

243. By working closely with these structures as primary interlocutors for sector development, the MoA can keep actors' needs and desires at the centre of the strategies and action plans that are needed to develop livelihoods based on economically feasible opportunities. This focus will result in an agricultural growth and investment policy that is market-driven, socially sensitive and inclusive of the most vulnerable groups, with responsibility shared by key actors.

244. Reducing the real cost of food depends on multiple factors, which may include: increasing the productivity and supply of domestic food production; improving the competitiveness and efficiency of the marketing system; coherent import and fiscal policies that balance domestic production with national consumption interests; accessing and disseminating a stream of productivity-enhancing technologies for rice- and cassava-led farming systems (including integrated systems and intercropping), whether through research or partnership; strengthened economic governance mechanisms to reduce transactions and reduce illicit payments in the food system. The use of intercropping in Liberia and opportunities for expanded integration in tree crop systems presents opportunities for increasing food crop production while providing income-earning opportunities through cash crop production.

AA. Private and Public Sector Roles in the Provision of Agricultural Services

245. The transformation of the agricultural sector described above has profound implications for the roles of the public and private sectors in the provision of agricultural services in the years ahead. The government's provision of public goods is arguably more important in countries emerging from conflict, such as Liberia, as it sets the stage for how actors will behave and invest in the future. At the same time a strict adherence to arguments regarding public good provisioning may undermine the essential ingredients of economic recovery. The decision of GoL to retract public institutions from direct involvement in implementation represents a major change from the pre-war period, when direct intervention in production and marketing was common. Nevertheless, experience across Africa in the last two decades has underscored the importance of critical public functions to the support of value chain development and performance: these include strategic direction, coordination, supervision, regulation, monitoring and accountability. Simply withdrawing and assuming that the private sector will enter has been shown not to work (OECD, 2006; WDR, 2007)

246. Determining the type of public goods to provide in an effective and sustainable manner is a difficult and important task for GoL, and is made more so given its limited financial and human resources relative to the task of recovery and development of small and subsistence farm households. GoL ideally should provide a facilitating environment through improvements in roads, utilities and other rural infrastructure, as well as regulatory frameworks, while allowing the private sector to engage in production and marketing activities. There is an emerging consensus among policy makers that the core functions of GoL in agriculture development could cover:

- Development and promotion of appropriate policies for the growth of agricultural output and incomes, reduction of poverty, and improvement in accessibility of the population to adequate supplies of nutritious food.

- In collaboration with other relevant institutions (e.g. the Bureau of Statistics), to collect, process and publish statistics and data on agricultural production and trade in a timely manner, including data for early warning systems (such as disease incidence).
- Coordinate, monitor and evaluate public and private agricultural development programmes and projects.
- Develop, maintain and support a decentralized community-based extension service for small-scale farmers, staffed with appropriate subject matter specialists, including provision of veterinary, pest control and land use planning services. The aim should be to assist rural communities to develop greater self-reliance and to take responsibility for their own basic needs by providing them with appropriate skills to acquire and manage post-harvest and other rural economic infrastructure facilities to sustain a higher quality of production and to achieve better living standards. Special attention should be given to participatory approaches in identifying critical needs and to providing and sustaining them individually or in groups.
- Supervise and support research designed to develop appropriate sustainable crops and livestock, forestry and fish, technologies, prices and policies.
- Collaborate with other agencies to ensure the supply of food to vulnerable groups, and to implement appropriate safety-net schemes, including facilitating livelihood and income-enhancing programmes for small and subsistence farmers through investments.
- In collaboration with other institutions to draw up appropriate standards for food quality, veterinary medicines, agrochemicals, and other agricultural, forestry and fish products, issue licenses and monitor the application of the standards.
- Stimulate private sector participation in all agricultural production and trade activities, including promotion of increased domestic use and export of non-traditional commodities, adequate input supply (including credit), and marketing systems.
- Public investments and collaboration with other institutions to improve rural infrastructure, such as feeder roads, irrigation and drainage schemes, and post-harvest systems.
- Institutional and human capacity building both by formal agricultural education and by in-service training of staff.
- Natural resource management relating to water, land and soil health through monitoring of land use, water use efficiency, and soil degradation data.
- Collaboration with other stakeholders to develop capacities in MoA to analyse and present the best trade options for Liberian agriculture in regional and international forums.

BB. Making the Government Budget Work for Agricultural Development

247. Creating a supportive environment for pro-poor growth and private sector-led agricultural development means getting the right volume and pattern of public expenditure. Past evidence shows that strategic public spending in agriculture can be highly effective in increasing agricultural productivity and reducing poverty. Work undertaken by the IFPRI shows the critical impact that public spending (**including that on specific**

subsidies) has made on accelerating agricultural growth and on reducing poverty. It also reveals the important ways in which the impact of different types of public spending on agricultural growth and poverty changes over time (Fan and Hazell, 2001a; 2001b).

248. However, as indicated earlier in this report, public expenditure on agriculture in Liberia has been minuscule and has not promoted growth. Public spending should be carefully targeted and effectively coordinated between ministries. Priority should be given to spending on public goods that support private investment, and that maximize the impact on productivity growth and benefit the poor. GoL needs to avoid the mistakes of the past when areas with high and proven returns, such as agricultural research, were starved of funds and crowded out by spending on politically popular items such as mechanization schemes. A public expenditure review can help to identify improvements in public expenditure management that support growth priorities, and can suggest ways of redirecting public spending to where its impact on poverty will be greatest, as well as measures to improve the efficiency with which public funds are spent. These considerations highlight the strong need for strengthened capacity in the MoA for analysis, evidenced-based prioritization and planning, which apparently was negligible in previous years in the Ministry.

249. **Liberia is committed to meeting the Maputo commitment to allocate ten percent of the budget to the agricultural sector.⁴⁶** Following the establishment of the current Government, initial steps for the implementation of this commitment were taken, as demonstrated by the preparation of the National Medium Term Implementation Programme (NMTIP), which is meant to underpin GoL agricultural policies and investments within the framework of the Maputo Declaration. An indicative simulation suggests that meeting the Maputo commitment is within reach and that, with buoyant revenues, this implies substantial scaling up of resources for agriculture. Assuming that revenues continue to grow by 10%, 15%, 20% and 25% in years 2007/08 and 2010/2011, respectively, the total budget would amount to approximately US\$189.8 million. If GoL allocation to agriculture is increased by 1% p.a. during the same period, the annual agricultural budget would more than triple, reaching about US\$17.0 million, which is equivalent to 9% of the total budget, and is close to the figure agreed upon in Maputo (Table 16).

Table 16: Closing the NEPAD Financing Gap

Item	Unit	Fiscal year				
		2006/07	2007/08	2008/09	2009/2010	2010/2011
Total national budget	US\$(000)	100,000	110,000	126,500	151,800	189,750
Expected national budget increase	%	NA	10	15	20	25
Share of agricultural budget	%	5	6	7	8	9
Expected national agricultural budget	US\$ (000)	5,000	6,600	8,855	12,144	17,077.5
Financing gap	%	5	4	3	2	1
	US\$ (000)	5,000	4,400	3,795	3,036	1,897.5

Source: NEPAD, 2006

250. However, given current capacity constraints, questions remain concerning the absorptive capacity to utilize this significant increase in resources effectively. Previous work has emphasized the importance of phasing assistance to match the steady increase in capacity,

⁴⁶ See footnote 42.

and it will be important to ensure a coordinated scaling up that matches resources with capacity.

CC. Food Production, Food Security, Safety Nets and Nutrition

251. **Because the majority of Liberians are net buyers of food – i.e. they do not produce enough of their own food to meet their households' consumption needs – reducing the real cost of food should be a major food security objective.** Typically, access to food is assured by diverse means, of which market purchases represent a major source. With high population growth rates and increasing urbanization, this demand will continue to grow. Liberia, like many other countries, is familiar with the political importance of low food prices (e.g. rice) as a wage good for urban and rural consumers. The MoA, in collaboration with civil society and other MDAs (in particular, MoCIS) needs to participate in monitoring key indicators in input and output markets to ensure that the government's equity objectives are not compromised (e.g. by terms of trade that may discourage participation and reduce the profit of households and small-scale economic actors). Similarly, the MoA and civil society will need to determine national interest in a rights-based approach to food as a possible framework or tool for achieving national food security objectives.

252. **Use of improved technology to raise yields is central if real incomes are to increase for both net food buyers and net food producers.** Good quality planting material is a prerequisite for good crop yields. High expectations have been placed on the recently developed New Rice for Africa, NERICA, rice⁴⁷ varieties due to their higher yield potential (2–2.5 mt/ha) and taller size, which makes harvesting easier. These varieties also show improved weed suppression ability due to droopy leaves, and a shorter duration of development (approximately 90–100 days, compared with 120–150 days for typical upland varieties), which allows time for a second crop during the rainy season. In addition, NERICA rice varieties display resistance to local stresses (drought, pests and diseases). NERICA has brought closer the possibility of offering farmers improved rice varieties that are adapted to local conditions. The situation regarding improved varieties for the other food crops in Liberia (maize, sweet potatoes, cassava) is unclear. However, improved varieties of all these crops have been tested and released in Sierra Leone for similar ecosystems to those found in Liberia. Short-term actions to improve the productivity of the crops can be based on procurement, importation and distribution of the materials in Liberia.

253. Experience from countries within the region that have similar agro-ecological conditions to Liberia shows that improved husbandry techniques can improve yields, and these practices need to be transferred to Liberian farmers. Crop and soil management practices, such as the optimum timing of planting, weeding and appropriate pest management strategies, can improve production and these are available to Liberia. Experience of upland soils indicates that the cropping cycle can be made more productive by good weed control and judicious use of inorganic and organic inputs. The latter include the use of composts on small vegetable plots, green manuring, crop residue restitution and use of cattle manure, which is available in the northern parts of the country. Thus, although technologies for continuous cropping of uplands have not yet been developed for Liberia, some information on the intensification of cropping exists that can be useful to farmers.

⁴⁷ Obtained by the West Africa Rice Development Association (WARDA) by crossing two strains, *Oryza sativa* of Asian origin and *Oryza glaberrima* of African origin, using embryo rescue techniques.

254. As indicated earlier, development of inland valley swamps for irrigated rice production, a technology in which Liberia has a comparative advantage for supplying its major domestic markets, has encountered many problems, including serious technical constraints, as in neighbouring countries. Lessons have been learned from such failures and Liberia should continue to promote the widespread adoption of the technology.

255. **Large-scale mechanization has failed in Liberia, as elsewhere, and is unlikely to be successful in the present context.** That said there is clearly a need for small-scale mechanization for particular activities. The government should provide clear guidelines for use of mechanical cultivation or processing in the agriculture sector. Such guidelines should include:

- Information on the priority and importance of mechanization for land preparation and processing for different value chains.
- Demarcation of areas and land in the country that are suitable for mechanical cultivation.
- Clear indication of the roles and responsibilities of the public and private sectors in providing mechanization services.
- Investment opportunities in the Investment Code of the country to encourage the emergence of a private leasing and rental market.
- Guidelines for participatory approaches in the planning and management of mechanization schemes.
- Information from research on the types of tractors and other equipment that are suitable for use in different areas and agro ecosystems in the country, the projected costs of using the equipment, and sources of supply of spare parts. Emphasis at this stage should be on small-scale land preparation equipment such as power tillers, in view of the emphasis on and priority of swamp cultivation for rice and other short-cycle crops;
- Mechanisms for strengthening the production and distribution of small farm tools and equipment that would enhance value addition, given the restricted capital base of smallholders.

256. MoA would benefit from a small Mechanization Unit staffed by at least two qualified agricultural engineers and agronomists to advise the government and stakeholders on appropriate actions, including sensitization of stakeholders to appropriate mechanization approaches, co-ordination of activities in the sub-sector, and monitoring of the performance and impact of mechanization schemes.

257. **A variety of different safety net programmes (e.g. food for work) have been used during the recovery process in Liberia to tackle specific needs; these need to be transformed to reflect the transition from relief to development.** These programmes will undoubtedly evolve as assistance and resettlement of returnees to communities winds down. Developing future programmes will hinge on the existence of a regular source of detailed information on vulnerable groups that may need some type of social protection. Critical issues in the future will be the mechanism by which safety net programmes will combine with the aforementioned pro-poor strategy, and what constitutes a vulnerable group in need of a safety net rather than access to opportunities and support for developing their livelihood.

258. For example, the CFSNS has indicated that elderly people with minimal access to traditional support systems, which had broken down during the conflict period, represent a vulnerable group that may require regular assistance. Young mothers and victims of sexual-based violence are also highly vulnerable. It remains unclear at present whether unskilled labourers in the plantation sector represent a vulnerable group whose livelihood limits their opportunities for improving their welfare. While some type of safety net could potentially respond to some of their needs, it may also be useful to consider how they could benefit from new opportunities presented by a future pro-poor growth strategy.

259. **Tackling vulnerability will require a combination of traditional safety nets and investments to develop a smallholder sector.** For example, many rural households will probably need financial help to increase food crop production, as well as to invest in tree crops as part of a smallholder development programme. This type of investment support programme could be complemented by more short-term centred investment programmes to restore livestock populations to households and communities and to expand artisanal fisheries.

260. **In the medium term, malnutrition is likely to remain endemic in Liberia – indeed, rates were as high in the 1970s and this is not just a conflict-related problem – and calls for a specific nutrition strategy.** Immediate efforts must centre on monitoring and responding to the problem of acute malnutrition, particularly in central and south-eastern countries, where the prevalence of wasting exceeds 10%. Liberia needs a special nutrition strategy and plan of action to complement its pro-poor, food security approach. The risk of the malnutrition problem slipping through the cracks is too great. Ongoing efforts to develop a multi-sectoral nutrition programme that will direct nutrition-focused interventions are a positive development. However, improved nutrition also depends on a number of additional interventions, for which the context is well known. Liberia has already begun to lay the foundation for dealing with nutrition in the iPRS, such as investment in health centres, bore wells and income growth, especially for the primary caregiver. More systematic efforts emanating from the national nutrition action plan will need to address the underlying factors that affect health status and dietary intake through interventions at multiple levels (national, county, community).

DD. Maximizing the Contributions of Tree Crops to Economic Development

261. It is generally accepted that the development of the tree crop sector (rubber, oil palm, cocoa and coffee) will be critical for the overall economic development of Liberia in the medium to long term. It already makes a very important contribution, but the modalities of its expansion have not yet been charted. It is important that the ownership pattern of plantations is inclusive, with significant smallholder participation in production and marketing, and adequate attention must be given to environmental issues.

262. The longer-term price outlook for Liberian tree crop exports is not very encouraging, with the possible exception of oil palm. The country will continue to be a price-taker and will need to improve on its ability to meet the quality standards required for international trade. In order to achieve this, the country will need to secure foreign investment, as the Liberian private sector is currently limited and under-resourced. It must also seek access to export markets, as the growth in demand in domestic markets for agricultural commodities will be insufficient to sustain the high growth rates needed to reduce poverty.

263. The policy objectives for the sub-sector should be to raise rural incomes and employment, and increase export earnings and public revenues through the promotion of production and marketing. The strategy should aim to strengthen policies, institutions and practices that increase pro-poor private sector development, including the strengthening of farmers' organizations and agricultural competitiveness in both traditional and new tree crop markets.

264. For the existing tree crop (rubber and oil palm) plantation estates the first step will be to review all concession agreements and audit all parastatal holdings and estates in order to establish a roadmap for the renegotiation of concessions as necessary, and for the competitive tendering of concessions and other plantation estates. The objectives should be to bring existing and new agreements into line with accepted international practice, and to ensure that the procedure used in awarding any new concessions follows the recommendations of the Contracts and Monopolies Commission (CMC) and the Public Procurement Law (2006).

265. The above process should lead to the formulation of a 'model contract', which would provide a level playing field with respect to: (a) labour, social and environmental, and wider community obligations; (b) fiscal policy (the definition of taxable income – including non-resident dividend income and the removal of individual plantation blanket duty exemptions); (c) a formula and mechanism for negotiating and reviewing prices based on international prices and grades, both for those paid at the factory gate (whether a concession or an independent processor) to private, contract and out-grower farmers, and for purposes of payment of export taxes; (d) contracts for out-growers, including cultivation rights, inheritance rights and management standards, and a mechanism for third-party monitoring of compliance.

266. For smallholder and commercial tree crop farmers the challenge is to make output markets work, and to provide public goods and services to rehabilitate and promote sustainable production, and to improve household livelihoods. The immediate priorities should be to: (a) resolve the status of the LPMC (in terms of its role, debts and assets); (b) explore the institutional options for regulating the marketing of tree crops. International markets have changed, and to ensure that farmers receive a fair price requires a greater emphasis on regulators to work with the private sector to improve quality performance through the mandatory certification of instruments used for quality and quantity assessment in the field (scales, hygrometers, etc.). It is also necessary to ensure that all produce meets appropriate international/industry grading, sanitary and phytosanitary standards. There should also be provision of market information that is timely, objective and disseminated using technology that is appropriate for the rural areas in which tree crop farmers live and work. There must be agreement on a mechanism for the licensing and monitoring of buyers/exporters; (c) discuss funding options for the private provision of public services, including support of common initiative groups, such as farmer associations and marketing groups, and grant funding for the continuation and expansion of capacity building among farmers using such mechanisms as Farmer Field Schools.

267. Previously, commercial tree crop plantations in Liberia were characterized by poor pay and working conditions, which gave rural people no stake in the asset or its productivity. There is consensus that any expansion of the commercial tree crop plantation sector should be accompanied by more equitable access to income earning and asset development opportunities for small growers. It is unlikely that this can be achieved by smallholders alone in the absence of a dynamic commercial/estate sector that could provide the necessary

platform for establishing export markets in terms of market signals (access, delivery, quality and access to the necessary inputs, finance and technical advice).

268. Outgrower-company partnership schemes have been used extensively in agriculture and forestry resource production arrangements throughout Africa. They build significantly on the asset base (natural, social, human and physical) of rural livelihoods. Furthermore, they provide a bridge between large-scale estates with processing facilities and small- and medium-sized growers that is conducive to the vertical integration of the value chain. This not only provides access to complex processing facilities for small farmers but also a conduit for much-needed improved genetic material – both of which are challenges to the development of exporting industries.

269. However, outgrower schemes also suffer from a number of inherent defects. Companies tend to control the most profitable sector – the processing and marketing of the commodities – and outgrower farmers are rarely able to negotiate the terms of contract (loan sizes, produce prices) because they are seldom collectively organized. From a corporate viewpoint, outgrowers may renege on their contracts and ‘side-sell’, the risk of which mitigates against company investment.

270. Currently, there is momentum in Liberia towards the inclusion of significant elements of outgrower participation in the negotiation of leases for tree crop concessions, most obviously in oil palm and rubber. Besides the basic contract farmer model, enhancements have been tried and tested elsewhere, which partially overcomes some of the drawbacks of the basic model. It would be prudent for Liberia to consider some of these (Box 13).

271. The alternatives discussed above emphasize the need for public–private dialogue to chart the way forward for the tree crops sector. MoA should play a stewardship role in line with its focus on policy and regulatory functions. The dialogue should cover, for example, options for regulatory policies (pricing policy, improving marketing), legal reform (labour law, investment code), fiscal reform (concession policies, corporate and other taxes, investment incentives, funding for replanting) and research. Trade finance and micro-finance programmes should be facilitated by public entities and financed through private means or via public/private partnerships.

Box 13: Small Grower–Company Options

Contract Farmer Model: Growers are provided with inputs (physical inputs, loans and extension) for the establishment and maintenance of their crops. In return, outgrowers are obliged to sell their harvests to the company, from which any loan capital and interest is recoverable.

Growers' Cooperative Model: Growers sell through their cooperative, which negotiates favourably with processing plants, seeking the highest prices for its members. Growers receive preferential allocations and loyalty premiums, but are not locked in. They may also have representative rights at shareholder meetings and receive distributed profits.

Integrated Cooperative Model: Growers not only benefit through their growers' cooperative, but also enjoy membership of a Processing Cooperative. This arrangement enables growers to receive distributed profits from both growing and processing, and thus addresses the perception of unfairness in the value chain.

Equity Sharing: Rather than build their own productive asset base, local people and/or communities can be offered equity shares in companies.

272. Particular government focus will be required on how to maximize the impact of the tree crops sub-sector on rural poverty. It should actively encourage investors to create of rural jobs above the subsistence level if significant gains are to be made in alleviating poverty and driving regional growth. Moreover, these investments need to offer equity sharing for local people through smallholder and other grower schemes. Model concession contracts could be used as part of the regulatory framework to enshrine the mechanisms to be used in small grower–company partnerships in the tree crops sub-sector in Liberia.

EE. Increasing Fisheries Production and Revenues

273. **There has never been a Government fisheries policy, and it is now imperative that GoL should formulate a national fisheries and aquaculture policy and strategy and strengthen the country's maritime and fisheries laws and regulations.** The policy should address the development of the requisite infrastructures for industrial and artisanal fisheries and aquaculture, improvements in monitoring, control and surveillance, capacity building and labour development, including community capacity building and co-management, and the conduct of scientific research including relevant data collection and analyses. It should also promote sub-regional, regional and international cooperation in fisheries management.

274. GoL should offer incentives to local and foreign enterprises for investments in fisheries and aquaculture by reviewing the investment code and putting into place appropriate provisions. The Code of Conduct for Responsible Fisheries should guide the national policy, and relevant sections and provisions of the Code should be incorporated into new national fisheries legislation to replace the Natural Resources Law of 1956, including the strengthening of national capacity for monitoring, control and surveillance (MCS). Liberia should accede to all relevant international fisheries agreements, conventions and protocols as an essential foundation for partnership and sub-regional and regional cooperation in sustainable fisheries management.

275. **Illegal, unreported and unregulated (IUU) fishing in the country's Exclusive Economic Zone (EEZ) is a serious concern that the GoL cannot address at present.**

MRAG (2005) estimate that elimination of IUU would lead to about a 4–5% increase in Liberian GNP and allow a 4–6% increase in per capita fish consumption, resulting in increased food security and nutritional status. As a short-term measure GoL should request UNMIL once again to provide support to MCS activities. Although UNMIL's mandate is on territorial surveillance and security, UNMIL appears to be willing to lend support to fisheries surveillance activities by conducting aerial surveillance in support of maritime surveillance. As a longer-term and more permanent solution GoL should prepare and submit a funding request to friendly governments for the supply of patrol boats and other surveillance equipment. A sustainable solution should be developed that combines private sector as well as GoL interventions, as has been achieved in other African countries.

276. Maritime patrols should not exclusively target unlicensed (poaching) fishing vessels but should include regular boarding of licensed fishing vessels to inspect fishing gear and ensure that it conforms to specifications. In parallel GoL should liaise closely with importers of fishing gear to ensure that only fishing nets of approved mesh sizes are imported. Co-management between GoL and fishers would ensure that all restrictions are observed at the community level by artisanal fishers.

277. **Without the requisite manpower and resources, the Bureau of National Fisheries (BNF) will not be able to meet its mandate and, therefore, it needs to build its capacity.** Currently, human resources and enforcement capacity are almost non-existent. There is an acute shortage of trained personnel in key disciplines (biology, statistics, management, economics, fishing technology, aquaculture, extension, etc). The BNF has been ruined by war and is currently ill equipped and lacks the capacity to monitor the fisheries resources. It should be strengthened as a matter of priority, and a capacity building programme should be elaborated and implemented for staff of the BNF. Also, MoA should advocate the introduction of Fisheries Science into the curricula of the UoL and CU so that Liberians can study fisheries science and related disciplines in the country. This would reduce the cost of training personnel of the BNF in institutions outside Liberia. Capacity building programmes should also be implemented for private sector operators in industrial and artisanal fisheries and in aquaculture. Training programmes on improved fishing, fish handling and fish processing technologies, and modern aquaculture techniques, should be designed and implemented through the extension service.

278. **GoL should seek collaboration at sub-regional, regional and international levels for scientific research**, especially on the sustainable management of shared fisheries resources. This should be designed to provide useful data and information on fisheries, natural resources, environments and ecosystems in Liberia, as a country within the Guinean Current Large Marine Ecosystem (GCLME) region. The current cooperation with the Nansen Programme on acoustic surveys is very useful to the country as it provides accurate data and information on the status of pelagic fish resources on a regular (annual) basis. GoL should seek to expand its cooperation with the Nansen Programme to include periodic surveys of the demersal fisheries resource. In addition, GoL should seek collaboration and technical support from the IRD (Institute for Research and Development) of France, to allow the performance of studies on the fisheries resource of the river systems of Liberia. Similar to the Nansen Programme, the assistance requested from IRD should be on a continuous basis and should include capacity building and institutional strengthening. CARI needs to resume applied aquaculture research and the institution should be the main source of expertise and technical knowledge to assist GoL in the sustainable development of aquaculture. The production of

fingerlings and brood stocks to supply fish farms should also be an important activity of CARI.

279. The BNF should start compiling useful data on fisheries and aquaculture and establish a fisheries data bank. Baseline studies that should be undertaken include annual Frame Surveys on the artisanal fishery to determine the distribution of fishing effort and the structural aspects of the artisanal fishery, such as the total number of fishers and fisher assistants by nationality; the types and sizes of fishing canoes e.g. motorized/non-motorized; number of crew per canoe; fishing gear employed per canoe; fishing status of fishers: full-time/part-time, other occupation; fishing habits: migratory or sedentary; fish landing sites with development potential, etc. In collaboration with farmer cooperatives, and local and international NGOs, staff of the BNF should commence systematic collection of data on aquaculture production. Socio-economic studies of fishing communities (community/household profiles, poverty profiles, vulnerability assessments, etc.) should also be sponsored by BNF, possibly by outsourcing to private sector consulting firms and university research institutes. Such studies will be important inputs into the planning of fisheries development by BNF.

280. **A special programme is needed to realize the enormous potential of artisanal fishery to contribute to national socio-economic development** through employment generation and poverty alleviation, national food security and improved nutrition, and revenue and foreign exchange earnings for the country. Currently, the artisanal fisheries (marine and inland) generate employment for more than 33,000 people in the production, processing, distribution and marketing chains and account for more than 60% of total fish production, all of which is consumed locally. However, artisanal fishery is basically underdeveloped; production methods and systems are outdated and processing technology is still rudimentary and unhygienic; distribution and marketing systems are not well established, and post-harvest losses are very high. The widely dispersed nature of artisanal fish landing sites and the age-old tradition of fishers working in isolated family groupings make improvement of artisanal fishery management a very difficult undertaking.

281. **GoL should support the establishment of a number of Community Fisheries Centres (CFCs)** with the required infrastructure, including ice plants, chill and cold storage facilities, fish boxes, fish processing areas, storage facilities for processed products, workshops, boat building areas, individual lockers for safe keeping of fishing equipment, and insulated/refrigerated vehicles for fish distribution and marketing. The establishment of CFCs should be initiated along the coastal areas, targeting the bigger fish landing sites/communities, and gradually move to the major sites/communities in the inland areas. International donor assistance and support should be sought. CFCs should focus attention on building and strengthening the human resource capacities of the different fisheries economic operators (fishers, fish processors and fish dealers) through training on issues relating to fishing, fish hygiene, fish processing and quality control in the artisanal fisheries. This would have the objective of improving fishing methods and techniques, fish handling, processing and quality control standards and reducing post-harvest losses. An essential component of CFC activities should be the encouragement of private sector and other financial institutions to make investment credit available to artisanal fishers, particularly indigenous fishers, and especially women.

282. **GoL should take active steps to help fishers, fish handlers and processors in Liberia implement quality control (QC) programmes and good manufacturing practices**

to ensure the safety and quality of fish products that meet the international standards. Fish quality and safety should be addressed across the entire value chain. With support of development partners including INFOPECHE in Abidjan, Cote d'Ivoire, and the Common Fund for Commodities in Amsterdam, the Netherlands, GoL should implement capacity building programmes in industrial fisheries, and particularly in fish factories. GoL should fully support the proposal to build a Regional Training Centre for Fish Quality Assurance in Monrovia. The proposed Centre will be a component of the EU-funded Post Harvest Project on Strengthening Fishery Products Health Conditions in ACP/OCT countries. In the long term, GoL should introduce an eco-labelling scheme for fish and fishery products as an instrument for the integration of environmental requirements into the management of fisheries. Eco-labelling would be an economic incentive for the fisheries sub-sector to act in a more sustainable way, contribute to the sustainability of fisheries resources and provide for an adequate level of protection of the ecosystem.

FF. Increasing the Contribution of the Livestock Sector

283. **The livestock sector is an area about which very little is known and the obstacles to development are not well understood.** The tentative analysis presented earlier suggests that livestock constitute an important opportunity. However, because of the paucity of data on the sub-sector, it is essential to collect information and conduct some basic analyses before further action is taken. Specifically:

- Utilizing rapid appraisal in a sample of villages in the country, data should be collected relating to types of livestock producers, livestock population, animal production systems, major livestock constraints, assistance needs, cost and returns in livestock production, major value chains, prices of different livestock products, and the real needs of actors in the sector. Other useful information throughout the value chain should also be collected.
- The comparative advantage and potential environmental impact of livestock production systems (including the bushmeat system) should be assessed, given the forest ecosystem nature of the country, and the competition from imported livestock produce from neighbouring countries and the EU. The possibility of establishing a fund for livestock development in the country should also be assessed.
- Studies of the characteristics of the internal demand for animal products and their evolution in time and space (characterization of demand) should be conducted, and the mechanisms of improving distribution channels and support to consumer organizations established.

284. In the meantime, consideration should be given to strategic orientations and priority programmes based on the following five priority areas:

- Review the existing legislation pertaining to veterinary sanitary regulations, and propose revisions to bring them in line with modern standards.
- Expand the existing programme of NGOs and other stakeholders to re-stock the national herd with a focus on short-cycle ruminants.
- To make livestock a pillar in the fight against poverty, food insecurity and unemployment, initiate micro-projects to establish a number of pilot animal production centres in selected villages, which will train local entrepreneurs in modern livestock

production techniques and businesses (milk production, sheep and goat husbandry, poultry and pig raising, guinea fowl and grass cutter production, etc.).

- Within the context of the MoA's Change Management Programme, improve the institutional environment and infrastructure for livestock and strengthen livestock inspection to improve the health standards of livestock products, including strengthening veterinary services and support for research into livestock diseases.
- Preserve, improve and exploit the pastoral common property resources of the country through a programme of assistance for the rehabilitation of pastoral areas, prevention of the degradation of natural resources and the promotion of sound range management.

GG. Policy on Agricultural Imports and Exports

285. **GoL should continue to maintain a liberal policy towards food imports and exports, with careful attention paid to the effects such a policy has on the incentive system for domestic food production.** Liberian governments have consistently maintained a liberal policy towards food imports and exports and the situation remains the same. Late in 2006 there was concern that importers had been holding off on a large consignment of rice in order to speculate for higher prices. GoL intervened by charging the importer with 'economic piracy' and placing him under arrest. Although this charge was subsequently dropped it demonstrates the importance the current GoL places on rice as a staple food for consumers. It did not, however, lead to the introduction of any law or policy to protect the country from this happening again, but demonstrated the vulnerability of Liberia to forces of commercial interest and possible speculation. Engaging in dialogue with importers would be an important step in the right direction to develop an enabling environment and to improve productivity to allow greater access to food.

286. Whilst GoL remains concerned with the volume of rice imports and views the commodity strategically, it maintains a zero monetary and fiscal policy towards it. This policy encourages private sector participation in the industry and reduces the potential burden on the State Treasury. GoL should commission an independent assessment of its rice trade and price policy.

287. **Moving towards ECOWAS Common Tariffs.** Imports of machinery and other goods are subject to tariff duties, ranging between 2.5 and 25%, which constitute a major source of government revenue. Import duties are specific (based on weight, for example) for some commodities and *ad volarem* (based on cost, insurance, and freight value) for others, which may hinder the application of technology due to the high cost. Specific duties apply to foodstuffs (rice, though, is a special case and is exempt), beverages, petroleum products, and certain rubber and textile products. All exports and some imports require licences. Customs duties are 25% on luxury items such as alcoholic beverages, apparel, cosmetics, electronics and jewellery. It is possible that there might be a temporary decline in government revenues when ECOWAS common tariffs are adopted. However, as experience elsewhere has shown, the long-term benefits from the stimulation of inter-regional trade are likely to outweigh any short-term losses.

HH. Institutional Reforms

288. **Democratization, decentralization and empowering of local authorities** require two critical steps: (i) restructuring the state system to give the people greater authority to

manage their own affairs at the local level; (ii) making local authorities and other institutions of local self-governance more representative, participatory, accountable to the local population, and more autonomous from the central government. The Governance Reform Commission (GRC) has recommended a decentralization policy framework. It is proposed that “decentralization, in as far as it puts emphasis on community organization and participation at the lowest level, will provide the political and administrative framework and structures to meet the challenges of post-war reconstruction and development of the country [and will] provide the rural communities with the autonomy, flexibility and opportunity for popular participation in the process of planning and implementation of development programmes”. The proposed next steps are summarized in Box 14. Ongoing support for the GRC will help to establish an appropriate policy and legislative environment.

Box 14: Steps and Principles for Developing a Decentralization Policy Framework

The steps include:

- (1) Defining the forms of decentralization, basic principles, pillars, systems, institutional roles and responsibilities of actors;
- (2) Obtaining consensus and ownership of policy initiatives by stakeholders;
- (3) Formulating a GoL decentralization policy framework that is based on the principles of devolution, popular participation, partnership, non-subordination and subsidiarity.

Source: Wagaba Francis (2005).

289. County Support Teams (CSTs) have been established to ensure a coherent and consolidated approach among UN agencies (and across DPs and NGOs) to addressing county challenges, providing support to GoL through the County Superintendents, and building the capacity of local government institutions as they assume increased responsibility for security, reconstruction and development. Capacity development by CSTs is focused on enhancing the skills and performance of local government officials (Superintendents, Mayors, Development Superintendents, Project Planning Staff, County Officials, District Commissioners, Chiefs and Traditional Leaders) and providing training in support of the Millennium Development Goals (MDGs), notably in HIV/AIDS awareness raising and training. Currently the focus is on cluster approaches in areas such as human rights, food security, early recovery and the rule of law. The CSTs are seeking to facilitate transition from emergency conditions to recovery and more normative development processes, and as such are providing interim orientation in the transition towards the participatory planning and local level decision-making processes that would eventually characterize decentralization of line ministries and their local service provision functions to county levels.

290. The District Development Committee (DDC) approach (Box 15) was first launched in 2004 and re-launched in July 2005, and is now operational in most of the 73 districts. Although the approach is still at a fledgling stage, it has the potential to improve the involvement and engagement of local communities in local economic development and, in turn, in shaping their own development. Furthermore, it provides a link between local communities and various development agents that operate at the local, regional and national levels. DDCs are being supported⁴⁸ to encourage community participation in planning and

⁴⁸ Currently the UNDP Community Based Recovery Program (2004–2007) is providing support (US\$9 million). Chairpersons of DDCs are currently receiving basic orientation and training in participatory approaches to community level planning and development; the New African Research and Development Agency (NARDA), a local NGO, is providing this initial training for UNDP.

programme development of local rehabilitation projects in water and sanitation, education, and rural roads and bridges. Problem areas that need to be addressed as the decentralization processes continue include the lack of clarity on roles and responsibilities of key actors, such as County Superintendents and their Assistants, appointed by MIA, centralized budgeting and financial administration, and poor functional linkages between County Assistant Superintendents for Development on the one hand, and MoA and MoH county-level management and staff on the other, who still report centrally to their Head Offices in Monrovia.

Box 15: District Development Committees

A DDC is a fourteen-member elected institution composed of a District Commissioner/ Superintendent (ex-officio), Chairperson, representatives of chiefs, representatives of all women's groups, representatives of youth groups (2 persons: 1 male, 1 female), representatives of elders (2 persons: 1 male, 1 female), representatives of CBOs (2 persons: 1 male, 1 female) and representatives of sectors, namely agriculture, education, health, water and sanitation (4 persons: minimum 2 females). The DDCs are local development and coordinating bodies in the districts. They provide an entry point to Local Economic Development (LED). Overall, the DDCs will take on planning, coordination and monitoring roles. Specifically, their Terms of Reference include sensitizing and mobilizing communities and using participatory approaches in designing projects, and evaluating and formulating development strategies in collaboration with NGOs and UN agencies.

291. It is widely recognized that in rebuilding its capacity, MoA needs to be transformed and modernized relative to its pre-war role and function. MoA aims to become an effective and efficient organization that focuses its energy on its most important or core function – to develop and maintain an enabling institutional framework that promotes economic development and civil society. Functions that contribute directly to this are core functions, whereas services that could be commercialized or privatized are non-core functions. It is recognized that core and non-core functions will change over time as the Liberian economy develops and, for instance, other service providers become established, allowing government to withdraw from direct service provision. It will be critical to avoid establishing rigid structures within MoA that impede its ability to evolve and to reallocate effort in response to changing contexts.

292. MoA needs to embark on a ministry-wide change management programme (CMP). Recent experience from other African countries (e.g. Ghana, Malawi, South Africa and Zambia) indicates that a comprehensive approach is required and this must be specifically designed for facilitation across all levels of staff in the Ministry. The programme would initially be of medium-term duration (2–3 years) with staff devoting approximately 20% of their time to its activities in the inception phase over the first 18 months. This would allow the programme to be implemented concurrently, and without disruption, with the ongoing work plans and commitments of management and staff. The programme should be based on the principles and practices of Organization Development to assure openness to new thinking, learning and self-development, individual and group accountability for performance, and institutional ownership in the process through which the department grows progressively into its new or revised functions and roles. The proposed focal areas for a CMP for MoA are outlined in Box 16.

Box 16: Proposed Focal Areas for a Change Management Programme

- Study/learning tours by MoA, farmers and non-state-actor partners to other African countries to gain knowledge and insights from experiences and case studies in the reform and renewal of extension systems.
- National multi-stakeholder workshop for initial orientation of key sector actors; formation and orientation of National Change Team and DECE-led Task/Change Teams to lead major thrusts and exercises outlined below.
- Service analysis exercise to assess relevance, quality, capabilities and costs of existing service provision to various smallholder farmer categories at county level.
- Core functional analysis (CFA) exercise followed by a national stakeholder workshop to agree core functions of MoA and its relationships with key partners.
- Visioning, planning and reorganization of MoA, including organizational structure, guidelines for multi-annual and decentralized budgetary allocations, disciplinary specializations, and staffing from HQ to county/clan levels.
- A skills audit followed by revision of departmental job descriptions at divisional, specialist and county levels; subsequent review and adoption by MoA, and staffing reduction/recruitment under a competitive remuneration system.
- Training needs assessments followed by management training and mentoring programmes in agri-services planning and coordination for divisional managers, technical staff and county coordinators.
- Preparation and implementation of new training programmes for county trainers/staff in participatory extension approaches, agribusiness/farm enterprise management, farmer group and organizational development, etc.
- Design and facilitation of pilot programmes at county level involving new approaches to local services coordination and delivery under pluralistic and decentralized arrangements with robust stakeholder involvement processes.
- Continual evaluation of learning and progress in accomplishing expected outputs by change teams with the support of external facilitation/expertise as required.

293. **The central focus for renewal of the extension system should be on building a pluralistic and participatory agricultural advisory and extension service.** This will require the facilitation of processes that will elaborate a vision, strategy and know-how to give practical effect to the desired ends of national policy intent for the provision of agricultural extension services to farmers. It will involve a flexible and iterative ‘learning by doing approach’ to ensure that change management in rural institutions and in approaches to local development is grounded in the specific contexts and needs of Liberian communities. The guiding value is ‘learning and growth in collective and participatory local ownership’ by Liberian actors across the agri-service system, with farmers, their organized groups and allied stakeholders at the centre of demand-led agendas for responsive service provision and continuing capacity development at central and local levels.

294. **The extension system needs to transform from the current transfer of technology model to a pluralistic extension system involving participatory extension approaches (PEA)** that aim to develop demand-driven services by engaging in a paradigm that involves listening to farmers and other stakeholders through interactive dialogue with farm families and their communities. In this system the members of the community define their problems, needs and priorities and participate fully in the search for solutions. This will result in a true sense of community and individual ‘ownership’ of development initiatives and thereby greater commitment and interest by participating beneficiaries. Past experience clearly shows that importing standardized models of extension to a new context is not a promising strategy, even when the imported models are viewed as ‘best practice’. What is important is to build capacity among policy planners and extension managers to identify modes of providing and

financing extension that best fit the specific conditions and development priorities of their country (IFPRI 2006). The involvement of non-public as well as public actors is central to the success of pluralistic, participatory systems.

295. As part of the CMP, the development of policy and guiding principles of a pluralistic extension service should commence with acceptance and engagement with the Neuchatel Principles (Box 17) and be further developed and gradually adapted and refined based on experiential learning in MoA and at local service development and delivery levels. With the focus on the county level, there will be a need to put in place processes that will assure robust local stakeholder involvement and well-planned and coordinated provision of advisory and training services to farmers. Services need to respond to local conditions (agro-climatic and other). Based on experiences in other countries, local agri-services planning can be improved through: (1) facilitating multi-stakeholder forums with specific inclusion of marginalized and vulnerable farming groups, and (2) leading substantive county coordination teams/units for services development, planning and coordination. To be effective, such units will need to conduct analysis of services and to develop capability profiles for all major service providers in each county to inform and facilitate appropriate and optimal deployment of actors and to assure quality of delivery in county extension plans and strategies. In designing new programmes for service provision, MoA has to ensure that issues of gender equity and equality, and HIV/AIDS are analysed and incorporated in the design of extension service programmes.

Box 17: The Neuchatel Initiative for Agricultural Service Systems

The commitment to change and renewal in agricultural services provision in Africa occurs in a context where international donors and development agencies have come together under the Neuchatel Initiative (NI) to engage in clearer and more strategic dialogue with national partners to develop a common and shared vision for the future role, delivery arrangements and funding of extension services in rural development. The NI Common Framework for Extension (1999) advanced some key principles to guide and inform transformation processes. Those principles include:

- The importance of *sound agricultural policy* to provide a conducive and enabling environment for rural sector development;
- *Pluralism* i.e. various state and non-state actors providing a diverse range of services under coordinated arrangements;
- The importance of the *market* and *demand-led impetus* in the supply of goods and services;
- *Facilitation and problem-solving approaches* for more heterogeneous and resource-poor communities;
- *Decentralized provision of services* in processes of continuous dialogue with local stakeholders.

Extension service providers are, therefore, increasingly challenged to open up to new demands in more businesslike ways and, through broadening their horizons and approaches, to renew their roles as more active and effective players in assuring food security, improving rural livelihoods and supporting smallholder farmers and organizations with potentials for commercialization.

296. The old-style research-extension linkages have not worked very well over the past 20 years in most African countries. In the emerging paradigm, both research and extension programmes need to demonstrate more relevance to the demands of farmers. Farmer-centred collaboration, which involves both research and extension services working closely with farmers, is emerging as the most appropriate way of assuring improved relevance and accountability in their combined efforts to ensure viable food production and nutrition

programmes for poor households. The link to knowledge management rests in the quality of learning during such processes and the sharing and documentation of specific experiences with colleagues. Institutional memory, in the form of case studies and lessons, must be used to guide ongoing programme and project design and planning. Some reasons why pilot learning and innovation are necessary in the transformation of an extension system are given in Box 18.

Box 18: The Importance of Pilot Learning and Innovation in Transforming an Agricultural Extension Service System

- Changes to county systems of extension service provision on the scale and depth proposed under decentralized arrangements have not been introduced before in Liberia.
- The agendas for change are complex and cut across many aspects of existing institutional mandates, functions and service responsibilities. County personnel will have to ‘grow into’ their emerging roles and engage actively with the challenges.
- As no comprehensive cases studies of good or best practice yet exist for such a system in Liberia, there is a need to explore and test a range of concepts and strategies at local levels (*in situ*) initially in a ‘learning by doing together’ approach.
- There is a need to build the competencies of individuals and capabilities of teams, organizations and institutions gradually across the system in order to learn and gain the confidence needed to bring the change agendas into effect.
- There is a need to foster high-quality learning from experiential practice strategies or practices nationally in a discrete number of districts initially, before seeking to out-scale or mainstream.
- To seek to introduce such a new system without pilot learning would risk disruption to the entire existing system of service delivery, without the crucial lessons and insights to implement the alternative arrangements with the competencies and demonstrated ‘know-how’ necessary to succeed.

297. For testing and local adaptation of new approaches to extensions such as PEA (e.g. Farmer Field Schools), MoA and partners should conduct initial pilot learning exercises in about three counties, with comprehensive documentation of programmes, and local stakeholder evaluation of impacts, training costs and viability before out-scaling to further counties or national level. In the context of decentralized extension systems that involve increased commitment to group development and farmer-to-farmer knowledge exchange, it is vital to ensure that new approaches are demonstrably relevant, that trainer capabilities are proven, and that outcomes are viable and enduring for smallholder farmers under their particular local circumstances. In this respect, farmers have to be increasingly involved, initially through robust participation in local stakeholder forums, in assessing the effectiveness and impact of extension services and field personnel.

298. **Rebuilding Liberia’s agricultural research and development (R&D) programme presents an opportunity to adapt to the major paradigm shifts seen in developing countries in recent decades.** Increasingly, agricultural R&D in many developing countries is guided by one or more of the following perspectives: innovation systems, value chains, research for development, and impact orientation. The national agricultural research system must explicitly consider these perspectives in designing its R&D strategies. Subsequently, the proposed strategies should inform the organizational structures, management models and

resource endowment (human, financial and infrastructure) needed to achieve the strategic objectives of the research system. Given the magnitude of the crisis facing the system, a two-stage plan of action for revitalizing the R&D system is proposed – a short-term programme and a medium- to long-term programme.

299. **Short-term priorities should concentrate on ‘quick win’ measures** that need to be undertaken immediately in order to re-launch and rationalize the national research system. The focus should be on re-initiating adaptive and applied research; capacity building activities (human and physical); formation of strategic alliances and partnerships with key stakeholders; resource mobilization and the development of a long-term strategy for the development of national agricultural research. Given its limited financial and human resources, CARI should rationalize its current activities. Some of the activities related to export crops could be transferred to the other relevant stakeholders. For example, the research capacity of the Forest Development Authority (FDA) could be strengthened and the mandate and responsibility for forestry research transferred to it. In such a case the Director General of CARI should be a member of the board of FDA and a technical advisory committee should be created to guide research in FDA. Similar arrangements could be considered for rubber (with Firestone). In the case of cocoa and coffee, substantial research has been conducted in Ghana and Nigeria (cocoa) and Cote d’Ivoire (coffee). Liberia could benefit from the progress already made by these countries through innovative cooperative or collaborative research agreements or partnerships. CORAF could play a role in designing mechanisms and incentives for facilitating such arrangements. This would free up resources for CARI to focus on food crops, other cash crops, and livestock and aquaculture.

300. **Medium- and long-term priorities should be guided by experience of the short-term action plan.** The priority activities could include:

- Development and implementation of an appropriate research strategy for the short and medium term based on based on the priorities identified and a rationalized mandate for CARI, including both strategic and applied research.
- Development of sub-stations to enable decentralization of activities to appropriate agro-ecological locations.
- Launching of an aggressive recruitment and long-term training programme (MS and PhD) for CARI and other public sector agencies.
- Sustainable enhancement of human resources through in-service group training on key topics, e.g. research project planning, management and monitoring; impact assessment; scientific writing; data collection/management and analysis.
- Rehabilitation and construction of facilities for germplasm conservation.
- Development of diversified and sustainable funding mechanisms.
- Enhancement of public–private–civil society partnerships, including collaboration with farmer organizations.
- Development of policy and socio-economic research capacity within CARI.
- Improvement of mechanisms for documenting and disseminating research results and impacts of research.

- Implementation of measures for institutionalization of systems thinking, innovation system perspectives, and agricultural value chain approaches, etc.

301. The uptake of research output and the relevance of that output depend on well functioning extension (and farmer learning) systems and relevant, high quality agricultural education programmes. There is therefore a strong need for a fully integrated agricultural research, extension and education system in Liberia. The major institutions responsible for development and delivery of agricultural education programmes in Liberia – MoE, CAF, CARS and BWI – are planning and in some cases already undertaking a number of interventions aimed at enhancing agricultural education and training.

302. Further actions to enhance the agricultural education system over the medium to long term include the following:

- Efforts should be made seek assistance through the World Bank's 'Africa Agriculture Education Training (AET) plan', which has been proposed in order to strengthen AET programmes in Africa over a 30-year timeframe.
- Clear political commitment is needed at the highest level to strengthen AET, particularly at the college level, which translates into increased state financial support for AET.
- Efforts should be made to develop strong curricula for both secondary and college agricultural training programmes, with flexibility for location factors and industry/employee demands.
- Training of agricultural education instructors at all levels should be given the highest priority. Curricula for these programmes should be upgraded and standardized.
- Partnership should be developed between CAF and CARS, which will allow students from both programmes to take courses at each other's campuses within the context of their overall graduation requirements. This will expand the total number of available areas of specialization.
- Training and accelerated internship programmes should be developed to provide training in special areas of need and in the use of equipment and technology that has been provided by NGOs to rural communities that remains either unused, due to lack of trained personnel, or under-utilized, due to inadequate training.
- A full assessment should be made of the infrastructure requirements and other material needs at CAF in light of the existing pressing needs and to allow for future expansion.

II. Making Markets Work

Improving the functioning of agricultural markets for both inputs and outputs is a critical aspect of developing the agricultural economy, driving growth and reducing poverty. As indicated earlier, getting markets to work effectively is often the most important challenge for countries like Liberia as they attempt to develop their agricultural sectors. Improved productivity can be sustained only if both input and output marketing function well. Markets in Liberia are sparse, and exhibit significant inefficiencies as well as market failures in important aspects. To improve the marketing system in Liberia requires collaboration between the public and private sectors, including farmers' organizations, to take direct actions such as: (a) improving access for distribution through improved transport,

especially road and rail networks, (b) improving the market institutions, (c) improving the physical infrastructure of marketplaces, and (d) putting in place appropriate market information services, as well as more indirect actions such as increasing the supply of produce through increased agricultural production and improving access to credit, and (e) implementing risk mitigation measures derived from detailed study of past experiences and lessons learned.

303. Improving physical access to markets requires major rehabilitation and expansion of the road network, including farm to market roads as well as the rehabilitation of the Yekepa–Buchanan railroad for commercial purposes. Major efforts towards the former are ongoing and will need to be continued and scaled up in the future. Priority rural roads should be selected on the grounds of their likely economic impact and the location of markets to maximize the economic impact of improved connectivity. Furthermore, the infrastructure development programme in Liberia needs to ensure the linkage of the key production centres, to facilitate movement of agricultural produce from areas of surplus to the rapidly growing urban areas and the rest of the country.

304. Improving the functioning of physical markets requires improved management of those markets. Experience suggests that management of markets is best left to the traders themselves through associations, rather than an outside body. In this regard LMA could provide critical services to marketers if properly organized and managed. The leadership of LMA, at both the national and local level, should be democratically elected by the marketers, and the operations and functions should be decentralized to empower the local membership and leadership to make decisions regarding management and development initiatives at the county/district level. The collection and use of market fees should be made transparent to all, and external support should be provided to LMA to train and build management capacity and skills at both the national and local levels.

305. In addition, market hall construction should focus on accommodating marketers during the rainy season and providing shelter from the sun. Market halls should have zinc roofs and concrete floors, but will not normally require walls. Concrete tables, with water supply, should be provided for fresh meat and fish traders. Movable tables can be provided for other sellers. Potable water and toilet facilities should be available in all markets, as well as suitable storage facilities. Experience with the Liberia Agency for Community Development (LACE) shows that such structures can be constructed under community management for relatively minimal investments (around US\$50,000) thereby maximizing the likelihood of their upkeep.

306. Ease of access and good facilities only benefit farmers if they are able to make informed choices about where and when to sell their produce. Some countries have experimented with establishing a Market Information System (MIS) using appropriate electronic information technology. These services collect and disseminate key indicators on a regular basis (monthly, weekly, etc.), including the availability of staple food commodities, availability of seeds (particularly rice) and tools, commodities traded across borders, wholesale and retail prices of key food commodities, and availability and cost of transportation. However, it should be noted that many African countries have experienced significant difficulties in sustaining such services: they can be costly and require sustained quality input data. Innovative methods facilitated by modern communication powered by information technology (IT) can be used. A proposed Liberian MIS should therefore start on a small scale, perhaps collecting price information from one or two markets in Monrovia on a

weekly basis. If successful, it could be integrated eventually into a region-wide arrangement.⁴⁹

307. **Risk is a major problem** – many agents perceive risks to be so high and the rewards so low that expected profits from market-based activity are insufficient (in comparison with inputs) to encourage their participation. Possible measures to alleviate this problem include the provision of guarantees or subsidies by the state to traders and suppliers that are aimed at overcoming perceptions of risk or the high costs of working in small and weakly developed markets. Also, given the volatility of commodity markets for food and cash crops, incentives for productivity improvement and risk taking by small and medium holders will depend on some degree of price stability and facilities for storage and processing facilities. Price volatility impedes planting decisions, the ability to purchase inputs and the ability to obtain credit. For countries like Liberia the critical importance of overcoming market failure provides some justification for the state to play a more direct role in building and creating markets. State interventions can be introduced in relatively market-friendly ways, for instance through vouchers for subsidies or partial guarantees to encourage banks to take risks. However, these must be seen as temporary measures focused on removing the barriers to the participation of the private sector in markets. The indiscriminate or prolonged use of subsidies may add to rather than reduce the underlying problem.

308. **Finance remains a real obstacle for many poor farmers.** Their income comes only after harvest, and many do not have sufficient access to credit, savings or remittances to finance the costs of inputs such as seed and fertilizer. The previous generation of state-operated activities, such as targeted agricultural finance schemes and input schemes operated by parastatal marketing organizations, has not worked effectively. Much has been learned about effective micro-finance and promising models for improving the access of poor people to financial services are beginning to emerge (DFID, 2005).

309. To address the constraints identified in the rural finance sector, DPs should assist MFIs and commercial banks to expand into rural areas as fast as possible. This could include access to a guarantee fund, but it must be recognized that attaining significant outreach in rural areas will take many years. Efforts should also be directed towards setting up a network of Rural and Community Banks in the country. On the demand side, development agencies need to assist the banks and MFIs to accurately identify and groom creditworthy clients. The focus should be on working with the more cohesive and successful farmer groups, cooperatives and associations. Development of cooperative and association business plans to assist in acquiring bank financing would be a priority. Such a project would also require substantial short- and long-term technical assistance.

310. **An effectively functioning land market adapted to the conditions in Liberia is essential for agricultural development.** The existence of both statutory and customary land tenure systems in Liberia can be seen in a number of ways, including in the context of leading to problems. However, most countries in Africa have this duality, as do a number of developed countries. Such duality *per se* is not problematic, but the way it is handled may be. In Liberia there needs to be increased mutual recognition and connection between the two systems. The purposeful separation of the two systems historically has led to their

⁴⁹ If successfully developed, an MIS in Liberia could be integrated into the IFDC-managed and Internet-based MISTOWA sub-regional market information system, which aims to provide information primarily to facilitate cross-border trade, as well as into the ECOWAS SIGOA-TOPS system, so that Liberian producers and their organizations can be better integrated into the sub-regional economy.

non-integration, to discrimination when they do come into contact, and has prevented the evolution of positive and mutually beneficial ways of interacting.

311. To overcome the backlog of land-related cases clogging up the courts, GoL needs to consider adopting something akin to a ‘components approach’. Such an approach would entail outlining the suite of relevant components in existence (and needed) for the broad complement of services, policies, and laws regarding land tenure, and then working with the GRC to coordinate these and assist in funding and building capacity with the ‘weak links’. Capacity is extremely low within the different institutions that will need to play various roles and functions within the land and property domain. Capacity building and retention in this regard is greatly needed.

312. There are longstanding concerns over the existing approach to concessions, and a review of existing concession agreements as well as the legislative foundations for the issuing of concessions is an urgent priority. The continued claim of very large areas under rubber concessions, while only a small fraction of the total area has ever been developed, presents significant problems for local communities, food security and, potentially, stability. The precedent set by the FDA in reviewing all forestry concessions sets an important example for the same in all other sectors. Such a review might hold as a priority the reduction in size of the area claimed to more appropriately reflect actual or potentially realistic development. Second, the legal construct of ‘concession’ in Liberia needs thoughtful review. A common use of concessions is for a specific right of use for a specific business proposition. Such an issuance comes with penalties, including forfeiture of the concession if the business plan is not realized in due course, or if violations in use occur. Concessions have historically been issued for certain purposes – rubber, timber, mineral, etc. – but in reality the concession holder can exploit the concession area for virtually any use, with no effective review of the proposed business plan nor consequences for non-compliance with the plan. In addition, there appears to be (at least in practice) the notion that concessions include the right to exclude others, and this has caused considerable animosity among local communities that are then either evicted or subjected to conditions in order to remain. As it stands, many concessions operate as a form of private property.

313. In addition, the options of leasing, licensing and other forms of conveyance should be explored, to allow the pursuit of commercial exploitation of land resources while not relieving local communities of their lands, use rights, and livelihood. Forms of leasing and license are much easier to provide to foreign and other investors in a secure way than is private property, which for rural areas includes the right to exclude other from large acreages. The non-cooperation that the latter would provoke tends to affect the security of the holding for the investor. The land and property sector is in need of a comprehensive document retrieval effort, in order to copy and archive the laws, deeds, titles, registries and other forms of land and property related documents that exist.

314. The ambiguity issue leads to significant problems, delays and, most importantly, tenure insecurity. Research would show the degree to which such ambiguity is a reality in the rural tenure sector, and whether local leadership and the reworked social relations with regard to land have resolved many of the ‘who owns what land’ issues. In other words, is the rural tenure situation primarily ambiguous from the perspective of Monrovia, while from a more local perspective claims, disputes, norms and institutions are becoming resolved, or is there real ambiguity and confusion that is ‘stuck’ in its present state, with local actors unable to

move forward on resolving local land tenure issues? There is some evidence that the former is the case.

315. **Mainstreaming gender:** Despite advances on the legislative and public policy front regarding women's rights at the national level, complex community arrangements and longstanding traditions continue to restrict women's development opportunities at the local level in rural areas. Social customs limit women's mobility, constrain their participation in decision making and determine their involvement in productive activities. Liberia is in the process of rebuilding its social fabric following the war through the creation of new institutions and the recreation of old ones. During this process of reworking norms and rules that govern community life, it will be crucial to avoid pre-existing arrangements that discriminated against women and young males in rural society in many aspects of life, including their access to assets, labour – including their own – and decision making.

316. Improving women's access to land, credit, inputs and extension services in Liberia will contribute to rural growth. Similarly, addressing social and cultural biases that confine women to narrowly defined social and economic roles will help women to participate in profitable activities such as cash crop production or forestry, and will improve rural livelihoods. Improved participation in decision making will contribute to more effective and efficient programmes and policies, by allowing them to be adjusted to the often overseen needs of female farmers, which will in turn contribute to improving women's productivity. Studies in Burkina Faso, Cameroon and Kenya show that more equal control of inputs and farm income by women and men can raise farm yields by as much as a fifth of current output (World Bank, 2001).

317. GoL should ensure that any agricultural strategy includes women at the centre, and should empower women and create an enabling environment so that women can fully contribute to and benefit from rural growth and poverty reduction. The strategy should focus on five areas:

- *Supporting women's role as agricultural producers:* Land reform deserves special attention as, despite the achievements of the new inheritance law, there are still gender issues to be addressed to ensure equal access to land by men and women. Also, a well functioning extension service is an important component of the reform of the agriculture sector in Liberia, and a crucial aspect of the strategy to support and expand women's role in agriculture.
- *Improving women's participation in the creation of rural value chains:* The GoL needs to support women in their role as processors of food, rural entrepreneurs and marketers of agriculture produce. First, the government should facilitate women's access to processing technologies for agribusiness. Second, access to markets, business support, marketing training, market information and other key services needed to start and run a business in rural areas should be provided. Ensuring women's effective participation in Farmers' Field Schools (FFS), and guaranteeing their access to these and other services should be a priority. Third, the government should ensure that women can access credit under any new systems. Fourth, in addition to women's participation in FFS, the government needs to promote the establishment of associations of rural women. The move from isolated small-scale production to integrated market production will be enhanced by the creation of networks of women's groups. Fifth, integrated packages for rural women, e.g. Ethiopia's Women's Empowerment Initiative, should be studied and piloted in Liberia.

Sixth, agribusiness interventions that organize and target female farmers, with high potential to offer rapid results and lessons (Results Based Initiatives), like the one currently under design by the MoA and the Ministry of Gender and Development with the support of the World Bank and UNIFEM, could be used to inform the ongoing design and redesign of sector strategies to support female farmers in agribusiness.

- *Promoting women's participation in new economic areas:* Women should be encouraged to enter economic areas where they are not yet present, and for which growth prospects are high. The recommendation of the Liberia Gender Needs Assessment that there should be a greater involvement of women in the natural resource sector is endorsed. Cash crop production and processing, including rubber tapping, coffee, cocoa and palm oil production, are natural candidates, as women already play an 'invisible' role in them and have the necessary skills to participate in the sector. The reform of the plantation sector and the rehabilitation of tree crops are opportunities for increased female employment that should not be missed. In addition, according to MoA, great potential also exists for the development of other crops for export, such as sunflower, sesame and other vegetables, oil seeds, maize, commercial quantities of coconuts, bananas, pineapples, cashew nuts, cola nuts, avocados, spices, and fruit. However, the strategy should go further, opening the doors of male-dominated sectors such as fisheries and aquaculture and the logging industry to women, including furniture making. To achieve this goal training programmes for women, including apprenticeships and vocational training, should be put in place to provide women with skills that allow them to enter these new activities.
- *Strengthening the institutional framework to address gender issues in rural policies and programmes:* Policy dialogue on gender and agriculture should be conducted at the highest possible level, and the capacity of MoA for strategic planning and implementation in the area of gender should be increased.
- *Addressing social barriers that limit the contribution and participation of men and women in social and economic life in rural areas:* Farmers Field Schools could be a vehicle to address social and cultural gender discriminating practices of the past and could become the cornerstone of a new rural social contract based on the values of participation, ownership, inclusion and non-discrimination.

318. **Promoting Youth Employment.** It is estimated that about 80% of the young people in Liberia are not gainfully employed. Unemployed young people who could be the target of youth employment programmes include those that did not leave their rural communities during the civil conflict but were seriously affected by the war, returnees to their rural communities, refugees and internally displaced persons, and ex-combatants located in rural as well as urban areas, particularly Monrovia.

319. A recent report (FAO/ILO/MOA, 2007) shows that rice production (both swamp and upland) would generate the greatest employment (2.6 and 1.8 persons per ha per year), followed by the raising of tree crop seedlings, vegetables and some livestock enterprises (poultry), with the vegetable and livestock enterprises showing higher economic efficiency (returns per day of labour invested).

320. It is recommended that youth employment activities in agriculture should focus on peri-urban agriculture (vegetable and livestock), vegetable production in other areas, particularly for

export markets, production of seedlings for the rehabilitation of crops, such as those in Nimba and Bong, and swamp rice production using improved practices.

321. Any youth employment programme would need to address issues of:

- Land acquisition.
- Registration of young people based on their community/county of origin.
- Organization of consultative/sensitisation workshops and assessment of the training needs of young people.
- Provision of infrastructure facilities and other incentives.
- Provision of agricultural extension support and veterinary services in target communities.
- Training to update knowledge and skills in agriculture.

322. **Information and analysis for improved decision making:** Evidence-based policy' is the new mantra, reflecting the fact that the effectiveness of policy and programme decision making is usually no better than the quality of data and the empirical analysis used in the decision-making process. This report highlights: (i) the paucity of data for analysis and planning, and (ii) the importance of developing the capability of the GoL, in partnership with others, to analyse, monitor and modify the complex and dynamic interactions between policies and institutional reform, technological change and human capital development. As experiences in other countries have shown, transforming the agricultural sector and re-establishing commodity value chains is a dynamic, iterative process (rather than a one-time event) that often proceeds by trial and error and requires continuous monitoring and revision.

323. The iPRS highlights the creation of a socio-economic and demographic database as a national priority, while recognizing that this is not just an issue of improving statistical systems but also involves the ability to analyse and establish the empirical underpinnings of policies and programmes. National and decentralized needs are extensive. The iPRS calls for robust monitoring and evaluation; analytical inputs are required for evidence-based decision making that is related to the design, targeting and monitoring and evaluation of policies and programmes.

324. A pro-poor development approach will require that Liberia creates a decentralized system to collect and analyse information that feeds into targeting and programming. Decentralized systems need to be driven by the local context, specificities and priorities in order to replace assumptions and generalities with empirically derived facts. Development of local capacity also increases the likelihood of obtaining information about dynamic situations. Finally, it will maintain a focus on understanding the details of what works and what doesn't work and on identifying the criteria for success. The development of proxy indicators related to income, consumption and nutrition could be useful for local teams involved in monitoring the National Programme for Food Security. Given the complex socio-political, cultural, economic, technical and institutional issues at play during this transition process, it is important that systems are nimble and flexible and can evolve and adapt to the current situation and needs.

325. The MoA is already committed to strengthening its policy development and monitoring and evaluation capacities with the support of a number of DPs. MoA staff within the Planning Department need to deepen their links with academia and think-tanks (insofar as they exist) as well as with other actors to obtain qualitative and quantitative information. Of

particular importance is the collection of evidence on the performance of projects and programmes, including the need to link together monitoring indicators to serve as progress indicators within the context of monitoring systems.

JJ. Opportunities and Guidelines for Investment

326. **Fostering sustainable growth in agricultural commodity value chains will require substantial public and private investment** in order to improve their productivity and competitiveness in national, regional and international markets. Investment could conceivably come from a combination of domestic savings and external resource inflows. Domestic savings can be generated both in the public sector, through lower consumption and fiscal discipline, and from private individuals and organizations, through higher incomes and increased savings. External investment can come from foreign direct investment, return of capital flight and foreign aid. While numerous factors have been identified as important determinants of national and foreign investment, private investors' perception of risk and the ability to earn and keep their returns in a given country or zone appear prominently at the top of every list.

327. The outcome of value chain stakeholder meetings should be detailed guidance for investment in the value chain. Determining and implementing a value chain investment plan is a major challenge. The manner in which the government and stakeholders address the problem of risk will go a long way towards determining the level of investment in the value chain. Financial risk reduction mechanisms will need to be considered throughout the value chain, including the production level, as well within the financial sector. Future studies may need to consider the relevance and feasibility of options such as cost or equity sharing, the use of leasing companies to reduce the cost of capital, training programmes and portfolio management, better business and financial plans to account for risk and risk sharing, and venture capital funds.

328. At the farm level, a major question relates to the influence of land tenure on investment in and adoption of new technologies, as well as intensification of production practices for tree crops. The government will need to consider how the value chain will deal with investments required by smallholders, given that many have few assets or experience. In the present situation, farmers have little income from farm and non-farm activities to use for productive investment.

329. From a food security perspective, investment in tree crops, which does not generate a return for several years (3–5 years for cocoa and 15 years for rubber), may need to be combined with investment in activities with shorter-term pay-offs. For many investments (e.g. in swamp rice), more detailed feasibility studies will be required that consider the relative returns and technical merits of alternatives. For example, in many cash crop producing regions, years of neglect of tree crops has resulted in plantations being overgrown by bush. In this context, is it more prudent, feasible and remunerative to establish new plantations or to use labour to rehabilitate existing ones?

330. Other smaller-scale investments, e.g. fish smoking technology or tools for aquaculture pond development, outside of a value chain may need to be proposed by producer organizations or included in county/district development plans in order to be systematically considered and funded.

331. **There is need to prioritize investments.** GoL will need to carefully prioritize its investment programme within the framework of the PRS. The following criteria should form basic components of the screening procedures for all proposals, whether they are to be donor funded or included in the Ministry's own budget. Screening and prioritization of this kind is a core part of public financial management reform.

332. The major project selection criterion should be the government's overall priorities for rural development and poverty alleviation. Together with donor interests, this should be used in selecting the proposed investment project. The following additional criteria may be used:

- **Technical feasibility and sustainability.** This is the crucial test of whether the proposal makes technical sense and can be seen as sustainable in terms of resource utilization. Examples of previous projects, or projects in similar areas, that have proved their technical viability are useful indicators in this respect. This criterion also covers the likely effects upon the environment. Proposals indicating the scope for synergy between various interventions should receive favourable consideration.
- **Financial and economic feasibility.** At the early stage of project identification, it is difficult to obtain more than a vague idea of the financial and economic viability of a project, but enough information should be included to justify continuation of the project preparation process. Indicative crop budgets can suggest whether a particular technical process is financially viable in the current pricing and marketing context. A rough idea of irrigation investment costs per ha in comparison with returns from the crop(s) likely to be grown will give an indication of the financial viability. Wherever possible, a preliminary comparison of the benefits with the costs of the project should be made, possibly using a simple financial cost/benefit ratio.
- **Absorptive capacity.** In the light of depleted government services and inadequate rural infrastructure, this is an important criterion in the context of Liberia. It is a difficult factor to judge, especially at a time of change and reorganization. However, a subjective judgment may be made in the context of the experience of the particular department or institution(s) concerned with the proposed technology or approach, and their manpower capacity.
- **Ease of implementation.** Experience indicates that projects with complicated implementation mechanisms have difficulty in attaining their objectives in a timely fashion. For this reason, priority should be given to projects with well designed implementation mechanisms, suited to the proposed activities, with clear demarcation of responsibilities.
- **Existing projects and plans.** There are a number of existing projects that partially cover some of the activities proposed above, and a number of donors have indicated an interest in formulating projects in some areas. These should be taken into consideration in order to avoid duplication of effort, and to increase the probability of donor follow-up.

333. As CAAS-Lib draws to a close, follow-up actions have already been initiated by MoA and its partners to prepare a new food and agriculture policy and strategy and to draft the agricultural section of the proposed PRS. Other ongoing initiatives of GoL include the work by IFC on palm oil, the granting of a new oil palm concession for production of biofuels, and

the Diagnostic Trade Investment Study (DTIS) on value addition for export of agro-forestry, forestry and fisheries products, which focuses on trade policy and institutions, the investment climate and priority export sectors. It is planned that during these activities a prioritized investment programme that fits within the expected funding envelope and absorptive capacity of the country will be agreed on by all stakeholders. In the rest of this section an indicative list of priorities is presented.

334. Short-term priorities:

- **Improving food security and increasing food production.** A set of important activities involves the *recapitalisation of smallholder agriculture*, which requires the restoration of the productive capital of a large number of smallholder producers that was lost or destroyed during the war, and the rehabilitation of returnees and ex-combatants. The GoL and NGO free distribution schemes for seeds, tools and small livestock should be continued until most of the lost capital has been restored. However, such schemes should have well developed mechanisms for phasing out that would encourage the development of private sector input supply markets. During the transition period efforts should be focused essentially on supporting through matching grants (i) small-scale productive investments identified by rural producer groups that have a clear collective good component, and/or (ii) provision of externalities (small-scale irrigation, watershed management, soil and water conservation, community forestry, cereal banks, inputs, etc.). This should be linked to the development of community savings and loans associations. Vegetable production has potential for improving income and for creating employment for young people and women in the short term. Immediate public investment in basic improvement of rural roads and marketing infrastructure is essential to provide the needed incentives for improving production. First it is necessary to conduct studies and analyses to fill knowledge gaps in critical areas. To complement all the above studies should be performed of: crop production (e.g. the impact of concessional and commercial food imports on the local economy, PAM studies of different food sectors); baseline livestock parameters (rapid rural appraisal of livestock systems, characteristics of internal demand, comparative advantage and potential environmental impact of alternative production systems), fisheries (annual frame surveys), input supply markets, etc.
- **Rehabilitating the tree crop sector.** Public–private dialogue should be immediately initiated on critical issues that impinge on development of tree crops, such as land tenure, the role of plantation out-growers, etc.). The GoL should lead this dialogue with a clearly stated intent that it will focus subsequently mainly on its policy and regulatory functions, with the responsibility of strengthening the voice and bargaining power of smallholders, improving welfare of plantation labourers and arbitrating disputes as an honest broker if necessary. Other programmes should include: (a) establishment of GoL and NGO grants programmes for under-brushing, cleaning and plant protection measures for existing and viable smallholder plantations, (b) encouragement and support of smallholder cooperatives for production and marketing, (c) keeping in view the necessity to have a more inclusive approach to the plantation sector, and to develop a model concessions contract to encourage foreign investment in the plantation sector through transparent incentives that encourage out-grower schemes and support improved governance of natural resources, and (d) divesting ownership of existing parastatal plantations through a transparent process once the rules of the game for the management of the sector are agreed upon.

- **Making agricultural markets work better.** In the short term this involves removing existing impediments to the evolution of the tree crop export markets, such as the threat of a resurgent LPMC, avoiding too much government intervention in the sub-sector, which is likely to result in predatory behaviour, and avoiding an excessive concentration of private sector exporters by encouraging competition. Additionally it is essential to improve the management of existing retail markets by pressing for reform of LMA. Experience suggests that management of markets is best left to the traders themselves, while Government support should be provided through provision of public goods and needed regulations on hygiene, fair practices, etc. In this regard LMA could provide critical services to marketers if properly organized and managed. Farmers' organizations and cooperatives can also play an important role in marketing and need to be strengthened.
- **Building Institutions.** Here there is a need to assess the role and function of MoA and to restructure the Ministry in accordance with its new mandate (Core Functions Analysis etc.). CARI should rationalize its operations by devolving some of its functions, e.g. tree crops research, to other institutions and focus on re-initiating adaptive and applied research, capacity building activities (human and physical), the formation of strategic alliances and partnerships with key stakeholders, resource mobilization, and the development of a long-term strategy for national agricultural research for development.

335. Medium- to long-term priorities

- **Improving food security and increasing food production.** This requires: continued promotion of the development and adoption of improved food crop production technologies; diversification to vegetable and fruit crops; improved land and water management practices; improvement of input supply through appropriate planning and by facilitating private sector participation; developing a regulatory and institutional framework for plant and animal health issues; continuing efforts to promote access to land through reform measures; stimulation of artisanal fisheries and aquaculture by establishment of community fisheries centres; promotion of livestock production by establishment of pilot animal production centres; ensuring the availability of credit through micro-finance and commercial and land development banks;
- **Promoting the smallholder tree crop sector.** GoL should promote widespread adoption of improved techniques in smallholder cocoa and coffee, drawing on experience in neighbouring Cote d'Ivoire where it is clear that cocoa and coffee under a liberalized environment are naturally 'smallholder crops' and not estate crops. These crops do not require complex processing and their marketing appears to be fairly competitive under the prevailing land abundant environment. In the case of industrial rubber and oil palm (for which the prospects are good for expansion into biofuels), where there is also a critical need for improved genetic material and complex processing is required, GoL should draw on the experience of countries such as Cote d'Ivoire, Indonesia and Malaysia by promoting a nucleus estate-cum-smallholder strategy that permits tight vertical integration of activities along the value chain. Experience from Malaysia and India shows that rubber or oil palm can also be very effective smallholder crops provided that primary processing facilities exist close to holdings. Farmers' cooperatives could be an effective way of providing such processing facilities.

- **Building Institutions.** GoL should strengthen the moves to decentralize government services, including the development of significant capacity building activities at all levels. Agricultural financial intermediation should be expanded by supporting the development and expansion of private sector agricultural credit institutions (commercial, rural, community and cooperative banks) using such instruments as equity participation and guarantee funds.)
- **Infrastructure.** The rehabilitation of the rural transport and marketing infrastructure should be the highest priority in order to link major producing areas to markets. The second priority is to promote efficient private sector-led marketing systems with public support as necessary. The rate at which producers will respond to market opportunities will depend on the efficiency of the marketing and communication systems. Dissemination of market information through rural radios and other media will be important. Government initiative will be required in this regard. The rehabilitation of the most important value chains, at all levels, is critical and should be performed through several instruments (infrastructure development, CDD operations and private sector development programmes) that will need to be tightly coordinated.

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ANNEX 1: COMPOSITION OF CAAS-LIB STEERING COMMITTEE

Institution	Name
ACDB	Mr Kpedee Woiwor
CARI	Dr Joseph Subah
CRS	Mr Peter f. Briggs
FAO	Dr Winfred Hammond
German Agro Action	Mr Galah Toto
House of Representatives	Hon Thomas P. Fallah
LINNK	Mr Jonathan Jukon
LPMC	Mr William M. Sheriff
Ministry of Agriculture (Chairman)	Hon Christopher Toe
Ministry of Planning & Economic Affairs	Mr Stephen A. Kaiser
Ministry of Youth & Sports	Hon Sneh Johnson
Senate Committee on Agriculture	Sen. Isaac M. Johnson
UNDP	Mr William A. Reeves
UNMIL	Dr Joseph Sam Sesay
World Bank	Mr Jonathan Davies
World Vision International	Dr James Kiazulu
CAAS-Lib Team Leader	Dr Dunstan S. C. Spencer
CAAS-Lib National Coordinator (Secretary)	Dr Othello Brandy

ANNEX 2: MATRIX OF PROPOSED INVESTMENT PROJECTS

No.	Name of Project	Aim(s)	Description	Duration	Cost (1000 US\$)
1	Land and Water Sector Institutional Capacity Building	To build the capacity of the land and water sector institutions for the strategic planning and management of the land and water resources to support agricultural and other sectoral developments.	<ul style="list-style-type: none"> • Land use assessment of Liberia. • Detailed study of the water sector. • Development of a comprehensive national water policy. • Establishment of water resources commission. • Improvement in the meteorological and hydrological networks. • Staff training in the management of the hydrological and meteorological networks. 	July 2007 – July 2012	2,500
2	Community Watershed Management (1–5 years)	To build the capacity of the land and water sector institutions for the strategic planning and management of the land and water resources to support agricultural and other sectoral developments.	<ul style="list-style-type: none"> • Assessing past and current land use practices at the community levels. • Assessing the extent of degradation in the various river basins using GIS and other appropriate tools. • Detailed hydrological studies of all river basins, including the development of hydrological maps for all river basins in Liberia. • Development of detailed land use maps. • Development of detailed soil and soil suitability maps for agricultural planning. • Undertaking community needs assessment in environmental conservation programmes. • Designing and implementing community-based watershed management projects. 	July 2007 – July 2012	7,500
2	Land and Water Development for Swamp Rice Production (2–10 years)	To increase rice production through the reclamation of swamps lost during the war and expansion of new ones with the aim of improving household food security, nutrition and income.	<ul style="list-style-type: none"> • Assessment of the potential of swamps and inland valleys and their characterization for agricultural development. • Expansion of community involvement and participation in restoration of priority swamps by initiating small farmer field schools in land and water management in swamp rice production and equipping farmers to sustain production. • Expansion of new swamp areas for improved water control at 5,000 ha/annum. 	July 2007 – July 2017	22,100

No.	Name of Project	Aim(s)	Description	Duration	Cost (1000 US\$)
			<ul style="list-style-type: none"> Expansion of new swamp areas for traditional water control at 5,000 ha/annum. Capacity building in the construction and management of water control structures. Research trials in swamp rice production. 		
3	Land and Water Development for Upland Rice Production (2–5 years)	To increase rice yields on the uplands through sound field management practices with the aim of conserving soils and maintaining soil fertility on slopes and to identify suitable technical options for intensification, and increased efficiency of upland rice development and management, allowing for intercropping, as well as for soil conservation.	<ul style="list-style-type: none"> Providing support services in terms of credit, farm tools, seeds and agrochemicals to approximately 500 women farmers and 300 youth in 50 groups, potentially involved in subsistence production activities. Capacity building in soil and water conservation strategies on uplands for LWRDD staff. Support for expansion of new upland farms at 10,000 ha/annum. Research trials in upland rice intercropped with other staples. 	July 2007 – July 2012	3,000
4	Crop production Studies, Sector Analysis and Monitoring	Fill in gaps in the knowledge of key areas and act as inputs to decision-making and resource allocation.	<p><i>Suggested studies and reviews:</i></p> <ul style="list-style-type: none"> The impact of the WFP programme in Liberia on the local economies. A study of transport and haulage of agricultural produce and commodities. A study of infrastructure including markets, communication, and input supply. A detailed study of the impact of Government's agricultural policy with respect to imports (in particular rice from overseas). The study of micro-businesses and SMEs in Liberia. A number of PAM studies could be undertaken of various sub-sector operators in the food crops sector, e.g. juicing or processing. A number of sub-sector studies, e.g. for rice and vegetables. A number of case studies need to be undertaken for illustrative purposes (some will be undertaken in the 	Immediate Term (1–2 years)	1,000

No.	Name of Project	Aim(s)	Description	Duration	Cost (1000 US\$)
			<p>follow-up section below) including cooperative arrangements, or following the transport of certain food crops from producer to final market and end consumer.</p> <ul style="list-style-type: none"> • A review of the seed sector should be undertaken. • Putting in a place a monitoring system for market information (e.g. prices, quantities, production and output and input usage) – could be undertaken by FAO marketing section. 		
5	Short Term: Crop Production Investment Project	To raise the level of understanding of agriculturalists, increasing production, productivity and output.	<ul style="list-style-type: none"> • Education and targeted training. • Appropriate technology. • Basic services. • Data collection and statistical services. 	Short Term (2–5 years)	5,000
6	Medium-Term: Crop Production Investment Project	To dramatically improve the handling, processing and value adding of commodities grown in Liberia.	<ul style="list-style-type: none"> • Processing and packaging: value adding activities such as juicing. Small scale juicing plants and cleaning houses are envisaged, which would allow local juices to substitute for expensive imports. • Infrastructure: initially this could be in the form of small-scale markets with water services included. If individuals/communities can appoint market ‘masters’ to manage the markets as an enterprise this may lead to sustainable continuation of the project. • Micro-Projects Programme (MPP) and Micro-Credit System. An MPP can be used as a means to support numerous small-scale projects where the need is highest. In some cases these can be community driven or, if credit related, privately targeted. 	Medium Term (5–10 years)	24,000
7	Urban and Peri-urban Agriculture for Women and Youth Groups (3 years):	To build the capacity for urban and peri-urban agriculture for women and youth groups with the aim of providing jobs and incomes and meeting the urban market demand for fresh vegetables.	<ul style="list-style-type: none"> • Assessing the potentials and benefits of urban and peri-urban agriculture. • Capacity building in urban/peri-urban production and post-harvest activities for LWRDD staff, women and young people. • Providing support services in terms of credit, farm tools, seeds and agrochemicals to approximately 1,000 women farmers and 600 young farmers in 50 groups, potentially involved in market orientated production, input supply 	July 2007 – July 2012	4,500

No.	Name of Project	Aim(s)	Description	Duration	Cost (1000 US\$)
			<p>and post-harvest activities.</p> <ul style="list-style-type: none"> Constructing and equipping shallow wells with motorized pumps for irrigation of the urban/peri-urban farms. 		
8	Promoting use of Small-scale Machines	Promoting use of small-scale machines and equipment for sustainable productivity of lowlands.	<ul style="list-style-type: none"> Secure support from development partners, particularly the Chinese Government and indigenous private sector. Establish clear policy guidelines. Identification of suitable lowlands and farmer groups/communities and cooperatives to be involved in the project, confirm their needs, requirements and inputs for the implementation of the project. Establish special unit in MoA and community support services in the regions/counties. 	5–10 years	4,500
9	Strengthening Blacksmith Capacities	Strengthening blacksmith capacities to produce appropriate tools for increased agricultural production and productivity of smallholders.	<ul style="list-style-type: none"> Four Regional Blacksmith Centres will be rehabilitated for production of agricultural tools and equipment, training, and product development. Identification, selection and recruitment of experienced blacksmiths and engineers to manage the Centres and carry out their activities. Assisting the organization of networks of Blacksmiths, other support services (particularly distributors; sensitizing and training them). Establishing linkages between the project beneficiaries and financial services, particularly savings and credit schemes. 	3–5 years	4,600
10	Promoting Mechanized Farming	Promoting mechanization to improve specific segments of the value chain of selected crops and directed at small to medium scale producers.	<ul style="list-style-type: none"> Strengthening the capacities of selected existing commercial agricultural enterprises as nucleus entities in promoting mechanized farming involving small producers. Provision of assistance to selected agricultural groups/cooperatives as out-growers to practise sustainable mechanized farming. Establishment of groups of small to medium scale farmers' groups/cooperatives to be fully engaged in mechanized farming activities in various parts of the country. 	5–10 years	4,500

No.	Name of Project	Aim(s)	Description	Duration	Cost (1000 US\$)
11	Vegetable Oils and Cassava Processing	Promotion of widespread mechanized extraction of vegetable oils and processing of cassava.	<ul style="list-style-type: none"> Assist small to medium scale farmers' groups and cooperatives to manage activities of mechanized processing of oils and cassava, including complying with quality control measures; marketing and distribution outlets. Strengthen MoA and other institutions for advice, quality control, training in management of enterprises and monitoring of activities. Assist beneficiaries to establish linkages with other support sources. 	5–8 years	2,600
12	Development of Artisanal Fisheries.	To develop artisanal fisheries so as to enhance the sustainable utilization of the fisheries resources of the country for increased fish production and improved livelihoods in artisanal fishing communities.	The project will be implemented in Maryland, Grand Kru, Sinoe, Rivercess, Grand Bassa and Cape Mount Counties and will include the provision of fishing inputs and training of about 3,600 fishers, fishmongers and fish processors.	January 2008 – December 2010.	2,050
13	Small-Scale Aquaculture Development	To increase fish production levels in small-scale aquaculture.	The project will be implemented in the Counties of Lofa, Grand Gedeh and River Gee. The project will bring into aquaculture production 50 ha of swamps through the provision of tools, materials, fingerlings and training. These include 10.3 ha of ponds to be rehabilitated and 39.7 ha of new ponds to be developed. Three (3) hatcheries and 1 research facility will be rehabilitated.	January 2008 – December 2010	1,100
14	Post-harvest Loss Reduction in Fisheries	Reduction of post-harvest losses of fish and improvement of quality through handling and processing technologies.	<ul style="list-style-type: none"> Identify participating groups, especially women, and training them in new improved technologies and support services for spoilage reduction, handling, preservation, packaging, and marketing of fish products. Assess capacities and provide appropriate support to strengthen the fisheries subunit in MoA and other support institutions (NGOs etc) for advice, training, monitoring, quality control and regulation. Establish guidelines and regulations for post-catch handling and marketing of fish. 	5 years	3,530

No.	Name of Project	Aim(s)	Description	Duration	Cost (1000 US\$)
			<ul style="list-style-type: none"> Establish linkages between the beneficiary groups of the project and support sources including financial services (credit and savings), packaging agents exporters, etc. 		
15	Enhancing National Capacity for Sustainable Fishery Sector Management	Improve the institutional capacity of the Bureau of National Fisheries (BNF) and the legal environments to enable it effectively to monitor and manage the fisheries resources on a sustainable basis, and to introduce and consolidate a co-management arrangement between the Government and the private sector.	<ul style="list-style-type: none"> Rehabilitation of the BNF Headquarters and Fisheries Research Facilities. Personnel of the BNF will be selected for training in such areas as fish biology, fisheries statistics and management, fish health and quality, monitoring, fisheries economics, etc. A new fisheries monitoring and regulatory law will be drafted and enacted to strengthen the management capability of the BNF. A Monitoring, Control and Regulatory System will be set up, using local fishers to monitor and report industrial fishing vessels intruding into artisanal fishing areas. 	January 2008 – December 2010	3,200
16	Livestock Promotion	Make livestock one of the pillars of the fight against poverty, food insecurity and unemployment.	<ul style="list-style-type: none"> Establishment of livestock production centres or micro-projects in selected counties for demonstration of improved practices and training of livestock farmers. Improvement of the coverage of livestock sanitary services and reinforcement of veterinary services by capacity building and equipment of veterinary laboratories. Rehabilitation of existing slaughterhouse in Liberia, construction and equipping of four provincial slaughterhouses. Preserve, improve and better exploit the pastoral resources. Rehabilitation, restocking and re-equipment of seven livestock ranches. 		9,000
17	Institutional Renewal and Capacity Development for Ministry of Agriculture (MoA) and Stakeholder Partners	Renew and develop MoA systems and capacities for improved performance in sectoral policy and strategy formulation, programme development,	<ul style="list-style-type: none"> Refocus and reorganize MoA functions and organizational systems and structures in line with the new paradigm for public sector roles in agricultural development, stakeholder involvement and decentralized services coordination and provision to farmers. 	2008 – 2012	6,000

No.	Name of Project	Aim(s)	Description	Duration	Cost (1000 US\$)
		implementation and evaluation in a decentralized paradigm for rural development.	<ul style="list-style-type: none"> • Reorientation and training of management and staff in their emerging roles and responsibilities. • Strengthen MoA supervision and coordination capabilities in sector-wide planning and coordination of agricultural programmes and service provision. • Develop an updated financial management and administration system in conjunction with the modernization processes of MoF. • Strengthen MoA capacities in knowledge management to inform policy, programme and services development across departments, including system-wide programme/project evaluation and staff performance management. • Operationalize decentralization of MoA personnel, planning processes, programme budgeting and financial administration to counties. 		
18	Rehabilitation and Revitalization of the Central Agricultural Research Institute (CARI), Liberia	To rehabilitate and renew CARI as the lead national research institution in developing innovations in support of a revitalized agricultural sector, contributing to improved household food security and smallholder commercialization for export markets.	<ul style="list-style-type: none"> • Rebuild and refurbish research buildings and facilities at CARI HQ in Suakoko. • Recruit, establish and train/retrain a critical mass of research expertise and support staff. • Revitalize field research programmes for co-knowledge development with farmers and extension personnel. • Renew and develop a decentralized agricultural knowledge system in collaboration with MoA Departments of Extension, and Planning and Policy. • Design, commission, equip and staff three new decentralized sub-stations in the coastal, derived savannah and forest ecologies. 	2008 –2015	10,000
19	Agricultural Services Development and Management Programme for DECE and Stakeholder Partners	Renew and develop DECE capacities for improved performance in facilitating agricultural services development, coordination, management, provision and evaluation in a decentralized system for	<ul style="list-style-type: none"> • Renew and reorganize DECE functions, organizational systems and capabilities in line with the new paradigm for pluralism in agricultural services provision. • Direct investment in improving the facilities, equipment and mobility of DECE management and staff. • Strengthen DECE coordination capabilities in county and district-level planning and coordination of agricultural programmes and service provision, 	2008 – 2012	8,000

No.	Name of Project	Aim(s)	Description	Duration	Cost (1000 US\$)
		rural community development.	<ul style="list-style-type: none"> including stakeholder involvement processes. Facilitate training of DECE/CBO facilitators for county and district level provision of participatory training programmes in household food security and farmer organization development. Strengthen DECE capacities in knowledge management on agri-enterprise development and impact evaluation of extension programmes. Facilitate and consolidate decentralization of MoA services to counties/districts, including evaluation processes. 		
20	Rehabilitation and Renewal of Agricultural Education Institutions in Liberia	To rehabilitate and renew education and training capacities of the Vocational Agricultural and Training Institutes (Booker Washington Institute, Tubman High School, Zwedru Multilateral High School), College of Agriculture, Rural Development and Sociology, Cuttington University (CARS).	<ul style="list-style-type: none"> To rehabilitate buildings and teaching facilities, principally at the CAF and vocational training centres. Provide higher education and training opportunities for existing and newly recruited teaching and support staff at colleges and training institutes. Revise and update curricula for undergraduate and vocational training in line with current regional and global developments and practices in agricultural and related sciences. Facilitate and support internship programmes for undergraduates in national institutes such as CARI. Develop partnerships for national capacity development (including twinning and bilateral arrangements) with higher education institutes in Africa, USA and Europe. Conduct studies on ongoing national priorities and programmes in higher education in conjunction with MOE and MoA. 	2008 – 2022	30,000
21	Expansion of Financial Services to Liberian Farmers and Other Rural Entrepreneurs	To substantially expand financial services to Liberia's rural dwellers, both farmers and other creditworthy rural entrepreneurs.	<ul style="list-style-type: none"> Development of appropriate financial products, services and techniques in collaboration with other providers of rural financial services (credit unions, MFIs, NGOs, etc.) in close collaboration with participating commercial banks, and training staff at all branches with rural clients in their use. Identification of the most creditworthy farmers and rural entrepreneurs. 	Four years: mid-2007 through mid-2011	4,250

No.	Name of Project	Aim(s)	Description	Duration	Cost (1000 US\$)
			<ul style="list-style-type: none"> • Resurrection, re-equipping and provision of management training to the country's formerly significant agricultural cooperatives and other rural associations. • Set-up and operation of a rural credit guarantee fund. • Institute confidence-building measures and develop linkages between participating commercial banks, agricultural cooperatives and other FBOs and MFIs (linkage banking). 		
	TOTAL				162,930