

# **AFRICAN DEVELOPMENT BANK GROUP**



## **LIBERIA**

### **SMALLHOLDER AGRICULTURAL PRODUCTIVITY ENHANCEMENT AND COMMERCIALIZATION (SAPEC)**

### **PROJECT COMPLETION REPORT (PCR)**

**RDGW/AHAI**

October 2022

# PROJECT COMPLETION REPORT FOR PUBLIC SECTOR OPERATIONS (PCR)



## I. BASIC DATA

### A. Report Data

<b>Project name:</b>	SMALLHOLDER AGRICULTURAL PRODUCTIVITY ENHANCEMENT AND COMMERCIALIZATION (SAPEC)		
<b>Project code:</b>	P-LR-A00-003		
<b>Country</b>	Liberia		
<b>Sector:</b>	Agriculture and Rural Development		
<b>Environmental categorization</b>	2-Moderate E&S risks		
<b>Report type:</b>	<b>Date of report:</b> 26.09.2022	<b>Mission:</b> ACHIEVEMENT MISSION 0001	
		From: 01.12.2021	To: 16.12.2021
<b>Prepared by</b>	<b>Task Manager:</b> Olukemi Dolly AFUN-OGIDAN	<b>Alternate Task Manager :</b>	<b>Division Manager :</b> GARBA Laouali ( AHAI2 )

### B. Responsible Bank staff

<b>Position at completion</b>	
<b>Division Manager</b>	GARBA Laouali
<b>Regional Director</b>	AKIN-OLUGBADE Née NDONGO-SEH Marie-Laure
<b>Sector Director</b>	FREGENE Martin
<b>Task Manager</b>	Olukemi Dolly AFUN-OGIDAN
<b>Alternate Task Manager</b>	

### C. Project Data

PROJECT FINANCING in UAC					
Financing source/instrument		Foreign currency	Local currency	Total	
<b>A.D.F.</b>	<b>Project</b>	2,438,000.00	1,562,000.00	4,000,000.00	
<b>GAFSP Trust Funds</b>	<b>SpeFoodSecProg</b>	17,718,000.00	11,821,939.27	29,539,939.27	
<b>OTHERS</b>	<b>SpeFoodSecProg</b>	611,000.00	389,000.00	1,000,000.00	
<b>T O T A L</b>		<b>20,767,000.00</b>	<b>13,772,939.27</b>	<b>34,539,939.27</b>	
PROCESSING MILESTONES (bank approved financing only)					
Loan Number	Date approved	Date signed	Date of entry into force	Date effective for first disbursement	Disbursement deadline
5570155000001	02.05.2012	28.05.2012	17.07.2013	10.10.2013	31.12.2021
2100150026744	02.05.2012	28.05.2012	17.07.2013	13.09.2013	31.12.2021
LOAN AMOUNT (in UAC)					
Loan Number	Net loan	Approved (UAC)	Signed (UAC)	Cancelled (UAC)	Net Loan (UAC)
5570155000001	46,500,000.00	30,630,998.57	30,630,998.57	0.00	30,630,998.57
2100150026744	4,000,000.00	4,000,000.00	4,000,000.00	0.00	4,000,000.00
<b>T O T A L</b>		<b>34,630,998.57</b>	<b>34,630,998.57</b>	<b>0.00</b>	<b>34,630,998.57</b>
DISBURSMENT STATUS (in UAC) AT COMPLETION MISSION DATE					
Loan Number	Disbursed to date	Disbursed to date (UAC)	% Disbursed to date	Undisbursed to date (in UAC)	% Undisbursed to date
	43,408,613.85	28,594,606.21	93.35%	2,036,392.36	6.65%
	3,326,454.80	3,326,454.80	83.16%	673,545.20	16.84%
<b>T O T A L</b>		<b>31,921,061.01</b>	<b>92.17%</b>	<b>2,709,937.56</b>	<b>7.83%</b>

COMMITMENT STATUS AT COMPLETION MISSION DATE (UAC)					
Financing source/instrument	Planned amount (UAC)	Committed amount (UA)	Percentage committed (%)	Uncommitted amount (UA)	Percentage uncommitted
ADB Group	33,539,939.27	31,921,061.01	92.17%	2,709,937.56	7.83%
Counterpart	0.00	0.00	0.00%	0.00	100.00%
Co-financer	1,000,000.00	0.00	0.00%	1,000,000.00	100.00%
<b>T O T A L</b>	<b>34,539,939.27</b>	<b>31,921,061.01</b>	<b>92.42%</b>	<b>2,618,878.26</b>	<b>7.58%</b>
Executing and Implementation agencies					
<b>Borrower</b>	GOVERNMENT OF LIBERIA MINISTRY OF FINANCE				
<b>Guarantor</b>	MINISTRY OF FINANCE				
<b>Executing Agency</b>	MINISTRY OF AGRICULTURE				

## II. Project Performance assessment

### A. Relevance

#### 1. Relevance of project development objective

Rating	Narrative assessment
4	<p>The SAPEC Project development objective was ‘to increase, on a sustainable basis, the incomes of smallholder farmers and rural entrepreneurs, particularly women, youths and the physically-challenged’. The Project’s objective and activities were aligned with a number of policies, strategies and needs of the four key stakeholders – Government of Liberia (GoL), World Bank, African Development Bank (AfDB) and the target group/beneficiaries. The SAPEC Project was in line with GoL’s 2008–2011 Poverty Reduction Strategy (PRS), the National Food Security and Nutrition Strategy (NFSNS), the Food and Agriculture Policy and Strategy (FAPS), and the Liberia Agriculture Sector Investment Program (LASIP). The PRS recognised the tremendous potential of the country’s agriculture sector to facilitate expansion of employment and incomes, particularly given international market demand and Liberia’s comparative advantage in agriculture and fisheries. FAPS identified specific sector and subsector policies and strategies that were to be implemented to revitalise and strengthen the food and agriculture sector, enabling it to maximise its contribution to GoL’s overall development goals. It highlighted pro-poor policies and associated strategies that were to be harnessed and utilised the potentials of the large number of smallholders in the sector. The Project was also with the second pillar of the AfDB/World Bank Joint Assistance Strategy (JAS) for Liberia. The strategy comprised: a) improved access to key infrastructure services; b) improved agricultural and natural resource management in a way that generates pro-poor growth; and c) improved business and investment climate. In addition, it was consistent with the strategic thrust of AfDB’s Agriculture Sector Strategy and its Framework Paper: Programme for the Reduction of Post-Harvest Losses (PRPHL) in Africa 2010-2014. The Project’s objective was consistent with the priorities of the target beneficiaries and their needs which, essentially, were food and nutrition security and improved livelihoods through a sustainable increase in household incomes.</p>

#### 2. Relevance of project design

Rating	Narrative assessment
4	<p>The SAPEC Project design was based on an internal logic that was simple, direct, and very relevant to the underlying issues. The Project sought to reduce rural poverty and household food insecurity of the target groups. Based on the issues identified and agreed through an extensive stakeholder consultative process (as part of the LASIP formulation), the project’s internal logic was three-pronged: Production and productivity enhancement of the three target crops (rice, cassava and selected vegetables) – This was to be done through the promotion of the adoption of improved technologies; integrated soil, crop and water management; and production modernization. Interventions used collaborative approaches for technology dissemination that included partnerships with regional research institutions that provided technical assistance to the ministry, farmer groups, and private sector actors; Ø Value addition and marketing – The aim was to: a) ensure that the surplus production emanating from productivity enhancement can appropriately be channelled to the market; b) reduce the vast post-harvest losses; c) equip the target beneficiaries with the requisite organizational capacity to increase their market share and profitability. The related interventions largely focused on improving the food value chain through market development and access; and, Ø Capacity building and institutional strengthening – The aim was to build the agricultural sector’s institutional capacity so as to equip them with the ability to plan, steer policy development and adequately provide decentralized services. Public and community capacity building was to be complemented by enterprise development and management enhancement to promote agricultural commercialization. The augmented capacity was to help to support activity implementation during and after the life of the project. During the course of implementation, there were some changes in: a) scope – some original targets were reduced (e.g.</p>

number of kilometres (KMs) of roads reduced from 270 KMs to 193 KMs; the target area for lowland intervention reduced from 1,000 hectares (ha) to 300 ha; the number of markets to be rehabilitated reduced from 12 to 6). This was precipitated by the Presidential Initiative that necessitated reallocating a total of USD 9 million from SAPEC Project resources to fund an e-farmers registration platform and input distribution; and b) implementation approach – a decision was made to change from constructing 9 agribusiness centres to, instead, equipping the four rice hub buildings that had been constructed by the Agricultural Sector Rehabilitation Project (ASRP) with industrial-capacity rice mills and to establish 6 cassava hubs. These changes to the original design were found to be relevant as they remained consistent with SAPEC Project’s development objective.

### 3. Lessons learned related to relevance

Key issues	Lessons learned	Target audience
<b>Fiduciary issues</b>	Implementation of this project showed that there could be some fiduciary risk, if strong financial management and fiduciary safeguards are not put in place. A key lesson is to only disburse smaller amounts into Special Account.	AfDB & Government of Liberia
<b>Government capacity</b>	Government capacity is weak and needs to be strengthened significantly to implement complex projects such as SAPEC. The project management unit could have done better if they had requisite capacity to deliver. The Ebola and Covid pandemics negatively affected project implementation.	AfDB & Government of Liberia
<b>Flexibility in project implementation and management</b>	The conditions influencing implementation are bound to vary from the time of design through to completion and, therefore, flexibility is necessary to allow for the needed adjustments for continued relevancy.	AfDB & Government of Liberia
<b>Consultative design process</b>	Involving key stakeholders in project design is a certain way of ensuring that: a) the needs and priorities of the target beneficiaries are appropriately incorporated and catered for; b) the design and implementation arrangements align with priorities, policies, and strategies of the country; and c) partners’ and donors’ policies are adhered to. It is also a means of ensuring ownership of the whole process from the very beginning.	AfDB & Government of Liberia

## B. Effectiveness

### 1. Progress towards the project’s development objective (project purpose)

Comments
<p>The SAPEC Project was one of the interventions designed to address Liberia’s fragility following 14 years of civil conflict that devastated the economy, decimated institutions, destroyed infrastructure and triggered massive rural-urban migration. It aimed at contributing to the peace and state-building goals of the country as it transitioned from conflict and fragility to recovery and resilience. Its implementation, however, was affected by both the Ebola and COVID-19 pandemics. Its goal was to reduce rural poverty and household food insecurity. Its objective was to increase, on a sustainable basis, the income of smallholder farmers and rural entrepreneurs, particularly women, youths and the physically-challenged. The SAPEC Project was structured around 4 components: Component 1: Sustainable Crop Production Intensification – the objective was to enhance productivity of the target crops by focusing on agriculture lowland rehabilitation, dissemination of improved soil, water and crop management technologies, and adoption of improved agricultural technologies by smallholder farmers. Component 2: Value Addition and Marketing – it sought to avail a conducive marketing environment and reduce postharvest losses through feeder roads rehabilitation, construction of market places and agribusiness centres/commodity-specific hubs. Component 3: Capacity Building and Institutional Strengthening – it sought to improve the capacity of different agricultural sector institutions and organizations to support SAPEC project implementation and to contribute to sustaining project benefits thereby facilitating national food security and poverty reduction. Component 4: Project Management – the objective was to ensure effective project management through coordination and supervision, monitoring and evaluation, procurement and contract management and financial management, audit and reporting. A summary of the key activities carried out by component and achievements made is presented hereunder: a) Component 1: 215 ha developed for lowland rice production (72% of the target); 5,090 ha developed for upland rice production (509%); 8,522 ha developed for cassava production (213%); more than 611 ha developed and utilized for vegetable production (122%); 55 producer-based organizations supported by the project (153%). b) Component 2: 172 km of farm to market roads rehabilitated (89% of the target) of which 27.7% that are designed to withstand changes in climate; 6 market centers rehabilitated and functional (100%); 6 cassava processing hubs constructed, equipped and functional (100%); 3 rice processing hubs equipped with industrial rice mills but not yet functional (75%); 3 technology training</p>

centers refurbished (100%). c) Component 3: 58 professionals (97% achievement) (19 graduate students (95%) and 39 undergraduate students (98%)) were trained in various agricultural-related subject matter; over 1,816 smallholder farmers received training in agribusiness and value addition (91%); 40 extension officers trained (50%); 232 vocational/ technician staff trained (64%); 3 soil and plant laboratories built/rehabilitated and equipped; capacity of the research and teaching staff at University of Liberia (UL) and the William V. S. Tubman University (WVST) built (100%).

## 2. Outcome reporting

Outcome indicators (as per RLF)	Baseline value	Most recent value	End target	Progress towards target (%)	Assesment	Core Sector Indicator (Yes/No)
Poverty rate reduced to 55% by 2020; rate of rural population below the minimum level of dietary energy consumption reduced to 38% by 2020 (%)	68.000	50.000	55.000	138.46%	Achieved/Likely to be achieved  Project interventions, such as input distribution and the associated advisory services, are credited for the resultant yield enhancement. That, together with interventions like Cassava Hubs, market centres and rural access roads, led to improved productivity and production; the resultant surplus production (over and above the household own-consumption requirements (food security) was more easily linked to markets.	No
Average farmer income (Increase incomes of Smallholder and rural entrepreneurs) (usd)	500.000	1,873.000	1,500.000	137.30%	Achieved/Likely to be achieved  The SAPEC Project's commercialisation and market linkage interventions were instrumental in the target beneficiaries' income enhancement. The cassava hubs offer a ready market for all the communities' surplus cassava production. The rehabilitated market centres have also availed both the space and opportunities for farmers to market their produce. The boost to incomes largely arose from a combination of both increased production of cassava and lowland rice and from a relative shift towards increased vegetable production. Beneficiaries also had increase in income resulting from training programs under the project for bakeries, etc.	No
<b>Rating</b>	<b>Narrative assessment</b>					
4	<p>The SAPEC project contributed to reducing the target beneficiaries' poverty and food insecurity. This was as a result of a combination of the different interventions. The provision of inputs (of improved seed varieties and agricultural tools) together with the associated extension/advisory services contributed to the resultant yield enhancement. Crop production intensification as a result of the development of lowland for rice and vegetable production and the dissemination of improved agricultural technologies to farmers was another contributing factor. The increased yields resulting from these interventions improved the food security and nutritional outcomes of the target beneficiaries as a result of households consuming more of the crops they produced. The impact evaluation established that farm households residing in communities that participated in the input distribution programme had greater declines in severe food insecurity and greater increases in income compared to farmers residing in communities that did not receive input distribution.</p> <p>The establishment of the Cassava Processing Centres/Hubs was another factor that contributed to enhancing incomes of the farmers living within the vicinity of the hubs. Cassava is processed into products that are sold within communities and also to different other Counties in the country. This has created a high demand for raw cassava and all the surplus cassava (after own household consumption needs) that is produced is purchased by the processing hubs. In addition, the hubs have created employment opportunities for some community members to supplement farm incomes. The rehabilitation and expansion of market centres was also instrumental in ensuring achievement of the income, food security and nutritional outcomes. The markets provided an organised place where the surplus produce is brought and sold. Part of the proceeds is used by the farmers to buy the other needed food stuffs that they themselves do not produce; that contributes to balancing diets of members of the farmers' households. The market centres also provide opportunities for other community members to engage in various non-farm income generating activities. Lastly, the rehabilitation of farm to market roads helped to greatly ease farmers' delivery of their produce to urban</p>					

centres. This intervention did not only contribute to improving market competitiveness of their produce but also helped increase the volume of produce reaching the markets. Both of these factors led to increased incomes to the farming households.

### 3. Output reporting

Output indicators	Most recent value	End target	Progress towards target (%)	Assessment	Core Sector Indicator (Yes/No)
<b>Sustainable Crop Production Intensification</b>					
Number of lowlands hectares (ha) developed under new irrigation and drainage systems as a result of SAPEC support (ha)	1,815.000	1,900.000	71.67%	On track  Seven different service providers were selected, one each for the seven different sites. The rehabilitation/development work was supervised by a team of individual consultants (including final inspections and issuance of Performance Certificates). This intervention provides an opportunity for beneficiaries to produce at least two crops/season in a year.	No
Average yields (mt/ha) for lowland rice (mho)	3.500	3.500	100.00%	On track  The average yield for the lowland varieties recorded at baseline was 1.5 tons/ha. To change the trend in terms of productivity and to enhance the production, the Project promoted four varieties suitable for the required ecologies (IR841, NERICA L-19 (for lowland). These varieties are high yielding (4-5tons/ha) for lowland. Because of their short duration the NERICAs can be planted 2 to 3 times a year in a lowland ecology.	No
Number of upland hectares developed and utilized for rice production (ha)	205,090.000	201,000.000	509.00%	On track  Over 78% of the domestically produced rice is cultivated using the rain-fed upland ecosystem. The project, therefore, put particular emphasis in developing more area for upland rice and, hence, the overachievement.	No
Average yields (mt/ha) for upland rice (mho)	2.500	2.000	141.67%	On track  The average yield for the upland varieties recorded at baseline was 0.8 tons/ha. To change the trend in terms of productivity and to enhance the production, the Project promoted varieties suitable for the required ecologies (NERICA 4 and NERICA 8 (for upland)). These varieties are high yielding (2-3.5tons/ha for upland varieties) and the interventions contributed to surpassing of the target.	No
Annual rice production (Mt) as a result of SAPEC intervention (mtd)	291,421.000	256,250.000	162.53%	On track  A combination of improved yields and the development of more land for rice production contributed to more annual production. However, the increase is still not enough to meet domestic	No

				needs; the country is, therefore, still a net importer of its staple food – rice.	
Number of upland hectares developed and utilized for cassava production as a result of SAPEC intervention (ha)	71,522.000	67,000.000	213.05%	On track  SAPEC Project cassava-related interventions created considerable demand for cassava and this translated into the need to develop and utilize additional land for cassava production – as a response to market demand. This largely contributed to the resultant overachievement.	No
Average yields (mt/ha) for cassava (mho)	36.000	25.000	144.00%	On track  Strategies employed included the establishment of 22 demonstration and multiplication farms in SAPEC designated counties to showcase ‘Good Agricultural Practices (GAPs) in cassava production and the performance of the selected varieties. Specific activities included: a) land preparation (manual and mechanical) - clearing, stumping, planting on ridges and mounds; b) selection and preparation of quality planting materials; c) pre- and post-emergent weed control, and fertilizer application; etc.	No
Annual cassava production (Mt) as a result of SAPEC intervention (mtd)	706,792.000	670,000.000	113.63%	On track  This was, partly, made possible by the distribution of more than 45,000 bundles of cassava cuttings of the 15 recommended, high yielding, high dry matter content, disease/pest resistant, and provitamin-A bio-fortified (yellow root) cassava varieties which are currently widely used and highly sought after by farmers and other stakeholders in Liberia.	No
Number of lowlands hectares developed and utilized for vegetable production as a result of SAPEC intervention (ha)	17,611.000	17,500.000	122.20%	On track  A combination of factors, such as subsidised vegetable seeds, higher commodity prices, etc. contributed to a higher development and utilization of lowland area for vegetable production.	No
Average yields (mt/ha) for vegetables (mho)	6.700	5.500	121.82%	On track  Access to improved vegetable seeds, manure (which was used as organic fertilizer) and extension services contributed to the resultant higher yields.	No
Annual vegetable production (Mt) as a result of SAPEC intervention (mtd)	112,762.000	100,000.000	151.05%	On track  Higher area allocated to vegetable production and improved yields led to the resultant overachievement with regard to annual vegetable production.	No
Number of smallholders (disaggregated by gender) receiving productivity enhancement support, climate-smart agriculture support (nbr)	36,944.000	35,000.000	105.55%	On track  Productivity enhancement support was a very	No



				popular intervention since it, essentially, involved availing subsidised inputs to the beneficiaries. In fact, the number of people receiving the support was, partly, limited by the number of subsidised packages made available.	
[WOMEN]-Number of smallholders (disaggregated by gender) receiving productivity enhancement support, climate-smart agriculture support (nbr)	11,098.000	10,500.000	105.70%	On track  Productivity enhancement support was a very popular intervention since it, essentially, involved availing subsidised inputs to the beneficiaries. In fact, the number of people receiving the support was, partly, limited by the number of subsidised packages made available.	No
<b>Value Addition and Marketing</b>					
Kilometers of all-weather feeder roads rehabilitated (km)	172.000	193.000	89.12%	Not on track  Of the completed number of kilometres, only 28% are considered to be of all-weather quality. Contractors cited political interference as one of the reasons for delay implementation. A stop order was given by MoA after contracts had been signed and this contributed to considerable delays. Also, changing weather patterns have led to a longer rainy season and that reduced the time available to proceed with the works during the course of a given year.	No
Number of marketplaces rehabilitated and functioning (nbr)	6.000	6.000	100.00%	On track  The original target was 12 but this was reduced to 6 when part of the SAPEC Project resources (USD 9 million) was allocated for the E-platform and input distribution. The selected 6 markets were rehabilitated/expanded and functioning well; they are being used by the beneficiaries variously (dealing in agricultural and non-agricultural commodities) to earn a living.	No
Number of agribusiness centers constructed, equipped and functioning. (nbr)	9.000	9.000	100.00%	On track  A total of 6 cassava processing hubs were constructed, equipped and functioning well. Three rice processing hubs were equipped/installed with industrial mills but not yet functioning. MoA is in the process of competitively recruiting private sector stakeholders to operate the rice mills under a public-private-partnership (PPP) arrangement. A fourth mill was procured but not yet installed; the rice hub building is still under construction.	No
Number of MoA technology transfer centers refurbished and functioning (nbr)	3.000	3.000	100.00%	On track  The three MoA centres were rehabilitated but not yet functional. This is because they are yet to be equipped by MoA. The selected and refurbished centres included: a) Philadelphia (Maryland); b) Kaweaken Center (Rivergee); and c) Compound Three (Grand Bassa).	No
Percentage of roads that are designed to withstand changes in climate. (%)	28.000	28.000	100.00%	On track	No



				Achieved the kilometers of all-weather, climate-resilient road construction that enables equitable and affordable transportation in rural spaces where rural-based production activities are taking place	
Number of rice mills with appropriate accessories installed and functioning (nbr)	3.000	4.000	75.00%	On track  3 rice processing hubs equipped with industrial rice mills but not yet functional (75%); Rice mill at Grand Kru rice hub not installed.	No
Percentage of people accessing and using value added equipment – cassava milling facilities (%)	60.000	50.000	120.00%	On track  Over 312 persons are using equipment for value addition comprising 201 males and 102 females. Five (5) of the 6 mills are operational, while one (1) is used for training and research purposes.	No
<b>Capacity Building and Institutional Strengthening</b>					
Number of targeted clients, including agricultural organizations (nbr)	55.000	36.000	152.78%	On track  The project did not establish new agricultural organizations, rather engaged and supported existing 55 producer organizations/FBOs.	No
No. of farmers trained in better post-harvest storage, transportation, and/or management practices (nbr)	1,341.000	1,500.000	89.40%	Not on track  Trained 816 Cassava Processors on the production of High-Quality Cassava Flour (HQCF), Cassava Starch, Odourless Fufu powder and tapioca. Trained 199 Bakers and 326 Pastry Makers on inclusion of HQCF in wheat flour for bread making and confectioneries.	No
Training needs assessment (nbr)	1.000	1.000	100.00%	On track  A training needs assessment was undertaken and used to guide interventions related to specific training needs for the different stakeholders.	No
Number of MoA staff trained (disaggregated by gender) (nbr)	40.000	80.000	50.00%	Not on track  • selected staff/students were trained in different agricultural-related fields in domestic and foreign universities;	No
number of Vocational/Technicians trained (nbr)	232.000	360.000	64.44%	Not on track  • selected staff/students were trained in different agricultural-related fields in domestic and foreign universities;	No
Number of professionals trained (nbr)	58.000	60.000	96.67%	Not on track  • selected staff/students were trained in different agricultural-related fields in domestic and foreign universities;	No
Number and type of evidence-based policies and strategies formulated and adopted (nbr)	5.000	1.000	500.00%	On track	No

				<p>Cassava Value Chain Consultant developed a marketing strategy and action plan for higher value products HQCF. A draft bill on the cassava flour inclusion was prepared for passage into law.</p> <p>Reviewed and updated the National Rice Development Strategy of Liberia. The project conducted a quality evaluation of gari consumed in Liberia, and the results showed that all the chemical constituents meet Codex standards except for the cyanide content, which is very high. However, the yellow gari might be safe for consumption since it is just 0.9 mg HCN/kg. An assessment of heavy metals and microbial contamination of gari from Liberia revealed that gari produced in Liberia may be safe for consumption since the zinc and copper content were below the recommended maximum limit stipulated by the FAO/WHO. Cassava Value Chain Consultant developed a marketing strategy and action plan for higher value products for HQCF</p>	
CARI crop and soil lab (nbr)	1.000	1.000	100.00%	On track  soil laboratory at CARI was rehabilitated as planned.	No
Number of staff and professionals trained to raise agricultural productivity (nbr)	1,194.000	2,000.000	59.70%	Not on track  • College of Agriculture & Forestry, University of Liberia – 1,000 • College of Agriculture and Food Science, WVST University - 194	No
Number of private sector operators (nbr)	29.000	10.000	290.00%	On track  SAPEC developed private sector operators: 5 cassava processors with factories 8 fabricators with equipped workshops 6 Master bakers with bakeries 10 agro-dealers	No
Number of targeted clients trained including producer association and trader organization (nbr)	26.000	12.000	216.67%	On track  6 operators of the cassava processing centres and 20 representatives of producer associations and trader organizations were trained on management of the agribusiness centres.	No
Gender strategy adoption and training session held with focal points and ministry staff (nbr)	0.000	1.000	0.00%	On track  This target was not met, as another project within the PMU/MOA took responsibility for it.	No

Rating	Narrative assessment
3	The SAPEC Project generally did well towards achieving the target outputs. The achievement was made despite the long delays experienced during the course of project implementation. The following were some of the factors that largely contributed to implementation delays: a) the Government's Legislature that delayed in approving the project; b) frequent changes in government and Ministers; and c) the Ebola pandemic. As a result, achieving the target outputs was also delayed although the majority of the target outputs were actually attained. As far as the rice value chain was concerned, the factors that contributed to the achievement of the different outputs included the introduction of improved and climate change resilient upland and lowland varieties, improved cultivation, harvest and post-harvest rice processing practices and technologies to upgrade the quality and marketability of locally produced rice in order to meet consumers' preferences, etc.

Promotion of the development and adoption of new rice- based products and by-products, provision of technical advisory to extension staff (project and NGO staff and mentoring scientists of CARI) were introduced to foster an enabling environment for a sustainable production, productivity and marketing of rice in Liberia. For cassava, some of the key interventions contributing to the outputs included: a) distribution of more than 45,000 bundles of the 15 recommended, high yielding, high dry matter content, disease/pest resistant, and provitamin-A bio-fortified (yellow root) cassava varieties which are currently widely used and highly sought after by farmers and other stakeholders in Liberia; b) establishment of 22 demonstration and multiplication farms in SAPEC designated counties to showcase ‘Good Agricultural Practices - GAP’ in cassava production and the performance of the selected varieties; c) training of more than 4,800 farmers and processors, NGOs, and project field officers on improved cassava production and postharvest/value addition techniques. Other beneficiaries trained include community youth, women’s organizations and the physically challenged; d) provision of a platform for interaction with farmers and other stakeholders for feedback through eight field days in eight counties; e) procurement, installation, establishment, and consolidation of cassava processing factories in six designated cassava production and processing hubs in Liberia. All the cassava factories are running although not at full capacity (20 tonnes of fresh cassava roots per day) due to shortage of raw materials; f) Training of more than 2000 Cassava processors and Master Bakers in production of High-Quality Cassava Flour (HQCF) for bread, biscuits, cakes and other confectionery and gari, odourless fufu, cassava grits. This also included training in maintenance of hygiene and safety; etc. For capacity building, some of the activities were undertaken as part of the other rice and cassava value chain activities. The others were undertaken through a consultative process (capacity needs assessment) that involved reaching out to the beneficiary institutions for them to provide a detailed account of the existing capacity gaps. However, as it turned out, specifications for the needed equipment were not appropriately done and this resulted in the supply of equipment that were yet to be put to use by the time of the PCR mission. In another incidence, while a total of 58 students were trained in different agricultural-related fields at different levels (19 Masters degrees and 39 Bachelors degrees), only a few of the group members were absorbed by MoA and its associated institutions. The majority were still struggling to get something to do. Overall, it is observed that SAPEC was a complex project and being implemented in Liberia where institutional capacity is weak. As a result, while implementation was generally successful, tracking and appropriately documenting progress proved problematic.

#### 4. Development Objective (DO) rating

DO Rating	Narrative assessment
3	The project reached 154,968 beneficiaries, 103.3% above its intended target, reduced poverty rate from 68% to 50% and achieved US\$ 91 increased incomes, thus achieving its development objective. The overall development objective of the Project was ‘to increase, on a sustainable basis, the incomes of smallholder farmers and rural entrepreneurs, particularly women, youths and the physically-challenged’. Overall, the project made good progress towards the achievement of its stated development objective. This is reflected in the achievement rates related to both target outputs and outcomes. The outcome achievement is rated highly satisfactory (4), as are the outputs – satisfactory (3). Thus, the SAPEC Project has, satisfactorily, achieved its development objective with a rating of 3.

#### 5. Beneficiaries

Category (e.g. farmers, students)	Actual (A)	Planned (B)	Progress towards target (%)	% of women
Households	25,250.000	25,000.000	101.00%	30.00%

#### 6. Unanticipated or additional outcomes

Description	Type	Positive(or negative)	Impact on project	Assessments
Access to water	Gender and social	25,000.000	MEDIUM	In some of the areas where the Cassava Hubs were established, communities are allowed to access water, from the Hubs’ wells, free of charge. This is more advantageous during the dry season during which communities (especially women and children) would otherwise walk long distances to fetch water.
Increased diversity of communities’ food habits	Social	25,000.000	HIGH	Cassava Hubs have contributed to increased diversity of communities’ food habits away from rice.
Gender equality	Gender and social	25,000.000	HIGH	The SAPEC Project performed quite well with regards to gender mainstreaming in the different project activities; this was quite befitting considering that women were especially targeted as part of the project’s development objective. This was done through: a) training and technology-dissemination activities were carried out in suitable localities to enable ALL

				the target beneficiaries to attend; b) for the rice-related interventions, all dissemination materials were developed with, and validated by, a small sample of the target groups to ensure that they were appropriate for the intended audience; this ensured that the materials were gender sensitive; c) good efforts were made to disaggregate the data collected by gender; this did not only enable the project to track progress on gender mainstreaming but also provided information on the different roles women play along the different links of the target commodity value chains. Overall, an estimated 30% of the SAPEC Project’s beneficiary households were female-headed households.
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**7. Lessons learned related to effectiveness**

Key issues	Lessons learned	Target audience
<b>Political interference</b>	Political interference coming in after contracts have been signed and making demands that are over and above the contractual agreements can jeopardise activity implementation effectiveness. A case in River Gee where a market construction contractor was asked to relocate some squatters and build houses at the contractor’s own cost.	AfDB and GoL
<b>Climate change</b>	Because of the changing weather patterns, the country is having longer rainy seasons than before. Therefore, road construction interventions need to be allocated more time for effective delivery of outputs.	AfDB and GoL
<b>Effective costing of project activities</b>	When projects get designed, Bill of Quantities (BoQs) or activity costs are established based on which ‘COSTABS’ are established. When project implementation gets delayed for any reason, the BoQs/COSTABS will no longer be representative of the prevailing costs. Thus, there is a need to revisit the COSTABS when project implementation gets delayed.	AfDB and GoL
<b>Non performing contractors</b>	Nonperforming contractors should be identified early in the process and steps taken to either terminate the contract or revise the contract to reflect the capacity of the contractor. This is to avoid poor completion of works or failure to deliver against the contract.	GoL

**C. Efficiency**

**1. Timeliness**

Planned project duration (in years)	Actual implementation time (in years)	Ratio of planned and actual implementation time	Rating
4.7	8.1	0.58	2

**Narrative assessment**

SAPEC Project implementation start-up was significantly delayed and implementation was slow, leading to two extensions. The timeliness aspect is rated highly unsatisfactory. This is largely attributed to: a) start-up delays – the time between entry into force and actual first disbursement was long; this is mainly attributed to delays in approval of the project by the Government’s legislative assembly. While SAPEC Project entry into force was 17th July, 2013, the first disbursement was on 7th May, 2015, two years after entry into force; b) The project lost 8 months of implementation time due to the suspension of disbursement to its Special Account from July 2018 to December 2018 and full suspension of disbursement to the Project from February 2019 – May 2019 as a result of the delayed refund of unauthorized transfer of funds from the Project Escrow Account, and; c) The project was affected by outbreak of two pandemics during implementation at two different times, Ebola between 2014 and 2015 and COVID – 19 in 2020/21 significantly affecting implementation.

## 2. Resource use efficiency

Median % physical implementation of RLF outputs financed by all financiers	Commitment rate (%)	Ratio of the median percentage physical implementation and commitment rate	Rating
100.00%	82.79%	1.21%	4
<b>Narrative assessment</b>			
<p>The average implementation rate of the outputs was about 95.40%. It is noted that SAPEC Project implementation was granted two extensions in order to finalize the various activities under the three technical components for the various outcomes. Disbursement on the other hand was at 79% excluding government contribution; having disbursed USD 42.98 million of USD 54.50 million envisaged, being USD 39.0 million of USD 46.5 million allocated from the GAFSP grant and USD 3.98 million of USD 6.40 million from ADF loan. Thus, USD 11.52 million representing 21% of total financing remained undisbursed. This includes USD 1.60 million envisaged contribution from government that has not been reported. The project achieved majority of its outcomes by project end date:</p> <ul style="list-style-type: none"> <li>• The achievement of the end targets for outcome one is about 138%; for outcome two it is estimated at about 187.3% which is highly satisfactory in both cases.</li> <li>• The disbursement rate for the funding is about 79% at project end. This excludes disbursement from government that has not been disclosed. The average percentage of the above outcomes is the weighted average of the implementation rates as derived from the outputs as defined in the cost structure of the project at appraisal. Resource use efficiency is rated satisfactory. It should be noted, however, that the completion of some outcomes experienced a two-year extension. Despite these extensions, the overall physical implementation rate of the outcomes was very satisfactory, which explains a very satisfactory level in the use of the project resources as indicated with the exception of selected outputs. For some of those outputs (e.g. number of beneficiaries of the pilot credit scheme and repayment rate), the associated activities were cancelled while for others (e.g. number of KM of all-weather roads rehabilitated). There is also another category of outputs (e.g. Postharvest loss (PHL) reduction resulting from project interventions) for which data was not available and, therefore, achievements made (or lack thereof) could not be ascertained.</li> </ul>			

## 3. Cost benefit analysis

Economic Rate of Return (at appraisal)	Updated Economic Rate of Return (at completion)	Ratio	Rating
18.00	29.00	0.62	4
<b>Narrative assessment</b>			
<p>Overall, SAPEC has demonstrated financial viability. In the implementation period alone, the production intensification investment activities generated about USD 54 million as incremental household income, whereas infrastructure improvement resulted in efficiency gains of over USD 3.5 million. Benefits of this magnitude will continue to accrue to the SAPEC communities, assuming that the infrastructure quality is fairly maintained and farmers continue using the farming practises introduced by the project. Due to incomplete project information, the economic analysis could not fully consider several other project impacts (benefits). This includes, among others, the benefits from agro-processing activities, reduction in post-harvest losses, reduction in vehicle operating costs, reduced health costs due to improved nutrition intake, and potential value raise for properties adjacent to the infrastructure developed. The project is believed to have no significant hidden economic costs (externalities).</p> <p>At a cost of capital of 12%, as used at its design, SAPEC has an Economic Net Present Value (ENPV) of USD 51 million and an Economic Rate of Return (ERR) of 29%; this compares to USD 27 million and 18%, respectively, expected at appraisal. As indicated in the output reporting, the project targets, both yields and hectares covered, though delayed, were in most cases over exceeded, and thus a huge positive difference in the ENPV. Even with a 10% simultaneous reduction in yields and prices, SAPEC would achieve an ERR of 18% and a positive ENPV of about USD 15 million. Therefore, the project cost-benefit analysis performance is rated Satisfactory (3).</p>			

## 4. Implementation Progress (IP)

IP Rating	Narrative assessment
3	<p>Almost all project components and activities were completed to 100%, except for road infrastructure rehabilitation, which was completed to 89%. The assessment in this section focuses on the following three main categories: a) compliance with covenants (project covenants, environmental and social safeguards and audit compliance); b) project systems and procedures (procurement, financial management and monitoring and evaluation); and c) project execution and financing (disbursement, budget commitments, counterpart funding and co-financing).</p> <p>a) According to the referenced IPR, compliance with covenants was rated as highly satisfactory (4); project covenants were complied with, inclusive of the audit. This was based on the report that Conditions Precedent to the Entry into Force and Disbursement for both GAFSP Grant and ADF Loan were met. Audits covering 2013-2014, 2014-2015, 2015-2016, fiscal periods were conducted by Paker &amp; Associates, and reports cleared by the Bank. Audits for the period 2016-2017 and 2017-2018 fiscal periods were conducted by KF Accountants &amp; Business Advisers and the report was finalized, submitted</p>

to, and cleared by the Bank. The covenants on environmental and social safeguards were also complied with; the SAPEC Project engaged the Environmental Protection Agency (EPA). EPA was given the responsibility of ensuring the Project's compliance with environmental and social safeguards covenants; this role was adequately executed.

b) IPR rated the project systems and procedures as having been satisfactory (3). The Financial Management (FM) system maintained by the MoA for the implementation of the SAPEC Project was considered by the IPR as satisfactory and was reliably be utilized in fulfilling the Project's FM requirements to the Bank. With regard to procurement, although the process took a lengthy period to complete, it, nonetheless, followed the stated procedures.

c) The category 'Project Execution and Financing' was rated as satisfactory (3). This is because Disbursement rates were 84% and 62% for the GAFSP grant and Bank loan, respectively. Therefore, the overall SAPEC Project implementation processes were generally satisfactory, and this contributed to the achievement of the anticipated results.

### 5. Lessons learned related to efficiency

Key issues	Lessons learned	Target audience
<b>Improve procurement planning</b>	Given the bad condition of many of the country's inter-County Road network, getting materials to different sites can be a big challenge during the rainy season. It is therefore important that the procurement process for Service Providers is undertaken in a manner that leads to awarding of the contract during the dry season.	GoL
<b>Strengthen M&amp;E system</b>	In order to establish whether implementation is on course to achieving the set targets, an effective M&E is a necessary requirement. While the SAPEC Project was successful in implementing most of the activities, achievements made in some of the cases could not be established because the data needed was not available.	GoL

## D. Sustainability

### 1. Financial sustainability

Rating	Narrative assessment
3	<p>a) Prospects for financial sustainability are rather mixed. Cassava processing hubs have established a system that allows continuous operations through the forward linkages (cassava products linked to outlets within and beyond the Counties) and backward linkages (established a network of out-growers to supply the raw material, in addition to the hubs' own nucleus farms); the hubs were, thus, established using a sound business model and this bodes well for sustainability. The industrial rice mills were not yet operational by the time of the mission; MoA was in the process of establishing a PPP to operate the mills. The mini-rice mills are also operated on a business basis; the system in place will allow continued benefit streams. Members mill rice for own use and sell the surplus to the community. Members and non-members are charged for using the mill; part of the proceeds is used to maintain the mill in good working condition. Thus, for cassava hubs and the mini-rice mills, prospects for financial sustainability of the target beneficiaries are promising. The rehabilitated and expanded market centres provided an opportunity for the target beneficiaries to transact business in different commodities, including fresh produce from rural farming communities. The market management committees are managing the facilities in a manner that allows for sustained operations thereby leading to long-term/sustained financial benefits for the project's target groups.</p> <p>b) However, although productivity enhancing interventions for the target crops contributed to increased yields and total production, resulting in higher incomes and improved livelihoods of the beneficiaries, the system does not seem to be sustainable in the long-run. The observed productivity enhancement was driven by the Project-provided inputs. This is a consequence of the absence of a system that avails access to the requisite inputs (seeds, fertilizers, etc.) at affordable prices. The issue of a seed system is particularly important and this is more pronounced for the rice sector where farmers received Open Pollinated Varieties (OPV) seeds.</p> <p>c) The financial modelling for target crops reveals that these crops can be grown profitably, and for every hectare (which is the average land holding), a household earns an additional USD 1,604 by using the technology introduced by the project (see table below). Even without, government subsidies on inputs, the additional benefit would be in excess of USD 1,000 per hectare. The issue is the absence of a system to provide access to the needed inputs at affordable prices.</p> <p>d) The Project rehabilitated feeder roads that are critical for the marketing of agricultural produce. However, there is no system in place for regular maintenance of these roads. Over time, these roads could, once again, become a limiting factor to effective market access for the beneficiaries. This will negatively affect their incomes. The Project also provided capacity augmentation for selected institutions in the agricultural sector. However, the SAPEC Project did not established proper arrangements to finance infrastructure maintenance and capacitated institutions. Although, considerable efficiency</p>



	gains are accruing to all households in the community, the public nature of this service means that communities cannot easily self-organize to finance the required repairs/maintenance. Hence, this is another aspect where prospects for financial sustainability are not promising.
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**2. Institutional sustainability and strengthening of capacities**

Rating	Narrative assessment
3	<p>The SAPEC Project sought to enhance capacities of the different stakeholders in the agricultural sector to support project implementation and to sustain the achievements after project completion. However, the way in which capacity strengthening was provided in some of the cases is not likely to facilitate the achievement of the original objective. For example, for the University of Liberia (College of Agriculture and Forestry), while the administrative and selected classrooms were rehabilitated and the salaries of 9 instructors paid for one year, some of the equipment provided were not being used. For computers, the college does not have access to internet while the provided soil, water and plant analysis equipment could not be used because they were not calibrated at the time of delivery by the suppliers! For the William Tubman University, the Project constructed a building that houses soil and crop laboratories and provided lab equipment. But, the equipment are not being used; some are still in Monrovia and not yet at the site. For others, the needed reagents were not provided and the accessories needed to protect the safe operation of the delicate equipment (such as stabilisers and air conditioning facilities) were not provided. This was attributed to preparation and submission of inadequate/incomplete technical specifications by the user institution. The PIU also explained that the laboratory equipment and reagents were supplied during the raining season when the roads were deplorable making full delivery to the University in Harper difficult. Hence the remaining items were delivered at the University’s Monrovia Office. Reagents were provided (though in limited quantity). Stabilisers and air conditioning facilities were also provided. However, the supply of electricity at the University is not stable. The provision of advisory/extension services by the MoA remains a weak link. The number of the Government extension staff is still low and the capacity (skills and equipment) is inadequate. Most of the extension staff recruited and capacitated by the project (3 to 4 per County) were not absorbed by MoA at the end of project implementation, as had been planned; only 3 were retained by the Ministry. This was due to lack of resources to pay their salaries. Thus, extension service provision will continue to suffer from inadequate personnel. In addition, the project trained a total of 58 students (Masters and undergraduate degrees) meant to serve the MoA, CARI and related agricultural institutions in fields of study that were confirmed by a training needs assessment. However, the majority of the students (upon completing their respective studies) were NOT absorbed by the institutions; many are still jobless while others feel that they are being underemployed in non-agricultural related sectors. Thus, the objective of capacitating the students to help the agricultural sector has not been achieved. On the other hand, the Booker Washington Institute (BWI) benefited from capacity building and, indeed, served as a training centre for some of the project beneficiaries. The equipment provided was not only used to teach learners, but was also used for agriculture tools fabrication, repair, and maintenance of farm level machinery. Some of the machinery supplied to selected beneficiaries were, actually, fabricated by BWI. Prospects for sustaining such an achievement are good.</p>

**3. Ownership and sustainability of partnerships**

Rating	Narrative assessment
4	<p>The SAPEC Project identification, design and implementation was participatory and this ensured relevancy of the project to the stakeholders’ needs and, implicitly, ownership of the project. It was first proposed in the Liberia Agriculture Sector Investment Program (LASIP); LASIP was developed by GoL to achieve national and sector priorities articulated in the PRS and the FAPS. In turn, these were formulated based on findings from the Comprehensive Assessment of the Agricultural Sector. The overarching objective was to address the needs for improving food security, reducing poverty, and fostering national economic growth. As already highlighted under the Relevance Section, the Project goal and development objective were consistent with a number of GoL’s policies and strategies. In addition, it sought to address the country’s fragility following 14 years of civil conflict that devastated the economy, decimated institutions, destroyed infrastructure and triggered massive rural-urban migration. The Project was also implemented within the Government’s decentralised structure and, in the process, ensuring that processes and procedures conform to, and consistent with, those of the Government. Communities, government and NGOs participated in project implementation. The SAPEC project was also supported by credible regional research institutions and renowned implementing partners (such as IITA and Africa Rice) for technology transfer. These partnerships will continue to exist long after the SAPEC Project’s closure. The consultative process initiated during the formulation of the project continued during its implementation. Thus, the SAPEC Project sought to address issues that the key stakeholders (communities and government) identified with and that ensured ownership.</p>



#### 4. Environmental and social sustainability

Rating	Narrative assessment
3	At the time of designing, the project was a Category 2 and, thus, required the preparation of Environmental and Social Management Plan (ESMP). The ESMP was jointly prepared by the MoA, Environmental Protection Agency (EPA) and the Bank to mitigate any potential risks and disclosed before Board presentation of the project. Resources were allocated in the budget and were used to implement the ESMP; AfDB and the EPA supervised implementation. Some of such activities included remediation, EPA and PMU capacity building (in environmental protection-related areas), and monitoring. The ESMP also contained activities that helped reduce potential negative impacts, including pollution and contamination of water bodies that may arise from runoff of excess fertilizers and pesticides through an application of efficient management regimes and best practices. However, going forward, the EPA would need to continue with monitoring of the different aspects to ensure continued compliance with the minimum requirements; this requires an annual budgetary allocation and it is not clear if the agency would be able to secure the budget on an ongoing basis.

#### 5. Lessons learned related to sustainability

Key issues	Lessons learned	Target audience
<b>Sustaining agricultural productivity</b>	A seed system is a minimum requirement for sustaining agricultural productivity gains. When farmers are provided with higher yielding crop varieties, the yield gains made are likely to progressively disappear without a system that would enable them to access improved seeds. This is especially the case with OPVs.	AfDB & GoL
<b>Use of local capacity</b>	When procuring equipment for project investment, ensure that beneficiaries would be able to easily access spare parts and services, as and when required. In the case of the SAPEC Project, local artisans were trained in machine fabrication and equipped with the machinery needed to set up workshops. They were able to fabricate agricultural tools/machinery, repair, and maintenance of farm level machinery. Local fabrication of equipment, whenever possible, is a better option than imports; it renders itself more accessible to spare parts and repair/maintenance services compared to imported supplies.	AfDB & GoL
<b>Seed system</b>	A good quality seed is the single most important input into a farmer's production system. It is, therefore, recommended that efforts be made by MoA to gradually work towards putting in place a seed system that would ensure timely and effective access to the needed planting material to sustain the productivity gains brought about by the Project's interventions.	GoL
<b>High Quality Cassava Flour</b>	As the supply of HQCF increases in Liberia with the establishment of cassava hubs, it is important that government initiates a process/policy to support increased use of HQCF in the different bakery products (bread, cookies, etc.). This is bound to be beneficial to all stakeholders along the cassava value chain and the baking industry, considering that HQCF is cheaper than wheat flour.	GoL
<b>Rice equipment fabrication</b>	The project has enhanced the country's ability to test and fabricating rice equipment. It is recommended that Liberia should exploit the wide out-scaling of these technologies both domestically and in the region.	GoL
<b>Capacity building</b>	Capacity building of the respective sector actors at different links of the rice and cassava value chains is so crucial to their effective functioning. It is recommended to continue such capacity building to ensure the adoption and up-scaling of the successes made with the objective of sustaining the value chains' growth and development.	GoL and AfDB
<b>Timely access to agricultural inputs</b>	The SAPEC project supported the development of an E-Platform for input distribution but it is not yet effectively being used for the intended purpose. It is recommended that MoA encourages the use of the platform by the different donor-supported projects and non-governmental agencies to ensure continuity and financial support towards the sustainable management and operation of the platform.	GoL

<b>Timing of contract awards for works</b>	Considering that, as a result of climate change, the rain season is lasting longer than before and given the bad conditions of the country's road network, the resultant conditions negatively affect the movement of people and materials. It is, therefore, recommended, that the timing of the procurement process for service providers for works should aim at making the eventual award of contracts at the onset of the dry season to facilitate movement of people and material to the sites.	GoL
<b>Internship for scholarship beneficiaries</b>	When students are awarded scholarships for agricultural-related studies, it is recommended that arrangements be made to provide internship opportunities for them. This could be done during the study period or after graduation. The objective would be to enable the students/graduates to gain practical experience that would increase the chances of their employability.	GoL
<b>Country capacity</b>	It is recommended that the complexity of the project should commensurate with the prevailing capacity of the country. Countries, like Liberia, whose capacity was decimated by a prolonged civil war, find it difficult to properly implement and appropriately monitor and document progress.	AfDB & GoL

### III. Performance of stakeholders

#### 1. Bank performance

Rating	Narrative assessment by the Borrower on the Bank's performance	
4	<p>The African Development Bank (AfDB) co-financed the project with an ADF loan of US\$6.4 (11.74%) – for implementation of civil works relating to feeder roads. AfDB support for rehabilitation of rural feeder roads has immensely improved access of rural communities to markets, health centers, schools and other service centers. According to the project implementation and institutional arrangement, the AfDB served as the Supervising Entity for Global Agriculture and Food Security Program (GAFSP) grant and the ADF loan. The Bank undertook periodic field supervision missions to Liberia, except the periods covering the outbreak of Ebola and Corona Virus pandemic, and reviewed progress made towards the achievement of project outputs, outcomes and impact, and provided support to address various challenges to implementation - including review and status update of procurement performance for the project and assessed the financial management. The missions were undertaken by a team of experts comprising Agricultural Economist, Procurement Officer, Disbursement, Financial Management Officer, Infrastructure Engineer, and Gender Monitoring and Evaluation Results Officer. In addition to supervision missions, the country office, in concert with the Aide Management Unit of the Ministry of Finance and Development Planning (MFDP), organized and conducted Joint Quarterly Technical Projects Progress Review Meetings. The services and support provided by the AfDB were highly satisfactory. They were critical to the effective and successful implementation of the project. The Bank was proactive in identifying, following up and resolving problems. However, a high turnover of Task Team Leaders (6 Task Team Leaders) ensued during the project life – negatively affected project institutional knowledge, and sometimes slowed down approval processes (especially in granting No Objections and processing of direct payment requests), as the new Task Team Leader needed time to adjust.</p>	
<b>Comments by the Bank on its own performance</b>		
<p>The project was approved in 2012, without baseline studies which was only prepared in 2016. Furthermore as with many Bank projects, projects have complex designs with numerous activities within projects. In the case of SAPEC, it included productivity enhancement (access to improved seeds, farmer e-registration, road infrastructure, market infrastructure, capacity building, etc.). A complex project will require strong implementation capacity. In a country like Liberia, where institutional capacity is weak, a complex project lacking fundamental data at inception will be difficult to implement and track. Furthermore, the period of 5 years was not adequate. Rural Liberia is only accessible during 6 months in a year. Hence the usual 5 years project duration is not adequate for Liberia's case. The Bank offered technical assistance to the project management team to resolve several implementation challenges, and ensured pro-active problem identification, follow up and resolution. The Bank has been quite flexible with the Govt. offering numerous extensions of the project close date, as well as capacity building trainings.</p>		
	<b>Key issues</b>	<b>Lessons learned</b>
	<b>Processing and approval of payment applications</b>	<p>The Local contractors' lack of cash flow financing required for smooth execution of projects inhibits completion of projects on schedule. Their credibility with local banks further inhibits the banks' preparedness to release the level of cash-flow financing required. The period for payment of certified certificates also tends to be too long for the local contractors to accommodate and end up cash</p>
		<b>Target audience</b>
		AfDB

	strapped until certified payments can be made. Hence, the Bank and the Ministry of Finance and Development Planning should expedite the processing and approval of payment applications to minimize financial struggle of Local Contractors during the course of execution of the projects.	
<b>Inception/preparatory phase of a project</b>	The SAPEC Project had a huge infrastructure component that required feasibility studies and production of designs, BOQs and technical specifications. Usually projects of this scope should be allowed to go through an inception/preparatory phase with separate funding set aside for this purpose.	AfDB
<b>Supervision missions</b>	The Bank undertakes periodic field supervision missions to review project implementation progress, and provides recommendations that are useful and critical to a successful implementation of the project. In the case of SAPEC, the Mission Team was usually composed of a mixed of different subject matter specialists (Agricultural Economist, Gender Specialist, Financial Management Specialist, Procurement Specialist and Engineer). These missions were timely and useful, but needed more time to physically follow up on project implementation in the field and directly interact with more beneficiaries. This way, the mission will have a full appreciation of both the success stories, and some of the project implementation challenges/constraints. For agriculture support projects, such as SAPEC, it is important to include an Agronomist on the mission	AfDB

## 2. Borrower performance

Rating	Narrative assessment on the Borrower performance by the Bank	
3	Given the complexity of the project and weak implementation capacity, the project required a longer implementation timeframe from the onset. The government also required significant capacity reinforcement and dependence on project funding sometimes limited/delayed Government's full participation. There were also several political interference in project decisions which sometimes delayed project implementation, especially relating to contract managements. The Ebola and Covid pandemics negatively affected project implementation.	
Key issues	Lessons learned	Target audience
<b>Fiduciary issues</b>	Implementation of this project showed that there could be some fiduciary risk, if strong financial management and fiduciary safeguards are not put in place. A key lesson is to only disburse smaller amounts into Special Account.	GoL
<b>Government capacity</b>	Government capacity is weak and needs to be strengthened significantly to implement complex projects such as SAPEC. The project management unit could have done better if they had requisite capacity to deliver. The Ebola and Covid pandemics negatively affected project implementation.	GoL
<b>Contractors performance</b>	PIU capacity to manage contracts needs to be significantly improved. Poor contract management resulted in some cases in political interference in project decisions delayed project implementation, especially relating to contract managements.	GoL
<b>Flexibility in project implementation and management</b>	The conditions influencing implementation are bound to vary from the time of design through to completion and, therefore, flexibility is necessary to allow for the needed adjustments for continued relevancy.	GoL

## 3. Performance of other stakeholders

Rating	Narrative assessment on the Borrower performance by the Bank	
4	Global Agriculture and Food Security Program (GAFSP) – GAFSP was a SAPEC Project co-financier, accounting for over 85% of the Project's finances at the time of design; the financing was in the form of a grant to the GoL. The arrangement was that AfDB would supervise the use GAFSP's grant resources. Disbursement of the grant proceeds from GAFSP was reported to be non-eventful. Africa Rice and the International Institute for Tropical Agriculture (IITA) – Africa Rice and IITA were identified, as part of the design process, to be part of the collaborative approach for technology dissemination to smallholder farmers, particularly women, who form the majority of rice and cassava farmers. The involvement of these regional research centres aimed at providing technical assistance to the MoA, farmer groups, private sector actors and NGOs. Their involvement was advantageous in that they availed new crop varieties, crop management practices, and knowledge to the target beneficiaries. More specifically, IITA was tasked with disseminating packages of improved cassava technology options to farmers; this included: a) high yielding, disease, and pest resistant crop varieties; b) improved crop management practices; and c) processing of cassava into food products. On the other hand, Africa Rice was tasked with: a) introduction of improved, higher yielding and climate change resilient upland and lowland rice varieties; and b) improved cultivation,	

<p>harvest and post-harvest rice processing practices and technologies to upgrade the quality and marketability of locally produced rice in order to meet consumers' preferences. Both institutions executed their respective responsibilities very professionally; they had teams of technical specialists that implemented the different tasks at the respective project sites. However, some challenges limited the effectiveness of their operations. These included: a) poor road network which impeded the movement of improved technologies across the Project's target areas; b) lack of the requisite farm machines limited the expansion of production operations; c) there were some delay in the release of funds needed to support project activities. Service Providers (SPs) – These were selected through a competitive open call for proposals; consistent with the requirements of the project. The majority of SPs generally completed the planned activities and made deliverables within the stipulated timelines. In a few cases, some SPs experienced delays in delivery and, in some cases, the works were not completed. The other cases where SPs allege that the assignment was completed but part of the invoice was not paid. All these point to a need to improve on contract management in future projects. However, some of the SPs were concerned with the length of time taken between applying for the tender and award of the contract. The lengthy time period, in many of the cases, led to a change in some of the commodity prices and, depending on the magnitude of the change, could have made the venture a money losing one on the part of the SPs.</p>		
Key issues	Lessons learned	Target audience
<b>Public extension provision is a limiting factor</b>	The limited human resources for MoA's extension system and the associated inadequate equipment limit opportunities for scaling-up farmers' use and adoption of technical innovations generated from the Project's various interventions.	GoL/MoA
<b>Public-Private Partnerships (PPPs)</b>	Weak PPPs make it difficult to effectively reap the advantages of private sector involvement along the different agricultural commodity value chains.	GoL/MoA

#### IV. Summary of key lessons learned and recommendations

##### 1. Key lessons learned

Key issues	Key Lessons learned	Target audience
Fiduciary issues	Implementation of this project showed that there could be some fiduciary risk, if strong financial management and fiduciary safeguards are not put in place. A key lesson is to only disburse smaller amounts into Special Account.	AfDB & Government of Liberia
Government capacity	Government capacity is weak and needs to be strengthened significantly to implement complex projects such as SAPEC. The project management unit could have done better if they had requisite capacity to deliver. The Ebola and Covid pandemics negatively affected project implementation.	AfDB & Government of Liberia
Flexibility in project implementation and management	The conditions influencing implementation are bound to vary from the time of design through to completion and, therefore, flexibility is necessary to allow for the needed adjustments for continued relevancy.	AfDB & Government of Liberia
Consultative design process	Involving key stakeholders in project design is a certain way of ensuring that: a) the needs and priorities of the target beneficiaries are appropriately incorporated and catered for; b) the design and implementation arrangements align with priorities, policies, and strategies of the country; and c) partners' and donors' policies are adhered to. It is also a means of ensuring ownership of the whole process from the very beginning.	AfDB & Government of Liberia
Improve procurement planning	Given the bad condition of many of the country's inter-County Road network, getting materials to different sites can be a big challenge during the rainy season. It is therefore important that the procurement process for Service Providers is undertaken in a manner that leads to awarding of the contract during the dry season.	GoL
Strengthen M&E system	In order to establish whether implementation is on course to achieving the set targets, an effective M&E is a necessary requirement. While the SAPEC Project was successful in implementing most of the activities, achievements made in some of the cases could not be established because the data needed was not available.	GoL
Processing and approval of payment applications	The Local contractors' lack of cash flow financing required for smooth execution of projects inhibits completion of projects on schedule. Their credibility with local banks further inhibits the banks' preparedness to release the level of cash-flow financing required. The period for payment of certified certificates also tends to be too long for the local contractors to accommodate and end up cash strapped until certified payments can be made. Hence, the Bank and the Ministry of Finance and Development Planning	AfDB

	should expedite the processing and approval of payment applications to minimize financial struggle of Local Contractors during the course of execution of the projects.	
Inception/preparatory phase of a project	The SAPEC Project had a huge infrastructure component that required feasibility studies and production of designs, BOQs and technical specifications. Usually projects of this scope should be allowed to go through an inception/preparatory phase with separate funding set aside for this purpose.	AfDB
Supervision missions	The Bank undertakes periodic field supervision missions to review project implementation progress, and provides recommendations that are useful and critical to a successful implementation of the project. In the case of SAPEC, the Mission Team was usually composed of a mixed of different subject matter specialists (Agricultural Economist, Gender Specialist, Financial Management Specialist, Procurement Specialist and Engineer). These missions were timely and useful, but needed more time to physically follow up on project implementation in the field and directly interact with more beneficiaries. This way, the mission will have a full appreciation of both the success stories, and some of the project implementation challenges/constraints. For agriculture support projects, such as SAPEC, it is important to include an Agronomist on the mission	AfDB
Public extension provision is a limiting factor	The limited human resources for MoA's extension system and the associated inadequate equipment limit opportunities for scaling-up farmers' use and adoption of technical innovations generated from the Project's various interventions.	GoL/MoA
Public-Private Partnerships (PPPs)	Weak PPPs make it difficult to effectively reap the advantages of private sector involvement along the different agricultural commodity value chains.	GoL/MoA
Fiduciary issues	Implementation of this project showed that there could be some fiduciary risk, if strong financial management and fiduciary safeguards are not put in place. A key lesson is to only disburse smaller amounts into Special Account.	GoL
Government capacity	Government capacity is weak and needs to be strengthened significantly to implement complex projects such as SAPEC. The project management unit could have done better if they had requisite capacity to deliver. The Ebola and Covid pandemics negatively affected project implementation.	GoL
Contractors performance	PIU capacity to manage contracts needs to be significantly improved. Poor contract management resulted in some cases in political interference in project decisions delayed project implementation, especially relating to contract managements.	GoL
Flexibility in project implementation and management	The conditions influencing implementation are bound to vary from the time of design through to completion and, therefore, flexibility is necessary to allow for the needed adjustments for continued relevancy.	GoL
Political interference	Political interference coming in after contracts have been signed and making demands that are over and above the contractual agreements can jeopardise activity implementation effectiveness. A case in River Gee where a market construction contractor was asked to relocate some squatters and build houses at the contractor's own cost.	AfDB and GoL
Climate change	Because of the changing weather patterns, the country is having longer rainy seasons than before. Therefore, road construction interventions need to be allocated more time for effective delivery of outputs.	AfDB and GoL
Effective costing of project activities	When projects get designed, Bill of Quantities (BoQs) or activity costs are established based on which 'COSTABS' are established. When project implementation gets delayed for any reason, the BoQs/COSTABS will no longer be representative of the prevailing costs. Thus, there is a need to revisit the COSTABS when project implementation gets delayed.	AfDB and GoL
Non performing contractors	Nonperforming contractors should be identified early in the process and steps taken to either terminate the contract or revise the contract to reflect the capacity of the contractor. This is to avoid poor completion of works or failure to deliver against the contract.	GoL
Sustaining agricultural productivity	A seed system is a minimum requirement for sustaining agricultural productivity gains. When farmers are provided with higher yielding crop varieties, the yield gains made are likely to progressively disappear without a system that would enable them to access improved seeds. This is especially the case with OPVs.	AfDB & GoL
Use of local capacity	When procuring equipment for project investment, ensure that beneficiaries would be able to easily access spare parts and services, as and when required. In the case of the SAPEC Project, local artisans were trained in machine fabrication and equipped with the machinery needed to set up workshops. They were able to fabricate agricultural tools/machinery, repair, and maintenance of farm level machinery. Local fabrication of equipment, whenever possible, is a better option than imports; it renders itself more	AfDB & GoL



	accessible to spare parts and repair/maintenance services compared to imported supplies.	
Seed system	A good quality seed is the single most important input into a farmer's production system. It is, therefore, recommended that efforts be made by MoA to gradually work towards putting in place a seed system that would ensure timely and effective access to the needed planting material to sustain the productivity gains brought about by the Project's interventions.	GoL
High Quality Cassava Flour	As the supply of HQCF increases in Liberia with the establishment of cassava hubs, it is important that government initiates a process/policy to support increased use of HQCF in the different bakery products (bread, cookies, etc.). This is bound to be beneficial to all stakeholders along the cassava value chain and the baking industry, considering that HQCF is cheaper than wheat flour.	GoL
Rice equipment fabrication	The project has enhanced the country's ability to test and fabricating rice equipment. It is recommended that Liberia should exploit the wide out-scaling of these technologies both domestically and in the region.	GoL
Capacity building	Capacity building of the respective sector actors at different links of the rice and cassava value chains is so crucial to their effective functioning. It is recommended to continue such capacity building to ensure the adoption and up-scaling of the successes made with the objective of sustaining the value chains' growth and development.	GoL and AfDB
Timely access to agricultural inputs	The SAPEC project supported the development of an E-Platform for input distribution but it is not yet effectively being used for the intended purpose. It is recommended that MoA encourages the use of the platform by the different donor-supported projects and non-governmental agencies to ensure continuity and financial support towards the sustainable management and operation of the platform.	GoL
Timing of contract awards for works	Considering that, as a result of climate change, the rain season is lasting longer than before and given the bad conditions of the country's road network, the resultant conditions negatively affect the movement of people and materials. It is, therefore, recommended, that the timing of the procurement process for service providers for works should aim at making the eventual award of contracts at the onset of the dry season to facilitate movement of people and material to the sites.	GoL
Internship for scholarship beneficiaries	When students are awarded scholarships for agricultural-related studies, it is recommended that arrangements be made to provide internship opportunities for them. This could be done during the study period or after graduation. The objective would be to enable the students/graduates to gain practical experience that would increase the chances of their employability.	GoL
Country capacity	It is recommended that the complexity of the project should commensurate with the prevailing capacity of the country. Countries, like Liberia, whose capacity was decimated by a prolonged civil war, find it difficult to properly implement and appropriately monitor and document progress.	AfDB & GoL

## 2. Key recommendations (with particular emphasis on ensuring sustainability of project benefits)

Key issue	Key recommendation	Responsible	Deadline
Delays in preparing bidding documents for the project.	PMU should ensure speedy processing of project bidding documents.	GoL	31.12.2021

## V. Overall PCR rating

Dimensions and criteria	Rating
<b>DIMENSION A: RELEVANCE</b>	<b>4.00</b>
<b>Relevance of project development objective (II.A.1)</b>	4
<b>Relevance of project design (II.A.2)</b>	4
<b>DIMENSION B: EFFECTIVENESS</b>	<b>3.33</b>
<b>Outcome rating (II.B.2)</b>	4
<b>Outcome rating (II.B.3)</b>	3
<b>Development Objective (DO) (II.B.4)</b>	3
<b>DIMENSION C: EFFICIENCY</b>	<b>3.25</b>
<b>Timeliness (II.C.1)</b>	2
<b>Resource use efficiency (II.C.2)</b>	4

<b>Cost-benefit analysis (II.C.3)</b>	4
<b>Implementation Progress (IP) (II.C.4)</b>	3
<b>DIMENSION D: SUSTAINABILITY</b>	<b>3.25</b>
<b>Financial sustainability (II.D.1)</b>	3
<b>Institutional sustainability and strengthening of capacities (II.D.2)</b>	3
<b>Ownership and sustainability of partnerships (II.D.3)</b>	4
<b>Environmental and social sustainability (II.D.4)</b>	3
<b>AVERAGE OF THE DIMENSION RATINGS</b>	<b>3.46</b>
<b>OVERALL PROJECT COMPLETION RATING</b>	<b>Satisfactory</b>

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