## BASIC DATA

### A Report data

<table>
<thead>
<tr>
<th></th>
<th>Date of report:</th>
<th>03 March, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission date (if field mission)</td>
<td>From: 13 February, 2017</td>
<td>To: 23 February, 2017</td>
</tr>
</tbody>
</table>

### B Responsible Bank staff

<table>
<thead>
<tr>
<th>Positions</th>
<th>At approval</th>
<th>At completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Director</td>
<td>Franck J.M. PERRAULT</td>
<td>Janvier K. LITSE</td>
</tr>
<tr>
<td>Country Manager</td>
<td>Margaret KILO</td>
<td>Chiji OJUKWU</td>
</tr>
<tr>
<td>Sector Director</td>
<td>Aly ABOU-SABAA</td>
<td>Chiji OJUKWU</td>
</tr>
<tr>
<td>Sector Manager</td>
<td>Dougou KEITA</td>
<td>Mouldi TARHOUNI (OIC RDGW.2)</td>
</tr>
<tr>
<td>Task Manager</td>
<td>Rogers LUBUNGA</td>
<td>Evans NTAGWABIRA</td>
</tr>
<tr>
<td>Alternate Task Manager</td>
<td>N/A</td>
<td>Doreen KIRABO</td>
</tr>
<tr>
<td>PCR Team Leader</td>
<td></td>
<td>Evans NTAGWABIRA</td>
</tr>
<tr>
<td>PCR Team Members</td>
<td></td>
<td>Philip DOGHLE (Fin. Mgt. Officer, SNFI.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Doreen KIRABO (Financial Analyst, RDGW.2)</td>
</tr>
</tbody>
</table>

### C Project data

**Project name:** Agriculture Sector Rehabilitation Project (ASRP)

**Project code:** P-LR-A00-001

**Project type:** Grant

**Sector:** Agriculture and Agro-Industry

**Country:** Liberia

**Environmental categorization (1-3):** 2

**Processing milestones – Bank approved financing only (add/delete rows depending on the number of financing sources)**

<table>
<thead>
<tr>
<th>Financing source/ instrument1:</th>
<th>ADF Grant: UA 6.0 million</th>
<th>Financing source/ instrument1:</th>
<th>ADF Grant</th>
<th>Financing source/ instrument1:</th>
<th>ADF Grant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date approved:</td>
<td>29 April 2009</td>
<td>Date signed:</td>
<td>14 May 2009</td>
<td>Date of entry into force:</td>
<td>30 March 2010</td>
</tr>
</tbody>
</table>

**Cancelled amounts: To be determined**

**Restructuring (specify date & amount involved): N/A**

**Original disbursement deadline: 30 July, 2016**

**Original closing date: 30 April, 2016**

**Revised (if applicable) disbursement deadline: 31 March, 2017**

**Revised (if applicable) closing date: 30 June 2017 (Revised)**

**Supplementary financing: None**

**Revised (if applicable) disbursement deadline: 31 March, 2017**

**Revised (if applicable) closing date: 30 June 2017 (Revised)**

**Key Events (Bank approved financing only)**

**Disbursement and closing dates (Bank approved financing only)**
<table>
<thead>
<tr>
<th>Financing source/ instrument2: ADF Grant: UA 6.0 million</th>
<th>Financing source/ instrument2:</th>
<th>Financing source/ instrument2:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date approved: 24 March 2010</td>
<td>Cancelled amounts: To be determined.</td>
<td>Original disbursement deadline: 30 July, 2016</td>
</tr>
<tr>
<td>Date signed: 26 August, 2010</td>
<td>Supplementary financing: None</td>
<td>Original closing date: 30 April, 2016</td>
</tr>
<tr>
<td>Date of entry into force: 28 August, 2010</td>
<td>Restructuring (specify date &amp; amount involved):</td>
<td>Revised (if applicable) disbursement deadline: 31 March, 2017</td>
</tr>
<tr>
<td>Date effective for 1st disbursement: 07 September, 2011</td>
<td>Extensions (specify dates): 1st Ext: 30 April, 2016 to 31 December, 2016, , 01 Jan 2017-30 Jun 2017</td>
<td>Revised (if applicable) closing date: closing date:31 December, 2016</td>
</tr>
<tr>
<td>Date of actual 1st disbursement: 07 September, 2011</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financing source/instrument3: ADF (FSF) Grant: UA 0.5 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date approved: 28 April, 2009</td>
</tr>
<tr>
<td>Date signed: 14 May, 2009</td>
</tr>
<tr>
<td>Date of entry into force: 30 March, 2010</td>
</tr>
<tr>
<td>Date effective for 1st disbursement: 09 July, 2010</td>
</tr>
<tr>
<td>Date of actual 1st disbursement: 09 July, 2010</td>
</tr>
<tr>
<td>Date of actual 1st disbursement: 09 July, 2011</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financing source/instrument (add/delete rows depending on the number of financing sources):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disbursed amount (amount, UA):</td>
</tr>
<tr>
<td>Financing source/ instrument1: ADF 2100155015318 – UA 6.00 Million</td>
</tr>
<tr>
<td>Financing source/ instrument2: ADF 2100155017866 – UA 6.00 Million</td>
</tr>
<tr>
<td>Financing source/ instrument3: ADF (FSF) 5900155000352 – UA 0.5 Million</td>
</tr>
<tr>
<td>Government: UA 1.70 Million</td>
</tr>
<tr>
<td>Beneficiaries: UA 0.70 Million</td>
</tr>
<tr>
<td>Other (e.g. co-financiers). IFAD – UA 3.4 Million</td>
</tr>
<tr>
<td>TOTAL: UA 18.30 Million</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financing source/instrument (add/delete rows depending on the number of financing sources):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Committed amount (UA):</td>
</tr>
<tr>
<td>Financing source/ instrument1: ADF 2100155015318 – UA 6.00 Million</td>
</tr>
</tbody>
</table>
D Management review and comments

<table>
<thead>
<tr>
<th>Report reviewed by</th>
<th>Name</th>
<th>Date reviewed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country Manager</td>
<td>Margaret KILO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sector Manager</td>
<td>Mouldi TARHOUNI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Director</td>
<td>Janvier K. LITSE</td>
<td></td>
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</tr>
<tr>
<td>Sector Director</td>
<td>Chiji Chinedum OJUKWU</td>
<td></td>
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</table>

II Project performance assessment

A Relevance

1. Relevance of project development objective

<table>
<thead>
<tr>
<th>Rating</th>
<th>Narrative assessment (max 250 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Relevance of the project development objective is rated satisfactory. ASRP was aligned with key Bank group and national policies and sector strategies, in particular the AfDB/WBG Joint Assistance Strategy, 2013-2017 Country Strategy Paper (CSP), 2008-2011 Poverty Reduction Strategy (PRS) and sector strategies for both the Bank and the Government of Liberia (GoL). The project was the Bank’s first re-engagement in post-war Liberia to contribute towards improving basic access and revitalizing rural economies in previously isolated counties, especially addressing beneficiaries’ needs. The sector goal of the ASRP was to contribute to food security and poverty reduction. Its specific objective was to increase the income of smallholder farmers and rural entrepreneurs including women on a sustainable basis. In addition to infrastructure development, the project’s productivity component was meant to support yield increases for: rice, maize and cassava. The project purpose remained largely aligned with: i) the Bank’s CSP, ii) Bank sector strategies, iii) the country’s development strategies, and iv) the beneficiary needs. The project was intended to revitalize domestic rice production, particularly in irrigated lowland swamps and rain-fed upland and swamp areas, and also for maize and cassava production. Productivity improvements were meant to create a pathway towards food security. It underscored the imperative use of improved agricultural technologies and development of capacity and skills for beneficiaries; rural infrastructure development; and rural financing which form the integral parts of the successful agricultural project.</td>
</tr>
</tbody>
</table>

* For all ratings in the PCR use the following scale: 4 (Highly satisfactory), 3 (Satisfactory), 2 (Unsatisfactory), 1 (Highly unsatisfactory)
2. Relevance of project design

<table>
<thead>
<tr>
<th>Rating*</th>
<th>Narrative assessment (max 250 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>The project design is rated satisfactory. The original design was sound and remained appropriate throughout implementation. While adjustments to the scope, became necessary because of project implementation challenges and exogenous factors such as the Ebola-Virus Disease (EVD), they were unfortunately not carried out. Thate said, the project design was simple and implementation arrangements streamlined to take into consideration capacity issues following the widespread devastating fourteen-year civil war that formally ended in 2004. The design focused on: (i) use of modern agricultural technologies to increase production and productivity through irrigated lowland, rain-fed lowland and upland rice (2800 ha) and maize (1530 ha) farming and cultivation of upland cassava (1150 ha), and good seeds, fertilizer, water, weeds &amp; pest management; (ii) capacity building in agricultural technologies, infrastructure management, training and provision of facilities for key players/stakeholders at all levels; (iii) support agricultural production and productivity through construction of relevant rural infrastructure: eight (8) small-scale concrete-earthen reservoirs/dams (1,620 ha) in four (4) most rice producing counties, construction of multifunctional agro-processing, post-harvest/marketing and warehouse facilities’ centers; (iv) spot improvement of 100 km of rural access roads and installation of 116 lines of culverts on other roads to stabilize rural farm-to-market feeder road network; and (v) construction of mechanized wells and sanitation facilities. Despite succinct project design, the project was adversely affected by: (i) the withdrawal of IFAD as co-financier during the first year of project implementation. While IFAD later established a stand-alone intervention, AfDB had to step-in to implement the would-be IFAD activities in the project. This resulted in reduction of project scope from project coverage eight counties to four. In addition, some of the project activities were scaled-down; (ii) the design did not consider the remote nature of project sites (and resultant implications of transportation costs); (iii) the design of infrastructure was done during the implementation phase instead of pre-appraisal stage, which delayed implementation of irrigation water control structures (reservoirs) and other infrastructure; (iv) limited capacity in-country to design, construct and manage agricultural infrastructure (particularly WMIs); (v) the project design didn’t sufficiently consider operations in relation to procurement and contract management in fragile situations. With regard to cross cutting issues; gender, climate change and environment were sufficiently taken into consideration in the project design.</td>
</tr>
</tbody>
</table>

3. Lessons learned related to relevance

<table>
<thead>
<tr>
<th>Key issues (max 5, add rows as needed)</th>
<th>Lessons learned</th>
<th>Target audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weakness in project preparation and appraisal</td>
<td>The project preparation and appraisal missions did not collect enough and vital information that would have informed implementation of the project (in particular project sites). The remote nature of WMI and CI sites imposed time and heavy financial costs on contractors. They experienced challenges with supply of construction materials and supervision of works. Project design missions should collect sufficient information relating to country specifics, technicalities, contracting capacities and market, etc., and elaborate sustainability dimensions to minimize deficiencies in the project cycle implementation.</td>
<td>Bank, Governments</td>
</tr>
<tr>
<td>Implementation readiness of project at Project Appraisal</td>
<td>Project designs should be implementation ready. The identification of a project should be comprehensive, possibly selecting activities and sites, and prepare design of activities that consume physical implementation project life time, prior to project approval. Infrastructure should be developed and designed; and scheduled by critical analysis method as part of entire project life span.</td>
<td>Government, Bank</td>
</tr>
</tbody>
</table>
B Effectiveness

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

During the course of implementation, ASRP was affected by: (i) the withdrawal of IFAD as co-financing partners in 2010, which posed some financial consequences as it was to finance 18.7% of the total project costs. Furthermore, IFAD engagement in the project would have served the comparative advantage in the implementation of components A and B of the project. Although mid-term review of the project was not conducted due to outbreak of the Ebola virus, the scope of AFDB’s project interventions was reduced as the project area was limited to 4 of the 8 counties proposed at appraisal; targeted development of 1,620 ha for irrigated production of rice in lowland swamps was reduced to 314 ha; spot improvement of 100 km of feeder road and construction of 116 lines of culverts on other farm-to-market feeder roads were reduced to 27 Km of road and 88 line culverts over 33.8 km of other roads, respectively; while CARI swamp dam and other project activities were not implemented; (ii) poor performance of contractors and consultants coupled with inadequate management of project implementation by PSU, stalled the completion for operation of both WMIs and CIs. The first contracts for irrigation water management (component A) infrastructure (WMI) and community infrastructure (CI) were terminated due to huge time overrun and poor performance of the contractors including absconding of the contract work sites. Although the works were re-tendered, only one out of eight WMI contracts was substantially completed while others remained at different stages of construction in the range of 60 to 90 percent progress. The contracts for supervising consultants were also terminated due to poor performance and the supervision replaced by sector ministry (MPW). The procurement processing was adequately implemented, however and generally the project management was not well matched to the requirements of the type of deliverables. There was lack of holistic view of the project scope for planning, prioritization and intervention, and supervision; which negatively impacted on timely delivery of the infrastructure and left a number of project activities undone. For example, the implementation of water management erred in the sequencing of activities, placing swamp land clearing activities and community mobilization ahead of the construction of irrigation water supply structures, which would be an added cost for re-clearing the farms downstream, should the infrastructure be completed; (iii) The Ebola Virus Diseases (EVD) outbreak had a devastating effect on economic activities between 2013-2015, which consequently affected implementation as project activities virtually stopped. The implementation of component B partly depended on completion of component A (irrigation infrastructure) and partly upland cultivation (rain-fed). There was no lowland irrigated rice nor maize production that could be achieved due to non-completion of WMI. All rice, maize and cassava production reported was out of rain-fed farming supported by local and international agricultural implementation partners (NGOs); (iv) with regard to implementation arrangement, the Steering Committee (PSC) was weak in discharging its roles for the progress of the Project. On the positive side, the community infrastructure (4 MoA offices and 4 processing facilities) were constructed as proposed, though left with major snag list of activities to be completed to unleash operation of the facilities; detailed technical studies for development of 7,000 ha of swamp land for rice production by follow up projects was completed by Hydroplan consultants, though with huge time overrun; community mobilization, awareness and consultative meetings were held; agricultural capacity building including provision of seedlings to farmers under four implementing partners (SAP, NAFAPD, CUD and SARA) was implemented. Furthermore, the project (i) mobilized and trained farmers in agricultural practices, (ii) equipped the MOA at all relevant levels with targeted amenities/tools, (iii) trained Liberians in various agricultural disciplines-18 to Masters and 2 to PhD degrees level, 30 community-based agents for input access transaction and facilitation between farmers and agricultural inputs suppliers and/or produce buyers were established, trained and equipped, of which 45% were women. In addition 80 Extension Agents, 20 Water Management Technicians were trained locally in Liberia and supported 100 bicycles for supervisory mobility. In general, implementation progress of the project could be assessed at 45 percent.
## Outcome reporting

<table>
<thead>
<tr>
<th>Outcome indicators (as per RLF; add more rows as needed)</th>
<th>Baseline value (2008) (A)</th>
<th>Most recent value (B)</th>
<th>End target (C) (expected value at project completion)</th>
<th>Progress towards target (% realized) ( \frac{(B-A)}{(C-A)} )</th>
<th>Narrative assessment (indicative max length: 50 words per outcome)</th>
<th>Core Sector Indicator (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome 1:</strong> Agricultural sector contribution to GDP growth increased by 3.5%</td>
<td>42%</td>
<td>44.7%</td>
<td>45.5%</td>
<td>71.4%</td>
<td>The baseline and most recent values are global proxies as the PAR did not provide them at appraisal. Irrigation infrastructure was not completed due to poor contractors' performance.</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Outcome 2:</strong> Poverty reduced</td>
<td>64% (2007)</td>
<td>54%</td>
<td>40%</td>
<td>41.7%</td>
<td>The progress remained low compared to end target. Majority of rural areas suffer from insufficient food. Agriculture was the mainstay of livelihood and income. Agriculture is an important sector to invest for reduction of poverty. The project did not contribute to poverty reduction as expected because most of the expected outputs were not attained.</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Outcome 3:</strong> Household income improved</td>
<td>US$350</td>
<td>0</td>
<td>US$1730</td>
<td>0</td>
<td>The project did not consistently report on the yield/production data and sales for rainfed assisted production. The project management concentrated on infrastructure delivery which were not completed at closure of the project.</td>
<td>Yes</td>
</tr>
<tr>
<td>Employment improved</td>
<td>3%</td>
<td>0</td>
<td>9%</td>
<td></td>
<td>There were no progressive data recorded for employment during implementation. However, the project mobilized and used NGOs each year to assist farmers in applying farming technologies for enhanced production and productivity.</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Annual increase in domestic rice production by 10%</strong></td>
<td>10870t</td>
<td>678.96t</td>
<td>11957t</td>
<td></td>
<td>Progress reports indicate 678.96t of rice was produced in the target areas. The baseline production is national. However, the two cannot be compared to justify project intervention as the project covered part of the country (about a quarter and few villages) though it is integral to Liberia.</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Annual increase in domestic cassava production by 1.2%</strong></td>
<td>5750t</td>
<td>390000t</td>
<td></td>
<td></td>
<td>Progress reports were silent on cassava produced in the target areas under rainfed.</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Yield improved for irrigated rice, upland rice, maize and cassava

<table>
<thead>
<tr>
<th>Crop</th>
<th>Yield (t/ha)</th>
<th>Initial (t/ha)</th>
<th>Final (t/ha)</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigated rice</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Upland rice</td>
<td>0.7</td>
<td>0</td>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td>Maize</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>Cassava</td>
<td>5</td>
<td>0</td>
<td>7</td>
<td>Yes</td>
</tr>
</tbody>
</table>

There was no irrigated rice production due to uncompleted irrigation infrastructure.

No yield records for the crop specified.

Outcome 3: enhanced use of improved production technologies, 0 ha of rice, 314 ha of rice, 2800 ha of rice, 1530 ha of maize, 1150 ha of cassava under IPPM, 12.7%.

It was targeted to cultivate rice in four counties. However, irrigated rice was not implemented due to lack of irrigation water infrastructure that would have increased the number of hectarage. Maize and cassava planted on the upland and rice planted in lowland was rain-fed.

Outcome 4: domestic production of rice, maize and cassava improved, and reduction of rice imports.

The project inclined mostly on rice productivity rather than all the crops. No consistent yield information was captured for maize and cassava.

Outcome 5: Improved delivery of savings and credit services.

This activity was not implemented.

Rating: 2

Apart from capacity building activities that were fully implemented, other activities were partially completed or not implemented at all to allow for tangible outcomes to be quantified. This was partly due to poor performance of service providers and consistency in planning of project activities. Again, monitoring and evaluation (M&E) could not capture well all indicators of some activities, though reporting was regular.
### 3. Output reporting

<table>
<thead>
<tr>
<th>Output indicators (as specified in the RLF; add more rows as needed)</th>
<th>Most recent value (A)</th>
<th>End target (B) (expected value at project completion)</th>
<th>Progress towards target (% realized) (A/B)</th>
<th>Narrative assessment (indicative max length: 50 words per output)</th>
<th>Core Sector Indicator (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Productivity/Production (low-land irrigation)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice 0 ha</td>
<td>1620 ha</td>
<td>0</td>
<td>No irrigation took place due to noncompletion of irrigation infrastructure.</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Productivity/Production (rainfed upland rice)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice 678.96 ha</td>
<td></td>
<td>??</td>
<td>Though rice was one of the crop to be produced, the PAR did not distinguish between upland and irrigated rice production</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cassava</td>
<td></td>
<td>1150</td>
<td>No consistent information on production reported.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maize</td>
<td></td>
<td>1800</td>
<td>No consistent information on production reported.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Technical study of swamp rice-7000ha</strong></td>
<td>Technical study of swamp rice-7000ha</td>
<td>100%</td>
<td>This was accomplished though with huge time overrun.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Access to input and output markets (infrastructure)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warehouses 5</td>
<td>warehouses 16</td>
<td>31.25%</td>
<td>The construction of buildings of the multifunctional post-harvest/marketing facilities (warehouses) were completed at assessed 95% but installation of ancillary equipment was not completed resulting in the facilities becoming unoperational. The contractors had not fully completed their contractual obligation, though the building structures were substantially completed.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Drying floors</td>
<td>8</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction of mechanised water wells &amp; sanitation facilities - 0</td>
<td>Construction of mechanised water wells &amp; sanitation facilities -40</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeder road rehabilitation 27 km</td>
<td>Feeder road rehabilitation 100 km</td>
<td>27%</td>
<td>Few roads were rehabilitated and culvert lines installed on other roads. The Government is unable to provide funds and other resources for maintenance and roads inspected at PCR had reverted to poorly untrafficable condition.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Construction of lines of culverts on other roads – 34 lines</td>
<td>Construction of lines of culverts on other roads – 116 lines</td>
<td>29%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Capacity building</strong></td>
<td>MOA agric. extension staff trained – 80</td>
<td>MOA extension staff trained – 80</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trained CARI scientists to higher degrees</td>
<td>Trained CARI scientists to higher degrees</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 5 MSc</td>
<td>• 5 MSc</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• 1 PhD</td>
<td>• 1 PhD</td>
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</tr>
<tr>
<td>Agriculture, Veterinary &amp; Water</td>
<td>Agriculture, Veterinary &amp; Water</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Outcome/Provision</td>
<td>Progress/Percentage</td>
<td>Notes/Issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
<td></td>
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<tr>
<td>Water management SMS trained</td>
<td>management SMS trained</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 15 MSc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 1 Phd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organized FFS every year on various subject matters 10</td>
<td>Organized FFS every year on various subject matters 10</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reconstruction of MOA - 0</td>
<td>Reconstruction of MOA - 1</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support to agriculture Institutions: support</td>
<td>Support to Agrico. Institutional:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Motorbikes 35</td>
<td></td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Cars 12</td>
<td></td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Office IT Equipment</td>
<td></td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rehabilitation of Seed field - 0</td>
<td>Rehabilitation of Seed field -20 ha</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rehabilitated &amp; Equipped Seed testing lab at CARI 0</td>
<td>Rehabilitated &amp; Equipped Seed testing lab at CARI - 1</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approved Seed sector policy &amp; regulatory framework - 0</td>
<td>Approved Seed sector policy &amp; regulatory framework -1</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recruited MOA qualified staff - 11</td>
<td>Recruited MOA qualified staff 10</td>
<td>91%</td>
<td>No systematic gender disaggregated information available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household access inputs on credit of which 50% women 0</td>
<td>Household access inputs on credit of which 50% women 5700</td>
<td>0%</td>
<td>Activity not carried out due to bank high interest rates and inadequate guarantee funds to provide security.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workshops for farmers held with total 12,000 participants?</td>
<td>Workshops for farmers held with total 12,000 participants: 100</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community-based agents well trained in various</td>
<td>Community-based agents well trained in various subjects and equipped (45%)</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjects and equipped (45% women) 30</td>
<td>Women) 30</td>
<td>0%</td>
<td>Although the position for Gender &amp; Community Development Officer was provided for in the project team, the position was not filled. This affected implementation of this activity.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV, malaria and malnutrition awareness campaigns supported 24</td>
<td>HIV, malaria and malnutrition awareness campaigns supported 24</td>
<td>0%</td>
<td>Though the project had four NGOs supporting farmers in good farming practices, the report on the activity was not readily available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction in upland rice cultivation using slash and burn?</td>
<td>Reduction in upland rice cultivation using slash and burn 80%</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rate of increase in use of liquid fertilizers vs granulated fertilizers 0</td>
<td>Rate of increase in use of liquid fertilizers vs granulated fertilizers 0% to 67%: 0</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational flush wells per scheme</td>
<td>Operational flush wells per scheme</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased income</td>
<td>Increased income USD 900</td>
<td>No systematic follow up on financial gains was put in place.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climate Proofing:</td>
<td>Cropped area under drought resistant varieties</td>
<td>Cropped area under drought resistant varieties 100%</td>
<td>Activities not implemented.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cropped area under drought resistant varieties</td>
<td>Cropped area under drought resistant varieties 100%</td>
<td>Activities not implemented.</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stream gauge installed within rehabilitated irrigation schemes’ catchment:</td>
<td>Stream gauge installed within rehabilitated irrigation schemes’ catchment: 16No.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rain gauges installed within rehabilitated irrigation schemes’ catchment:</td>
<td>Rain gauges installed within rehabilitated irrigation schemes’ catchment: 160</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weather stations installed within rehabilitated irrigation schemes’ catchment:</td>
<td>Weather stations installed within rehabilitated irrigation schemes’ catchment: 16No.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rating* (see IPR methodology) | Narrative assessment |
---|---|
2 | The project is rated unsatisfactory with respect to output reporting. The activities of the project were grouped into four core outputs, namely (i) Land Development and Small-Scale Irrigation; (ii) Rehabilitation/Construction of Feeder Roads and Community Infrastructure; (iii) Agricultural productivity Enhancement; and (iv) |
Agricultural Sector Institutions Capacity Building. The activities were designed such that they complement each other to achieve outputs. Though not all, the project met a number of outputs under the agricultural sector institutions capacity building and upland rice production but was unable to complete most activities under other project’s core outputs. The construction of small water reservoirs (concrete-cum-earth dams) that intended to unleash irrigation of rice and maize to take place was not completed and hence use of modern agricultural technologies could not happen to enhance production and productivity. The construction of feeder roads was also partially implemented and the target could not be achieved. Buildings of multifunctional warehouse facilities and MOA office buildings were substantially completed but without supply and installation of equipment like milling machineries, weighing machines, generator sets, water systems, etc., which were necessary to make the facilities operational. Some activities under these deliverables were not implemented to completion nor attempted, to achieve the targeted outputs. The reasons for this could be attributed four main prongs: (i) poor performance of contractors and consultants; (ii) poor project management – inability to view the project holistically to comprehend all activities for planning, scheduling (critical path analysis), and prioritization; (iii) poor sequencing of project activities for implementation; and (iv) lack of adequate supervision, partly due to remoteness of the worksites.

4. Development Objective (DO) rating

<table>
<thead>
<tr>
<th>DO rating (derived from updated IPR)</th>
<th>Narrative assessment (indicative max length: 250 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>The DO rating is satisfactory, as the supervision mission 10 dated 22/02/2016 rating is satisfactory (3) but both outputs and outcomes are rated unsatisfactory (2). Only 43.2% of the planned land across the five project counties was turned over for production by December 2016 and only 60.8% of the initial targets for feeder roads was met. The project focused on infrastructure development to promote rice irrigation, which even though the activities were not completed at project closure. Except for rain-fed rice and cassava cultivation with limited agricultural technologies, mainly farmers’ training, there was no major output to justify a significant level of production of targeted annual increase by 10% and 1.2% of domestic rice and cassava reported, which are uncompleted.</td>
</tr>
</tbody>
</table>

5. Beneficiaries (add rows as needed)

<table>
<thead>
<tr>
<th>Actual (A)</th>
<th>Planned (B)</th>
<th>Progress towards target (% realized) (A/B)</th>
<th>% of women</th>
<th>Category (e.g. farmers, students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9,610 in 8 counties</td>
<td></td>
<td></td>
<td></td>
<td>All Direct Beneficiaries</td>
</tr>
<tr>
<td>1232</td>
<td>3,400</td>
<td>36.2</td>
<td>40</td>
<td>Small holder farmers - Certified Rice seed (Y1 &amp; Y2)</td>
</tr>
<tr>
<td>0</td>
<td>2,360</td>
<td>0</td>
<td>0</td>
<td>Land clearing – female headed households</td>
</tr>
<tr>
<td>986</td>
<td>1,250</td>
<td>78.9</td>
<td>30</td>
<td>Labourers – Rehab of feeder roads</td>
</tr>
<tr>
<td>0</td>
<td>100</td>
<td>0</td>
<td></td>
<td>Permanent jobs- Maintenance of feeder roads</td>
</tr>
<tr>
<td>92</td>
<td>80</td>
<td>115</td>
<td></td>
<td>Extension staff trained by June 2013</td>
</tr>
<tr>
<td>20</td>
<td>20</td>
<td>100</td>
<td></td>
<td>Water Management Technicians</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>100</td>
<td></td>
<td>Soil &amp; Water Mgmt. Specialists</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>100</td>
<td>75</td>
<td>Deployed Project Focal points at Counties</td>
</tr>
<tr>
<td>18</td>
<td>18</td>
<td>100</td>
<td></td>
<td>Master’s degree recipients</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>100</td>
<td>0</td>
<td>PhD recipients</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>100</td>
<td></td>
<td>Agricultural Research Specialists</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>100</td>
<td></td>
<td>Veterinary/Livestock Specialists</td>
</tr>
</tbody>
</table>
### 6. Unanticipated or additional outcomes (add rows as needed)

<table>
<thead>
<tr>
<th>Description</th>
<th>Type (e.g., gender, climate change, social, other)</th>
<th>Positive or negative</th>
<th>Impact on project (High, Medium, Low)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplements to communities’ diets through diversification farming by project introduced production of assorted vegetables (okra, pepper, bitter balls, corn, cabbage, watermelon, groundnuts, plato, cucumber, etc.,) during little or no access to water (off-season) to engage the farmers mainly women throughout the year and to give quick incomes.</td>
<td>Gender</td>
<td>Positive</td>
<td>High</td>
</tr>
</tbody>
</table>

### 7. Lessons learned related to effectiveness (add rows as needed)

<table>
<thead>
<tr>
<th>Key issues (max 5, add rows as needed)</th>
<th>Lessons learned</th>
<th>Target audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project management competencies</td>
<td>Multi-sectoral projects require versatile and experienced project coordination and team who can see through the project scope in detail, do focused planning by reason of affecting factors, prioritize, schedule by critical path analysis, manage procurement and implementation. Contrary to necessarily picking from the Government system, the positions of project coordinator and other key staff need to be filled by competitively assessed candidates who have experience in most of the type of project activities.</td>
<td>Executing agency/Bank</td>
</tr>
<tr>
<td>Implementation of infrastructure development</td>
<td>To implement an infrastructure, investigation and design are prerequisite, and these take time to accomplish. As of now, these precursor activities to project implementation take place within the physical implementation of projects which is a high risk of completing the construction of infrastructure before the closure of the project, given other progress adverse factors. There should be a reform in the project identification and preparation processes in order to get the details of infrastructure needed in the project and locations (for logistic factors) and allow time for the design to be done before approval of the project, ready for implementation. This would require pre-financing the design, as part of project.</td>
<td>Executing agency/Bank</td>
</tr>
<tr>
<td>Contracting out project activities and management/Selection of Service Providers (Contractors and consultants)</td>
<td>Poor performance of contractors and consultants and PIU capacity to manage contract administration and supervision is essential for delivery of infrastructure projects. Due diligence in contracting out is needed to mitigate the risk of nonperforming service providers. Special enforcements should be introduced in bid documents. Furthermore, in markets with a limited pool of qualified contractors / consultants, the Bank could play a more pro-active role in: advance procurement, bid evaluation, contract monitoring and enforcement. Lessons from similar projects show that performance contracts provide incentives for delivery. Contractors’ technical and financial capability is integral to timely delivery and ensuring that beneficiaries have access to quality services.</td>
<td>Executing agency, Bank</td>
</tr>
<tr>
<td>Effectiveness of Bank’s supervision</td>
<td>Bank’s supervision is advisory according to the Bank’s mandate in loan and grant protocols. However, based on inadequate (varying ) capacities of RMC countries, particularly fragile countries, there is need to look into more effective roles of the Bank to support the countries.</td>
<td>Bank</td>
</tr>
</tbody>
</table>
### Efficiency

#### 1. Timeliness

<table>
<thead>
<tr>
<th>Planned project duration – years (A) (as per PAR)</th>
<th>Actual implementation time – years (B) (from effectiveness for 1st disb.)</th>
<th>Ratio of planned and actual implementation time (A/B)</th>
<th>Rating*</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>6.67</td>
<td>0.90</td>
<td>3</td>
</tr>
</tbody>
</table>

**Narrative assessment** *(indicative max length: 250 words)*

The project was approved on 29 April 2009, became effective after 12 months on 30 March 2010 and was originally to close on 30 April 2016 but it was extended to 31 December 2016 (thus, closed after 6.67 years) to allow contractors for water management and community infrastructures to complete their contractual works. The ratio of planned project duration as per PAR and actual implementation from effectiveness to closure is 0.90, which is close to the planned project duration. However, the significance of the timeliness ratio should be associated with implementation effectiveness. The implementation of the project’s core activities remains uncompleted and therefore outputs, outcomes and impacts were only lowly/marginally achieved. Although the procurement of contractors and consultants was timely in most cases, the main reasons adduced to ineffectiveness are: (i) poor performance and absconding from worksites by these service providers; which undermined timeliness as the project had to terminate their contracts and re-tender the works and services to get new contractors and consultants. This took time. The new contractors attempted significantly to execute their contractual obligations, especially on quality and progress, but they were also huge time-overrun ridden due to inadequate works execution planning and scheduling; (ii) remoteness of the worksites and long period closure of means of supply due to transportation bottlenecks on unmaintained earthen roads during rainy season; (iii) lack of realistic contract execution plan during tendering and project’s due diligence on such plans.

#### 2. Resource use efficiency

<table>
<thead>
<tr>
<th>Median % physical implementation of RLF outputs financed by all financiers (A) (see II.B.3)</th>
<th>Commitment rate (%) (B) (See table 1.C – Total commitment rate of all financiers)</th>
<th>Ratio of the median percentage physical implementation and commitment rate (A/B)</th>
<th>Rating*</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>93</td>
<td>0.59</td>
<td>2</td>
</tr>
</tbody>
</table>

**Narrative assessment** *(indicative max length: 250 words)*

There are major outstanding works to be completed and some of project activities were not implemented. Physical implementation does not auger with resource utilization.

#### 3. Cost benefit analysis

<table>
<thead>
<tr>
<th>Economic Rate of Return (at appraisal)</th>
<th>Updated Economic Rate of Return (at completion)</th>
<th>Rating*</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERR (base case) = 20%</td>
<td>16.46%</td>
<td>2</td>
</tr>
</tbody>
</table>

**Narrative assessment** *(indicative max length: 250 words)*

The project was rated unsatisfactory because it is unclear whether it will generate sufficient revenue streams to ensure sustainability ex-poste. Over 80% of the envisioned outputs (particularly on Water Management infrastructure) were not delivered and the project did not prepare an exit strategy prior to project completion. The team met the following challenges associated with the lack of consistent and credible production, revenue and income data:

- The project didn’t consistently report yield/production data. The 2010 production data (by county) is the only validated data published by the Liberia Institute of Statistics and Geo-Information Services (LISGIS) and has therefore been used as proxy for production targets at the end of the project. Details are included in Annex 3;
- Given that the WMIs were not completed before the end of the project, increases in rice production are more likely attributed to rain-fed rather than irrigation;
- Rice was sold as paddy and did not command competitive prices. Given that the project did not equip processing facilities with rice mills, it is limiting to infer that increased income would result from rice milling and packaging;
- In most cases, the team relied on use of secondary data from national data bases and using proxies to make assumptions on yield and market prices. This had a direct effect in projecting cashflows and revenue streams.
The Economic Internal Rate of Return (EIRR) at project completion was 16.46% compared to 20% at appraisal. The Net Present Value (NPV) at the end of the project was USD 1.76 million compared to USD 12.9 million at appraisal. Details of sustainability assessment are included in Annex 1. The project’s IRR while lower at exit than it was at appraisal, still remains higher than the current discount rate. The investment would still attract higher returns than alternative investments. The NPV at exit is significantly lower than what was projected at appraisal; implying that the profitability at exit didn’t meet up to projections at appraisal. The large variation may be attributable to:

- Use of single points for both production and revenue data. Proxies and assumptions of “return to steady state” (i.e. 2010 yield and consumption levels) by the end of the project (2016) may be at odds with growth projections made at appraisal;
- Benefit streams at the beginning of the project were based on assumptions for high achievements (as reflected in targets for infrastructure development and yields from increased production of rice, cassava and maize). Given that as much as 80% of project outputs were not delivered, this raises challenges for assessing Value for Money for the project. The handover of the infrastructure coincided with close of the project. As such, revenue streams are based on anecdotal evidence more than actual tests of the market. This raises challenges for assessing profitability and long term sustainability ex-post;

Horticultural production was a positive externality of the project. The 2015-2016 annual report attributed income of USD$1,197.67 from the sales of assorted vegetable crops including bitterballs, eggplants, watermelons, maizes and platos during the period supra. The 28 farmers that reported these sales were members of female headed households.

4. Implementation Progress (IP)

<table>
<thead>
<tr>
<th>IP Rating (derived from updated IPR)</th>
<th>Narrative comments (commenting specifically on those IP items that were rated Unsatisfactory or Highly Unsatisfactory, as per last IPR). (indicative max length: 500 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>The rating for implementation progress is unsatisfactory. Due to inadequate progress performance. Notwithstanding that the project is rated satisfactory in (i) procurement; (ii) audit compliance; (iii) financial management; (iv) disbursement; and (v) monitoring &amp; evaluation (M&amp;E); due to their timeliness and improved quality, the project was however rated unsatisfactory in (i) project activities management; (ii) budget commitments; (iii) compliance with environment and social guards; and (iv) climate proofing. The implementation progress was constrained by: (i) inadequate holistic view of project activities, planning, prioritization and supervision that led untrustworthy bidders, who were awarded the contracts, failed to complete them; while implementation of other activities was not attempt; (iii) withdraw of IFAD funds (UA 3.4 Million) constrained the funding of other activities, as such some of these activities were covered through ADF funding, which reduced the capacity of ADF to finance its targeted activities; and (iv) the project areas were scaled down from eight to four counties.</td>
</tr>
</tbody>
</table>

5. Lessons learned related to efficiency

<table>
<thead>
<tr>
<th>Key issues (max 5, add rows as needed)</th>
<th>Lessons learned</th>
<th>Target audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weak contract management and monitoring</td>
<td>Effective contract management and monitoring could have ensured timely execution of activities, created better impact considering the key nature of the water management and community infrastructural projects with impetus for agricultural take off.</td>
<td>Executing agency</td>
</tr>
</tbody>
</table>
**Sustainability**

1. **Financial sustainability**

<table>
<thead>
<tr>
<th>Rating</th>
<th>Narrative assessment (indicative max length: 250 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>The project was financed by two ADF grants (UA 6 Million each) and Fragile State Facility (FSF) grant (UA 0.5 Million). During implementation the project was audited yearly and audited financial statements were accepted by the Bank though in some years late and after second submission. Until February 2017, the project management was yet to submit its audit reports for the financial year ended 30 June 2016, which was due for submission by 31 December 2016. An addendum to the current audit contract was to be signed for the 9 months to 31 March 2017 for the closure audit, but delayed. Proper financial planning by project management was inadequate, which resulted in contracts over commitment of one of the grants and left gaps in providing resources available to meet the salaries of skeletal staff and operating cost for the 3 months window period after the closing date. Again, proper contract administration and management were not well exercised, which led to over-valuation of works done and front-loading payments. This caused less balances than the cost of contracts for uncompleted project activities, which additional funds will have to come from government sources to execute to completion the outstanding water management and community infrastructural activities. Generally, contract management and supervision were inadequate resulting in contractors abandoning work sites and low executions. Consequently, 7 contracts out of 10 previously terminated, still have initial advance payments totaling USD 398,447 unrecovered. Also, the management of special accounts was not adequate and justifications for advances received, delayed. At close on 30 December 2016, the project had unjustified balances on its special accounts totaling USD 265,055.66/ UA 189,415.95, whilst the cash book showed nil balances. With regard to beneficiaries’ financial sustainability, the access to credit activity was not implemented partly due to high interest rates despite trained community-based agents to facilitate access of the credit facility. In addition, implementation of various core project activities were not completed and hence the accrued financial benefits out of project outputs could not be evaluated.</td>
</tr>
</tbody>
</table>

2. **Institutional sustainability and strengthening of capacities**

<table>
<thead>
<tr>
<th>Rating</th>
<th>Narrative assessment (indicative max length: 250 words)</th>
</tr>
</thead>
</table>
| 3      | The project was rated satisfactory because it significantly contributed to strengthening institutional capacities. The project was implemented using existing government institutions at central and through decentralized establishment of the Ministry of Agriculture (MOA) at county, district and clan levels. At the central level four experts; namely Project Coordinator, Financial Management Specialist, Procurement Specialist, and Monitoring and Evaluation (M&E) Specialist were competitively recruited and these were supplemented by National Technical Officers (NTOs). The Project Coordination Unit worked under the MOA Program Management Unit (PMU) headed by a Director. The project built various capacities at all agricultural institutional levels. It financed professional training of 20 Liberians subject master experts in specialized agricultural areas to Msc (18) and PhD (2) degrees levels. ASRP absorbed 1 Irrigation Engineer, on the project. However, not all the trainees of higher degrees could be sufficiently absorbed in the government system, though they are in the open market. Again, ASRP strengthened community based institutions. It financed training of 40 Extension officers and provided them with motorcycles to facilitate their work. The Extension officers were most effective in counties where they supported productivity enhancement. In Pleebo for instance, farming groups initiated opportunistic horticulture farming while they awaited completion of the water management infrastructure. As such, farmers have more consistent revenue streams which was particularly beneficial even during the off-season. Institutional sustainability is unlikely to be ensured ex-poste because indoctrination of some capacities depended on the operations of completed activities, which were uncompleted during the project implementation period. For example, the project was unable to complete irrigation infrastructure and this deprived farmers and other stakeholders to internalize capacity in terms of management of the irrigation water and its infrastructure, fusion of agricultural technologies, community-based dynamics management, and profitability. Project activities like: smallholder farmers’ access to inputs and credit schemes; literacy/life skills classes; integrated plant and pest management (IPPM); environmental and social impact; climate proofing; etc.; were hardly attempted. The country systems remain weak. At appraisal, the project envisaged a supervisory/oversight role for the County Agricultural Coordinators (CAC) and District Agriculture Officers (DAOs). The follow up by the MOA is inadequate as the counties’ officers lacked the requisite capacity and resources to carry out their delegated responsibilities. This presented a missed opportunity for ensuring efficiency and effectiveness, particularly in remote districts. However, ASRP created entry points and an institutional framework for incentivizing commercialization of rice production in south east Liberia. The delays in purchasing processing equipment and the unclear trajectory of local commodity markets pose threats to the sustainability ex-poste for small-holder farmers. However, the use of Bank systems and incremental alignment with development effectiveness holds promise for building institutional capacity.
3. Ownership and sustainability of partnerships

<table>
<thead>
<tr>
<th>Rating</th>
<th>Narrative assessment (indicative max length: 250 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>The project was designed with long-term focus for sustainability and ownership through increased: (i) agricultural production and productivity for food self-sufficiency in rice, maize and cassava; (ii) reduction of rice import; (iii) reduction in poverty rate; and (iv) increased income. The implementation was decentralized to trickle down its impacts to farmers and other stakeholders. Though Field Farmer Schools (FFS) were organized, the project impacts were not tangibly realized due to uncompleted activities that would be the driving force to inculcate ownership, and build sustainability. The trained agricultural extension staff and community-based agents for input access facilitation were limited to upland rain-fed rice and cassava cultivation with minimal agricultural technologies given to farmers. Failure to attract input suppliers to provide credit also diverted the potential for sustainability of the improved agricultural production practices/technologies. A high risk therefore, prevails for ownership of project intended deliverables for sustainability of partnership.</td>
</tr>
</tbody>
</table>

4. Environmental and social sustainability

<table>
<thead>
<tr>
<th>Rating</th>
<th>Narrative assessment (indicative max length: 250 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>The project was rated satisfactory. The project was predominantly infrastructure construction and improvement in farming practices through enhanced application of modern production technologies and input. The project was classified under category II, and had insignificant negative impacts related to Environmental and Social Management Plan (ESMP), thus implemented without incident. Project activities included; rehabilitation of dykes, canals for the control of water to irrigated fields, landscaping during preparation of land for irrigation, application of fertilizers and pesticides, rehabilitation of farm tracks and roads, construction of warehouses/market structures and light mechanization of farm activities, and technical studies for future development of swamp rice irrigation schemes. The potential negative impacts of project intervention including modification of ground and surface water quality downstream of the irrigation sites; soil salinization, breeding of malaria and schistosomiasis parasites; and potential pollution of stream/rivers; were mitigated in the design of relevant project activities and promotion of good agricultural practices at upland cultivation. However, as mitigating measures, the project could not provide hydrological monitoring equipment to ensure maintenance of environmental flows in the streams and optimize water; provision of mosquito nets and protective clothing; re-use of processing by-products (rice straw and husk); and user associations training to ensure ownership and sustainability. In terms of social impacts, the project contributed towards: i) enhancing peace and reconciliation amongst project stakeholders; ii) capacity improvement of project beneficiaries and communities; iii) infusion of cash into the local economy-through local employment.</td>
</tr>
</tbody>
</table>

5. Lessons learned related to sustainability

<table>
<thead>
<tr>
<th>Key issues (max 5, add rows as needed)</th>
<th>Lessons learned</th>
<th>Target audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ownership and sustainability is not only capacity building but also benefits a farmer is able to accrue.</td>
<td>Sustainability should be the essence of agricultural sector investment. Most of the project activities have vanished immediately after project closure because of farmers and other beneficiaries were not able to quantify cost and benefits during project implementation, apart from the training and any capacity building given to them. Beneficiaries need to realize benefits and be assisted on the long run through extension services.</td>
<td>Executing Agency</td>
</tr>
<tr>
<td>Exit strategy for sustainability</td>
<td>Sustainability dimensions should be built from the design through to the entire period of project implementation. There is need to be more emphatic and illustrative on sustainability part in the project design while project management should build robust monitoring and evaluation to build body of knowledge for exit sustainability strategy.</td>
<td>Executing Agency, Bank</td>
</tr>
<tr>
<td>Ownership and sustainability depends on completeness and operation of project activities</td>
<td>Due to various reasons, key project activities were not fully completed and operational to enable beneficiaries match the training and capacity building given to them with tangible results – benefits is cornerstone of sustainability.</td>
<td>Executing Agency</td>
</tr>
<tr>
<td>Ex-poste project sustainability</td>
<td>MoA and AfDB teams must begin exit planning as early as MTR. This</td>
<td>Executing agency</td>
</tr>
</tbody>
</table>
**III Performance of stakeholders**

1. Bank performance

<table>
<thead>
<tr>
<th>Rating</th>
<th>Narrative assessment by the Borrower on the Bank’s performance, as well as any other aspects of the project (both quantitative and qualitative). See guidance note on issues to cover. (indicative max length: 250 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>The Bank’s performance from the Borrower point of view is satisfactory. The Bank played a pro-active role in resolving problems at different levels of project implementation including those related to non-performing contractors by providing guidance and facilitating re-tendering of WMI and CI works, modifying the design as necessary to respond to changing circumstances. The Bank enforced safeguard and fiduciary requirements, ensured that the monitoring and evaluation system was well designed and implemented, ensured that the project was regularly supervised and no-objections promptly given that led to timely procurement of activities. In spite of this, due to the outbreak of the Ebola virus, field supervisions were suspended and the mid-term review could not be carried out as the project closure incidentally approached. Despite the achievements recorded and in realization of the fragility of Liberia, the Bank would have done better if it had tracked project intervention planning to ensure that all project activities were implemented. Again, failure to conduct the mid-term review was a force majeure failure to review and re-direct implementation of the project.</td>
</tr>
</tbody>
</table>

Comments to be inserted by the Bank on its own performance (both quantitative and qualitative). See guidance note on issues to cover. (indicative max length: 250 words)

The Bank agrees with the feedback provided by the Borrower. The Bank’s performance in formulating the project was satisfactory though some implementation factors needed to be taken into account. The Bank supported implementation phase, however fragility aspect of the country was not well heed, particularly in capacity deficits.

<table>
<thead>
<tr>
<th>Key issues (related to Bank performance, max 5, add rows as needed)</th>
<th>Lessons learned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank supervision missions</td>
<td>Regular supervision and monitoring of progress of implementation from the Country Office was helpful and resolved project challenges on spot for smooth implementation.</td>
</tr>
</tbody>
</table>

2. Borrower performance

<table>
<thead>
<tr>
<th>Rating</th>
<th>Narrative assessment on the Borrower performance to be inserted by the Bank (both quantitative and qualitative, depending on available information). See guidance note. (indicative max length: 250 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>The assessment was based on the performance of the Ministry of Finance and Economic Affairs (MFEA) as borrower and Ministry of Agriculture (MOA) as the executing agency represented by Project Coordination Unit (PCU) for day-to-day implementation of the project activities under the guidance of project steering committee (PSC)- adopted from existed Food and Nutrition Technical Committee (FS&amp;N-TC). This, collectively, was rated as unsatisfactory. On the progressive side, the MFEA and MOA contributed to the succinctly clear and objective preparation of the project and quick achievement of grants conditions and compliance with covenants. The PSU effectively and efficiently managed procurement and M&amp;E reporting of activities under intervention. However, monitoring of the project implementation for guidance by the MOA and FS&amp;N-TC was weak resulting in uncompleted project activities and other activities not attempted to at all with lack of guidance on sustainable and exit strategy for continuation of project activities after project closure. The PSU could not take the project holistically, which has led to some project activities left undone. Again, due diligence of the PSU on contracting and supervision of various interventions was weak resulting in poor performance of contractors and private consultants. On positive side, the project was able to prepare and submit quarterly and annual progress reports.</td>
</tr>
</tbody>
</table>
### Key issues (related to Borrower performance, max 5, add rows as needed)

<table>
<thead>
<tr>
<th><strong>Lessons learned</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Effectiveness of project delivery</td>
</tr>
</tbody>
</table>

### Lessons learned

**Effectiveness of project delivery**
- Recruitment of qualified and experienced PIU staff for the type of the project activities to be implemented is key for successful implementation of any project. Only qualified staff from the government system should be considered for various positions of a PIU. The qualifications and experience should be well analysed on the basis of the activities to be delivered and other additional knowledges and experiences including primarily versatility in project management. All organs of the project management and advisory should be composed of persons with technical knowledge of the project activities.

---

### 3. Performance of other stakeholders

#### Rating | Narrative assessment on the performance of other stakeholders, including co-financiers, contractors and service providers. See guidance note on issues to cover. (indicative max length: 250 words)

<table>
<thead>
<tr>
<th>Rating</th>
<th>Narrative assessment on the performance of other stakeholders, including co-financiers, contractors and service providers. See guidance note on issues to cover. (indicative max length: 250 words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>The combined rating of the performance of the stakeholders is unsatisfactory for both public and private sector stakeholders. The major set-back of this project was poor performance of contractors and consultants, which was characterised by default, time over-runs, improper work package sequencing. Out of ten (10) contracts previously terminated between December 2013 and 2015, seven (7) contractors defaulted on advance payments made to them totalling USD 398,447. This whole incidence left civil works (infrastructure development) uncompleted and therefore not operational. Contractors failed to accomplish their respective contractual obligations and this deprived the beneficiaries’ benefits and fundamental training for ownership of the infrastructures. The ILO and Hydroplan who were assigned supervision of road works and design of swamp irrigation areas (7000 ha) respectively pulled out in the middle of the services. Hydroplan returned later to complete the designs assignment for development of swamp irrigation. On the positive side, the water management infrastructure (WMI) and community infrastructure (CI) were assessed to be with adequate quality. IFAD, on the other hand, unilaterally decided to pull out of its co-funding of UA 3.4 million just at the beginning of project implementation in 2010 to the detriment of designated project activities, which created deficit of project funds. Furthermore, the services delivery of international and local NGOs assigned to the project is unsustainable as the ministry of agriculture capacity to follow on is unattainable due lack of resources.</td>
</tr>
</tbody>
</table>

#### Lessons learned (max 5)

**Target audience (for lessons learned)**

**Poor performance of outsourced private service providers**
- This is a major challenge in contracted out civil works. The failure of a service provider to deliver its contractual obligation on time means the product arrive later and in most cases with less quality than promised and at opportunity cost, increased cost and loss of economic and financial returns. Due diligence in outsourcing works and services coupled with designed strong failure-prevention conditions can mitigate poor performance of contractors and consultants.

**AfDB collaboration with multilateral international organizations need reform**
- There is a tendency to assume by default (undisputably) assigning implementation of project activities to multilateral organizations. However, the experience has shown that in a number of cases these organizations have not delivered the services adequately. This calls for the need to consider conditions for collaboration.

<table>
<thead>
<tr>
<th><strong>Target audience</strong> (for lessons learned)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive agency</td>
</tr>
<tr>
<td>Bank, Executive Agencies</td>
</tr>
</tbody>
</table>
## Summary of key lessons learned and recommendations

### 1. Key lessons learned

<table>
<thead>
<tr>
<th>Key issues (max 5, add rows as needed)</th>
<th>Key lessons learned</th>
<th>Target audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weakness in project design</td>
<td>Project designs need to be country specific to take into prevailing account factors that are likely to affect project implementation. Project preparation should be comprehensive and rich of pertinent information/data.</td>
<td>Bank/Executive agency</td>
</tr>
<tr>
<td>Readiness of projects for implementation pre-project appraisal</td>
<td>Design of infrastructure or other long time taking activity should be done in advance before physical implementation starts. The essence of sector economic work should be to encompass readying the designs for future development.</td>
<td>Bank</td>
</tr>
<tr>
<td>Sustainability of project ante- and ex-poste</td>
<td>Sustainability is key for an agricultural project. However, it is simply stated in project appraisals. Sustainability should be analysed in the contexts of its various dimensions during project design and acted upon constantly during implementation. There should be mechanisms built to ensure constant follow up after closure of the project.</td>
<td>Bank, Executing agency</td>
</tr>
<tr>
<td>AfDB collaboration with multilateral organizations need reform</td>
<td>The prevailing tendency is to assign implementation of some project activities by default. Experience has proven that not always these organizations have performed well on the Bank funded project. A business/private sector-based deal with these organizations is imperative to enforce responsibilities.</td>
<td>Bank</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Key issue (max 10, add rows as needed)</th>
<th>Key recommendation</th>
<th>Responsible</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk of not completing outstanding works of water management infrastructure (WMI) and community infrastructure (CI)</td>
<td>Government should establish snag list of activities/outstanding works, compare contractually deliverables from the contract and demand the contractor to execute and provide all items in the contracts. The Government to secure funds to complete all key items that were not in the contracts.</td>
<td>MOA</td>
<td>Immediate</td>
</tr>
<tr>
<td>Operations of project delivered assets</td>
<td>Government to set up modalities for operations management of the project assets including Milling and Warehouse Facility and water infrastructure.</td>
<td>MOA</td>
<td>Immediate</td>
</tr>
<tr>
<td>Ownership depends on completeness and operation of project activities</td>
<td>Ownership is beyond capacity building. It is intimately and ultimately associated with constant or regular benefits, particularly financial benefits. Any activity that does not render benefit to the beneficiary or actor cannot be sustainable. To bring about benefits, sustainability needs to be analysed and assessed in all its dimensions and accordingly articulated in the project design, implementation and post-project (exit strategy).</td>
<td>Bank, MOA</td>
<td>Project cycle</td>
</tr>
</tbody>
</table>
V Overall PCR rating

<table>
<thead>
<tr>
<th>Dimensions and criteria</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DIMENSION A: RELEVANCE</strong></td>
<td><strong>3.00</strong></td>
</tr>
<tr>
<td>Relevance of project development objective (II.A.1)</td>
<td>3</td>
</tr>
<tr>
<td>Relevance of project design (II.A.2)</td>
<td>3</td>
</tr>
<tr>
<td><strong>DIMENSION B: EFFECTIVENESS</strong></td>
<td><strong>2.00</strong></td>
</tr>
<tr>
<td>Development Objective (DO) (II.B.4)</td>
<td>2</td>
</tr>
<tr>
<td><strong>DIMENSION C: EFFICIENCY</strong></td>
<td><strong>2.25</strong></td>
</tr>
<tr>
<td>Timeliness (II.C.1)</td>
<td>3</td>
</tr>
<tr>
<td>Resource use efficiency (II.C.2)</td>
<td>2</td>
</tr>
<tr>
<td>Cost-benefit analysis (II.C.3)</td>
<td>2</td>
</tr>
<tr>
<td>Implementation Progress (IP) (II.C.4)</td>
<td>2</td>
</tr>
<tr>
<td><strong>DIMENSION D: SUSTAINABILITY</strong></td>
<td><strong>2.50</strong></td>
</tr>
<tr>
<td>Financial sustainability (II.D.1)</td>
<td>2</td>
</tr>
<tr>
<td>Institutional sustainability and strengthening of capacities (II.D.2)</td>
<td>3</td>
</tr>
<tr>
<td>Ownership and sustainability of partnerships (II.D.3)</td>
<td>2</td>
</tr>
<tr>
<td>Environmental and social sustainability (II.D.4)</td>
<td>3</td>
</tr>
<tr>
<td><strong>AVERAGE OF THE DIMENSION RATINGS</strong></td>
<td><strong>2.44</strong></td>
</tr>
<tr>
<td><strong>OVERALL PROJECT COMPLETION RATING</strong></td>
<td><strong>U</strong></td>
</tr>
</tbody>
</table>

VI Acronyms and abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADF</td>
<td>African Development Fund</td>
</tr>
<tr>
<td>ADRA</td>
<td>Adventist Development and Relief</td>
</tr>
<tr>
<td>AfDB</td>
<td>African Development Bank</td>
</tr>
<tr>
<td>AWPB</td>
<td>Annual Work Plan and Budget</td>
</tr>
<tr>
<td>CARI</td>
<td>Central Agricultural Research Institute</td>
</tr>
<tr>
<td>CBO</td>
<td>Community-Based Organization</td>
</tr>
<tr>
<td>CRS</td>
<td>Catholic Relief Service</td>
</tr>
<tr>
<td>ESMP</td>
<td>Environmental and Social Management Plan</td>
</tr>
<tr>
<td>FFS</td>
<td>Farmer Field School</td>
</tr>
<tr>
<td>FSF</td>
<td>Fragile State Facility</td>
</tr>
<tr>
<td>FS&amp;N-TC</td>
<td>Food Security &amp; Nutrition Technical Committee</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GoL</td>
<td>Government of Liberia</td>
</tr>
<tr>
<td>IFAD</td>
<td>International Fund for Agricultural Development</td>
</tr>
<tr>
<td>IFRS</td>
<td>International Financial Reporting Standards</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labor Organization</td>
</tr>
<tr>
<td>IPPM</td>
<td>Integrated Plant and Pest Management</td>
</tr>
<tr>
<td>JAS</td>
<td>Joint Assistance Strategy</td>
</tr>
<tr>
<td>MOA</td>
<td>Ministry of Agriculture</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>MOF</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>MTR</td>
<td>Mid-Term Review</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>NGP</td>
<td>National Gender Policy</td>
</tr>
<tr>
<td>NPV</td>
<td>Net Present Value</td>
</tr>
<tr>
<td>NSC</td>
<td>National Steering Committee</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>Operation and Maintenance</td>
</tr>
<tr>
<td>PCR</td>
<td>Project Completion Report</td>
</tr>
<tr>
<td>PCU</td>
<td>Project Coordination Unit</td>
</tr>
<tr>
<td>PPCC</td>
<td>Public Procurement &amp; Concessions Commission</td>
</tr>
<tr>
<td>PFMRS</td>
<td>Public Financial Management Reform Support Program</td>
</tr>
<tr>
<td>PRS</td>
<td>Poverty Reduction Strategy</td>
</tr>
<tr>
<td>TA</td>
<td>Technical Assistance</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
</tr>
<tr>
<td>WFP</td>
<td>World Food Programme</td>
</tr>
</tbody>
</table>

**Required attachment:** Updated Implementation Progress and Results Report (IPR)– the date should be the same as the PCR mission.
ANNEX : SUSTAINABILITY ASSESSMENT FOR LIBERIA: Agriculture Sector Rehabilitation Project (ASRP- PCR)

1. Background

During appraisal, financial analysis projected that average household incomes would increase from $130 (without the project) to $1,016 per household in 2015. These income impacts would be attributed to improvements in productivity and increased production as a result of project interventions. Economic analysis took into account: investment, operating and maintenance costs for road, water management and community infrastructure financed by ASRP. The computation of the Economic Internal Rate of Return (EIRR) would be based on the following assumptions:
   i. The net benefits accruing to the project over a period of 25 years from the project start date;
   ii. All financial prices and costs would be converted to economic prices using conversion factors for tradable and non-tradable items;
   iii. The investment costs were computed by considering an economic opportunity cost of capital of 12%.

Based on these assumptions the EIRR of the project was found to be 20%.

2. Economic and Financial Analysis at Exit

The PCR team met some challenges largely associated with the lack of consistent and credible production, revenue and income data. This had a direct effect in projecting cashflows and revenue streams. Table 1 below outlines key challenges and alternative approach/assumptions used to calculate financial and economic returns:

Table 1: Assumptions used for calculating Financial and Economic Returns

<table>
<thead>
<tr>
<th>No</th>
<th>Challenge</th>
<th>Remedial Action/ Assumptions</th>
</tr>
</thead>
</table>
| 1. | Project did not collect consistent production/yield data by project site or globally. Impact of external shocks such as the global food crisis (2008-2010); the Ebola outbreak (2014-2015) though only estimated, had crippling effects on project implementation and local production of staples (particularly rice and cassava) | - Production data/projections assume that ASRP contributed towards increased rice production to attain ATLEAST 2008-2009 production levels. FAO estimates rice production in Liberia declined by 12% nationwide (24,000 mt) as a result of the Ebola outbreak; and as much as 20% in the most affected countries such as Bong and Lofa counties.  
- 2009 production data (by county) is the only validated data published by the Liberia Institute of Statistics and Geo-Information Services (LISGIS) and has therefore been used as proxy for production targets at the end of the project. Details are included in Annex 3. |
| 2. | The project was informally restructured following the withdrawal of IFAD from the co-financing arrangement. Besides contract management challenges from inception, it became evident by the MTR that production and infrastructure development targets proposed at appraisal were unattainable. The project outputs were therefore scaled down; and for some activities such as WMI by more than 80%. The completion of project infrastructure coincided with project completion. Attributing increased yields (particularly for rice) to improved irrigation would therefore be limiting. | - Financial projections in the assessment only cover rice production; which though still heavily dependent on rainfed was the only crop that was evidently being produced as a result of project support. In Pleebo horticulture production was largely opportunistic and as such production and revenue data was not consistently collected. |
| 3. | Pricing information. A survey done during penultimate mission provided largely anecdotal | The assessment used 2010 commodity pricing data from LISGIS. While LISGIS’ reference point is prices of imported rice; on |


### No | Challenge | Remedial Action/ Assumptions
--- | --- | ---
1 | Information on market prices for rice and horticulture produce. Most of the rice produced was in paddy and would therefore not receive competitive market prices because there was no value addition. | Average, wholesale prices for imported rice tend to be approximately 50% higher than those of locally produced rice. In March 2010, for instance, a 50 kg bag of imported rice in Monrovia cost LD 2,800/bag while that of local rice was LD 1,850/bag. Keeping all prices constant local rice prices vary from LD 15,000/MT in Bong to LD 17,500/MT in Grand Kru. The benefit stream was projected based on a 20% increase in rice production.
2 | Sequencing of project activities (construction of roads, vs community infrastructure vs water management infrastructure) wasn’t uniform. The staggered timing may have some impact on calculation of incremental IRR. | Negligible.
3 | Additional assumptions include: | - The analysis only considered one crop (rice) as site visits found that cassava and maize were not being produced. Given that horticulture production was not initially costed, it has also been excluded for sustainability assessment at exit; - Given the high costs of transport and other logistics, farmgate prices especially in remote areas tend to be higher as one moves further away from Monrovia, ranging from USD 0.01/additional Km away from Monrovia to as high as USD 0.06/additional Km in Grand Kru county (depending on season). While Economic analysis should correct for moving variables such as inflation and transport, there is high likelihood that due to the speculative nature of markets in Liberia (especially during crisis), these factors inadvertently may have influenced market prices; - Given that crop prices were not collected systematically in each of the counties over the project and that the LISGIS hasn’t consistently reported on price and production data since 2009/2010, pricing estimates are based on a single point; - Daily average wage in rural areas is LD 462/day (1 USD = LD 80.57); - The non-agricultural traffic was estimated to be 40% of the total traffic; - Infrastructure maintenance costs consist of routine (annual) and periodic (every 5 years). Replacement costs vary (Roads - 25%; Community Infrastructure – 10%; Water Management Infrastructure -15%); - As done during appraisal, the life of all assets is 25 years; - Conversion factor from financial to economic costs is 0.9; - Economic benefits result from the sum of: i) projected net revenues resulting from production, trade and service fees (producer surplus); ii) Savings resulting from reducing operating costs for vehicles; iii) Time savings resulting from reduced travel and improved safety.
4 | Findings and Conclusion | The Economic Internal Rate of Return (EIRR) at project completion was 16.46% whereas that at appraisal was 20%. The Net Present Value (NPV) at the end of the project was USD 1.76 million compared to USD 12.9 million at appraisal. The discount rate for the project (12%) is not too far from current interest rates (13.3%) so financing costs cannot explain the variation. The project’s IRR while lower at exit than it was at appraisal, still remains higher than the current discount rate. The investment would still attract higher returns than alternative investments. The NPV at exit is significantly lower than what was projected at appraisal; implying that the profitability at exit didn’t meet up to projections at appraisal. The large variance may be attributable to: - Use of single points for both production and revenue data. Proxies and assumptions of “return to steady state” at the end of the project may be at odds with growth projections at appraisal; - Benefit streams at the beginning of the project were based on assumptions for high achievements (as reflected in targets for infrastructure development and yields from increased production of rice, cassava and maize). Given that as much as 80% of project outputs were not delivered, this raises challenges for assessing Value for Money for the project. The handover of the infrastructure coincided with close of the project. As such, revenue streams are based on anecdotal evidence more than actual tests of the market. This raises challenges for assessing profitability and long term sustainability ex-poste;
References:


Feb 2015, FAO/WFP Crop and Food Security Assessment in Liberia, Sierra Leone and Guinea

August 2015 Liberia Market Price Monitor
Annex Table 1: Economic Internal Rate of Return (EIRR) Calculation

<table>
<thead>
<tr>
<th>Year</th>
<th>Investments (USD)</th>
<th>Maintenance Costs (USD)</th>
<th>B1-Producer Surplus</th>
<th>Vehicle Operating Costs (VOC)</th>
<th>Savings in Travel Time (VOT)</th>
<th>Net Benefits (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2009</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>2010</td>
<td>121,669</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>(121,669)</td>
</tr>
<tr>
<td>3</td>
<td>2011</td>
<td>243,339</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>(243,339)</td>
</tr>
<tr>
<td>4</td>
<td>2012</td>
<td>711,248</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>(711,248)</td>
</tr>
<tr>
<td>5</td>
<td>2013</td>
<td>1,422,497</td>
<td>14,372</td>
<td>140,400</td>
<td>57,456</td>
<td>(1,239,013)</td>
</tr>
<tr>
<td>6</td>
<td>2014</td>
<td>1,403,730</td>
<td>20,121</td>
<td>234,000</td>
<td>95,760</td>
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|               | 9,358,197        |                         |                     |                             |                             | 31,500,471         |

EIRR 16.46%
Discount Rate 12.0%
NPV $1,759,383
### Annex Table 2: County Production Data in MT

<table>
<thead>
<tr>
<th>No</th>
<th>County</th>
<th>Hectares</th>
<th>% of Pdn (at National Level)</th>
<th>Total Rice Pdn Area (in Ha)</th>
<th>National Pdn in Mt</th>
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<tbody>
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<td>1</td>
<td>Bong</td>
<td>34,130</td>
<td>15.3%</td>
<td>30,270</td>
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<td></td>
<td></td>
<td></td>
<td>Ha/Farm</td>
<td></td>
<td>Pdn (Mt)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.31</td>
<td>1,370</td>
<td>46,760</td>
</tr>
<tr>
<td>2</td>
<td>Grand Gedeh</td>
<td>11,230</td>
<td>5.0%</td>
<td>10,500</td>
<td>1.07</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Ha/Farm</td>
<td></td>
<td>Pdn (Mt)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.18</td>
<td>1,230</td>
<td>13,810</td>
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<tr>
<td>3</td>
<td>Grand Kru</td>
<td>7,350</td>
<td>3.3%</td>
<td>8,500</td>
<td>0.86</td>
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<td></td>
<td>Ha/Farm</td>
<td></td>
<td>Pdn (Mt)</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>1.13</td>
<td>1,360</td>
<td>9,990</td>
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<tr>
<td>4</td>
<td>Maryland</td>
<td>8,270</td>
<td>3.7%</td>
<td>8,060</td>
<td>1.03</td>
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<td></td>
<td></td>
<td>Ha/Farm</td>
<td></td>
<td>Pdn (Mt)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.21</td>
<td>1,380</td>
<td>11,410</td>
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<td>5</td>
<td>River Cess</td>
<td>5,960</td>
<td>2.7%</td>
<td>6,320</td>
<td>0.94</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Ha/Farm</td>
<td></td>
<td>Pdn (Mt)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.15</td>
<td>1,120</td>
<td>6,670</td>
</tr>
<tr>
<td>6</td>
<td>River Gee</td>
<td>7,990</td>
<td>3.6%</td>
<td>7,240</td>
<td>1.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ha/Farm</td>
<td></td>
<td>Pdn (Mt)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.31</td>
<td>1,240</td>
<td>9,900</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td></td>
<td>33.7%</td>
<td>35.3%</td>
<td>27.0</td>
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</table>


### Annex Table 3: Investment Costs – Roads, Community Infrastructure and Water Management Infrastructure

#### Table 3.1: Roads and Culverts

<table>
<thead>
<tr>
<th>Lot/ Description of Works</th>
<th>Km. of Roads</th>
<th>Initial Investment on Roads (USD)</th>
<th>Cost/Km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehabilitation of Zwedru- Ziah Rd, G. Gedeh County</td>
<td>27.0</td>
<td>1,320,370.76</td>
<td>48,903</td>
</tr>
<tr>
<td>Culverts, Grand Kru County</td>
<td>0.15</td>
<td>35,315.60</td>
<td>241,385</td>
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<tr>
<td>Culverts, River Gee County</td>
<td>0.46</td>
<td>222,213.17</td>
<td>486,031</td>
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<tr>
<td>Culverts, Zwedru- Ziah (Grand Gedeh)</td>
<td>33.06</td>
<td>790,944.00</td>
<td>23,925</td>
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<tr>
<td>Culverts Maryland County</td>
<td>0.13</td>
<td>64,541.55</td>
<td>504,168</td>
</tr>
<tr>
<td>TOTAL</td>
<td>60.79</td>
<td>2,433,385.08</td>
<td>40,028</td>
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</table>
Table 3.2: Community Infrastructure

<table>
<thead>
<tr>
<th>Lot/ Description of Works</th>
<th>Costs in USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. of Agriculture Offices, Barclayville (Grand Kru)</td>
<td>454,232.03</td>
</tr>
<tr>
<td>Min. of Agriculture Offices, Warehouses &amp; Milling Facilities (River Gee)</td>
<td>203,603.31</td>
</tr>
<tr>
<td>Min. of Agriculture Offices, Warehouses &amp; Milling Facilities (Philadelphia, Maryland)</td>
<td>395,134.86</td>
</tr>
<tr>
<td>Min. of Agriculture Offices, Warehouses &amp; Milling Facilities (Zwedru, Grand Gedeh)</td>
<td>577,887.02</td>
</tr>
<tr>
<td>Min. of Agriculture Offices (Fishtown) + Warehouses &amp; Milling Facilities (Jarkaken, River Gee)</td>
<td>427,826.23</td>
</tr>
</tbody>
</table>

2,058,683.45

Table 3.3: Water Management Infrastructure

<table>
<thead>
<tr>
<th>Lot/ Description of Works</th>
<th>Costs in USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleebo A&amp;B (Maryland County), Grand Cess and Grand Kru</td>
<td>393,038.46</td>
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<tr>
<td>CARI Swamp (Bong County), Jakarken &amp; Kanweken (River Gee County)</td>
<td>766,340.90</td>
</tr>
<tr>
<td>Jarkaken &amp; Florweken Swamps (River Gee County)</td>
<td>125,712.06</td>
</tr>
<tr>
<td>Philadelphia Swamp (Maryland) &amp; Barclayville and Kayken Swamps (Grand Kru)</td>
<td>1,078,514.57</td>
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<tr>
<td>Grand Cess Swamp (Grand Kru County)</td>
<td>38,413.05</td>
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<td>Zwedru Swamp (Grand Gedeh County)</td>
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<td>Kanweken Swamp (River Gee County)</td>
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4,866,128.66