increases exposure to this type of risk	Increases exposure to this type of risk	Ban against pri-vate security for territorial polic-ing is essential	High
MSME Devel-opment via Corridors	Reduces threat by high levels of direct citizen participation	Reduces threat to extent it pro-vides unskilled jobs	Reduces threat by expanding direct citizen incomes through jobs	Exposes to petty levels	Unlikely to exacerbate threat	Expanding busi-ness opportunity could mitigate	Low

This conclusion is one among many to emerge from the summation of all filter rnkings to the four growth strategies as aggregated in Table 2.10 below. The rankings in Table 2.10 range from High (H) to Medium (M) and Low (L) wherein a high ranking attributes high potential contribution by a given strategy to the desired development outcome sought by each filter criterion and equivalent measures for the lower rankings. These were arrived at through the qualitative and quantitative considerations presented in the strategy reviews above. This permits each strategy to ultimately be ranked against two priorities: (1) state-sponsored intervention in the key AFT pillars of Human Development and Governance, and (2) state-sponsored investment in infrastructure for Economic Transformation. Each dimension helps to draw out several additional conclusions.

Table 2.10 Ranking of Appraised Growth Strategies vis-à-vis Filter Criteria

STRATEGY RANKING FRAMEWORK	Development Strategy			
Development Outcomes Sought from Filter Criteria	Industrialization via Zones	Commercialization of Smallholders via Trade	Natural Resource Concessions via FDI	SME Development via Corridors
Contributes to GDP, Share and Rate	L	H	H	M
Builds human capacity through direct citizen participation	M	H	L*	H
Benefits Liberian citizens indirectly	M*	M	H*	L
Engages indigenous private sector	L*	H	L	H
Timing of growth coincides with capacity gains	L	H	L	H
Encourages green growth	L	H	M	H
Promotes internal economic or physical integration	L	H	H	H
Fosters regional integration	M	H	H	M
Reduces exposure to threats	M	H	L	H
* Ranking is initial; depends on how managed				
Rack Up of Ratings to Inform Priority Rankings	5 L, 4 M	1 M, 7 H	4 L, 1 M, 4 H	1 L, 2 M, 5 H
PRIORITY FOR STATE INTEVENTION IN HD & GOVERNANCE	2	3	1	4
PRIORITY FOR STATE INTERVENTION IN INFRASTRUCTURE	3	1	4	2
Summary logic behind priority rankings:	Human capital must be built up before industrial zones; otherwise indigenous Liberians risk not being effective participants in an industrialization strategy	Engagement in domestic or foreign trade connects farmers to markets; incentivizes surplus; reduces social isolation	Investors will provide own infrastructure so not a priority for State financing, but public role essential in realm of planning & coordination to extract public good & local content linkages	Essential to build an indigenous culture of entrepreneurship if Liberia to achieve endogenous sources of growth
Infrastructure Investment Implications for AfT time frame:	Prioritize zonal development that engages the emerging SME sector over that which emphasizes capital intensive manufacturing. Accelerate the former to AfT timeframe and delay the latter till HR capacity building has germinated domestic entrepreneurship & investment capacity	Emphasize primary & secondary roads including cross-border links. Promote trade-enhancing infrastructure including county-level market hubs, ICT and one stop border posts for regional trade facilitation	Emphasize private financing of hard rail, road and port infrastructure while public sector addresses soft-side investments to improve the oversight capability of concessions bureau & bring MOPW infrastructure planning talent plus MOCI and NIC local content linkages into the picture	Emphasize power sector investment including off-grid development for rural power supply and building of a domestic backbone for broadband internet along with upgrades in road-port connections and quality

Fundamentally, state-sponsored intervention across all pillars requires resources that are in scarce supply: the first being time, capacity and attention devoted by organs of government for dispensation of quality governance; the second being financial resources which are especially heavy for infrastructure. As Table 2.10 makes clear, *this study concludes that Liberia's public infrastructure investments during the AFT time frame should be prioritized first to favor Smallholder Commercialization and second to support MSME development.* The NRC strategy should continue to rely on privately sponsored financing for infrastructure, but there is a need for greater policy and planning involvement over private installations to ensure that the total network aspects of installations is carefully coordinated. The analysis also presents arguments for deferring near-term state-financed investment in the installation of infrastructure platforms for capital intensive industrial zones and prioritizing, instead, the installation of facilities that enable SME industry to emerge.

This would permit national human capital to develop further, enabling a greater eventual degree of direct participation by Liberian citizens in zone management and investment opportunities than would otherwise be the case. This does not mean that SEZ zones are inappropriate for Liberia; it simply suggests that public investment capital devoted to the installation of such zones might return more optimal benefits to the agenda for transformation if they are pitched at infrastructure serving the emerging SME and entrepreneurial sector during AFT time frame and then at capital intensive manufacturing in a medium term time frame. The study therefore also concludes that *Natural Resource Concessioning and Industrialization represent growth strategies where Liberia should upgrade the intensity of public governance and oversight* in order to extract genuinely transformational benefits for the population and economy at large. These findings are carried into chapter three to inform the composition of an infrastructure planning strategy across short, medium and long term time horizons for Liberia.

CHAPTER 3

Prioritizing transformational infrastructure investments

Introduction

Chapter one identified Liberia's history of conflict and the resulting decline of socio-economic status accompanied by severe depletion of the nation's physical infrastructure. It also described the many reform measures introduced since the advent of peace to usher in a better framework for economic recovery. Liberia has made significant progress on policy and regulatory governance matters and now enjoys an improving investment climate for growth and for installation of physical infrastructure.

Chapter two turned to examining future growth potential to take the country from recovery towards prosperity. This began with acknowledging that Liberia's next stage growth strategy, the Agenda for Transformation (AFT), emphasizes approaches that will deliver inclusive, stability-enhancing growth for the benefit of all citizens throughout the country. In this context, the chapter examined the attributes of four key growth strategies that will contribute to steering the country along its chosen growth path. Each strategy has an important contribution to make in terms of spurring economic growth, yet each performs differently against identified filter criteria. Some, such as the Natural Resource Concessioning (NRC) strategy, can deliver higher absolute rates of growth and fiscal returns to the economy, while others such as a Smallholder Commercialization strategy, will deliver slower growth but with higher levels of inclusion and greater distributional impact across the populace. Consequently, chapter two concludes that Liberia's public infrastructure investments should be prioritized against a staggered set of timeframes in order to give greater privilege during early years to the types of activities that catalyze human capital development which is so critical to the desired transformation. This places highest short term priority for public investment in infrastructure that supports Smallholder Commercialization and MSME development. Concurrently, the NRC strategy should rely primarily on privately sponsored infrastructure in a manner that contributes to national grids. Additionally, the NRC and industrialization strategies will require state-sponsored prioritization of Human Development and Governance advancements during the AFT time frame. Chapter two also concludes that state-financed investment in industrial processing zones should be reconsidered so as to prioritize a different kind of zone or business-park which can cater to the needs of emerging indigenous enterprise in the AFT time frame.

Bringing forward these insights, the forthcoming chapter turns to a more detailed examination of Liberia's infrastructure requirements for sequential time frames in the future. These are defined as:

- Short term = AFT transformation investment period FY 13 through FY 17
- Medium term = Interim period post-AFT and up to Liberia Rising 2030
- Long term = Decade from 2031 through 2040 (and beyond).

Chapter three begins by presenting the estimated total costs of the Agenda for Transformation inclusive of all program pillars over its five year time frame. It identifies the portion allocated to infrastructure and then compares this plan with a simplified long list of desired infrastructure across the key investment categories. The latter can represent a more complete estimate of Liberia's latent "appetite" for infrastructure investment. These help establish rough orders of magnitude on the implied investment needed to address the most pressing elements of Liberia's infrastructure gap. Next, an assessment of affordability reveals the likely need for a longer term time horizon against which to close the more ambitious infrastructure gap and permits a short discussion of projects that might need to migrate into medium and longer term time frames. However, before drilling down into the merits of specific projects and priorities to be retained, the report takes a wider look at the regional and continental context in which key infrastructure investments can be planned. Developments on the continental stage are due to have game-changing consequences on the architecture of regional trade and infrastructure with serious implications on the relative competitiveness of countries within ECOWAS. This is an important perspective to introduce before returning to the task of identifying parameters for short, medium and longer term infrastructure planning for Liberia's own future. By relieving binding infrastructure constraints strategically over sequential timeframes, the study aims to inform Liberian authorities and development partners about those priorities for intervention that can best propel Liberia forward—first to secure national unity and stability through inclusive growth—and then to give the nation an ability to engage competitively in regional integration. Concurrent progress can be made on both domestic and regional integration fronts in the short term with increasing economic growth opportunity arising from regional engagement in the medium to long term.

Table 3.1 Total Estimated Costs of the Agenda for Transformation—2012 to 2017

AfT Costing by Pillar		5 Yr Investment	% of Total
1	Peace, Security & Rule of law	$358 274 638	11%
2	Economic Transformation*	$2 073 831 930	65%
3	Human Development**	$562 787 261	18%
4	Governance & Public Institutions	$90 819 170	3%
5	Cross Cutting Issues	$100 445 750	3%
	TOTAL Estimated Cost:	**$3 186 158 749**	
of which	**Infrastructure Components include:**	**$1 949 072 880**	**61%**
	Energy Sector Results	$502 481 800	26%
	ICT Sector Results	$14 578 120	1%
	Roads & Bridges Results	$1 269 348 260	65%
	Transport Sector Results	$18 195 200	1%
	Water, Sanitation, Hygiene	$101 947 500	5%
	Public Bldg & Housing Results	$42 522 000	2%
*Includes ET investment in Private sector development, Macroeconomic issues, Ag & Food Security, Forestry & Mineral Sector results in addition to infrastructure sectors: Energy, ICT, Roads & Bridges, Housing, Public Buildings			
** Water, Sanitation & Hygiene investments of $102m are included in Pillar 2			

Source: AFT Costing as per MOPEA Executive Summary of AFT dated December 15, 2012

3.1 AFT Investment Planning vs. Desired Infrastructure Investment Projects

Table 3.1 presents MOPEA cost data from December 2012 setting out the full roster of investments required under AFT to launch the holistic transformation of citizen capacity, institutions and infrastructure.

In total, the cost of this five year program has been estimated at $3.19 billion, of which $1.95 billion is for infrastructure projects considered highest priority or realizable within the AFT timeframe. As noted in chapter 1, this compares to an ex-ante cost estimate of $1.6 billion for PRS 1 for a 3 year timeframe.[85] A comparison of average annual costs shows an increase of 19% from PRS 1 to PRS 2, accompanied by far greater emphasis on investment in infrastructure to relieve the physical dimension of binding constraints to economic growth.

Scarcity of financing and other capacity deficits will not allow Liberia to address all of its infrastructure deficits in the near term. As such, taking stock of the current inventory of infrastructure projects for which preliminary cost or design analysis has been undertaken will allow for subsequent prioritization. In some cases, these would restore Liberia to its former endowment levels while in other cases new investment will usher Liberia into an era of new capacities and technologies.

Examples of new technology include renewable energy and communications where advances provide new solutions to old challenges. Examples of new capacity would result from tapping of Liberia's latent hydro-generation capacity. Liberia's latent capacity would far surpass domestic needs but would open the potential for Liberia to trade surplus energy into the West Africa energy market.

Table 3.2 therefore presents a "long list" of infrastructure projects in all infrastructure spheres compiled from numerous sources, all of which contribute to an analysis of Liberia's ultimate appetite for infrastructure investment. This analysis is fairly approximate given imperfect information on cost estimates and a lack of information on privately sponsored infrastructure. Nonetheless, Table 3.2 presents cost information in two columns, the first of which presents cost estimates for the "wish list" which is the sum of currently identified projects (whether in preparation or in the longer queue). The second costing column portrays the "all-in" infrastructure elements included within the AFT Plan and thus tallies with the infrastructure sub-total presented in Table 3.1. The former would suggest that Liberia's appetite for desirable infrastructure amounts at a minimum to a capital investment requirement of $4.39 billion which is far in excess of the infrastructure investment planned within the AFT. Even then, the question arises as to Liberia's ability to afford the planned $1.95 billion infrastructure investment planned for the short term.

[85] No ex-post cost analysis of PRS 1 is available other than reports which suggest the percentage of projects completed within the available funding, which imply the $1.6 billion cost estimate.

TABLE 3.2 Summary compilation of desired infrastructure Projects & rough cost estimates (U.S.$ Million)

Infrastructure Category	Includes	Source of Cost Estimate	Comment	Current Wish List Total	AfT Costs Est. 15/ Dec/12
AGRICULTURE INFRA.	Rural Agriculture Infrastructure & Technology	LASIP	Rural Infrastructure component	$74	
Road Transport	Rehabilitate & Expand (non-concession) Feeder Rds	Lasip Feeder Roads Estimate	SIDA pledge of $21.1 & EU of $.67	$171	
	Rehab. Roads & Bridges to restore Primary Network	MoPW estimates for Road Infrastructure		$1 500	$1 269
	HD and Governance Improv't in Transport Sector	AFT cost est. Transport Results Matrix; adds		$22	$18
Airport	Pave Ganta Sanniquelle 23 km segment	MoPW presentation	Mittal Steel to finance per MDA	$29	
Seaports	Pave Zwedru - Greenville 119 mile segment	MoPW presentation	Putu Ore to finance per MDA	$161	
Rail Transport	Rehabi Roberts Int'l Airport & 1 Domestic	Transport Master Plan, 2010 prices	GOLR pledge in MTEF	$305	
Maritime	Rehab Monrovia, Greenville, Harper; Expand Buchanan		GOLR pledge in MTEF	$37	
	Rehabilitate 3 lines & Construct 1 new	Transport Master Plan, 2010 prices	Public sector role only; bal = private	$62	
	Improve Int'l Ship & Port Security; Gain ISPS Compliance			$5	
ALL TRANSPORT	All Transport Sector Projects			$2 291	$1 288
Energy Sector	Rehabilitate Domestic Electricity Generation	Wish list est. from August 2012 AFT costs		$580	$502
Domestic	Expand Hydro Generation Capacity on Liberian Rivers		WAPP Tractebel Study	$1 565	
Regional	WAPP CLSG-- Liberia Transmission Segment	Financing secured for project	$51 mn IDA & $19.25 AfDB, EBRD, KfW & regional Gov'ts	$116	
Rural Energy	RREA rural energy strategy & master plan	Norway financing Master plan	EU, IDA, NORWAY, USAID	TBD	
	Energy master plan study		WB or AfDB to undertake	$1	
Sector Mgm't & Cap. Building	Training & Capacity Building	Norway and World Bank		TBD	
Energy TOTAL	All Energy Sector Projects	AfT Cost Est. is for Energy Sector Results Matrix		$2 262	$502
ICT	West Africa Regional Communications	MTEF	Private sector contrib. $10m	$30	$15
Domestic	Monrovia Fiber Optic Backbone	To be provided via PPP	Not estimated since private sector to lead domestic backbone dev't	TBD	
ICT Total		AfT Cost Est. is for ICT Sector Results Matrix		$30	$15
Water Sector	Water & Sanitation infrastructure & sector reform	Wish list from August 2012 AFT costs	$32m from AfDB & $6.2 from IDA	$107	$102
	Expansion of arable land under Irrigation from .2 to 5%	LASIP estimate		$12	
Water TOTAL				$119	$102
Industry TOTAL	Special Economic Zone Dev't	Estimate in earlier version of PSIP		$44	
Other Infrastructure	Housing & Public buildings	Included in AFT & MTEF		$43	$43
	GRAND TOTALS			$4 821	$1 949
		Of Which, Privately Financed Component is:		$431	NA
		Net Capital Investment Required		$4 390	$1 949

3.2 Affordability

Given these extensive demands, Table 3.3 considers GOLR fiscal resources and determines that, even with borrowing of $360 million during the first three years of the AFT, an additional minimum of $697 million in net financing is still required to meet the expectations of the AFT program.[86]

The affordability analysis assumes that identified donor pledges, which currently total over $514 million for GOLR and donor-designated priorities over the 2013 to 2015 fiscal years (as presented in the approved 2012/13 budget), will help to close the financing gap for the AFT. Yet, it recognizes that future pledges and concessional loans from development partners are not yet taken into account. It is reasonable to expect that more financing may be forthcoming from Liberia's development partners in due course, yet the examination of affordability concludes that Liberia will need to continue placing high reliance upon Official Development Aid in order to implement the AFT with its envisaged ambitions. GOLR's aspiration, of course, is that Liberia's own economic growth and expanding fiscal capacity will enable it to graduate from ODA in the post-AFT era.

Although reconciliation of AFT versus the approved Annual Budget (which includes the MTEF and PSIP) is still a work in process, the analysis of affordability is undoubtedly aided by Liberia's adoption of higher PFM standards and public transparency, and the ability to reconcile all data sources will likely improve over time.[87] In the interim, Table 3.3 makes clear that capital resources needed for the AFT are sizeable and, when one considers the larger $4.39 billion wish list in Table 3.2, it becomes clear that a longer term planning horizon combined with more sophisticated financing approaches will be required to more thoroughly address Liberia's infrastructure gap. It is evident, for example, that downstream projects to develop totally new hydropower generation on Liberia's high potential rivers (such as those proposed for the Mano or St. Paul Rivers) will need to be delayed to the medium or long term. At the same time, the $1.27 to $1.5 billion investment which is seen as essential for the restoration of the primary roads network will strain Liberia's financing envelope and may force strategic choices between which road projects to prioritize, which to defer and what standards to apply.

AFT proposed spending begins at 27.5% of GDP in FY 13 and goes to 46% and 34% subsequent years. Meanwhile, planned investment in Priority-1 projects pertaining to roads, power and ports alone begins at about 6% of GDP, rises above 12% and levels to about 10% in the coming three years. Meanwhile, annual borrowing is limited to 4% of GDP (on a Net Present Value basis). Whether GOLR can afford the planned investment levels depends upon the share of investment burden contributed on a grant basis by development partners and the actual GDP growth rate, but the orders of magnitude for P1 investment may not be attainable for a recovering economy.

An average 10% investment rate is highly ambitious relative to infrastructure investment levels observed elsewhere in Sub-Saharan Africa (about 4%), ECOWAS (about 2%) and other fragile low-income countries (4+ %) and sustains the high levels Liberia was observed to be reaching in 2009. This is evident from benchmark data presented in Figure 25. Not only was Liberia's voracious capital investment appetite estimated at that date by the World Bank to be the highest in Sub-Saharan Africa, but its appetite for operations and maintenance investment was clearly under-valued relative to benchmark practices. It is encouraging to observe that Liberia plans on devoting a major portion of its public roads expenditure during AFT in routine maintenance and upkeep.

With this background, the next sections present the major changes under planning for Africa's infrastructure landscape to provide a better context in which to consider Liberia's own infrastructure investment plans for the next 30 years.

3.3 Regional Infrastructure Initiatives and Implications for Liberia

The creation of an African Economic Community is enshrined in the Abuja Treaty of 1991 as a means of re-positioning Africa as an integrated and prosperous continent. Regional Economic Communities (RECs), including ECOWAS of which Liberia is a member, have been identified as the building blocks for achieving this objective through regional integration. Numerous studies and fora have brought out the fact that one of the biggest constraints to Africa's integration and competitiveness has been the continent's fragmentation. Key initiatives have been launched continent-wide and within each REC to develop infrastructure plans to unite Africa. Those examined here include the Programme for Infrastructure Development in Africa (PIDA) and their execution through regional projects sponsored by the ECOWAS Commission.

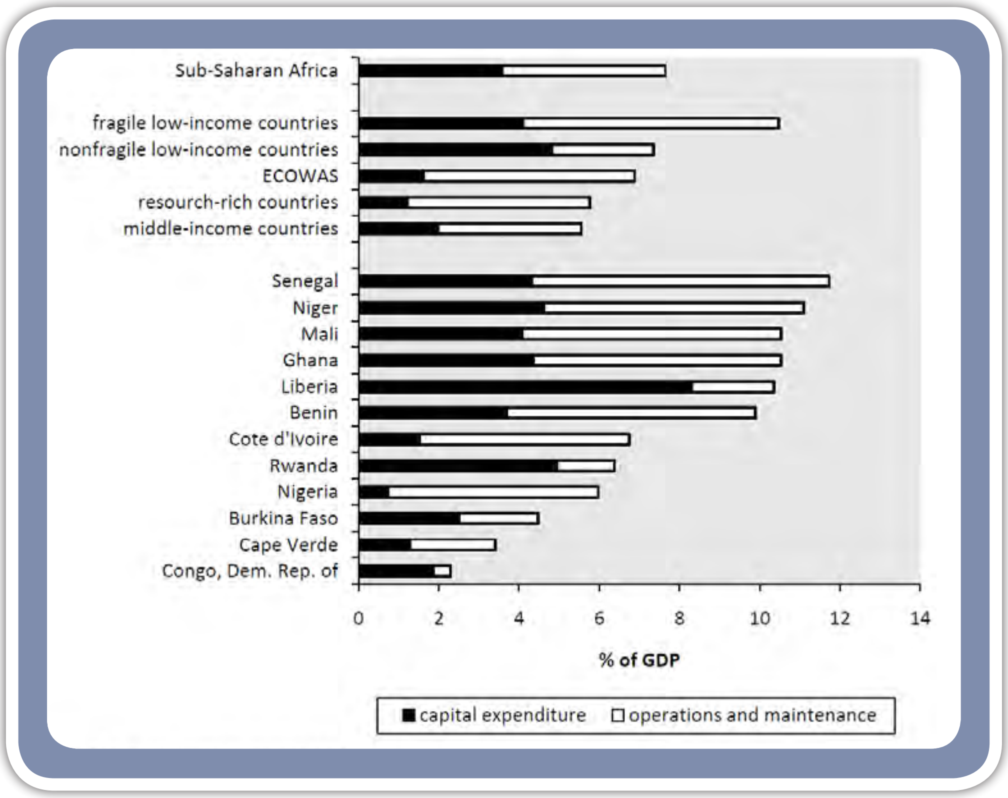
[86] This analysis draws upon a multitude of publicly disclosed fiscal documents, including the approved FY 2012/13 Budget, the Budget Factsheet, the Medium Term Expenditure Framework (MTEF) and accompanying Public Sector Investment Plan as well as the December 2012 Executive Summary Report on the Costing of the Agenda for Transformation.

[87] One point of discussion, for example, pertains to the borrowing levels that Liberia can afford in the MTEF period with GOLR proposing borrowing of $702 million whereas IMF estimates borrowing capacity on the order of $360 million. This analysis takes the more conservative borrowing figure.

Table 3.3 Analysis of GOLR Affordability of AFT Programme and Net Financing Requirements (U.S.$ Million)

Forecast Budget & Costs Opex, MTEF & AFT		Source	2012/13	2013/14	2014/15	2015/16	2016/17	TOTAL
			Approved	MTEF Projections				
Revenue	Total Government Revenue[1]	2013 budget Factsheet	$592	$558	$584			
	Affordable Borrowing Levels	IMF Recommendation	$80	$140	$140			
	Total Budget Envelope	Only 12/13 borrowing firm	$672	$698	$724			
Expenses	Recurrent Operating Costs	Fy 14 & 15 derived +10%	$433	$476	$524			
Fiscal Space	Fiscal Space for Capital Investment[3]		$239	$222	$200			
	Devoted to:	Fy 14 & 15 derived					TBD	
MTEF	P1 Infrastructure (in AfT)2[1]	final 12/13 budget	$106	$240	$210			
	P2 Investment (AFT pillars 1,3,4)	PSIP	$27	$35	$35			
	Sector Projects	PSIP	$108	$194	$164			
	Discrep. Submitted vs approved Budget[4]		$2					
	Draft MTEF (Only FY 13 Approved)[3]	Dec/2012 AfT Exec Sum	$239	$468	$407			
	Estimated GOLR Financing Shortfall MTEF		$0	-$247	-$207			
Assume	Donor Pledges	final 12/13 budget	$515					
	GROSS INVESTMENT COSTS AfT	Outer yrs AFT Costing	-$485	-$893	-$706	-$604	-$498	$3 186
AfT	GOLR Financing Gap: Budgeted AfT - MTEF		-$246	-$425	-$298	Scen. 1 (AfT Cost Dec 2012)		
	Apply & Carry Forw›d Donor Pledges	final 12/13 budget text	$515	$269				
	Incremental financing Surplus/ Gap Scen. 1 AFT		$269			-$194	-$48	
	Incremental future Pledges by Donors				Unknown			Cumulative Gap
	= Incremental Financing Gap			-$156	-$454			-$697
Memo Items	Borrowing as a % of AFT Total	First 3 yrs cumulative			17,3%			
	P1 projects (Energy, Ports, Transport)							
	Fiscal Yr Nominal GDP	Using IMF data or Gr Rate	$1 768	$1 934	$2 063			
	GDP Growth Rate	IMF Article IV Nov 2012	8,9%	8,3%	5,6%			
	Budget as a % of GDP	Without borrowing	33%	29%	28%			
	Investments as % of GDP		14%	11%	10%			
	P1 Infrastructure as % of GDP	P1 Projects Only	6,0%	12,4%	10,2%			
	AfT Spending as % of GDP		27,5%	46,2%	34,2%			
	[1]Data from Approved National Budget 2012/13, Includes Contingent revenue estimates of $83.4 million							
	[2]These projects link specifically to the AfT PRS 2 plan, P1 = Energy, Ports & Transport; P2 = Youth, Cap Bldg and Reconciliation. Projections for FY 14 forward may get modified by donor uptake and support of the P1 projects or lower GOLR borrowing capacity							
	[3] Only FY 13 approved. Data from approved 2012/13 budget for that year which is $8.9 m lower than reported in the Dec 2012 AFT Costing. Of the $239 m approved for PSIP, 86.4M is «core funded», $72.6 is «contingent funded» and dependent upon concession negotiation outcomes and $80m is dependent on borrowing. All borrowing will go to PSIP. This scenario relies on IMF sanctioned levels of affordable borrowing for FY 14 and 15.							
	[4] Draft PSIP budget RQ submitted to Legislature was $4.734m higher than final amount approved, so lower amount considered binding							

Figure 25 **Comparative Spending by States to Address Infrastructure Needs(88)**



Source ; Foster and Briceno-Garmendia 2009.

3.3.1 Programme for Infrastructure Development in Africa

Completed in 2012, the Programme for Infrastructure Development in Africa (PIDA) study was launched as a joint initiative by the African Union Commission (AUC), the NEPAD Secretariat and the African Development Bank (AfDB) to identify and address the infrastructure gap for the continent.[89] PIDA is much more than a study; it is a plan for action. PIDA has generated African Union member endorsement of a continent-wide Priority Action Plan (PAP) to guide strategic investment priorities for regional infrastructure between now and 2040.[90] The planning horizon takes the period through 2040 to take into account the expected growth profile and consequent bottlenecks which can be anticipated in Africa's infrastructure architecture. In this regard, the 2040 time frame is relevant to the long term planning horizon proposed for Liberia's consideration. From this starting point it makes forecasts on the rate and drivers of growth on the continent which then permits casting a future vision both for the distinct infrastructure sectors of transport, energy, ICT and water as well as synergies between them.

Over three decades from 1980 to 2010, average GDP growth in Africa was about 3% compared to around 6% by China, India, and Malaysia. The latter countries together with other emerging economies have proven the potential to lift people out of poverty if economic growth out-paces population growth. Considering a projected 2.5% African population growth rate in the coming three decades, PIDA assumes that Africa could, with adequate planning and enhanced continental integration, sustain more recent higher growth trends and achieve a 6% annual growth rate for the three decades from 2010 to 2040. This type of growth would be underpinned by stronger regional integration which can offer the formation of large, integrated and competitive markets out of the small, isolated and inefficient markets that presently fragment the continent. It can do this by slashing transport costs and establishing physical and ICT connectivity to enable the exchange of goods, people and information, and by providing lower cost energy to enable expansion of agriculture, mining and industry. Regional infrastructure can also tap synergies among sectors such as when power transmission lines carry fiber-optic cables, road projects are implemented in synchrony with laying of communications cables or multi-purpose dams are constructed to simultaneously generate hydropower, store water for irrigation and provide a means of flood control and environmental preservation.

[88] Reproduced from Cecilia Briceño-Garmendia, Karlis Smits, and Vivien Foster, "Financing Public Infrastructure in Sub-Saharan Africa: Patterns and Emerging Issues" Background Paper No. 15, Africa Infrastructure Country Diagnostic, World Bank June 2008.

[89] SOFRECO Consortium, "Study on Programme for Infrastructure Development in Africa, PIDA" comprising over ten volumes of reports beginning with an Inception report in 2010, Phase 1 and 2 interim reports by infrastructure sector and concluding with a Phase 3 Synthesis Report published January 20, 2012.

[90] African Development Bank, Africa Union and NEPAD, Programme for Infrastructure Development in Africa: Interconnecting, Integrating and Transforming a Continent, February 7, 2012

Figure 26 **Diagram of Presumed "Spatial Development Programme" Corridors on Continent by 2040** [91]

Exploitation of these synergies can be enhanced by planning and implementing infrastructure projects on a regional level and by employing a "growth corridor" approach. Figure 26 depicts the resulting expectations about future growth corridors within the continent, the location of which inform the continent-wide strategy for crowding in infrastructure.

Following from this growth perspective, PIDA developed a vision and development objectives for each sector as depicted in Box 13.[92] For energy, PIDA envisions developing efficient, reliable, cost-effective, and environmentally friendly infrastructure which will integrate the continent and enhance access to modern energy services. PIDA's transport vision intends to increase integration with infrastructure and services to enable the free movement of goods and passengers. The ICT vision envisages every government, business and citizen accessing reliable and affordable ICT networks. Meanwhile, the water vision promotes integrated water resource management to develop and strengthen transboundary water infrastructure projects and management frameworks, and to ensure water security.

3.3.2 Liberian Involvement in PIDA

In some respects, the worrisome aspect of the PIDA forecast and the depiction in Figure 26 is the fact that Liberia is not central to any of the evisaged growth

Box 13 **PIDA Continental Priorities by Infrastructure Sector – Visions and Actions**

PIDA's Energy Vision	PIDA's ICT Vision
PIDA will develop efficient, reliable, cost-effective and environmentally friendly infrastructure for the physical integration of the continent and enhance access to modern energy services for the majority of the African population by: • Developing regional and continental clean power generation and transmission projects • Implementing high-capacity oil refineries and oil and gas pipeline projects • Developing renewable energy resources	To enable Africa to build an information society and an integrated digital economy in which every government, business and citizen has access to reliable and affordable ICT networks by: • Doubling ICT's contribution to GDP from 5% to 10% by 2025 • Satisfying African broadband demand at the least cost, while increasing accessibility and security of access • Promoting intra-African e-commerce Increasing physical integration at the regional and continental levels.
PIDA's Transport Vision	**PIDA's Water Vision**
To work towards an integrated continent where the transport infrastructure and services enable the free movement of goods and passengers by: • Improving connectedness of African capitals and major centres with modern paved roads and rail systems • Satisfying demand on the African Regional Transport Infrastructure Network (ARTIN) routes at the least economic cost, with priority for landlocked countries, while minimizing the environmental impact of transport infrastructure and services • Developing modern ARTIN corridors, including gateway ports and air transport services, to bring the performance of ARTIN components up to best world practice in efficiency, cost, reliability and safety.	Promoting integrated water resource management to develop transboundary water infrastructure projects, strengthen transboundary management frameworks for regional integration and ensure water security for the socio-economic development of Africa by: • Strengthening institutions for efficient cooperation on shared water resources • Developing transboundary water infrastructure to meet increasing water demands while protecting people and the environment • Strengthening finances for transboundary water development and management • Improving knowledge on transboundary water basins and shared aquifers.

[91] SOFRECO Consortium, Phase 1 Overview of PIDA Study, March 3, 2011 page 36.
[92] Programme for Infrastructure Development in Africa: Interconnecting, Integrating and Transforming a Continent, February 7, 2012, page 6.

Table 3.4 (a) PIDA Projects Slated for Implementation within ECOWAS Regional Economic Community
Liberian Participation Highlighted

	Project Name	Description	Est'd Cost, US$ Mn	ECOWAS Locations	Liberian Involvement
ENERGY	Kaleta	Phase 1 of OMVG power generation scheme: Erect dam & hydropower generation at Kaleta in Guinea	179	Guinea	Liberia can benefit when OMVG is connected into W.A. Energy Market through WAPP and supplements supply for import
ENERGY	West African Power Transmission Corridor	2000 km line along the coast connecting with the existing Ghana Nigeria line with a capacity of 1,000 MW	1 200	All MRU, Guinea-Bissau, Gambia, Ghana	Direct participant in CLSG WAPP Transmission Line
ENERGY	Guinea Regional Project Dev't Capacity Bldg	Guinea Regional Hydro Projects preparation for implementation of long term development program of hydro potential of Guinea	5	Guinea - WAPP	Beneficiary when Guinea's immense hydro-power is developed & connected into W.A. Energy Market
ENERGY	Bumbuna II	Project with a capacity of 86MW with prospects for 350 MW located about 200km northeast of Freetown	169	Sierra Leone	Beneficiary as a power importer via CLSG WAPP
TRANSPORT	Completing Trans-African Highway	This is Phase 1 of the continental connectivity program which focuses on completion of the TAH missing links by 2030 to complement the Africa Regional Transport Infrastructure Network (ARTIN) and designated SPD corridors	2 150	Ivory Coast, Sierra Leone, Liberia	Missing Links in Trans Africa Highway = Freetown-MRU Bridge, and TAH link between Liberia and Cote D'Ivoire including bridge
TRANSPORT	'Single African Sky' Phase 1	Single African Sky is a continental project which will create a high-level, satellite-based air navigation system for the African continent	275	Africa	All ECOWAS Countries, since continent-wide
TRANSPORT	Yamoussoukro Decision Implementation	Accelerate Yamoussoukro decision implementation by identifying countries ready to fully implement it and agreement with governments and airlines to launch the voluntary club on a full membership basis	5	TBD based upon policy actions endorsed by countries	Liberia's NTPS recognizes «need to adopt» Yamoussoukro and this is essential for Liberia to join the «club»
TRANSPORT	Smart Corridor Program Phase 1	This program includes both the development of model smart corridor technology and the design and implementation of a continental and regional corridor efficiency monitoring system.	100	Africa	Liberia is not presently considered as vital to the key ARTIN corridors
TRANSPORT	Abidjan-Lagos Coastal Corridor	This program would modernize the most heavily travelled ARTIN corridor in West Africa including trade facilitation, one-stop border posts and PPPs for efficient corridor mgm't rganization	290	Nigeria, Benin, togo, Ghana, Ivory Coast	Presently, this corridor is seen to stop once it connects Nigeria to I.C. as traffic is too light into Liberia and SL
TRANSPORT	Dakar-Niamey Multimodal Corridor	This program would modernize the most heavily travelled ARTIN corridor in West Africa including trade facilitation, one-stop border posts and PPPs for efficient corridor mgm't organization	590	Senegal, Mali, Burkina Faso, Niger	This horizontal corridor runs north of Liberia and sees Senegal as the key evacuation port for interior transit goods
TRANSPORT	Praia-Dakar-Abidjan Multimodal Corridor	This program would improve marine transport between island and mainland countries by creating a new maritime service between regional ports and facilitating this with a modern information system linking with ports and road corridors on the mainland	150	Cape Verde, Senegal, Gambia, G-Bissau, MRU countries	If Liberia chooses to engage, this is a program that could link it more into the planned multi-modal corridors due for further development in ECOWAS
TRANSPORT	Abidjan-Ouagadougou-Bamako corridor	This program would modernize and rehabilitate the multimodal corridor that suffered during civil war in Côte D'Ivoire	540	Ivory Coast, Burkina Faso, Mali	This vertical corridor positions Ivory Coast as key evacuation corridor for goods from land-locked north. It runs parallel to Liberia but does not connect due to missing TAH link
TRANSPORT	West Africa Air Transport	This project aims at increasing the air transport service levels in West Africa currently limited by the lack of a regional air hub. It will conduct a study to identify the most suitable hub for the REC	420	15 countries in REC	Countries most implicated by this include 2020 gap airports located in Ghana, Nigeria and Senegal
TRANSPORT	West Africa Hub Port and Rail Programme	This project aims at responding to the future capacity problems in West African ports. This project has 2 components: (a) a regional hub port and rail linkage master plan and (b) port expansion. It will also conduct a study to identify the most suitable hub port and rail links	2 140	15 countries in REC	While all ECOWAS locales relevant to the study, emphasis will be on expansion of Dakar, Abidjan, Tema, Lome and Cotonou ports plus rail through Ghana as these are key to high traffic Corridors

Table 3.4 (b) PIDA Projects Slated for Implementation within ECOWAS Regional Economic Community

Project Name		Description	Est'd Cost, US$ Mn	ECOWAS Locations	Liberian Involvement
ICT	ICT enabling Environment	The objective of this project is to offer the best investment environment for the private sectors who will invest in the high speed broadband infrastructure	25	Continental	Benefit if countries find a way/ reason to participate
	ICT Terrestrial Connectivity	Project has 2 main components: (a) secure all country connections at least to broadband infrastructure and (b) ensure the access to submarine cable by those landlocked	320	Continental	Liberia is directly participating through ACE connection to submarine fiber optic cable
	IXP Programme	The aim of this project is to provide the Continent with adequate internet node exchange to maximise internal traffic	130	Continental	Liberia is directly participating through ACE connection to submarine fiber optic cable
WATER	Fomi	Hydropower station in Guinea with irrigation water supply for Mali	384	Guinea	Guinea (Niger River Basin)
	Gourbassy	Multi-purpose dam located in Guinea	N/A	Guinea	Guinea (Senegal River Basin)
	Noumbiel	Multi-purpose dam with hydropower generation	N/A	Ghana	No MRU involvement. Ghana & Burkina Faso, (Volta River Basin)
	Volta Basin Plan	Development of a joint basin management plan	3	Volta River Basin	No MRU involvement.
	Pre-Feasibilities aimed for better usage of the aquifer system	Development of management strategy and identification of investment options for better aquifer use	2,5	NW Sahara & ECOWAS	No direct MRU/Guinea Bissau involvement
	Pre-Feasibility studies	Development of management strategy and exploring possibility of artificial aquifer use	10	Lullemeden & T-T Aquifer system	No direct MRU/Guinea Bissau involvement
	Capacity Building in Investment Project Preparation	Targeted capacity building in infrastructure project identification, preparation and implementation	3	Continental	Benefit if countries find a way/ reason to participate

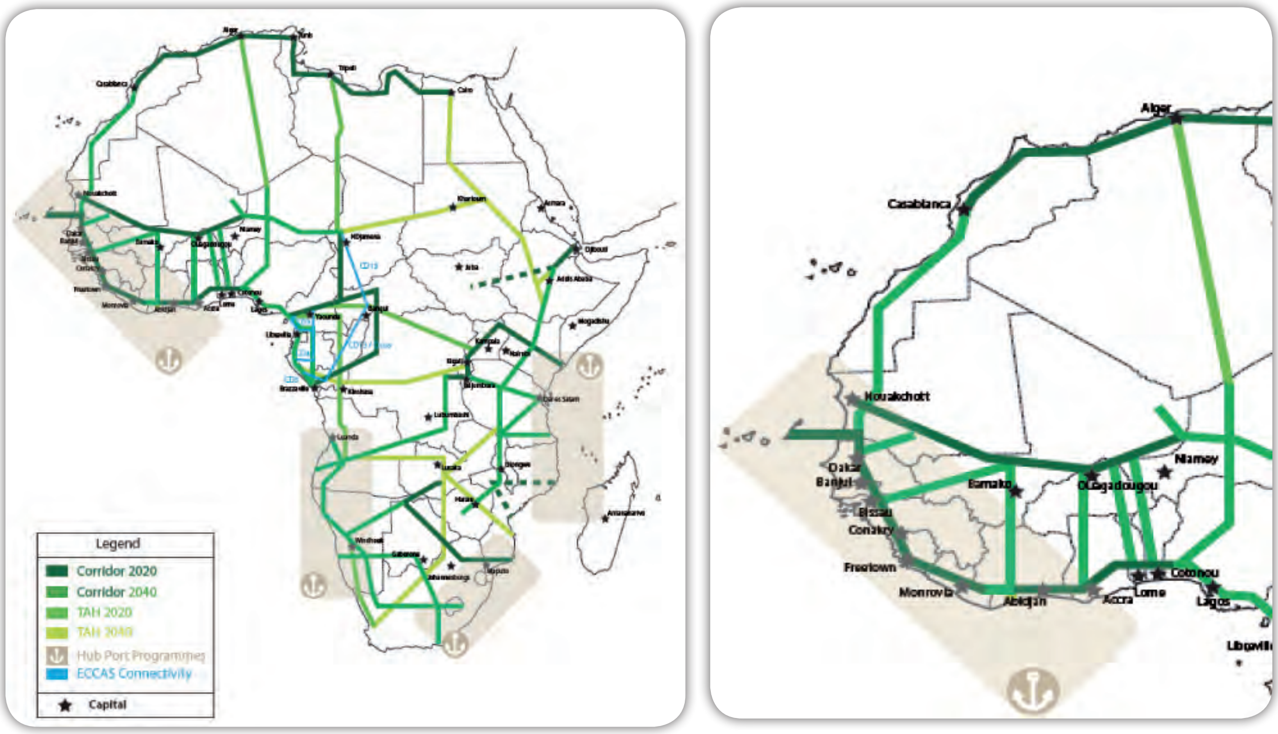
corridors. Indeed, except for Ivory Coast, the same applies to other MRU nations. This is not a random outcome or due to subjective bias, but instead is the direct consequence of conflicts which plagued the sub-region during an extended period during which other ECOWAS countries prepared for take-off. Three points are worth noting. First, this particular graphic does not adequately convey how Liberia and other fragile states will be included in the PIDA PAP (discussed below) and will indeed benefit from the infrastructure investment due for implementation all around them. Second, if this vision provokes a Liberian reaction to stand up and be counted on the regional stage, it will have served a useful purpose. Liberia cannot allow itself to get left behind. And, though the nation must first focus on critical national needs, it is important that the authorities cast a longer term vision for infrastructure. The recommended premise is that national unity, once consolidated, should migrate towards regional unity in order for Liberia to maintain its regional presence and competitiveness. Third, the bottlenecks that PIDA predicts will arise within the SPD corridors in the 2030-40 decade present an opportunity for Liberia and these are further explored below and in forming recommendations for Liberia's own plans for that time-frame.

Of the 51 projects in the PAP, 19 engage the ECOWAS region as depicted in Table 3.4. Four projects (highlighted in yellow) acknowledge direct participation by Liberia while several others offer downstream potential to connect the country into regional networks or meet growing domestic demand for services. Further details regarding those projects directly engaging Liberia are provided in the context of ECOWAS programming covered in the next section.

Meanwhile, Table 3.4 reveals that, assuming neighboring countries move ahead with implementation of the PAP projects envisaged for them between now and 2020, key transport corridors will have developed all around Liberia. Figure 27 brings the implications of this forecast to light. Future freight transport that is projected to evolve as a function of growth in international trade is expected to double in tonnage by 2020 but increase six-fold by 2040. In particular, transit traffic from landlocked countries is expected to increase by 10 to 14 times in the coming 30 years and this will lead to major bottlenecks at most of the ports located along coastlines. These diagrams suggest that good quality multi-modal road and rail transport, border posts and port infrastructure will have been established to serve north-south transit traffic between landlocked ECOWAS countries and nations east of Liberia along the West African coastline.

Likewise, an efficient East-West corridor will be functional trans-Sahel. Yet, a container port capacity constraint will appear in 2030 in Abidjan and border post capacity

Figure 27 PIDA Vision of Transport Impact to Improve Connectivity for Continental and Global Trade



constraints serving landlocked countries will arise in 2040. This could present an opportunity for Liberia if the authorities take measures to position the country with better multi-modal connections that improve its own corridor competitiveness.

At this stage, Liberia is less implicated in the seven identified trans-boundary water projects critical to other parts of ECOWAS but as a water-rich nation, its water resources will undoubtedly become more precious to the REC. This is especially the case if ECOWAS should decide, as the Nile Basin initiative is considering, to engage in "virtual water trade" strategies to meet food security requirements. PIDA makes the point that because water resources are distributed unevenly on the continent, it may be optimal for countries to trade on the basis of their comparative advantage. This envisages water-scarce countries importing grain instead of building costly water supply infrastructure to meet longer term food imports while giving others in water-rich environments the opportunity to become regional food exporters. Such a scenario would justify greater relative investment in irrigation facilities than is presently the case in Liberia's rich rain-fed agricultural environment.

In establishing an overall look ahead, PIDA concludes that certain corridors will be up and running by 2020 and others, including those that embrace Liberia, need to be made functional by 2040 as depicted in their vision of transport impact. It is clear that Liberia and other fragile states in West Africa have much to gain from the infrastructure projects envisioned in the PIDA program. Several projects directly engage MRU states and where others may not physically penetrate their territory, the planned densification of energy, transport and communications networks will help to drive broader continental growth that will, in turn, create better conditions for fragile states to emerge as trading partners in the region. It is equally apparent that greater opportunity will emerge for countries that strategically position themselves to seize advantage from future trends and bottlenecks. Overall, it is evident that transformational growth will be occurring all around Liberia in the coming three decades and it is important for the country to become an active participant in this process.

3.3.3 Liberian Involvement in ECOWAS Regional Initiatives

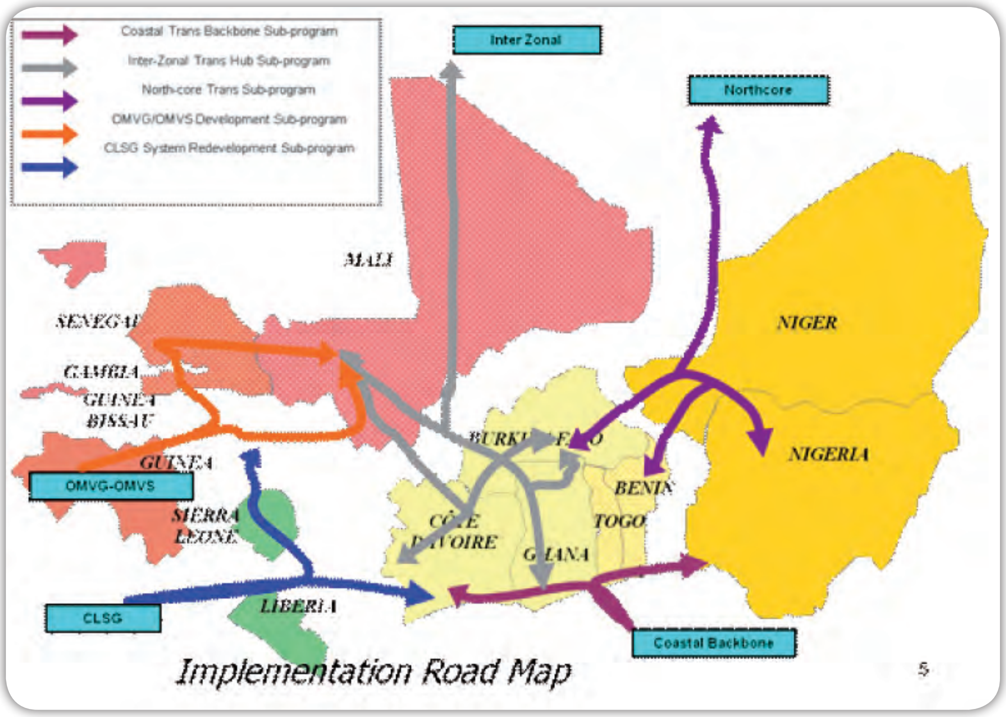
The ECOWAS Commission takes a leading role in coordinating the implementation of NEPAD programs in West Africa, including the CAADP and PIDA programs in which Liberia is a participant. Through its specialized infrastructure directorates and subsidiary organizations such as the West African Power Pool, the Commission has a mandate to design and champion strategic infrastructure of a regional nature to better connect the REC and deliver on the promise of enabling free movement of goods and people throughout the community. Liberia is especially involved or impacted by ECOWAS initiatives in the energy, transport and ICT sectors. The sections below review both the hard investments and soft accompanying measures in energy, transport and ICT sectors of particular relevance to Liberia in planning or implementation stages by the Commission.

Development of the West African Energy Market

This section starts by summarizing the rationale of a regional approach to energy market creation. It continues with a review of the planned physical (hard) investments within ECOWAS including those that involve Liberia and then turns to soft accompanying measures needed to make them most effective.

The West African Power Pool (WAPP) was created in 1999 by ECOWAS heads of state to address issues of deficient power supply plaguing the region. WAPP's strategic objective is to integrate national electricity networks into a unified regional market based on the fundamental premise that energy sector installations require large amounts of investment capital, facilities have long-lived duration and they are characterized by economies of scale. These features make it particularly attractive to implement generation and transmission installations on a regional scale, permitting energy trade between countries. This approach serves to reduce costs to optimal competitive tariff levels for all participating nations while accelerating the mobilization of financing at reduced commercial risk through delivery of larger markets to absorb expanded energy supply on a faster timeframe than could be accomplished by one country alone. Additional benefits from taking a regional approach to energy market development are that it allows for a balanced energy mix to be developed and permits tariffs to better afford the introduction of green energy (renewable, low carbon emission) sources into that mix. A balanced energy mix reduces risks that can arise from reliance upon a single energy source. As examples, supply disruptions can arise from reliance on hydroelectric generation if climate change or seasonal anomalies disrupt rainfall patterns whereas vulnerability to price hikes can arise from reliance on heavy fuel oil (HFO) generation. Acting on its own to meet all of its energy needs, Liberia would have significant exposure to both of these risks. In addition, renewable energy technologies currently require much higher investment cost per Kilowatt hour (KwH) of operation so, in order to get the benefits of green energy, it is important to blend them into a basket of energy sources to keep a lid on tariffs and maintain regional competitiveness. As noted in chapter 1, Liberia presently has likely the highest electricity tariffs in Africa at \$0.54 per KwH. This does more than act as a damper to economic growth; it makes it a strategic national imperative for Liberia to reduce its electricity tariffs to competitive levels with the region and the continent. On the basis of this logic, Liberia and other ECOWAS member states foresaw the advantage of creating a broader regional energy market through the establishment of a regional power pool. This led to the establishment of a first regional energy master plan, an implementation plan to interconnect countries (Figure 28) and a pipeline of priority projects sanctioned in 2004.

Figure 28 West Africa Power Pool Implementation Plan



Regrettably, eight years later, it must be said that the regional power pool for Zone B of ECOWAS is *not very functional* at the moment and more must be done to convert this potential into reality.[93] One of the key investments that will change this situation is near term implementation of CLSG transmission line due

[93] Zone B includes Mali, Liberia, guinea, Sierra Leone, Guinea Bissau, Senegal and The Gambia with the only existing inter-connection between Senegal and Mali. Zone A, with functioning inter-connections includes Nigeria, Niger, Benin, Togo, Burkina Faso, Ghana and Ivory Coast.

to link Côte D'Ivoire-Liberia-Sierra Leone and Guinea highlighted in Box 14. Financing for this project has been arranged, institutional design of a Special Purpose Company to realize the works and operate the installation has been sanctioned, project closure is imminent and commissioning is scheduled for 2015. While this project will initially be supplied with excess power generated in Côte D'Ivoire, it will effectively introduce all four countries into the regional energy market and pave the way for subsequent investment in generation and transmission to be planned on a more optimal, cost-competitive basis. This project has huge significance for Liberia far beyond the short term impact it will deliver, not only because it will feed capacity into the national grid and reduce pressures on LEC's current tariff structure but because it gives Liberia many more options on the selection, timing and financing options for future national hydroelectricity generation projects. This deserves further elaboration to convey the strategic relevance of other ECOWAS energy projects to Liberia.

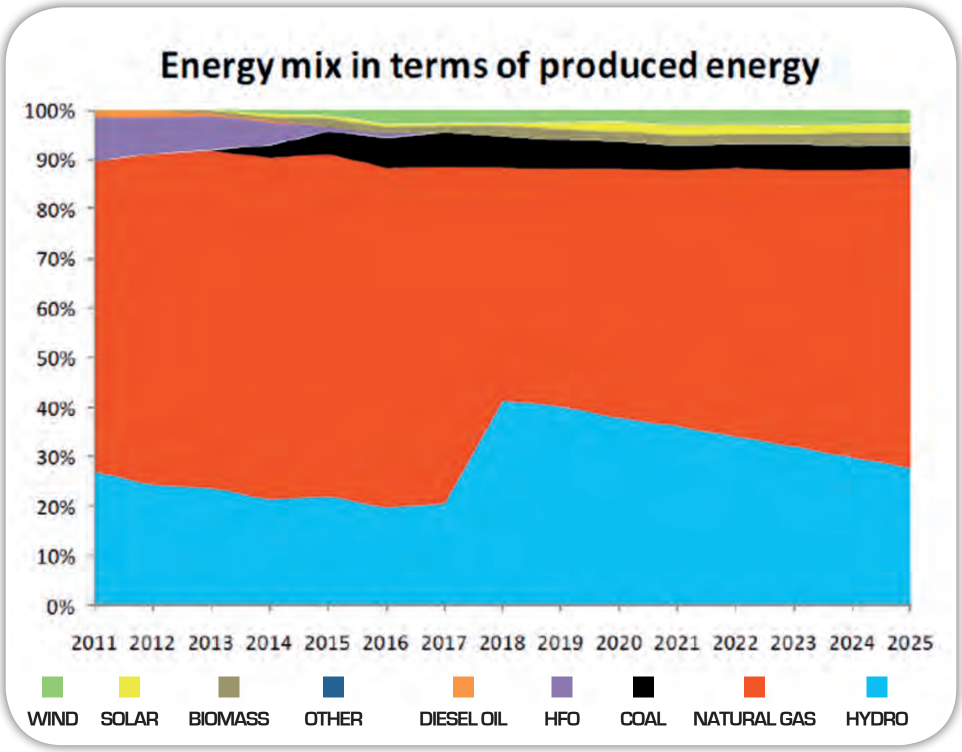
Box 14 CLSG Regional Power Transmission Project

The CLSG project involves the construction of a high voltage (225kV) double circuit transmission line running approximately 1360 km to connect Côte d'Ivoire, Liberia, Sierra Leone, and Guinea. The transmission line will consist of approximately 150km in Côte d'Ivoire, 100km in Guinea, 500km in Liberia and 550km in Sierra Leone. The selected line route passes through future hydro generation plant sites, notably Yiben and Bikongor in Sierra Leone and Mano in Liberia. In addition, 225/33 kV substations will be connected to this line to supply networks for the rural electrification. The objective of the interconnection is to facilitate the exchange of low-cost energy initially from Côte d'Ivoire that it can export to its neighboring MRU members currently experiencing power deficits. Ultimately, this transmission line will facilitate economically viable development of other hydro power sources in the sub-region as well as the import of green energy from solar and wind-based resources generated further north in due course. The planned routing of the CLSG line is presented below.

Because of the gap between objectives and achievements in WAPP's previous regional energy master plan, a comprehensive update to the ECOWAS regional master plan was prepared, which was completed in October 2011. The updating process took stock of a vast "inventory" of realizable electricity generation and transmission projects, including "existing" units, "confirmed" units for which decisions have been made and "candidate" units for which potential has been identified but studies are not yet complete or financing has not yet been found. This approach took as a given the national projects already decided upon, such as (in the case of Liberia) the installation of a 10MW HFO plant at Bushrod and the rehabilitation of 66MW hydroelectric generation capacity at Mt. Coffee due for commissioning in the AFT time-frame. At the same time, by expanding the regional inventory to consider all "candidate" projects, the process allowed the optimization of an overall power supply plan to carry the region through 2025 at a long term competitive tariff rate of $0.10 per KwH.[94] This plan evaluated the merits of over 100 investment projects (over 80 of which were hydro) to deliver a balanced energy mix in a portfolio of 36 recommended projects including transmission links plus generation through gas, coal, thermal, biomass, hydro, and 20% renewable (solar plus wind) energy. The resulting energy mix proposed for ECOWAS including voluntary development of renewable energy is depicted in Figure 29 below.[95]

[94] This compares to a 2009 estimate that typical power tariffs elsewhere in the developing world are around $0.07 per KwH.
[95] Tractebel, IBID, Volume 4, Page 13.

Figure 29 Energy Mix for West Africa, including Voluntary Inclusion of Renewable Sources



While this demonstrates the importance of relatively cheaper natural gas in contributing to the region's total energy requirements—a source that can only be directly tapped by Liberia after transmission links have been extended into Zone A—it also demonstrates the benefit to the entire community of taking a pooled cost approach to regional supply through the mechanism of a regional regulator, the ECOWAS Regional Regulatory Authority (ERERA).

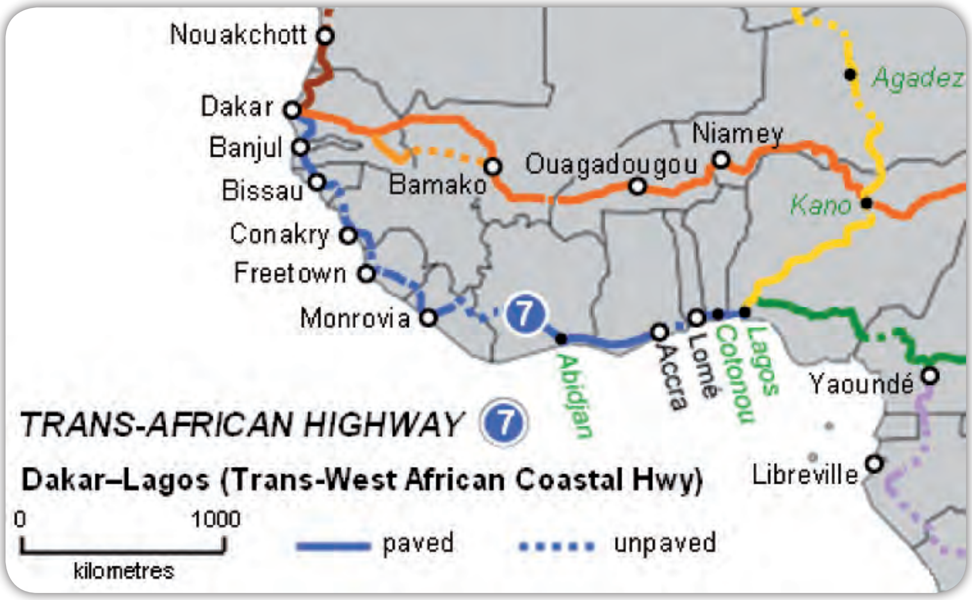
To achieve this highly competitive cost structure and mix of energy supply, member countries would need to invest themselves in several accompanying "soft" measures to realize full benefit of the potential gains. It would be important, for example, for each member state to cast their national energy investment plans within the context of the WAPP master plan to prioritize those projects which contribute to a regionally optimized tariff. States will need to engage willingly in energy trade as importers or exporters rather than being all-consumed by the need for uniquely sovereign sources of supply. This is the kind of hurdle that requires political will by the region's leaders first and foremost to recognize that sovereign needs can be met while simultaneously contributing to the target of a regionally optimized tariff. At the same time, the updated WAPP master plan does make provision for inclusion of "confirmed" national projects so as to allay the fears of over-reliance upon energy imports. In Liberia's case, the confirmed downstream projects include St. Paul 1B to install 78MW of capacity at an estimated cost of $244 million plus St. Paul 2 to install an additional 120 MW of capacity at an increment investment of $375m. Other soft measures important for effective participation in the regional energy market include the restoration of creditworthiness of LEC through on-going efficiency gains from pre-paid metering, loss reductions and improved billing and collections. In addition, Liberia will be well served to eventually set up its Energy Regulatory Board in a manner that provides cooperation and coherence with the authority of the regional energy regulator, ERERA. The latter institution will be obliged to facilitate unrestricted cross-border electricity exchange among Member States within a competitive framework, applying non-discriminatory rules for exchanges and dispute resolution. ERERA will also be responsible for monitoring and enforcing cross border power trading contracts, technical operating standards, grid codes, methodology and calculation of transmission costs and tariffs, benchmarking of performance and setting of market rules for power pool operations. The presence of harmonious regulation at both national and regional levels will provide a level playing field for all players in the power pool, including prospective investors and improve the climate for private investment in Liberia's promising hydro locations.

These initiatives by ECOWAS on the regional energy front set the regional context in which Liberia may wish to cast its medium and longer term visions for investment in the power sector.

Development of a West Africa Regional Transport Network

Africa's leaders first approved the objective of building a continental road network four decades ago to link capitals and key cities across the continent in a plan denominated as Trans-Africa Highways (TAH). The West African portion is depicted in Figure 30. The vital importance of transport was subsequently sanctioned by ECOWAS members in their Treaty and other measures to improve governance of the sector (Box 15). The vision corresponds to the first transport objective re-endorsed under the PIDA vision, notably "Improving connectedness of African capitals and major centres with modern paved roads and rail systems." To this day there remain several missing links in the TAH. Within ECOWAS this is most notable in the incomplete Trans-Coastal highway intended to join Lagos with Dakar.

Figure 30 Trans-African Highway Plan: Status and Missing Links in West Africa



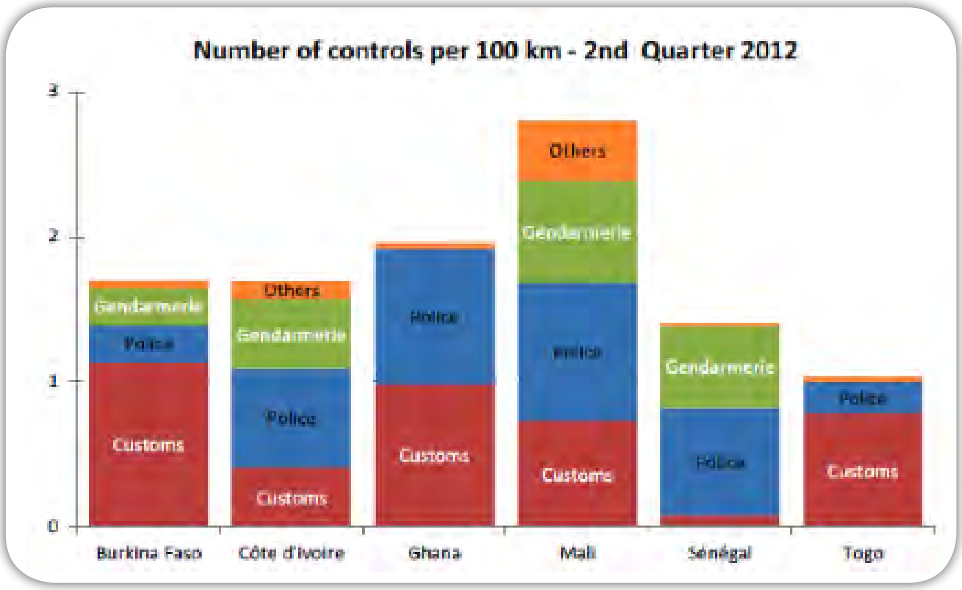
Box 15: ECOWAS Measures to Improve Governance of West African Regional Transport

Article 32 of the ECOWAS revised Treaty of 1993	Member States resolve to develop transport infrastructure and policies to promote physical cohesion among member states and facilitate the movement of persons, goods and services within the Community with special emphasis on increased access to island and land-locked countries
ISRT Convention A/P4/82	Convention regulating inter-State road transportation between ECOWAS Member States
Decision C/ DEC.13/01/03	Establishment of a Regional Road Transport and Transit Facilitation Programme in Support of Inter-Community Trade and Cross-Border Movements
Decision A/ DEC.9/01/05	Facilitation Committees established to ensure smooth flow of interstate Road transport and support the removal of obstacles identified
Supplementary Act/SP.17/02/12	Harmonization of Axle-Load control Standards and procedures in Member States

This is meant to include a link between Monrovia and Côte D'Ivoire plus another between Monrovia and Freetown in Sierra Leone. However, the first is mostly unpaved on the Liberian side and the latter is mostly unpaved within Sierra Leone. Neither is built to the standard originally envisaged, notably asphalt concrete or pavement, with controlled access and adequate drainage suitable for a high speed, transit-oriented roadway. At the same time, neither carries the traffic associated with a highway but this could be a "chicken and egg" problem of what should come first-- traffic or enabling infrastructure.

Meanwhile, time evolved and traffic grew heavier (up to 15,000 vehicles per day in some segments) between landlocked countries and coastal ports leading ECOWAS to adopt a Regional Road Transport and Transit Facilitation Program in 2003. This program seeks to stimulate intra-regional trade and facilitate the movement of goods across borders by promoting multi-modal connections involving road and rail infrastructure, inland dry ports, seaside ports for bulk and containerized cargo plus one-stop border posts (OSBPs) across increasingly efficient corridors. On the soft side, ECOWAS is also encouraging the adoption of common construction standards and harmonized customs procedures, adherence to the Inter-State Road Transport Convention covering axle load weight control measures and development of Corridor Management Organizations to improve the efficiency with which multi-modal corridors are managed. This program has naturally put greater emphasis on those corridors that have proven most effective in connecting landlocked Burkina Faso, Mali and Niger with gateway ports, hence those in Nigeria, Ghana, Benin, Côte d'Ivoire, Senegal, Guinea, and Togo. Given the relative success of these key North-South and East-West corridors, other development initiatives such as the West African Trade Hub (www.watradehub.com) and the Borderless Partnership (www.borderlesswa.com) have also crowded in to further stimulate regional trade.[96] These institutions work through networking and technical assistance to upgrade the competitiveness of value chains while using "praise and shame" to monitor and publicize non-tariff barriers that arise along the key trade routes. These measures, as epitomized in Figure 31, serve to keep sector participants informed so that all players-- public and private alike-- can adjust their behavior and make improvements upon current practice.[97]

Figure 31 Comparative Behavior on WA Trade Routes
www.borderlesswa.com



Two observations are important here. First, Liberia, Sierra Leone, Guinea and Guinea Bissau are mostly absent from these programs. Second, however, is the fact that this situation could change if these fragile states want it to by identifying and establishing inter-state road links which they then get registered under the ISRT convention of ECOWAS. The landlocked states will benefit from there being choice and competition among corridors. Recent experience from Côte D'Ivoire is highly informative in this regard. In particular, the 2002 crisis in that country resulted in the closing of international road and rail routes out of Abidjan, forcing a re-routing of freight to other ports in Togo, Benin, and Ghana. For Burkina Faso, the rerouting resulted in Lomé and Tema ports increasing their share of the country's trade. Lomé went from handling a 20 percent share of Burkina Faso transit cargo in 1999 to 50 percent in 2004 while Tema went from 7 to 36 percent during the same period [98]. The crisis also affected Mali traffic with the result that Burkina Faso became a transit country for Mali trade. Although Côte D'Ivoire is now well on the way to re-establishing its competitiveness, the lesson for the fragile states is that they should not consider it too late to become an active participant in West African transit trade and inter-regional exchange.

With respect to regional rail infrastructure, eleven ECOWAS countries have installations, three of which have been privatized through concessions and are performing reasonably well. Others are running way below commercial standards while many, such as those in Liberia are essentially moribund. The overall failing of the ECOWAS rail network is that, with few exceptions, the national networks do not connect. This is further hampered by the use of different gauge tracks within the region, a fact which is applicable within Liberia as well. Given the high capital cost and relatively low volumes on most railways in West Africa, further public investment is difficult to justify on economic grounds. This explains why the PIDA program intends to first gain information about future capacity problems in key gateway ports before casting decisions on what public sector rail investment will be most economic for the region. There is no forseeable way that Liberia could emerge as a candidate location for hosting a hub port and rail link for the region within the timeframe of the PIDA study.

However, Liberia does have tremendous potential for the private mining sector to invest in resurrecting or constructing new rail links and, with incremental public

[96] West Africa Trade Hub is an initiative sponsored by USAID. Borderless is a collaboration developed by Publicis Ghana for the Hub which has expanded to include public and private sector stakeholders including ECOWAS, UEMOA, the World Bank, the Abidjan-Lagos Corridor Organization, other regional USAID projects, TransAlloman Togo, Verhad Trucking and Haulage Ltd. in Ghana. It has the support of the Governments of Benin, Burkina Faso, Ghana, Mali, Nigeria, Senegal and Togo.
[97] "Improved Road Transport Governance Initiative," 19th Road Governance Report, 1st Quarter 2012, www.borderlesswa.com
[98] Transport Corridors to Facilitate Interregional Trade and Exports in the ECOWAS Region, RISP Background Paper, November 2010, AfDB

investment at the margin, Liberia might find a way to position itself as a longer term player with connections into ECOWAS. With mineral activity expanding throughout the region, the viability for public-private collaboration to extend rail networks across borders is changing. This potential for cross border rail viability already exists as in the case of the Simandou iron ore deposit located in Eastern Guinea as depicted in Figure 33. This and other deposits could be moved from their location in Eastern Guinea to ships at a Liberian port at estimated life-cycle cost savings of $1billion were it not for sovereignty concerns persuading Guinea to insist on use of national transit routes yet to be constructed.[99]

Despite the regrettable opportunity loss to Liberia and private investors seeking a hospitable and competitive investment climate in the West African region, other opportunities for cross-border rail connections may well arise, especially in the direction of Côte D'Ivoire and Ghana which are likely to gain priority under Commission-sponsored rail planning. This raises the importance of Liberia taking measures to position itself to capture opportunity arising within the regional rail sector in the long term future.

Figure 32 Schematic of Existing ECOWAS Rail Lines and Possible Expansion

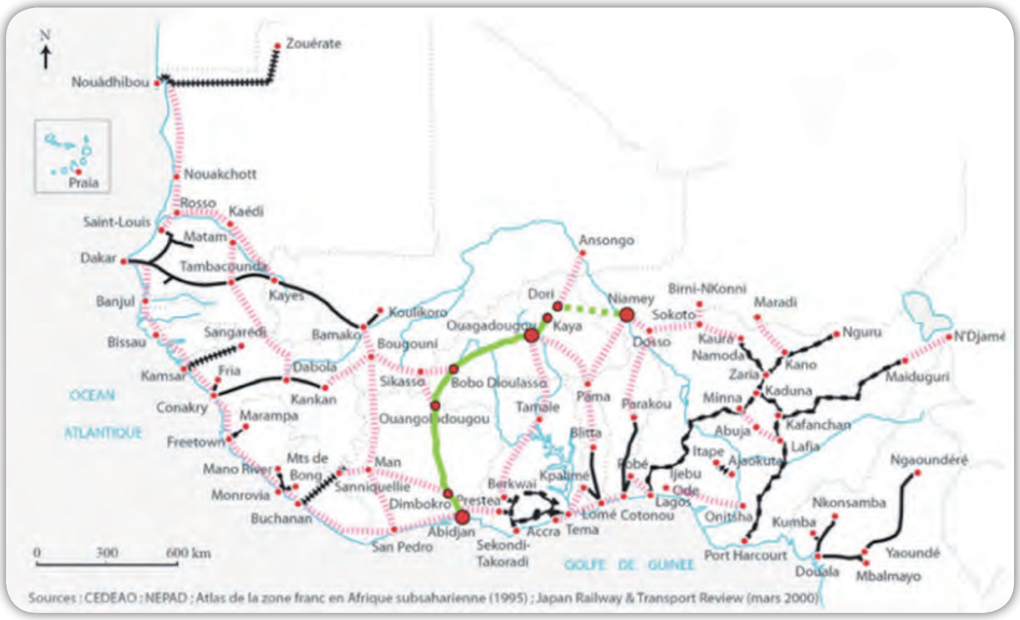


Figure 33 Planned Guinea Rail Line to Conakry Vs Extension of Liberian Rail Lines Across Joint Border

[99] World Bank, "Liberia's Infrastructure: Envisioning the Future," power-point presentation made at National Economic Forum in 2011.

With respect to the ports sector, it is clear that Liberia lags far behind other countries in the region with the country being relatively underserved in terms of global shipping services (see Table 3.5) and cargo volumes being one tenth or less than those of neighboring country ports that serve inland countries. Consequently, focus by ECOWAS Commission for physical investment will be on the identification of a suitable transshipment hub for the sub-region along with improvements in multi-modal connectivity to gateway hubs serving the interior. At the same time, the region requires critical attention to the soft measures that will improve trade facilitation and this is equally applicable to Liberia. Such measures would need to include:

- reduction and simplification of tariffs,
- reduction or elimination of approvals required,
- simplification of documentation and introduction of electronic submission,
- Introduction of simplified procedures for moving goods in transit, and harmonization and automation of regulatory procedures for clearing cargo at the borders.[100]

Table 3.5
Shipping Liner Connectivity Index

Ranking	World	Regional	
Country	2009	2009	2006
Egypt, Arab Rep.	17	1	1
South Africa	29	3	2
Nigeria	50	4	4
Cote d'Ivoire	53	5	5
Ghana	54	6	3
Senegal	63	8	8
Mauritius	64	9	6
Togo	68	10	9
Benin	70	12	10
Kenya	72	13	12
Cameroon	73	14	7
Angola	75	16	11
Tanzania	83	17	15
Guinea	97	24	16
Gambia, The	103	25	30
Mauritania	104	26	24
Sierra Leone	111	28	28
Liberia	**112**	**29**	**32**
Cape Verde	115	30	34
Guinea-Bissau	143	35	29
Sao Tome & Principe	153	38	38

Source: UNCTAD

These initiatives by PIDA and ECOWAS on transport fronts set the regional context in which Liberia may wish to cast its longer term vision for investment in transport-related infrastructure.

Acceleration of Regional ICT Infrastructure and Use of ICT Efficiency Tools

West Africa still relies to a large extent upon satellites to manage long distance telecommunications whereas modern digital communications through fiber optic networks are now recognized as the main catalysts for ICT development. Such networks must enjoy connection to international undersea cables and comprise domestic backbones plus cross-border terrestrial links to deliver benefits to public and private users. Recognizing this, and cognizant that Africa is furthest behind with respect to the global digital divide, a primary interest of the ECOWAS community is to secure international connectivity and address regional ICT infrastructure gaps to create an integrated regional communications market.

There is wide disparity between member states in terms of availability and cost of ICT infrastructure. Some states like Liberia and Sierra Leone have made advances in sector liberalization and inward investment for mobile telephony, but these fragile states were engaged in conflict and unable to participate when the South Atlantic 3/West Africa Submarine (SAT-3/WASC/SAFE) communication cables were installed to connect other parts of West Africa. In addition, the landlocked countries face challenges because of their geographic position which obliges them to physically transport their communications traffic through the territory of adjacent coast countries to access submarine cable landing points. It is in their interest to expand connectivity to several coastal landing points so as to increase their bargaining power and bring down the cost of bandwidth by encouraging competitive behavior among countries or operators with cable access. It is in this context that Liberia is making strides to establish its own international, regional and domestic connectivity during the AFT time-frame as portrayed in Box 16.

A few ECOWAS countries (Ghana, Nigeria and Senegal) are at initial stages of positioning themselves to become preferred destinations for IT enabled services but additional opportunity remains. The market for IT and IT-enabled services has been estimated at $475 billion of which about only about 15% has materialized to date.[101] If ECOWAS were to capture even a fraction of this market, the job creation for youth and corresponding socio-economic impact would be huge. However, to realize that objective, the region will require dependable and affordable transmission infrastructure, including international connectivity and better integration domestic and regional networks.

[100] African Development Bank, "ECOWAS Ports and Trade Facilitation, Background Working Paper for the Development of RISP in ECOWAS Region," Nov. 2010
[101] WB WARCIP appraisal

Box 16 ICT Broadband Connectivity through ACE Cable

Liberia has joined the Africa Connect Europe undersea cable consortium in order to establish broadband connectivity to join the regional and international ICT communications market. A landing station and IXP exchange will be erected in Monrovia to enable traffic to be routed without transit through higher cost intermediaries. This first stage of infrastructure investment will bring down the cost of ICT services given an Open Access policy environment. Enhanced integration and secure communication with ECOWAS governments can now be achieved by joining ECOWAP, the region's Virtual Private Network.

Picture: ACE Cable Comes Ashore
Published by Financial Times

One regional initiative that could certainly provide leverage towards this end is the twinning of WAPP transmission line infrastructure with ICT cabling to reduce the costs and ease the planning for domestic and cross-border physical links. While PPP approaches will be employed to encourage private sector participation, WAPP has teamed up with the West Africa Telecommunications Regulators Authority (WATRA) to collectively manage the intersection between infrastructure and policy regulation to improve the environment for regional communications market development. Another aspect which is an emphasis of the PIDA program is to encourage the multiplication of internet node exchanges (IXP) to maximize capture of communications traffic internally on the continent at lower cost rather than relying on traditional North-South exchange transit arrangements which affect Africa's competitiveness. Once established, these exchanges will also facilitate the establishment of more affordable cross-border virtual private networks (VPN) for ECOWAS member states. The value of this technology to member states cannot be over-estimated in terms of potential for efficiency upgrades to public administration achievable through timely and confidential information exchange. This potential of VPN for the region has been cast by the Commission into a vision for "ECOWAP" a wide area private network among member states to carry out their core functions of governance that require cross-border collaboration. This is particularly attractive for fragile states like Liberia in their quest to deal with all forms of criminality, including drug trade, gun-running and human trafficking. All of the coastal states could likewise benefit from exchanging information on the presence of illegal fishing vessels operating within their coastal waters because, until now, their flight from one territory to another has enabled large violators to escape capture.

These initiatives by PIDA and ECOWAS on ICT fronts set the regional context in which Liberia may wish to cast its longer term vision for investment in ICT-related initiatives.

3.4 Time-Sequenced Infrastructure Planning for Liberia

The sections above served to cast the fiscal context in which Liberia must meet its strong appetite for infrastructure as well as the regional context of growth and development taking place. This leads to the elaboration of a time-sequenced infrastructure planning strategy for Liberia. As indicated earlier, the short term plan naturally contains greater precision in terms of specific projects, their scope and estimated cost whereas the medium and long term time frames are cast in terms of the strategic priorities and trade-offs that authorities might want to consider. This approach bears in mind the value of medium and long term reinforcement of the fundamental transformation that Liberia is embarking upon under AFT. As such, the discussion proceeds through short (FY 13 to 17), medium (FY 18 – 30) and long term (2030 to 2040) time-frames as justified in chapter 2. The analysis takes each infrastructure sector in turn with greater attention devoted to sub-sector aspects in the short term. It addresses both physical and soft accompanying measures affecting the efficacy of investments in synchrony.

Before proceeding, it is important to return to the notion introduced in chapter one and revisited in chapter two whereby Liberia will pursue infrastructure planning according to a spatial development strategy that progressively integrates the country through domestic corridor development. Domestic unification supported by integrative infrastructure is essential to Liberia's stability in the near term and the strategic corridor development strategy is central to this approach. The progression for ever greater domestic integration, followed by regional integration, is nonetheless evident in the three figures presented below. Map 1A reproduced in Figure 34 portrays the principal corridors which are driving Liberia's economic output at present. These include Monrovia-Ganta, Monrovia-Buchanan, Monrovia-Tubmanburg, Monrovia-Bo Waterside and Monrovia-Bong. What is evident is that all five of these relatively better endowed

Figure 34 Existing Economic Corridors within Liberia as Assessed in 2009

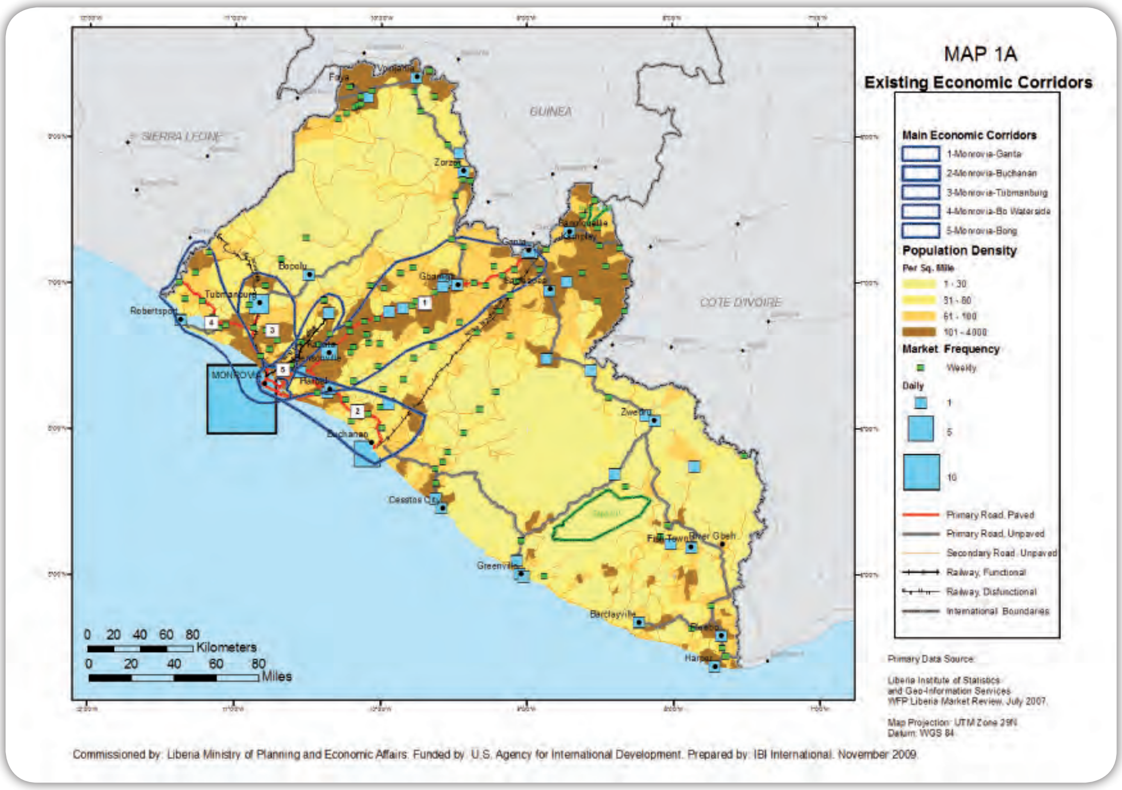
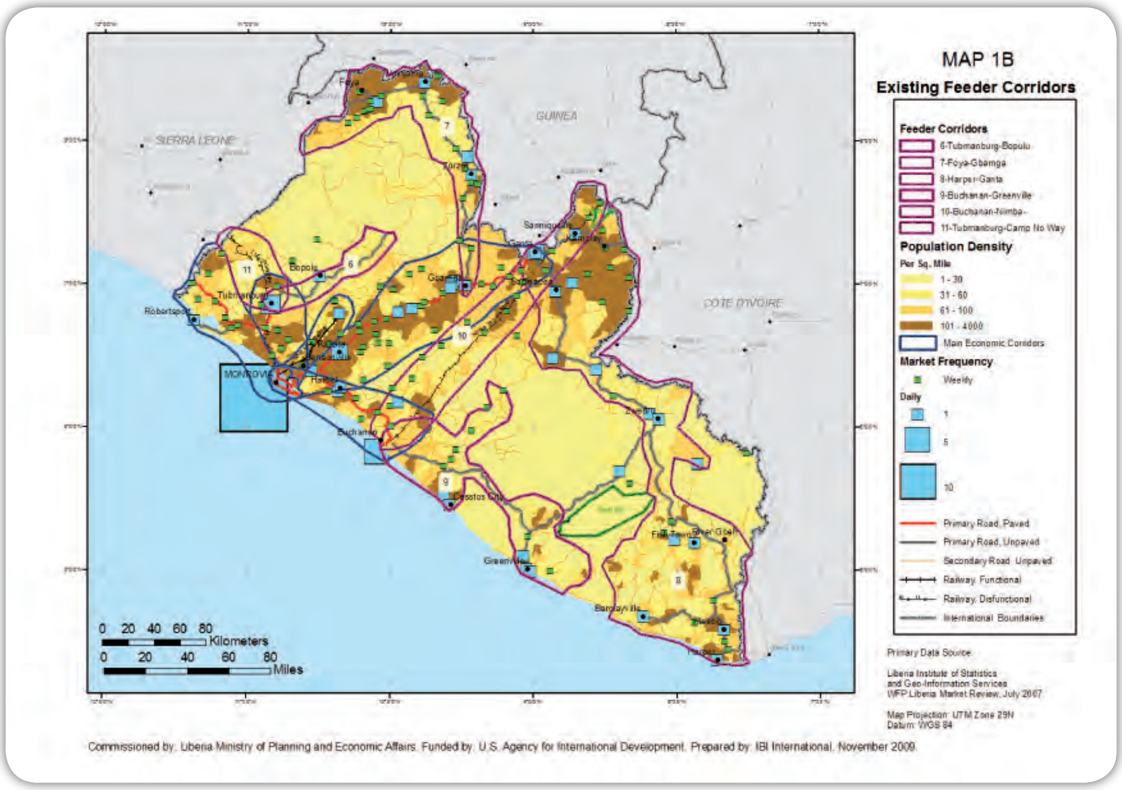


Figure 35 Feeder Corridors Requiring Improvements in Quality of Connecting Transport Infrastructure



corridors are spokes leading into and out of Monrovia and they are predominantly centered on the coast.[102] This concentration clearly reinforces the central triangle and underlines the need for a more inclusive infrastructure plan to mirror the objectives of the inclusive growth transformation strategy under AFT.

[102] Maps produced by LISGIS, commissioned by MOPEA and funded by USAID through IBI International study, "Developing Liberia's Economic Corridors, Volumes 1 and 2", August 2011

What this map also reveals is that the existing corridors fail to adequately integrate three other densely populated zones within Liberia. Beginning in the Northwest, there is a dense population center in Lofa County adjacent to Sierra Leone and Guinea that is poorly connected to the nation's central corridor. There is another dense population cluster in Nimba County adjacent to Guinea and Côte D'Ivoire, especially beyond the road connecting Monrovia to Ganta. A third neglected zone is in the Southeastern Maryland County adjacent to Côte D'Ivoire. There is also a sparsely populated coastal corridor between Buchanan and Barclayville which has the benefit of a functional road to Greenville but very poor connectivity heading Eastwards thereafter. Consequently, Map 1B reproduced in Figure 35 depicts six supplemental "feeder corridors" that GOLR has the ambition to upgrade in due course in order to better integrate the economy and its people.

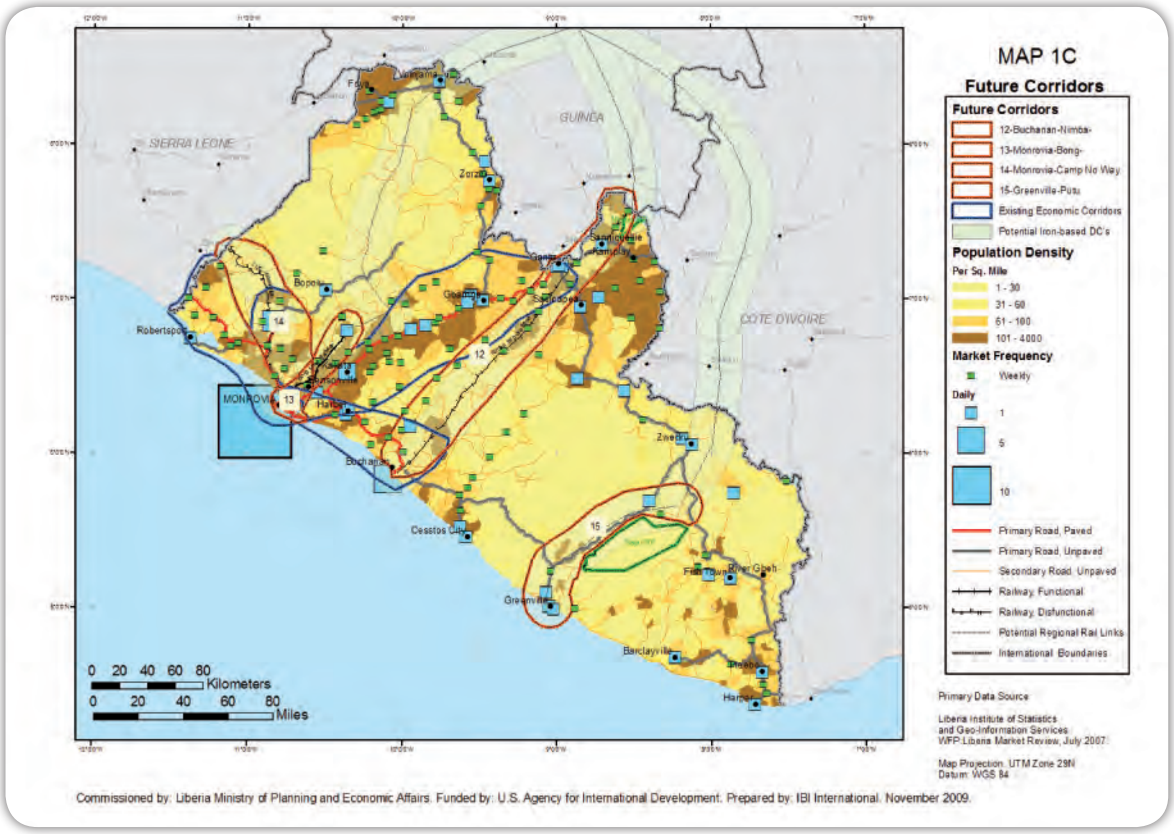
The six "feeder" corridors on this map connect the following towns and a geographic designation is provided for each:

- Corridor 6 Tubmanburg – Bopolu: Western vertical corridor
- Corridor 7 Foya-Gbarnga: Northwestern corridor
- Corridor 8 Harper-Ganta: Southeast to North Central corridor
- Corridor 9 Buchanan-Greenville: Eastern Coastal corridor
- Corridor 10 Buchanan-Nimba: Central Triangle corridor
- Corridor 11 Tubmanburg-Camp No Way: Western inland corridor.

Finally, Map 1C in Figure 36 depicts potential future corridors which are envisioned here to connect Liberia to the broader ECOWAS region through strategic links through neighboring MRU states. Three cross-border connections are depicted as potential regional rail links, not so much to represent actual rail projects under planning or to predict the placement thereof, but to convey the powerful vision of a middle income Liberia which has recovered from fragility and is ready to engage constructively in trade with the ECOWAS region. This kind of visualization done by MOPEA and development partners is helpful to long term planning for infrastructure in that it posits possibilities which merit further exploration. A plausible alternate vision is one of a developed network of Inter-State roads which link all MRU countries to the landlocked northern countries within ECOWAS.

The report resumes a discussion of these various future corridors with reference to their geographic designations within the short, medium and long-term planning sections which follow.

Figure 36 Future Domestic Corridors and their Potential Connections to the Wider Region



3.4.1 Why prioritize and how?

The discussion of affordability is critical to assess the feasibility of Liberia's Agenda for Transformation. Particularly with respect to infrastructure, AFT plans are often aiming high in order to maximize progress at closing fundamental gaps in the shortest possible amount of time. Yet, it is probable that some trade-offs will be needed during implementation and decisions required about what priorities should be preserved. In setting out proposals by time frame, the methodology employed here gives consideration to the following elements:

- The vital importance of prioritizing domestic integration in the short term to reduce Liberia's exposure to internal drivers of conflict which threaten stability in the first instance;
- The best respective roles for public sector, development partner and private sector financing;
- The best strategic match between synchronous advancements on the Human Development and Governance fronts with concurrent investment in physical infrastructure;
- The fiscal constraints that suggest restoration priorities may need to carry into the medium term and,
- The potential to foster greater regional integration in the long term on the basis that petty border skirmishes will diminish when poverty has decreased and public awareness recognizes that prosperity that can be better gained from trade than conflict.

The factors above combined with the analysis of growth strategies in chapter two yield insights with respect to the types of infrastructure projects that will reinforce other aspects of poverty reduction, notably the development of Liberia's people and institutions, to release the best possible conditions for faster, more inclusive economic growth. Drawing from that review, Table 3.6 brings forward an independent assessment of the key priorities and the appropriate time-frames for their realization. This table also evaluates whether the AFT plan has included and made provision for the desired physical installations or not. It asserts a judgment about those areas which have relatively better potential for public private partnerships (PPPs) or outright private sector financing as well as those which are a fitting priority for public sector investment.

Table 3.6 (a) Infrastructure Required for Successful Execution of Key Growth Strategies

	Infrastructure Requirements to Relieve Constraints to Growth	Included in AfT? Y/N	Potential for PPP or Private *?Financing	Appropriate priority for Public **Funding	Time Frame Most Appropriate
Industrialization via Zones	ZONES: Physically delineated industrial zone(s) equipped with dedicated zone-based supply of power, water and telecommunications. Each of these utility services could be purpose built or generated through zone-specific infrastructure instead of relying upon grid-based service delivery.	Yes	Yes-	Could leave to PPP if developer selected competitively	Medium Term
	ROADS: Roads which specifically connect zones to ports or airports	Not clear	Yes-	Ditto	Ditto
	PORTS: Export-processing zones will need access to good quality port facilities	Yes	Yes-	Ditto	Ditto
	GRID-BASED POWER: Zone-specific power could be adequate for manufacturing but grid-based power would likely be essential to supply a mineral processing zone in the long term future	No	Yes-	Not yet predictable	Long term
Smallholder Commercialization	ROADS: Restoration of the total "agriculture road network" to improve road density, including feeder roads, secondary and primary arteries connecting county capitals and also leading to border crossings to bring farmers into greater proximity of local, national and regional markets.	Yes	Yes-	High	ST & MT
	OFF-GRID RENEWABLE ENERGY: Power supply will help with the processing and transformation of agricultural outputs produced by smallholders, particularly cash crops. The level of demand would be better served through renewable rural energy sources than grid-based sources	Yes	Study to be done on this topic	High	Short Term
	SMALL PORTS: Development of Greenville (Sinoe) and Harper ports via investment in ramps and landing facilities will foster the development of Coastal Shipping by the private sector and result in lower cost transport solutions for serving domestic markets in the Southeast with marketable surplus of agricultural production.	Not clear	No	High	Short Term
	DOMESTIC TRADE INFRASTRUCTURE: Trade supportive infrastructure including product drying and transformation facilities, laboratories and grading facilities to upgrade quality standards, covered markets and storage depots plus secure cargo truck transit parks at strategic inland	Yes, partial Hard + Soft measures	No	High	Short Term
	REGIONAL TRADE INFRASTRUCTURE: One-stop border posts at strategic locations with Sierra Leone, Guinea and Côte D'Ivoire and associated ICT productivity tools	No	Unlikely	High	Medium Term
	IRRIGATION FACILITIES: Irrigation infrastructure to enable increasing productivity in rice production	Soft stage/ study	Yes-	TBD	Medium Term
	ICT: Broadband internet including international and regional connectivity plus domestic backbone to penetrate rural milieu. ICT will improve availability and stimulus of market information and reduce isolation	Yes, Modest	YES	Medium	Short Term

Table 3.6 (b) Infrastructure Required for Successful Execution of Key Growth Strategies

	Infrastructure Requirements to Relieve Constraints to Growth	Included in AfT? Y/N	Potential for PPP or Private Financing?*	Appropriate priority for Public Funding**	Time Frame Most Appropriate
Natural Resource Concessions via FDI	**POWER:** Mining concessions present substantial and increasing demand for power to support operations.	Yes	Yes-	High	ST, MT & LT
	RAIL: The larger mining concessions have a need for rail to economically transport bulk minerals to ports.	Left to private sector	Yes-	Regulatory role important	ST & MT
	PORTS: All concessions are export oriented and have a need for port infrastructure catering to their particular type of bulk product-- whether minerals, logs or agricultural commodities such as rubber or palm oil	Limited	Yes-	High	ST & MT
	ROADS: Primary and secondary arteries to connect Concessions to Ports. Rural roads within concessions to cater to mining and/or plantation agriculture development needs	Yes	YES	High	Short Term
	ICT: Concession operations require reliable telecommunications and internet and these needs could be met through privately financed satellite if not supplied through grid-based infrastructure; yet, concessions would offer viable demand for private expansion of domestic internet backbone.	No	YES	Medium	Short Term
MSME Development via Corridors	**OFF-GRID RENEWABLE ENERGY:** Power supply is essential for fostering domestic MSME development, though the level of demand could be satisfied for the interim by renewable rural energy sources	Yes, Modest	Study to be done on this topic	High	Short Term
	COMMON FACILITY INFRASTRUCTURE PLATFORMS: This would be a modest type of zone in which MSMEs could co-locate, lease space and have shelter, security and storage facilities.	No	Not in Short Term	High	Short Term
	ROADS: Restoration of primary and secondary roads along key corridors, coinciding with the "current" or "potential concession networks"	Yes	Yes-	High	ST & MT
	SMALL PORTS: Development of Greenville (Sinoe) and Harper ports via investment in ramps and landing facilities will foster the development of Coastal Shipping by the private sector and result in lower cost transport solutions for SMEs to serve demand in the Southeast	Not clear	No	High	Short Term
	ICT: Broadband internet will improve market information for the MSME sector and will improve connections to buyers and input suppliers	Yes, Modest	YES	Medium	Short Term
Notes	*' YES' indicates PPP approach could be suitable in ST. 'Yes-' indicates that other conditions must improve before this would be truly feasible, so is Medium or Long Term potential **Includes funding by Development Partners				

The right-hand column proposes a conclusion about the most appropriate time frames for certain investments to improve the successful execution of Liberia's key growth strategies. This table makes clear that certain elements of recommended infrastructure investment are not included in the AFT-Plan programmed for the near term. Where this is the case, the issue is further highlighted in the narrative which follows. In other cases, our recommendation is that certain programmed investments might better be deferred to a later time frame. These implications are also covered in the sections which follow.

3.4.2 Recommended Priorities for the Short Term

Table 3.7 presents a fairly detailed list of the physical infrastructure projects programmed for the AFT time-frame, including the AFT cost estimates, information about financing pledged by GOLR under the MTEF and the approximate net situation with respect to financing gaps at the present time. Whereas Table 3.3 identified a financing gap on the order of $700 million, that pertains to all pillars of the AFT plan. With respect to the narrower physical infrastructure pillar (including water which is under the Human Resource Development pillar), Table 3.7 estimates the financing gap to be approximately $400 million assuming that Liberia can concurrently meet all of its own core, contingent and debt-financed pledges.

Table 3.7 makes clear that, in comparison to the longer wish list in Table 3.2, GOLR has already weighed its need for infrastructure against several tradeoffs and has cast its investment plans with several aspects of realism in mind. One example is that the authorities have explicitly built in the important role of FDI investors in financing large scale infrastructure needed in the country. Some of the projects will serve a dual purpose of meeting the needs of mining companies as well as those of the public at large. Such is the case for rehabilitation of key arteries in the primary roads network (Ganta-Sanniquellie and Zwedru-Greenville) as well as feeder roads within concession zones. In other cases, such as rehabilitation or addition of critical port structures in Monrovia and Buchanan, the investments will likely serve the private needs of the financiers but will be limited to wharves or stacking areas without monopolizing the entire port, while the private sector will be expected to improve access routes and other port investments unique to their own requirements. Also, even though rail investments are not featured within the AFT plan, authorities are relying upon concessionaires to rehabilitate some of these as well. Table 3.7 is very incomplete with respect to the totality of planned private investment but the magnitude thereof is considerable and was estimated to be valued at about $5 billion in commitments to date.[103] Another example of GOLR intentions to be strategic in planning scarce public and ODA resource allocations is with respect to the smaller ports. GOLR's investment pledge under the PSIP seeks to relieve constraints in the ports of Greenville and Harper for those key exporters whose scale of operation does not enable them to privately finance port and road infrastructure on a similar scale to mining companies. This is important to cater to the needs of the private oil palm and rubber plantations as well as logging and forestry operations, all of which will contribute to the expansion of GDP and fiscal revenues for GOLR.

Beyond that, however, in catering to these private sector needs with publicly financed infrastructure, Liberia will simultaneously contribute to a change in the incentive structure and enabling environment for smallholders and nascent enterprises because development of the smaller ports will support the rise of private coastal shipping as a lower cost form of transport. This will effectively open up the potential for domestic goods to be supplied to the isolated Southeast on a basis that is more affordable than road transport at the present time. This is an example of how strategic public investment in the transport sector can support the more inclusive growth strategies highlighted in Chapter 2. The sections which follow make apparent the key objectives by sector for the near term as well as issues which need more attention.

[103] World Bank, "Infrastructure Policy Notes: Leveraging Investment by Natural Resource Concessionaires," background paper prepared for High-Level National Economic Forum, June 2011, page 2

TABLE 3.7 (a) SUMMARY COST ESTIMATE AND FINANCING ASPECTS UNDER SHORT TERM AFT TIME FRAME (U.S.$ MILLION) FY 12/13 through FY 16/17

Infrastructure Category	Includes	Source of Cost Estimate	Comment	Current Wish List Total	AfT Costs Dec/2012 Estimate[1]	GOLR financing pledged as P1	GOLR Sector financing per PSIP	Dev't Partner Financing Identified	Comments on Affordability during ST AfT Time Frame
Road Transport	Overall Road & Bridges Transport Investment	Detail not available but will go to restoration of roads network		$1 269,34	$1 269,34				Apparent financing gap
	Restore primary Roads network, including Rehab. & Expand (non-concession) Feeder Roads	Lasip Feeder Roads Estimate	SIDA pledge of $21.1 & EU of $.67 and assume GOLR cash for work tradit. Road maintenance applied here	$170,65		$7,50			Likely secured
	On-going roadworks, pavements & bridges	PSIP. Cost estimates vary widely between laterite vs. paved asphalt construction. Transport Master Plan recommends Emergency rehabilitation of laterite roads & AFT seeks to pave primary roads network	Locations not specified			$28,50			
	Construction of new major roads and bridges		Table 3.8 identifies Long Wish List			$135,00			Financing and affordability of Primary Road Network restoration is a work in process. May have financing gap.
	Maintenance of roads & bridges nationwide		Maintenance = GOLR Responsibility			$25,70			
			DfID & EU pledges into Tust Fund = $57.6 + IDA roads projects $151.3 + AfDB projects $65.27 . Not all sums strictly attributable to roads since some is for other rural infrastructure.					Approx $500m pledged	
	Rehab. 2 bridges in Montserrado & 1 in Gbarpolu						$1,25		
	Connect to borders with all-weather roads, incl. TAH								
	Build Buchanan-Tappita missing link								
	Build Buchanan-Harper missing link								
	Incl. in program is Paving of Fishtown - Harper & beyond								
	Restore Key Cross-Border Bridge(s) -- Loguatu to I.Coast	Cost estimate taken from WB infra. paper	Critical artery; now served by ferry	$2,00					
	Pave Ganta Sanniquelle 23 km segment	MoPW presentation	Mittal Steel to finance per MDA	$28,71					Secured under MDA
	Pave Zwedru - Greenville 119 mile segment	MoPW presentation	Putu Ore to finance per MDA	$160,60					Secured under MDA
	Institutional Strengthening of Transport Sector	AFT Cost estimate is for Transport Sector Results Matrix; additive to roads & bridges		$18,34	$18,34				Likely secured
	Capacity Building in Transport Sector	MTEF	Pledge from Germany						
	National Transit Authority, 30 buses, parking & facilities						$3,00		
	Feasibility studies & road bidding document prep'n						$2,50		
	Purchase of (7) weigh bridges						$1,10		
	Road Safety & other transport governance tasks								
	Coastal Corridor study								
Airports	Overall Airport Investment			$305,00					Apparent financing gap
	Rehabilitation of Roberts International Airport Refurbish Terminal and Apron Zone Cargo Terminal Technical Zone Commercial Zone Parking, Lighting & Consultancy Fees	Transport Master Plan Envisaged to be completed in three phases: $90 m Phase 1 to 2015; $85 m Phase 2 to 2020 and $130m phase 3 to 2025	Incl. in Transport Master Plan Some donor financing has been mobilized but nothing on the scale of what is recommended in the Transport Master Plan		Nothing evident other than GOLR commitment	$10,00			
	Rehabilitation of a Domestic Airport	Transport Master Plan, 2010 prices	Est'd $20.5 mn in 3 phases	$20,50					
Seaports	Overall Seaport Investment		GOLR pledge of $37.4 in MTEF	$37,40		$37,40			Apparent financing gap
	Rehabilitation of Port of Monrovia Extend marginal wharf, pave container stack facility Fuel unloading facility Rehabilitation & Expansion Port of Buchanan Dredging/Rehabilitation Port of Greenville (Sinoe) Rehabilitation Port of Harper		China Union to invest for its needs Estimate is $15 m Estimate is $7m ArcelorMittal to invest for its needs Other port upgrades to serve rubber, tree palm & other NRC players to be provided by GOLR		Nothing evident other than GOLR commitment & private FDI investors				
	Maritime: Int'l Ship & Port Security ISPS Compliance			$4,90		$4,90			

[1] The AFT is a five year program, but the Public Sector Investment Plan is only prepared for a 3 year period so GOLR spending commitments against 2 final years of AFT are not yet known.
[2] P1 Projects are considered "National Priority Investments" and are more likely to remain firm commitments by GOLR than "Sector" projects. Pledge amounts cover 3 years, but only 2012/13 is so far approved.
[3] Data on sector projects is sourced from the draft PSIP and amounts could change.

TABLE 3.7 (b) summary cost estimate and financing aspects under short term aft time frame (u.S.$ Million) fy 12/13 through fy 16/17

Infrastructure Category	Includes	Source of Cost Estimate	Comment	AfT Costs Dec/2012 Estimate[1]	GOLR financing pledged as P1[2]	GOLR Sector financing per PSIP[3]	Dev't Partner Financing Identified	Comments on Affordability during ST AfT Time Frame
Energy Sector	**Overall Energy Sector Investment**			**$502,48**				***Mostly secured but for T&D needs outside Monrovia***
Governance	Conduct energy needs assessment nationwide				$0,27			
Domestic	Mt. Coffee Generation Rehab, T&D to Bushrod Island	Tractebel/WAPP est. $383	Norway $70m + EU 40m€		$190,00		$125,00	Mostly secured
	Thermal Diesel HFO Power Station		Japan		$20,70		$30,00	Net gap may remain
	Transmission & Distribution in Monrovia	Donor aide-memoires	Norway & USAID & EU		$91,20		$42,00	Net gap may remain
	Electricity system enhancement project (LESEP)	Donor aide-memoires	$43.4m from IDA				$43,40	Financing Secured
	Buchanan Private Sector Renewable Energy Generation	WB Paper on Infras. For Diversification	$170 from OPIC, McBain					Financing Secured
	Via River Diversion Project to Supplement Mt. Coffee				GOLR financing may include some partner financing and thus may reflect double counting, leaving a net higher financing gap			Financing required
	Future: Mano River Hydro Electric Power Generation	Updated WAPP Master Plan	180 MW on SL/L Border					
	Future: St. Paul River 1B + 2: Hydro generation	Updated WAPP Master Plan	198 MW on St. Paul River					
	Future: Tiboto Cote D'Ivoire 2/ transmission to Buchanan	Updated WAPP Master Plan	225 MW on L/CI Border					
Regional	WAPP CLSG-- Liberia Transmission Segment (consortium) & Cross Border electrification (EU)	Donor aide-memoires	$150 mn IDA & $19.25 AfDB, EBRD, KfW €31m & EU €9.6m				$221,93	Financing Secured
Rural Energy	RREA rural energy strategy & master plan & installations	Donor aide-memoires	Norway, USAID, EU,IDA, AfDB				$11,60	Some secured
Sector Mgm't & Cap. Building	Energy master plan study		$1.1 from AfDB					Some secured
	Training & Capacity Building	PSIP for LEC& pledges in minutes	Norway, IDA, GOLR			$0,50		Some secured
ICT	**Overall ICT Sector Investment**			**$14,58**				
	International Connectivity	Precedes AfT	IDA Financing under WARCIP				$14,58	***Basics secured with interior backbone to be privately financed***
	Monrovia Fiber Optic Backbone & Postal Installations	PSIP	GOLR Pledge $3 m in MTEF		$3,00			
Water	Overall Water & Sanitation Sector Investment							
	Water & Sanitation infrastructure & sector reform	Aft Cost Esimate for WASH Results Matrix	$32m from AfDB & $6.2 from IDA	**$101,95**				***Apparent financing gap***
	Rural water supply & hygiene services					$1,50		
	Solid waste collection in Monrovia communities					$1,95		
	Expansion of arable land under Irrigation from .2 to 5%	Source: LASIP Program estimate	Left for private investment					
Other Infra	Public Buildings and Housing	PSIP	GOLR to zone Monrovia bldgs	**$42,50**		$4,40		***Apparent financing gap***
Industry SEZ	Special Economic Zone for Industry	PSIP				$5,40		
	GRAND TOTALS		Infrastructure results matrices for Housing & Public Buildings omitted from tally of AfT Cost Estimate	$1 949	$554,17	$21,60	$988,51	***Apparent net financing gap of +/- $400m***

[1] The AFT is a five year program, but the Public Sector Investment Plan is only prepared for a 3 year period so GOLR spending commitments against 2 final years of AFT are not yet known.
[2] P1 Projects are considered "National Priority Investments" and are more likely to remain firm commitments by GOLR than "Sector" projects. Pledge amounts cover 3 years, but only 2012/13 is so far approved.
[3] Data on sector projects is sourced from the draft PSIP and amounts could change.

Energy

Rehabilitation of the pre-conflict power grid (including generation, transmission and distribution) is considered the highest priority for investment as a matter of national urgency because of the importance of reliable energy as a contributor to enterprise activity and economic growth. Planned investments in both hard and soft infrastructure are depicted in Box 17 and while these will marginally expand the territory served by the distribution network, the emphasis for the short term needs to be on grid restoration rather than expansion. Although financing is yet to be raised for some of these projects, they are all important and should gain priority for launch during the AFT time frame. Though investments in off-grid installations such as solar and mini-hydro will be much less costly than the major restoration investments in the formal grid, they are strategically important to support the development of smallholder and SME productivity as was highlighted in Tables 3.6(a) and (b). It is important that these smaller investments do ***not*** become thecasualty of financing constraints since rural energy supply is vital to the transformational objectives of AFT, which must be launched with immediate priority.

Box 17 reveals that the main short term focus is to restore the destroyed Mt. Coffee hydro-electric plant to functional generation capability year-round with reliance on hydro resources during the rainy season and back-up with HFO capacity during the dry season. Two key aspects bear special mention vis-à-vis the limits of what is realizable in the short term: the pricing of electricity and the expansion of services outside of Monrovia to support inclusion and stability.

As noted in Chapter 1, Liberia has perhaps the most expensive electricity on the continent and this is due to three factors: high unit costs of generation, technical losses and non-technical losses. Technical and non-technical losses can be tackled in the short term and could make a modest dent in Liberian power costs. Generation costs have the potential to be brought down much more significantly but depend upon a change in technology (away from HFO) plus a change in generation scale whereby the long run marginal production costs are reduced. This more dramatic cost reduction can only occur in the medium and long term when the West Africa energy market becomes effective. Guinea and Sierra Leone are due to build out their inherently more cost-effective hydro-generation potential and commence supplying surplus power into the CLSG grid. This must be complemented with establishment of the CLSG transmission line and explains the strategic importance of Liberia's connection to it during the AFT period. The benefits of launching an inter-dependent approach to power sector development within the MRU in the short term will enable Liberia to become an energy importer with improved competitiveness in the medium term. Alternatively, Liberia does have potential for additional hydro-power generation on the St. Paul and Mano Rivers, but the cost/benefit of these facilities is lower than the potential contributions from Guinea and Sierra Leone. Nonetheless, there is consideration being given by GOLR and development partners to the installation of a through reservoir/diversion structure from the St. Paul River during the AFT time frame to increase the year-round capacity of the Mt. Coffee hydro plant and bring down costs by relieving reliance upon HFO generation. The back-up dual HFO plants must be implemented in order to supply energy during dry season and to cope with spinning load during wet season. Other than this, it is clear that further expansion of electricity generation must wait until the medium or long term time frames and the advantage of waiting is that more strategic choices can be made between self-generation and importation thanks to the establishment of CLSG connection to WAPP which should be commissioned by 2017.

Box 17 Hard and Soft Power Infrastructure Investment Planned during Agenda for Transformation

Power Sector Physical Infrastructure	Power Sector Soft Accompanying Measures
Sector Goal: Increase access to modern energy services & affordable power by 2017	
• Install HFO-fired generating capacity • Construct WAPP CLSG transmission line • Connect 18 communities to CLSG line • Reconstruct transmission lines—Monrovia-RIA Airport; Monrovia –Kakata-Gbarnga and Monrovia-Tubmanburg • Construct HFO delivery facilities at Port • Reconstruct 64MW Mt. Coffee hydro • Install stand-alone solar PV power in rural communities • Construct & rehab mini-hydro in rural communities • Rehabilitate and extend the distribution network in Monrovia	• Assess renewable energy sources including coastal wind energy, mini-micro biomass plants and mini/micro/pico hydro-plants in river basins • Design framework for private sector participation in energy supply, rural and other • Revise energy sector policy and develop sub-sector reforms and strengthening plans to implement more inclusive National Energy Policy • Promote investment in lower-cost power generation options • Establish integrated Energy Research and Training Center

Meanwhile, Liberia can and must devote short term efforts to reducing technical and non-technical losses (which have reached nearly 30% in 2013) as means of reducing power costs in the interim. Approximately one third of the losses are technical losses, which are being tackled through the hiring of a management contractor to implement a turnaround and address deferred maintenance at LEC. However, non-technical losses represent about two-thirds of total losses, and the bulk of this is due to electricity theft. Even though the company has invested in improved metering equipment, there is a constant problem of illegal branching before the meter junctions. This leads to a loss of revenue, increased meter burn out, and higher staff costs for constant monitoring and repair. The situation is exacerbated by the fact that GOLR does not currently consider electricity theft a criminal act. Reluctance to make this a crime suggests a problem of entrenched corruption which is interfering with financial recovery of LEC. This should be addressed in order for the power sector to truly recover. At the same time, this emphasizes that cooperation between the company and the state's law enforcement officials is essential in order for marginal improvements to be made in the power sector in the short term.

Expansion of the legitimate customer base for grid-based electricity is constrained by high electricity costs. While all but a few Government, NGO, and foreign embassy institutions have already connected to LEC, larger industrial loads (e.g., Cemenco, Club Brewery, and the Coca Cola bottling plant, with peak loads from 1MW to 7 MW) currently self-generate at generation costs similar to LEC, but without administrative costs and losses. Thus, these are unlikely to switch to LEC until a reliable supply can be provided at tariffs below US$0.30 per kWH, currently expected to occur when Mt. Coffee comes online at the end of 2015. On the other hand, small commercial or residential customers who self-generate or have access to a third party network are, on average, paying higher tariffs and demonstrate a high interest in connecting to LEC. However, the drive to connect is also often driven by the business opportunity resell the electricity, either legally or illegally. For legal connections, though, the high cost is being met with limited ability to pay by low income customers, ultimately constraining demand. High cost further prohibits LEC from charging for and building up capital reserves, and, combined with constrained domestic demand, this has the knock-on effect of inhibiting financially viable expansion of the national distribution network in the longer term. While it is difficult to forecast power demand once tariffs drop significantly, it will be manifested most significantly by mining operations in the near term and it is this primary customer base that will provide demand and serve the vital commercial function of making grid expansion a viable investment.

The other key issue is a stability or inclusion matter. Even before the conflict, Liberia's power grid had limited presence outside of the capital Monrovia, except for where it extended to service mines and rubber plantations. It is critically important that the interior population begin to see evidence of government sponsored services penetrating their milieu. For this reason the pilot project of connecting 18 communities to the CLSG transmission line is highly strategic. Yet, expansion of the formal grid to serve the broader rural milieu or cover the entire national territory is not a viable proposition at the present time for viability and affordability reasons on the public side and limited customer ability to pay on the client side. This makes recourse to off-grid renewable energy an important complement to the sector management plan. Accordingly, measures are being taken on both physical and soft infrastructure dimensions to install renewable solar, biomass, and mini hydro green energy points along with other options such as the harnessing of coastal wind to be explored through a new institution, the Energy Research and Training Center. It is clear that renewable energy sources are highly relevant to Liberia not just for their "green" benefits but also for their economic properties and the fact that delivery of rural energy solutions on a faster timeframe will have an important stabilizing impact on the nation.

Transport

Within the transport sector, rehabilitation of roads has been a priority ever since the end of hostilities and will remain the case long into the future. Nonetheless, re-establishment of the primary roads network is the second critical priority for infrastructure investment under the AFT plan and the chosen approach is to be ambitious. In fact, there has been substantial debate both within Liberia and among development partners on the best approach to restoring the primary roads network and views still diverge. The Transport Master Plan was prepared on a premise of austerity budgeting with an approach that would afford only emergency restoration and maintenance of the majority laterite road surfaces and few paved miles to their current technology standard. This has been dubbed the "constrained budget approach" to road transport investment, the cost of which would be about 5% of that aimed for within the finalized AFT plan. The AFT plan opts for the stretch target of upgrading laterite roads to paved asphalt standards and this has been dubbed the "unconstrained budget approach." In reality, it is likely that both strategies will need to be deployed during the AFT time-frame given possible financing gaps. Tables 3.6 (a) and (b) make it apparent that different growth strategies have different needs with respect to transport solutions and road priorities. In some respects it is the smallholder sector that has the most demanding appetite for road infrastructure insofar as improved density of feeder, secondary and primary roads will bring farmers closer to markets and will deliver the required incentive of encouraging surplus production. This is referred to as the "agriculture road network" and it represents the most extensive wish list for public road investment. Industrialization, NRC and MSME growth strategies have more limited requirements with less need of a feeder road network, lower dependence upon cross-border arteries and more selective focus upon links between production centers and ports or airports. Four alternatives can be brought into play in order to trade off the demands between affordability and essential support for key growth strategies: these include corridor prioritization, private sector financing, recourse to different paving technology and alternate transport solutions. These factors are further examined below.

Beginning with corridor prioritization, this analysis refers to Figures 34 and 35 presented earlier. Much of the roads sector investment undertaken during PRS 1 and due to continue during AFT has aimed at restoring to functional service the five existing economic corridors denoted in Figure 34. While these priorities are not in dispute, the bigger question is which of the six feeder corridors identified in Figure 35 merit greatest priority. The high population densities present along "feeder" corridors 10, 7 and 8 naturally qualifies them as priority candidates. Of these, we consider that corridor 10 (Buchanan-Nimba) is another clear priority and it can become an extension of the Central triangle that links Monrovia to Buchanan and Monrovia to Ganta. Fortunately, the presence of Mittal Steel iron concession within Nimba county means that the Ganta-Sanniquellie road link is due to be built under the terms of the MDA with private resources, thus connecting this zone to the central triangular corridor. In addition, restoration of the Nimba railroad, (currently the subject of an MDA negotiation), can serve to densify the core central triangular corridor bisecting Liberia. This corridor development scenario provides an example of how private sector financing combined with an alternate transport solution can serve Liberia's corridor development vision, especially if the railroad is built to accommodate passenger and non-mineral freight traffic in the future. In such an instance, the main public sector investment required will be to develop public capacity for rail regulation as well as for road sector planning and enforcement of construction standards.

Similar logic suggests that further development of corridors 6 and 11 are needed by private sector concessionaires seeking connectivity between their production zones and ports of export. Foreign direct investors should therefore be encouraged to mobilize the essential financing for key arteries in these zones while the public sector prioritizes other zones. This leaves corridors 7 (Foya-Gbarnga), 8 (Harper-Ganta) and 9 (Buchanan-Greenville) as those that are least likely to be developed through private investment and most in need of public and ODA financing if they are to be realized. Of these, the Buchanan-Greenville "Eastern Coastal" corridor has an advantage over the other two inland corridors because of its alternative of resorting to coastal shipping as a transport solution. The Transport Master Plan discusses this alternative to road transport and encourages GOLR to create a better enabling environment so that coastal shipping solutions can be brought into play. It has been estimated, for example, that travel time between Monrovia and Harper could be 44% faster through coastal shipping while costing 44% less.[104] These factors would minimize post-harvest losses and improve the competitiveness of Liberia's smallholder agriculture on a faster timeframe that reliance upon road construction. The approach would be for the public sector to invest in ramps and landing infrastructure for multi-purpose cargo vessels and passenger ferries while leaving the private sector to invest in ferry purchase and operation. This trend has begun to develop and it should be further encouraged during the AFT time frame in order to deliver a faster transport solution for domestic connectivity than would be achieved by reliance upon road construction alone. At the same time, Table 3.7 does not reflect any clearly identified public investment in coastal shipping and this therefore bears re-examination by the authorities for possible reallocation of a portion of the large amounts pledged for road transport investment.

[104] Dalberg powerpoint deck entitled "IFC Liberia Investment Promotion Strategy: Sector Prioritization" issued June 12, 2012, pages 36-38.

One final alternative being explored is the use of concrete blocks as an alternate to asphalt-concrete technology and this might become an appropriate middle ground solution to reducing the cost of corridors 7 and 8. At the heart of this matter is the issue of the longevity of the road surface and the relative cost of maintenance. Table 3.8 presents data which contrasts the unit capital and maintenance costs of the "constrained budget" predominantly laterite restoration approach versus the "unconstrained budget" paved asphalt approach. What is clear is that capital costs of emergency rehabilitation are miniscule as compared to the heavy cost of paving. However, the maintenance costs per unit are much higher for laterite construction, to the point where four years of maintenance on a laterite road is virtually equal to the capital cost of restoring a laterite road anew.

Table 3.8 Unit Capital and Maintenance Costs under Contrasting Choices of Road Technology

	Capital Investment Cost over 5 year Time Frame	Miles of Road Rehabilitation[1]	Unit Capital Cost per Mi.	Cost of Maintenance	Miles of Maintenance	Unit Maint. cost per mile	Ratio: Maintenance to Capital Cost per Mile
Constrained Budget Approach	$49,207,000	1454.2	$33,838	18,832,000	2340.3	$8,047	23.78%
Unconstrained Budget Approach	$1,569,000,000	1305.3	$1,202,023	1,979,719	1397.12	$1,417	0.12%

[1] Road Rehabilitation is defined as "Emergency" rehabilitation only under Constrained Approach, but as "Upgraded, paved road" under Unconstrained Approach

In absolute terms, there is no doubt that the cost of paving is high in Liberia and such an investment will not be economic without sincere commitment to keep up with maintenance. This would be different from the experience of the past—conflict issues aside. At the same time, arguments in favor of more durable road surfaces resonate as valid given the high rainfall conditions under which Liberian roads must be maintained and the tremendous cost incurred by transporters due to delays on blocked and deteriorated road conditions. Accordingly, the assumption within AFT is that GOLR will devote a sizeable portion of its scarce resources into recurrent maintenance and the institutionalization of maintenance functions at central and county levels including planning, financing (through a road fund fuel levy) and human capacity development while looking to its development partners to help it tackle the paving of its primary roads network with grant and concessional financing as much as possible. In implementing this approach, Liberia must remain cognizant of its vulnerability to climate change and huge investments in roads and bridges infrastructure should be accompanied by adequate measures for climate resilience. In this regard, Liberia should ensure that (i) it develops design standards that take account of climate change and climate vulnerability; (ii) the upgrading of roads and highways should take vulnerability into account; and (iii) the maintenance capacity to be created must build in an ability to respond to climatic issues.

Taking the above considerations into account, Box 18 depicts the aspirations for roads and bridges infrastructure investment for the AFT time-frame.

Box 18 Hard and Soft Transport Infrastructure Investment Planned during Agenda for Transformation

Roads & Bridges Physical Infrastructure	Transport Sector Soft Accompanying Measures
Sector Goal: Enhance accessibility and connectivity by ensuring all roads are pliable year-round	
• Rehabilitate and maintain feeder roads • Construct missing secondary road links (Buchanan-Tappita & Buchanan- Harper) • Rehabilitate & pave primary roads network • Install bailey bridges and replace some with more durable bridge structures • Maintain secondary, primary and urban roads and bridges • Replace corrugated metal pipes for drainage	• Finalize National Transport Policy & Safety implementation framework • Harmonize with ECOWAS transport policy & ratify relevant conventions including Brown Card insurance scheme-facilitate cargo transit • Implement ECOWAS Road Axle load policy • Establish a Roads Authority, including Road Fund & Road Safety council • Develop GIS database for feeder roads & use for road and bridge maintenance system • Develop technical standards and train staff in road safety

Table 3.9 Unconstrained Budget Approach to Upgrade of Primary Road Network

Road Location	Corridor	Length to Pave, miles	Cost, US $ Mn	Funding Source
Redlight Monrovia - Ganta/Guinea Border	Monrovia-Ganta	288	$311.00	World Bank
Cotton Tree-Buchanan	Monrovia-Buchanan	35.1	$33.00	World Bank
Gbarnga-Voinjama-Zorzor-Mendicorma	Northwest	176.47	$234.32	Kuwait Fund doing feasibility
Ganta-Tappita-Zwedru-Fishtown-Harper	North-SouthEast	291	$359.72	AfDB, partial
Buchanan -Yarkpa Town-Greenville	Eastern Coastal	147	$182.60	Not Identified
Madina - Robertsport	Eastern Coastal	26.72	$33.00	Not Identified
Brewerville - Bopolu		57.2	$79.92	Not Identified
Pleebo- Barclayville	Southeast	47.8	$64.44	Not Identified
Ganta-Sanniquellie	Northern	23	$28.71	Mittal Steel
Sanniquellie-Loguato (Côte D'Ivoire (border	Northeast	29	$36.21	Not Identified
Zwedru-Greenville	Missing Link	119	$160.60	Putu Ore Co.
Yarkpa Town - Cestos City	Eastern Coastal	15	$20.88	Not Identified
Rehabilitation of 50 miles of Urban Roads	Urban	50	$25.00	Not Identified
		1,305.3 miles	$1,569.40	

Table 3.7 and Box 18 confirm that road transport is the infrastructure sector targeted to receive the heaviest investment—$1.269 billion—in the near term. This is because road construction is particularly expensive in Liberia's high rainfall environment and fewer than 10% of roads are currently paved. The unconstrained budget approach favored by the Ministry of Public Works identified the following list of road segments requiring attention in due course.[105] What seems clear is that even if GOLR succeeds in raising $1.269 billion during the AFT period, there will still be a balance of at least $300 million in road construction that will need to carry well into the medium term.

Given the need to be strategic about road investments, Liberia has the opportunity to prioritize among projects and sequence road investment according to the importance of key corridors as discussed above. The proposal advanced here is that deliberate attention be paid to bringing Maryland and Lofa Counties out of their relative isolation. A road segment from Harper to Fishtown to be financed by AfDB will contribute to the former objective, but a reasonable aspiration is for this to be extended all the way up the Southeastern-North Central corridor in the medium term. Regardless of whether GOLR adopts these priorities or not, Liberia is encouraged to clearly articulate priorities among the feeder corridors so that development partners can orient their contributions accordingly.

The present investment plan places greater emphasis upon the domestic roads network than it does upon regional links. This can be understood from two perspectives. On one hand, it is imperative that GOLR deliver greater domestic integration to the Liberian population in the first instance, as this will serve to reinforce stability and generate better economic conditions for domestic trade to revive, a key component of the smallholder commercialization strategy. On the other hand, the traffic counts across border arteries are extremely low at the present time and this yields low economic rates of return for such projects. This is very likely a "chicken and egg" problem however and once the nation's capacity to trade has been revived, it is highly likely that cross-border roads, if of better passable quality than at present, will attract more traffic. 'Build it and they will come.

The conclusion, therefore, is that Liberia has a great deal to do before it can turn its attention to the establishment of effective regional road links and this needs to wait until the medium term before being launched in an energetic manner. However, though physical links are not presently a central focus of the road reconstruction plan, this does not mean that regional integration is being ignored. On the contrary, Box 18 identifies that Liberia expects to make progress in the near term on harmonization with ECOWAS regulations. The adoption of axle load control measures will help Liberia to preserve their investment in the roads sector and it will undoubtedly take some time to impose a new culture in this regard. Vigilance will be needed not only in installing weigh stations and implementing the control measures, but also in preventing a culture of rent-seeking behavior to arise or gain traction in parallel. If Liberia can succeed in implementing this kind of policy without a rise in petty corruption, it will be ahead of ECOWAS neighbors and will make itself more competitive to attracting transit traffic from landlocked

[105] "Road Infrastructure—A Catalyst for Economic Growth," power-point presented by MOPW at National Economic Forum, Monrovia, September 2011.

countries in the medium term. If Liberia is also successful at institutionalizing new instruments such as the standard "Brown Card" for insurance that can cover both domestic and international cargo, this will add to competitiveness.

Other planned investments within the transport sector are focused upon bringing Roberts International Airport up to international safety standards, seaports up to moderately functional levels and railroads back into service. It is clear that seaport and rail infrastructure are vital to the NRC and industrialization growth strategies and it is thus fitting that these sub-sectors will benefit from substantial private investment to serve the particular needs of foreign direct investors. The appropriate role for public sector investment in such circumstances is to focus upon safety and access issues as well as capacity building for planning engineers and regulators. With respect to air transport, chapter 1 brought to light that Liberia had been endowed with twelve airports prior to the conflict and that efforts to date have focused on upgrading the safety of Roberts International Airport and bringing James Spriggs Payne airport back into service. As is evident from Table 3.7, the Transport Master Plan envisages RIA rehabilitation to be completed in three phases: \$90m Phase 1 to 2015; \$85m Phase 2 to 2020 and \$130m in phase 3 to 2025. Yet, it also reveals that GOLR's own public financing pledge is far below these levels with only \$10 million pledged during AFT. It is thus evident that GOLR has weighed the tradeoffs between road and air transport and has come down in greater favor of road network investment. On balance, this prioritization seems justified. There is no doubt that safe provision of international air transport service is vital to the FDI-friendly business climate. Yet, Tables 3.6 (a) and (b) illustrate that air cargo services are not yet the binding constraint to any of the key growth strategies under-pinning transformation. It is more likely that air cargo infrastructure which can cater to the handling of perishable horticulture, fish and other fresh products will come into demand in the medium term when smallholder and MSME commercialization begins to bear fruit.

ICT

Liberia recognizes the importance of expanding the availability and improving the affordability of broadband internet and related e-services in the country. To this end it has already made progress in establishing international connectivity through participation in Africa Connecting Europe (ACE) as depicted in Box 16. However, this leaves as a key objective, the challenge of penetrating the interior with domestic spines to expand the domestic ICT market in the country. Box 19 presents the near term investment plan for the ICT sector.

Box 19 Hard and Soft ICT Infrastructure Investment Planned during Agenda for Transformation

ICT Physical Infrastructure	ICT Soft Accompanying Measures
Sector Goal: Increase Access for Liberians to affordable Postal and Telecommunications Services	
• Finalize installation of ICT IXP and landing station for international connectivity • Construct 6 post offices in towns up-country and 3 regional offices in Buchanan, Zwedru and Harper • Set up ICT connectivity in all counties by connecting post offices to Public Access Network	• Recruit and train Chief Information Officers for ministries + 120 technical staff in E-services in • Set up E-government program elsewhere in country • Create ICT-based financial & electronic services • Decentralize LTA Regulator to 3 regions • Review broadband policy & Implement Universal Access framework to promote private competition in ICT environment

The objective of decentralizing and delivering services into the interior is evident from both the hard and soft investments which are planned. On the physical side, GOLR is appropriately reluctant to crowd out the private sector in building a domestic ICT market. Accordingly, it has limited the public sector role to establishing connectivity within the post offices in each county with the expectation that the Universal Access policy will induce the multiple competing mobile telephony operators to take the initiative and branch out into the rural milieu. Hopefully this will be adequate and the private sector will play its part in responding to expanding market demand for ICT services in the interior. If affordable, smallholders and MSMEs will gain significant benefit from the market connectivity which comes with broadband internet service, but unlike the NRC investors, do not have the wherewithal to sponsor the capital costs of backbone extension. Hence, affordability becomes a key element in successful penetration of the interior to help drive the inclusiveness of transformational growth. On the regulatory side, it will be important for Liberia to monitor market conditions with vigilance so as to encourage competition and discourage private operators from carving the country into small monopolies by county. On the physical slide, the laying of fiber optic cable into the interior could be done more affordably if it is done in concert with the building of roads or power lines, the coordination of which implies an important role for MOPW. This PPP approach is also reflected in the manner taken to establish the Cable Company of Liberia (CCL), the equity vessel into which the landing station has been vested. Two private operators contributed \$5 million each to the ACE subscription; they plus other mobile companies may have the opportunity to expand their equity participation when the CCL undergoes its planned divestiture in the coming years.

Water

Box 20 presents the planned investment in water, sanitation and hygiene in the next five years.

A large part of the investment planned for the WASH sector will be devoted to soft side issues to ensure the sustainability and community involvement in facilities that will be newly installed or rehabilitated. The agricultural investment plans under AFT call for preparatory work to evaluate lowland water basins in order to identify those areas of Liberia which are best positioned to host irrigation facilities. However, no actual public investment is envisaged into irrigation structures in the short term since this is an area where private initiative is likely to be encouraged.

Box 20 Hard and Soft Water, Sanitation and Hygiene Infrastructure Investment Planned during AFT

WASH Physical Infrastructure	WASH Soft Accompanying Measures
Sector Goal: Increase access to safe water supply and sanitation and improve hygiene practices	
• Rehabilitate 3 water facilities and systems in towns & cities over 5,000 people • 100% rehabilitation of White Plains water treatment plant serving Monrovia/environs • Rehabilitate distribution system for Monrovia • Establish 136 SaniCentres at district level for water points, sanitation & hand-washing • Rehabilitate 100% of Monrovia sewerage system • Rehabilitate 3000 and Construct 2000 new rural water supplies	• Establish and make functional key sector institutions including National Water Resources and Sanitation Board, plus operational commissions that it will supervise • Establish/refresh community rural water supply maintenance management structures • Develop detailed sector investment plan • Carry out willingness to pay survey for WASH services • Train 1 Community Hygiene Volunteer per 1000 population in hygiene promotion (3,500 total) • Implement school WASH package in 2000 schools

Trade and Industry

Chapter two brought out the importance of trade and industry to all of the key growth strategies appraised. For smallholders and the emerging SME sector, improvements in the trading environment are essential to provide incentives for producing marketable surplus and to encourage entrepreneurship to take hold. For these reasons, Table 3.6 highlighted the fact that smallholders would benefit from domestic market and processing infrastructure and improved border posts to facilitate regional trade while MSMEs would benefit from common-facility infrastructure such as that provided through space leasing in utility-enhanced business parks. Our assertion is that these types of investment should be accelerated into the near term so as to better catalyze the results and transformational impacts desired from these strategies. Meanwhile, the industrialization and NRC strategies also have direct interest in the enabling environment for trade and industry but it is clear that transformation of minerals, (which should be encouraged to evolve from a successful NRC strategy), must wait until the long term future when the investment climate has reduced investor risks and the available power supply is abundant and reliable. Yet, GOLR's intent to experiment with Special Economic Zones in the near term is apparent in Box 21 below.

Our recommendations with respect to the trade and industry sectors are three-fold. First, GOLR might want to consider re-orienting planned investment in a manufacturing-oriented SEZ into one or more business parks in the interior that would cater to the entry of MSMEs instead, thereby encouraging an expansion of entrepreneurship in the short term. This would not mean that the SEZ-enabled approach to jump-starting industrial development should be abandoned, but deferred until the medium to long term when Liberia's capacity to supply human capital into management (and possibly ownership) positions within industry will have improved. Second, the establishment of a National Industrial Development Financing Organization is a welcome institution for the business development services it can offer, but authorities are encouraged to reconsider attributing it a direct role in financing MSMEs. Past history, including Liberia's own experience, suggests that state-owned financial institutions are prone to capture by elites or other special interests which can divert from the core objective of relieving a credit constraint which plagues small enterprise. A better approach might be to take a role as guarantor behind loans which the private banking sector awards on the basis of meritorious business plans which they appraise. This approach may have the benefit of reducing risk and therefore incentivizing entry into MSME lending by a reluctant private banking sector while avoiding the pitfalls of a state owned financing institution. Third, the multiple soft measures envisaged promoting economic competitiveness and trade are very encouraging and are appropriate priorities for the short term. Progress is vital in the short term so that Liberia can position itself for greater regional competitiveness in the medium term.

Box 21 **Hard and Soft Trade & Industry Infrastructure Investment Planned during Agenda for Transformation**

Industry, Trade and PSD Infrastructure	Soft Accompanying Measures
Sector Goal: Promote PSD through Economic Competitiveness, Diversification, Value Addition & Trade	
• Construct new storage, marketing and processing facilities for agricultural products in each county to provide for grading, processing and storage of commodities • Establish a special economic zone (SEZ) with infrastructure and utilities	• Rezone Gardnersville industrial park & Monrovia Freeport area to previous use to facilitate industrial development • Finalize & implement National Trade Policy • Facilitate cross border trade by consolidating trade-related services at border points • Ratify ECOWAS Trade Liberalization Scheme and implement Common External Tariff • Reduce cost of transportation along corridors & ports by reducing inspections & checkpoints corruption and reduce volume of goods smuggled across borders • Establish NIDFO & National Standards Institutions & Reform Bureau of Industry • Improve enabling environment for informal enterprises including registration, tax administration, increasing supply of low cost business development services, strengthening of business associations • Encourage formalization of land ownership & sales through improved integrity of registration • Ensure integrity of leases granted • Enact Copyright Act and Industrial Property Act and modernize Copyright, Intellectual Property Protection and Industrial Property Offices

3.4.3 Recommended Priorities for the Medium Term

Discussion of the short term infrastructure plan in the preceding section brings out the conclusions that some of the investments planned for realization during AFT might need to move into the medium term for lack of financing while others, notably with respect to industrialization, should be deliberately deferred till the medium term. In addition, soft measures that will be introduced to improve capacity and regional harmonization in the transport and trade spheres during AFT will pave the way for greater emphasis on regional infrastructure in the medium term. Accordingly, considerations for medium term infrastructure planning focus here on the transport and energy sectors in particular.

Transport-Roads

On the domestic front, it seems clear that the paving of Liberia's primary roads network is an endeavor that will not be completed within the AFT time-frame and it is recommended that the task be planned over the short and medium term. Clarity vis-à-vis the priority sequencing of corridor development would help development partners to support Liberia in this endeavor.

Meanwhile, Liberia is well aware of the desirability of establishing regional roads to link it to MRU neighbors to permit better economic integration with the region. To that end, the Ministry of Public Works has established a list of the key regional links which are desired along with the estimated cost. This is reproduced in Table 3.10 below. Figure 37 depicts the desired MRU links color-coded by country being connected. Most segments within this list have already been included in the AFT primary roads reconstruction plan and, as such, once those internal roads are complete, the regional roads often require only a short extension and cost far less than the total presented in table 3.10 which includes a high degree of double-counting. An exception is the Cavalla Bridge. Taking the Zwedru-FishTown-Harper–Cavalla road as an example, the Cavalla River segment represents an addition which has the effect of extending that artery across the river into Côte D'Ivoire. This will require investment in a bridge across the Cavally River at substantial added investment. Overall, the desire is to upgrade all of the cross-border crossing segments to asphalt pavement. Cost estimates for such projects have not yet been precisely estimated but it would be appropriate to commence forecasting the investment cost of such arteries in order to accelerate their realization. Current concerns are that costs of cross-border arteries may seem excessive in comparison to the traffic levels currently plying such roads, but one should plan on the basis that traffic levels will rise. One conclusion that the PIDA study makes clear is that many projects with a bearing upon regional architecture are "national" projects for purposes of financing and execution, but regional projects in terms of the economic returns that can be expected. An additional conclusion arising from the present study is that regional connectivity could deliver significant stability benefits by removing Liberia from its present isolation and exclusion from the wider ECOWAS markets.

Table 3.10 Desirable Regional Links with MRU Neighbor States

	Road Segment	Length (KM)	MRU State Border Town Linked	Current Status	Intervention Required	Estimated Cost (US$ Mn)
LIBERIA-SIERRA LEONE	Monrovia-Klay-Mano River Bridge	117	Bo	Paved	Investigation of residual life of pavement	90
	Gbarnga-Zorzor-Voinjama-Mendikoma	284	Koindu	Unpaved	Upgrading to Asphalt paved road	213
LIBERIA-GUINEA	Gbarnga-Guinea Border	-	N'Zerekore	Unpaved	Upgrading to Asphalt paved road	-
	Zorzor-Yeala	6,5	Koyama	Unpaved	Upgrading to Asphalt paved road	7
	Voinjama-Guinea Border	20	Macenta	Unpaved	Upgrading to Asphalt paved road	17
	Saniquellie-Guinea Border	-	Lola	Unpaved	Upgrading to Asphalt paved road	-
LIBERIA-COTE D'IVOIRE	Ganta-Saniquellie-Loguatou	83	Danane	Unpaved	Upgrading to Asphalt paved road	59
	Ganta-Tappita-Tobli	150	Toulepleu	Unpaved	Upgrading to Asphalt paved road	106
	Zwedru-Fishtown- Harper-Cavalla River	275	Tabou	Unpaved	Upgrading to Asphalt paved road	208
						$700

Figure 37 Liberia-MRU Road Links

In other words, such projects, when located geographically within a single nation's sovereign territory, are often prone to being conceived and executed on the basis of a national development paradigm but this can lead to a missed opportunity where appreciation of the regional potential could justify dimensioning facilities on a larger scale or with higher quality technology. This is so because they have potential to be rendered more economically viable by serving more customers from wider markets and more affordable by virtue of the economic growth that comes with greater integration. Port projects and strategic trunk roads that connect to borders are both pertinent examples of how this logic applies to Liberia. The country needs to be careful not to over-invest in port capacity, but as conditions for transit traffic become more competitive and Liberia is table to attract cargo to its ports, increased investment will become justified.

Table 3.10 includes the traditional plans to establish Trans-Africa Highway (TAH) links including the Monrovia-Bo segment between Liberia and Sierra Leone and the Ganta-Tobli-Toulepleu segment between Liberia and Côte D'Ivoire. Although this routing has, in the intervening years, been eclipsed by traffic moving from Loguatou to Danane, Liberia and Côte D'Ivoire have recently conferred upon the importance of the original TAH routing and concur that it remains an important priority to construct. This is all the more important in light of recent troubles in Côte D'Ivoire and the expectation is that a better road link could help to improve livelihoods and reduce tensions in this border area.

Multi-Modal Corridor Efficiency is Key to Competitiveness

In reality, Liberian investment in regional roads must be accompanied by an entire basket of supplemental infrastructure and accompanying measures to render its corridors between locations in the region and Liberian ports more efficient. This requires multi-modal planning to reduce transit times and costs of cargo heading to air or sea ports. On the physical side, one-stop border posts will eventually become attractive at key arteries as these serve to harmonize import and export procedures, customs fiscal functions, phytosanitary and quarantine procedures across borders and speed goods to their destination. Such processes are made more transparent and efficient if accompanied by ICT communications capability and e-enabled efficiency tools extended to the far reaches of border posts and fully integrated into port operations. On the soft side, it confirms the multiple imperatives for Liberia to improve their harmonization and proficiency with regional and global trade facilitation norms, improve their mastery of ICT enabled processes and, almost more important than anything else, reduce the phenomenon of petty bribery and corruption.

In addition, more thought should be given to the potential for extending rail across borders in due course and for this to happen it will first be important that Liberia establish regulatory and coordination capacity for a national rail system. It is appropriate that the medium term time-frame be devoted to building this domestic management capacity in a railways institution in preparation for physical rail investments in the 2030-40 longer term future.

The notion of Liberia positioning itself for greater competitiveness on the regional transport and transit cargo scene raises the profile of the current most active freight transit border point between Liberia and Côte D'Ivoire at Loguatou. Even as the traditional TAH is due to move ahead, there is little doubt that the Loguatou border crossing will remain more important in the interim, especially when considering that Guinea and Côte D'Ivoire are collaborating to establish a paved link between N'zerekore and Danane. It behooves Liberia to find a means of connecting itself to this triangle and that will require a replacement of the current Bailey bridge with a more permanent structure in the medium term.

Figure 38 Liberian Border Crossing Roads and their Connectivity to Interior Landlocked Centers

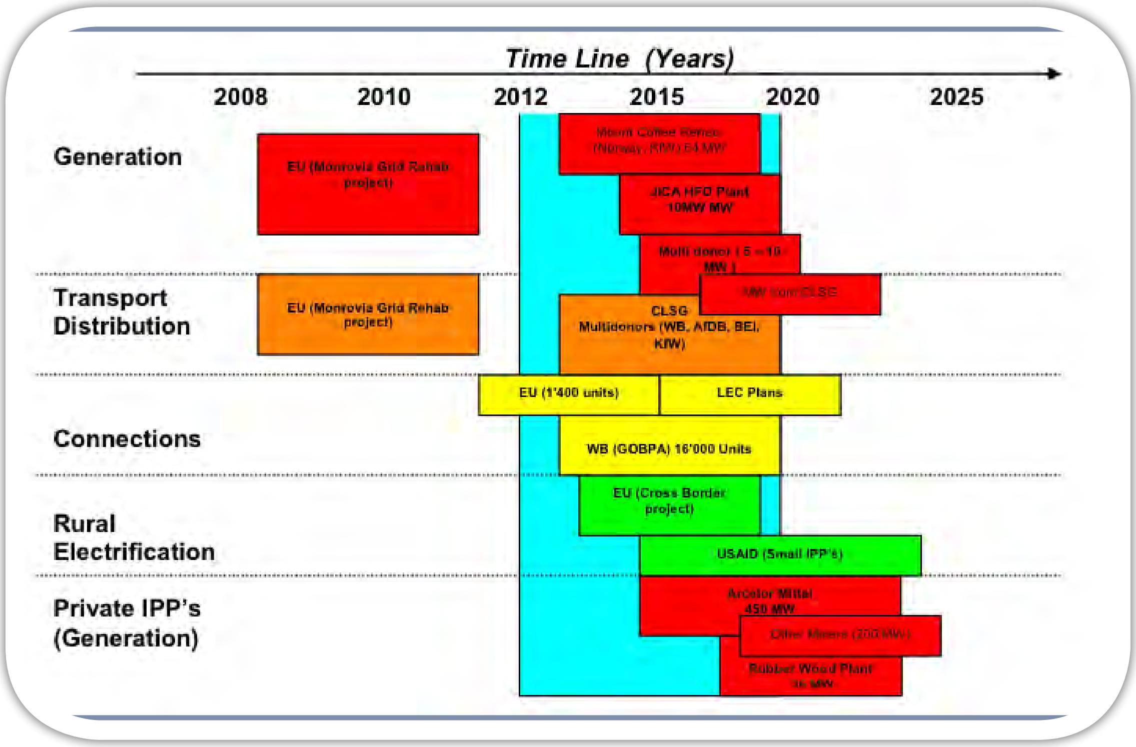
The realization of these projects could relieve Liberia of the fiscal burden of heavy power generation investment in the medium term, leaving it with greater scope to focus upon the build-up of its transport corridor infrastructure and associated capabilities. This would imply that Liberia would need to embrace an energy import policy for the medium term and while there are always arguments in favor of developing sovereign sources of supply, the rewards in this case seem to outweigh the disadvantages, especially if the essential domestic needs are supplied through Mt. Coffee and LEC facilities in the near term.

Until such time as the more southern TAH artery is developed, this northern triangle will offer the advantage of being backed up by paved connection to Monrovia Freeport on the Liberian side; it would connect to higher traffic roads on the Ivorian side including those that lead northwards into Burkina Faso and, once the planned link between Nzérékoré, Guinea and Danane, Côte D'Ivoire is completed, will offer better connectivity to Guinea and Bamako further beyond. It seems appropriate that this highly economic corridor be given due consideration for priority in the medium term. When the Buchanan – Tappita missing link due for laterite construction as a secondary road during AFT has been completed and traffic reaches a stage to warrant paving, the original TAH might be appropriate to complete in the 2030-40 time horizon.

Energy

The discussion of planned investments in the energy sector during AFT demonstrate that this sector is still in profound recovery mode and it will take more than the five year PRS 2 duration to restore it to its originally installed generation, transmission and distribution capacity. For this reason, Liberia and its development partners have already established a vision that will take the recovery process well into the medium term. This is evident in Figure 39 which represents

Figure 39 Recommended Planning for Future Energy and Electricity Projects in Liberia



recommendations made by consultants to the EU on recommendations for a next generation of investment in Liberia's energy sector.[106]

Further generation investment in the "via reservoir/ diversion" of St. Paul river which is likely to be appraised and tackled in the short and medium term is also appropriate as it will help to increase year-round supply from Mt. Coffee and decrease generation costs which is important for the economy. It is probably wise to program other investments in the context of a sector Energy Sector Master Plan which will soon get underway with AfDB financing.

Nonetheless, analysis done on behalf of WAPP took a regional perspective into energy sources available within ECOWAS.

On the basis that the physical CLSG transmission link will jump start a regional energy market between the MRU countries allowing countries to import to or export from the grid by 2017, Tractebel formulated recommendations about which key generation projects should be undertaken in the medium term to supply more energy into the sub-regional grid. Two criteria used to select regional generation projects were that facilities aim for a minimum 150MW size and/or that they have a regional vocation to encourage energy sharing between countries. Resulting from this, the recommendations for medium term investment in power generation for the sub-region identified:

1. Kassa Hydroelectric plant, to be installed on the river between Sierra Leone and Guinea. This can generate 135 MW at an estimated investment cost of $214 million. The project is at the stage of identification but it could be commissioned by 2021 and export power into the CLSG grid.

2. Bumbuna II & Yiben Hydroelectric plant which could generate 400 MW at an estimated investment cost of $520 million. If complemented by an addition 1060km of CLSG line at $69 million, this could also supply power into the regional grid and be commissioned by 2019.

[106] Evaluation of EU Energy Funding in Liberia and Recommendations, Montgomery Watson Harza, July 2012

3. Tiboto Hydroelectric Plant in San Pedro Côte D'Ivoire could generate 225 MW at an estimated investment cost of $578 million which would then be connected to a 225 kV transmission line to Buchanan in Liberia at a supplemental cost of $100 million. This project is also at identification stage but could theoretically be commissioned by 2021.[107]

3.4.4 Strategic Choices to Contemplate for the Long Term

Building upon the logic behind medium term infrastructure planning, it seems that the rewards from prioritizing transport competitiveness over energy self-sufficiency might carry on into the long term 2030-40 decade. This would be the decade in which to prioritize physical investment in rail capacity to increase the density and capacity on Liberia's key corridors in order to really gain an economic growth push from engagement in regional trade. This would require investment in additional rolling stock to permit introduction of passenger and non-mineral cargo transport. At the same time, the economics of such expansion would still require a regional perspective so as to connect across borders into other rail networks and capture traffic from a much wider regional market. Complementary investment would then be appropriate to expand port facilities, including a possible container terminal at Buchanan if, by then, the rail and highway links between Buchanan and the border are up to the standard required.

Table 3.11 Comparative Economics of Hydro Investment in MRU

Site	Country	Potential Capacity	Est'd Investment Cost/KwH US$ mn
Kaleta	Guinea	240	1114
Mt. Coffee & Via	Liberia	66	5803
Souapiti	Guinea	515	1344
Amaria	Guinea	377	1256
St. Paul 1B	Liberia	78	3123
St Paul 2	Liberia	120	3123
Bumbuna II	Sierra Leone	40	1950
Bumbuna III	Sierra Leone	90	1950
Benkongor	Sierra Leone	200	2447
Tiboto	Côte D'Ivoire	225	2570
Mano River	Liberia/S.L.	180	2625

Given that these types of corridor enhancement investments are costly, it is plausible that Liberia will still need to make strategic financing tradeoffs. Leaving aside PPP approaches that it will also undoubtedly pursue, the recommendation here is that downstream generation investment be deferred until such time as Liberia enters the era of bona fide industrialization, bona fide in the sense that it includes mineral transformation and the vast opportunities that open up with that phase of development. Only then will the country have a huge demand for power over which it will want a greater degree of sovereign control. It is hard to predict when this era will emerge, but it is not likely to materialize until the end of the 2030-40 period defined as "long term" for purpose of this study. By then a generation of young Liberians will have grown up with better educational opportunity and human development investments in the present era will have yielded a ready supply of talent and labor for industry. In the interim, Liberia will be well served to cultivate the entrepreneurial skills of its indigenous business sector and these will be preferentially enhanced by a regional corridor development strategy.

As is the case in the medium term, the policy choice between positioning to become an energy exporter versus remaining as an importer from WAPP will arise. There is no doubt that Liberia has one of the best "absolute" endowments in hydropower potential within ECOWAS relative to most of the non-MRU countries. At the same time, other MRU countries enjoy even better comparative advantage in hydro-resources, making Liberia's projected investment costs appear high in relative terms. It will thus be important for Liberia to re-evaluate its energy policy and investment options on a recurrent basis in the coming decade to take stock of the evolution of a bona fide WAPP market and the feasibility of reliance on the regional grid. This will depend in large measure on the degree to which Guinea and other neighbors tap their latent capacity and take the step of supplying it into the grid.

In any case, it does appear that Liberia's best long term energy projects are those which involve collaboration with its neighbors, whether through direct sponsorship of a Mano River plant with Sierra Leone or cooperation in the installation of an Ivorian plant at Tiboto with transmission links into Liberia. These are good choices and they serve to reinforce the point that Liberia will gain tremendous advantage if it moves from an era of domestic transformation into an era of regional participation in the future if it embraces fully the advantages that integration can offer.

3.5 Summary Considerations for Infrastructure Planning in Liberia

The present report has explored three major themes: stability, regional integration and the infrastructure gap in Liberia. The preservation of stability is of central concern to Liberia's continued path towards recovery and transformation. The current state of the nation and underlying threats to stability are thoroughly examined in chapter 1. These then inform the examination in chapter 2 of strategies that have the potential to foster an era of inclusive and transformational growth. Infrastructure

[107] Tractebel, WAPP Energy Plan Revision, Ibid.

is vital to these strategies and forthcoming priorities for investment are explored in chapter 3. Regional integration is examined in the context of promising growth strategies and the related infrastructure investment priorities that can best bring Liberia out of its relative isolation. These will enable Liberia to play a larger role on an agricultural trading stage within the Mano River Union, on a regional stage within the ECOWAS energy, communications and transit trade markets and on a globally competitive stage as an attractive investment destination for manufacturing, mining and agro-industry. Key insights drawn from this study begin with the conclusion that transformation of Liberian society, including people, institutions and infrastructure, will take longer than the AFT time frame. Accordingly, infrastructure planning to reinforce the objectives of transformation should be programmed over a longer time frame. At the same time, infrastructure investments will need to be made in the presence of capital scarcity and this can also be expected to endure beyond the short term. Therefore, it will remain important to carefully select those public infrastructure investments that can deliver maximum transformational impact. Tradeoffs between competing needs, wants and desires should be made with AFT transformational goals in mind. The study concludes that Liberia's public infrastructure investments during the AFT time-frame should be prioritized first to favor smallholder commercialization and second to support MSME development. Meanwhile, in sectors where FDI is installing infrastructure with private capital, government's appropriate role is to engage in the planning so as to enhance the potential for multi-user benefits and maximize the connectivity with public infrastructure networks. Aside from the objective of closing the current infrastructure gap, policy makers should be asking themselves how different infrastructure projects will simultaneously contribute to the other two AFT objectives of building Liberia's human capital and improving its domestic institutions. Investment during AFT should not aim to give Liberia a five-year growth spurt, but instead aim to endow the nation with a capacity to launch and sustain a transformational and inclusive growth path over a longer term. This can be achieved when human, institutional and infrastructure endowments are all transformed at a concurrent pace. While reaching the destination of Liberia as a stable, middle income country is important, the inclusiveness of the journey is paramount.

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