



Report Number: ICRR0021646

1. Project Data

Project ID
P124775

Project Name
GH-West Africa Regional Fisheries

Country
Ghana

Practice Area(Lead)
Environment & Natural Resources

L/C/TF Number(s)
IDA-49790

Closing Date (Original)
31-Dec-2017

Total Project Cost (USD)
35,315,479.21

Bank Approval Date
14-Jul-2011

Closing Date (Actual)
28-Sep-2018

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	50,300,000.00	0.00
Revised Commitment	50,300,000.00	0.00
Actual	31,854,192.13	0.00

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Project ID
P124812

Project Name
Ghana - W. Afr. Regional Fisheries GEF (P124812)

L/C/TF Number(s)

Closing Date (Original)

Total Project Cost (USD)
3461287.08

Bank Approval Date

Closing Date (Actual)



14-Jul-2011

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	0.00	3,500,000.00
Revised Commitment	0.00	3,461,287.08
Actual	0.00	3,461,287.08

2. Project Objectives and Components

a. Objectives

As stated in the IDA credit and GEF grant agreements, the Project Development Objective (PDO) and the Global Environmental Objective (GEO) for the first phase of the West Africa Regional Fisheries Program (WARFP) was "to support the sustainable management of Ghana's fish and aquatic resources" by: (a) strengthening the country's capacity to sustainably govern and manage the fisheries; (b) reducing illegal fishing; (c) increasing the value and profitability generated by the fish resources and the proportion of that value captured by the country; and (d) developing aquaculture.

While the PDO was not changed during implementation, the GEO was amended in the Restructuring Paper dated June 27, 2017 becoming "to sustainably increase the overall wealth generated by the exploitation of Ghana's fisheries resources, and the proportion of that wealth captured by the country."

The contributions of each of these sub-objectives to the achievement of the PDO will be evaluated separately in Section 4 of this review where the four sub-objectives will be referred to as Objectives 1 to 4.

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

Yes

Date of Board Approval

27-Jun-2017

c. Will a split evaluation be undertaken?

Yes

d. Components

Component 1: Good Governance and Sustainable Management of the Fisheries. (Appraisal Cost: IDA - US\$15.2 million, GEF -- US\$3.5 million; Actual Cost: IDA - US\$6.47 million, GEF -- US\$3.46 million). This



component aimed to build the capacity of the Government and stakeholders to develop and implement policies through a shared approach that would ensure that the fish resources are used in a manner that is environmentally sustainable, socially equitable, and economically profitable. It had four subcomponents: (i) developing the legal and operational policy to enable the implementation of the Ghana Fisheries and Aquaculture Sector Development Plan; (ii) strengthening fisheries management, including fishing rights and stakeholder-based management and ensuring necessary research activities for sustainable exploitation; (iii) aligning fishing capacity and effort to sustainable catch levels; and (iv) social marketing, communication, and transparency.

Component 2: Reduction of Illegal Fishing. (Appraisal Cost: IDA -- US\$10.9 million; Actual Cost: IDA -- US\$9.3 million). This component sought to reduce the illegal fishing activities threatening the sustainable management of the country's fish resources by strengthening fisheries monitoring, control, and surveillance (MCS) systems.

Component 3: Increasing the Contribution of the Fish Resources to the National Economy.(Appraisal Cost: IDA -- US\$12.1 million; Actual Cost: IDA - US\$4.59 million). This component aimed to identify and implement measures to increase the benefits to Ghana from fish resources by increasing the share of the value added captured in the country. It had two subcomponents: (i) value chain development (fresh/frozen product/trade facilitation); and (ii) fish product trade and information systems

Component 4: Aquaculture Development. (Appraisal Cost: IDA -- US\$8.0 million; Actual Cost: US\$5.58 million). This component sought to set the framework for increased investment in inland aquaculture and had four subcomponents: (i) developing the aquaculture policy and legal framework; (ii) improving the genetic quality of Tilapia fingerlings and brood stock; (iii) catalyzing aquaculture development for medium and large scale enterprises; and (iv) support for small-scale aquaculture development.

Component 5: Regional Coordination, Monitoring and Evaluation and Project Management.(Appraisal Cost: IDA -- US\$4.1 million; Actual Cost: US\$5.52 million). This component aimed to support project implementation and regional coordination with the West Africa Regional Fisheries Program (WARFP), ensuring that regular monitoring and evaluation is conducted, and the results are fed back into decision-making and project management. The appraisal cost for this component included US\$1.51 million for the Sub-Regional Fisheries Commission (SRFP).

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost. At the time of project closing, actual project cost was 65 percent of that anticipated at appraisal, US\$34.92 million as compared with US\$53.8 million.

Financing. Project financing was to consist of a US\$50.3 million IDA credit and a US\$3.5 million GEF grant (for Component 1 only). At closing, 63 percent of the IDA credit (US\$31.46 million) and 99 percent (US\$3.46 million) of the GEF grant had been disbursed. Thus, there was an undisbursed balance of nearly US\$ 18.5 million from the IDA credit at the time of closing. According to the ICR (para. 49, pg. 24),"the project lost a total of US\$6,848,013 because of exchange rate fluctuations." However, this only accounted for about one third of the total shortfall.

In a communication between the ICR team and IEG, it was confirmed that "the US\$6 million (sic) loss to the project is attributed to losses due to the SDR-USD exchange rate." It also pointed out that a "cancellation



was proposed by the CMU as part of a portfolio review since the project was disbursing more slowly than planned and other projects in Ghana were in more urgent need of resources. After a long wait period, the Government did not submit a letter requesting the cancelation and shifting of funds from the WARFP project, so the cancelation did not take place. The team also clarified that "the key design and implementation factors cited in the report (i.e., the ICR) led to slower and lesser than planned implementation of work plans, which resulted in undisbursed funds. Also, as the project was reaching its closing date and without the 18-month extension [see the subsection on **Dates** below], it was agreed that ongoing activities will receive priorities over new activities."

Borrower Contribution: There was no Borrower financial contribution as the project was financed 100 percent by IDA and GEF.

Dates and Restructurings. The project was approved on July 14, 2011 and became effective on June 12, 2012. A Mid-term Review (MTR) occurred in January 2015 and the original project closing date (December 31, 2017) was extended twice through Level 2 restructurings on December 26, 2017 until June 29, 2018 and on June 28, 2018 until September 28, 2018. The key restructuring for this project, however, was the revision of the Results Framework involving changes in indicators and targets in the Restructuring Paper dated on June 27, 2017. Hence there were three Level 2 restructurings altogether.

The changes in the Results Framework involved the PDO indicators. The original PDO indicators in the PAD (para 21) were as follows:

- **Strengthened Governance:** The overexploited canoe fisheries show signs of a recovery, as measured by a stabilization in total landings per unit of fishing capacity (e.g., number of fishing vessels);
- **Reduced Illegal Fishing:** A 40 percent increase in the total number of patrol days at sea each year in the coastal fisheries;
- **Increased Value and Profitability:** At least a stabilization in annual net economic benefits to Ghana from targeted fisheries;
- **Aquaculture Development:** Total annual aquaculture production is increased to 35,000 tons.

The revised PDO indicators proposed in the June 2017 Restructuring Paper (ICR, para. 16) were as follows:

- **Strengthened Governance:** Fisheries management plan of the marine fisheries sector of Ghana implemented
- **Reduced Illegal Fishing:** Average infraction reported per unit of enforcement activity
- **Increased Value and Profitability:** Number of fish health labs established
- **Aquaculture Development:** Scoring on aquaculture enabling environment: 1 Disease control; 2 Policy framework (number).

The ICR noted that "the intermediate results indicators were also changed during the June 2017 restructuring. Of the ten original indicators, three were maintained, six were revised, and one was



dropped. In addition, 11 new intermediate results indicators were added under Components 1-4. These changes did not affect the GEF's scope of support or financing, Component 1" (pg. 17).

With their stronger focus on institutional performance and more precise environmental performance targets the revised PDO indicators introduced a material enhancement in the expected results from the project. The more ambitious PDO indicators justified a split rating approach for determining the project's overall outcome.

In a communication to IEG by the ICR team during the preparation of this review, it was pointed out that a Level 1 restructuring had been considered following the MTR that would keep the most important activities and justify an 18-month extension. However, one critical condition for this to occur -- restricting the number of trawlers -- was not met by the agreed deadline and the other agreed actions that were a prerequisite for the extension were also not making significant progress. Therefore, the Bank decided not to process the Level 1 restructuring and only to extend the closing date by six months to allow completion of priority activities. The final three month extension was also granted in order to permit completion of ongoing civil works and oven installations, as these were considered simple to finish and highly beneficial to local communities, while leaving them unfinished could have posed a substantial reputational risk for the Bank.

3. Relevance of Objectives

Rationale

The project objective remains relevant to Sustainable Development Goal (SDG) 14 to conserve and sustainably use the oceans, seas, and marine resources for sustainable development, and was intended as a key instrument for implementation of Ghana's 2011-2016 Fisheries and Aquaculture Sector Development Plan, whose key goals were to maintain current production, increase revenue and profitability, boost aquaculture production, strengthen landing and processing capacity, and sustainably manage fisheries in the country by controlling commercial fishing activities. These were significant development challenges for Ghana and addressing them successfully could result in the sustainable use of fisheries resources and the reduction in poverty among artisanal fisherfolk along the country's coastline.

This project was also aligned with the World Bank Group's (WBG's) Country Assistance Strategy for Ghana, which included support to improved environmental governance in line with Government priorities for fisheries such as combatting illegal, unregulated, and unreported (IUU) fishing. It was likewise relevant in relation to the WBG's Country Partnership Strategy (CPS) for FY13-16, which was later extended to FY 2018, which included support for improved links to value chains in agriculture, especially for small-scale



fisheries. In addition, the project was part of the Bank-supported Regional Fisheries Program for West Africa (WARFP), which was identified in the Results Framework for the FY13-18 CPS as a key Bank instrument under both Pillars 1 (Improving Economic Institutions) and 2 (Improving Competitiveness and Job Creation) of this strategy. Potentially, therefore, this project generated benefits for the fisheries industry and the environment at local, national and regional levels. Consequently its relevance was rated high.

Rating

High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

Strengthen the country's capacity to sustainably govern and manage the fisheries through a reduction in the overexploited of canoe fisheries measured by a stabilization in total landings per unit of fishing capacity (e.g., number of fishing vessels)

Rationale

Theory of Change: This objective was expected to improve the governance of the fishing industry through stabilizing the number of active marine fishing vessels, reducing the number of licensed industrial trawlers, establishing a vessel monitoring system, and strengthening local stakeholder involvement in fisheries management.

Outputs (prior to restructuring):

- Active marine fishing vessels (target -- maintain the baseline number of 11,123).
- Active licensed industrial trawl vessels (target -- reduce the number from 67 to 40) -- not achieved
- Agreements signed between Government and communities for stakeholder management of fisheries (target -- 12) -- not achieved; according to the ICR, even though a baseline study and a needs assessment were carried out in 2017, implementation of any activities in this regard had not begun by the time of project closing.

Outcomes (prior to restructuring)

- Landings per unit of fishing capacity in the artisanal segment decreased instead of stabilizing due to an increase in the number of active canoes (around 13,500 canoes compared to a baseline of 11,213), which contributed to a decrease in the stock's biomass.



The ICR (para. 26, pg. 15) affirms that "most of the activities associated with this objective were implemented before the June 2017 restructuring, resulting in a partially achieved outcome." However, the actual figure with respect to the total landings per canoe from marine motorized and non-motorized canoe fisheries (targets: 15 and 25, respectively) and per canoe from Lake Volta canoe fisheries (target: 6.9) were not reported in the ICR.

This review concluded that the efficacy of the achievement of Objective 1 before the June 2017 restructuring was Modest.

Rating

Modest

OBJECTIVE 1 REVISION 1

Revised Objective

Strengthen the country's capacity to sustainably govern and manage the fisheries through the implementation of a fisheries management plan for Ghana's marine fisheries sector

Revised Rationale

Theory of Change: This objective was expected to improve the governance of the fishing industry through the implementation of a fisheries management plan for the marine fisheries sector, including stabilizing the number of active marine fishing vessels, reducing the number of licensed industrial trawlers, establishing a vessel monitoring system, and strengthening local stakeholder involvement in fisheries management.

Outputs (after restructuring):

- 14,717 canoes (11,597 motorized and 3,120 non-motorized) registered and 10,307 canoes embossed with a small plaque by August 2018 verifying registration, compared with targets of 13,000 each -- thus the target for registration was exceeded by 13.2 percent but that for embossment fell short by 20.7 percent; averaging the two, the combined target was 96.2 percent met.
- 303 licensed industrial and semi-industrial vessels licensed (indicator replaced the original "active licensed industrial trawl vessels" and included 73 trawlers, 29 tuna vessels and 200 industrial vessels) -- 97.1 percent of the target (312) set at the June 2017 restructuring compared with a baseline of 541 in February 2016.
- Fishing vessel registration and licensing guidelines prepared by Fisheries Commission were prepared in November 2013 and a web-based registry was established subsequently.
- A Fisheries Management Plan was developed and approved by Cabinet and gazetted in October 2015; several actions were later implemented.
- A framework and strategy for the establishment of marine protected areas (MPAs) were prepared in May 2018 and although a Cabinet Paper was not prepared at project closing a report was with the Ministry of Fisheries and Aquaculture Development (MOFAD) pending submission for Cabinet



approval -- partially achieved; according to the ICR, this output was 37 percent achieved, but the ICR does not explain how this number was determined.

- Two fisheries watch committees were established and functional, achieving half of the target (4).

Outcomes (after restructuring):

- Reduction of demersal fishing fleet by 50% over a five year period -- not achieved as the trawler demersal fishing fleet increased from 67 at appraisal to 73 boats at program closing.
- Establishment of a new licensing scheme -- not established even though some actions were taken to upgrade the existing scheme.
- Closed season for industrial vessels -- has been in place since 2016, but timing has been the result of negotiations between the government and the National Trawlers Association and not as recommended in the Fisheries Management Plan and the agreed August 2018 closing was postponed. However, when closed seasons were in effect, they were fully enforced.
- Deletion of boats inactive for one year -- not achieved.
- Fisheries Management Plan of the marine fisheries sector of Ghana implemented (yes/no) -- this plan was not implemented as intended as per the shortfalls with respect to three of the outputs described above.

The ICR (para. 29, pg. 17) also states, "although official numbers are not yet available (USAID is expected to release the new figures in mid-2019), it is expected that the landing per unit of fishing capacity in the artisanal segment continued to decrease in 2017 and 2018 because the Government did not prevent the entry of new active canoes, which, at closing totaled 14,717. On the other hand, the implementation of the Fisheries Management Plan improved with a decrease in the number of licensed trawlers to 73 units at closing." However, the ICR also states that "co-management agreements were not signed during the project's lifetime because of continuous delays, the alternative livelihoods program was not implemented despite several preparatory actions taken, and the Marine Protected Area (MPA) framework and strategy were not submitted to Cabinet for approval as planned also because of implementation delays.

The efficacy of the achievement of Objective 1 after the June 2017 restructuring was assessed by this review as Modest.

Revised Rating

Modest

OBJECTIVE 2

Objective

Reduce illegal fishing through a 40 percent increase in the number of patrol days at sea each year in the coastal fisheries

Rationale



Theory of change: This objective was expected to be achieved by establishing a Fisheries Enforcement Unit and a satellite-based fishing vessel monitoring system (VMS) for the 200 mile exclusive economic zone, together with 24 hour daily monitoring and a combination of aerial and other enforcement activities.

Outputs (before restructuring):

- Establishment of a Fishing Enforcement Unit (FEU) as described in 2002 Fisheries Act -- achieved as of September 2013.
- Establishment of a satellite-based fishing vessel monitoring system (VMS) for the 200 mile exclusive economic zone, and monitoring 24 hours a day -- achieved as of 2014
- Total aerial patrol hours per year in coastal fisheries (replaced at the June 2017 restructuring) -- no results are reported. On the other hand, the ICR (para 32, pg. 18) explains that the aerial patrols were replaced with a general group of enforcement activities due to the relatively high cost and irrelevance of aerial patrols once the VMS was widely installed.

Outcome (before restructuring)

- Total patrol days at sea per year in coastal fisheries -- target 19 - partially achieved at closing, according to ICR, only 13 patrol days were reported.

This review concluded that the efficacy of the achievement of Objective 2 before the June 2017 restructuring was Modest.

Rating

Modest

OBJECTIVE 2 REVISION 1

Revised Objective

Reduce illegal fishing through increasing the average infractions reported per unit of enforcement activity

Revised Rationale

Theory of Change: The objective was still expected to be achieved by the Fisheries Enforcement Unit through a satellite-based fishing vessel monitoring system (VMS) for the 200 mile exclusive economic zone together with 24 hour daily monitoring enforcement activities but without aerial patrols.

Outputs (after restructuring):

- Two fisheries watch committees established -- compared with a target of 4, thus 50 percent and hence partially achieved.
- Satellite-based fishing vessel monitoring system (VMS) for the 200 mile exclusive economic zone and monitoring 24 hours a day continued -- achieved.



- Target for annual law enforcement activities 96.8 percent actions (748 versus 773); however, as reported in the ICR, the mix was substantially different than anticipated -- i.e., 656 vessels inspected at quayside versus the target of 35 vessels, and 13 patrol days at sea versus a target of 288 days, 52 kilometers of beachcombing at the coast and Lake Volta versus 300 km, and 27 patrol days on land as compared with the target of 150 days (page 54)

Outcome (after restructuring)

- Reduction in average infractions reported per unit of enforcement activity (baseline: 500 in July 2011) - this target (180 established at the June 2017 restructuring) was exceeded (141) based on the sum of the following averages: 37 infractions reported by sea patrols in 2014-2018, 12 infractions reported by land patrols in 2016-2018, 52 infractions reported by beachcombing on the coast in 2018, 40 infractions reported by the Vessel Monitoring System (VMS) in 2014-2018, and zero infractions reported by beachcombing in Lake Volta in 2017-2018. This low rate of infractions and the improved ability to report on them is attributed to project-financed support under Component 2, notably the establishment and operation of the Fisheries Enforcement Unit (FEU), including equipment, training, VMS and AIS (Automatic Identification System) coverage, development and implementation of a Monitoring, Control and Surveillance (MCS) Plan, and the establishment and operationalization of an observer program (ICR, pg. 42).

This review concluded that the efficacy of the achievement of Objective 2 after the June 2017 restructuring was Substantial.

Revised Rating

Substantial

OBJECTIVE 3

Objective

Increase the value and profitability generated by fish resources through at least a stabilization of annual net economic benefits from targeted fisheries

Rationale

Theory of change: This objective was expected to be achieved by increasing the productivity of fishing activities and the economic returns as a result of improved post-harvesting activities, especially for women.

Output (before restructuring):

- Pilot integrated fish landing site clusters were functioning and providing basic services (e.g., electricity, water, etc.), which created greater opportunities for fisherfolk to sell fish.



Outcome (before restructuring)

The ICR (para. 38, pg. 20) affirms that the third objective "was not achieved before the restructuring" due to the "unavailability of reliable data on returns from fisheries." Thus the initial indicators on annual net economic benefits from non-motorized and motorized marine canoe fisheries and from motorized Lake Volta fisheries were not presented.

This review concluded that the efficacy of achievement of Objective 3 prior to the June 2017 restructuring was Modest.

Rating

Modest

OBJECTIVE 3 REVISION 1

Revised Objective

Increase the value and profitability generated by the fish resources through a continued stabilization of annual net economic benefits from targeted fisheries

Revised Rationale

Theory of Change: This objective was expected to be achieved by a continued increase in the productivity of fishing activities and enhanced economic returns as a result of an increased number of landing sites as well as improved post-harvesting associated with the participation of women.

Outputs (after restructuring)

- 204 improved smoke ovens for fish constructed and 64 partially constructed -- target (300), 68 percent achieved. However, the ICR states (para. 40) that "the impact of the new facilities in Anloga cannot be evaluated yet because the construction was completed near the closing of the project.
- National Association of Fish Processors and Trader (NAFPTA) established and functional.

Outcome (after restructuring)

- Number of fish health labs established -- target (2) was exceeded by 150 percent as 5 fish health laboratories were established in Accra, Cape Coast, Koforidua, Kumasi, and Takoradi with facilities, equipment and training on their management and the use of equipment.

The ICR notes (para. 39, pp. 20-21) that most post-harvest activities associated with this objective were implemented after the restructuring, resulting in a partially achieved outcome, indicating further that only 204 of the 300 planned ovens and only one of the planned nine landing sites -- where local market sheds had



been converted into fish landing platforms and fish processing facilities, electricity, wash rooms, fencing, and a site management office -- had been fully constructed by the time the project closed.

This review concluded that efficacy of the achievement of Objective 3 after the June 2017 restructuring at the time of project closing was Modest

Revised Rating

Modest

OBJECTIVE 4

Objective

Develop aquaculture as indicated by an increase in the total annual aquaculture production to 35,000 tons

Rationale

Theory of change: This objective was expected to be achieved initially by establishing a zoning regime for Lake Volta.

Output (before restructuring):

- Zoning regime for Lake Volta established -- zoning plan partially achieved.(see below under Objective 4, Revision 1)

Outcomes (before restructuring):

- Increased annual aquaculture production (tons) -- not achieved (see below under Objective 4, Revision 1).

This review concluded that efficacy of the achievement of Objective 4 before the June 2017 restructuring was Modest.

Rating

Modest

OBJECTIVE 4 REVISION 1

Revised Objective

Develop aquaculture as indicated by a scoring of the aquaculture enabling environment

Revised Rationale



Theory of Change: This objective was expected to be achieved initially by establishing a zoning regime for Lake Volta and after restructuring through establishment of policies for fish health and aquaculture.

Outputs (after restructuring):

- Report on zonation of Lake Volta finalized in September 2016 and submitted to Fisheries Commission in 2018 for conversion into a Zoning Plan by a Minister-appointed committee, but this had not occurred by the time of project closing.
- Functional early warning system on disease outbreak not established by project closing.
- Functional database for diseases of economic importance not established by project closing.
- Aquaculture policy was developed but not submitted for Cabinet approval and was judged by a Bank aquaculture specialist to be of poor quality.
- Fish health policy was developed and approved by Cabinet.

Outcomes (after restructuring):

- Scoring on aquaculture enabling environment
 - Disease control -- hatchery and farm certification regimes in place -- health and sanitation protocols for certification of fish farms and hatcheries were developed and validated by the Fisheries Commission and other stakeholder agencies, fish farmers and hatchery operators were sensitized on the protocols, 12 farms received certification in accordance with the protocols, other fish farms were inspected by the Fish Health Unit in accordance with the protocols, and farm owners received training in government training centers on meeting set protocol standards.
 - Policy framework -- a fish health policy and a national aquaculture policy were developed and the fish health policy was approved by Cabinet in March 2018; however, the aquaculture policy was not submitted for approval and was considered to have been of poor quality by a Bank aquaculture specialist (as noted already)

The ICR (para 42, pg. 21) observes that even though total aquaculture production in the country increased from 19,092 tons in 2011 to 57,000 tons by the time of project closing, this trend could not be attributed to project-financed interventions because it was largely driven by several large-scale private investors. For this reason the outcome indicator was replaced at the time of restructuring with a scoring system for an aquaculture enabling environment for large and small investors, comprising an aquaculture policy framework and disease control measures, which were only partially achieved.

This review concludes that efficacy of the achievement of Objective 4 as a result of project interventions after restructuring was Modest.

Revised Rating
Modest



Rationale

Overall Efficacy Ratings. The PDO for this project was "to support the sustainable management of Ghana's fish and aquatic resources." This overall objective was to be achieved through the achievement of the four sub-objectives listed above as Objectives 1 to 4 before and after the June 2017 restructuring. As explained below, on the basis of the efficacy of the four sub-objectives before and after the restructuring in June 2017, it can be concluded that the PDO was not achieved. The following is a summary of the project's efficacy before and after restructuring.

Efficacy of the achievements of objectives before the June 2017 restructuring. The assessments in this Section show that before restructuring, based on the achievement of the four sub-objectives as measured by the original PDO indicators, the efficacy rating for each of them was Modest. Hence the overall rating of the project's efficacy before restructuring was modest.

Efficacy of the achievements of objectives after the June 2017 restructuring. While project performance after restructuring improved in relation to some of the revised indicators, others were only partly achieved. Thus, on balance efficacy continued to be modest, particularly with respect to the first sub-objective -- good governance and sustainable management of fisheries -- which was the most critical one for achievement of the overall project objective -- namely the sustainable management of Ghana's fisheries resources, which are primarily marine in origin. The only exception was the efficacy of the "reduction of illegal fishing", for which efficacy was rated substantial after restructuring. . Some key results in relation to another of the sub-objectives (e.g., the net economic benefits from artisanal fishing), could not be reported due to the lack of reliable data. In addition, the project's original PDO indicators also included targets for the total number (223,000) and female share (12 percent) of direct beneficiaries, which were not revised at the time of the June 2017 restructuring. While these targets were reportedly met, the ICR (pg. 45) concluded that "this indicator is not considered overly achieved due to the lower than planned percentage of female beneficiaries and the fact that the increase in the overall number of beneficiaries is a result of the sector's growth rather than project-financed interventions." In short, the recorded gains could not be fully attributed to the actions implemented under the project. Hence, overall the efficacy of the project's achievements after restructuring was rated modest.

Overall Efficacy Rating

Not Rated/Not Applicable

5. Efficiency

The PAD (para. 42, pp. 11-12 and Annex 7, pp. 70-86) estimated the project's direct benefits based on a quantitative biological and economic model for Ghana's fisheries and the proposed investments. This analysis found that, using a discount rate of 10%, the net present value (NPV) of the net economic expected to result from the project over 30 years exceeded US\$140 million with an economic internal rate of return (EIRR) of 49.6 percent. Another Annex in the PAD (No. 8, pp. 87-92) presented an incremental cost analysis for the GEF-financed subcomponent. However, the ICR was unable to replicate these analyses due to data unavailability. In



a communication with IEG during the preparation of this review the ICR team elaborated on the reason why the economic analysis in the PAD could not be replicated stating that: "there was a need for intensive collection of cost and revenue data, and another stock assessment, which the team could not carry out due to the data-poor environment in Ghana and the Government's unwillingness to share data where available. In addition some of the data for the economic analysis in the PAD came from interviews which are costly to repeat and were based on assumptions, many of which are no longer relevant as explained in the ICR."

The ICR nonetheless drew several conclusions in relation to the economic benefits of project achievements as well as missed opportunities due to unattained results. It states (para. 47, pp. 23-24) that "analysis of project performance from biological, economic, and social perspectives demonstrates that the overall fisheries' biomass declined during the project period, as did the species' mix and landings in the artisanal subsector, therefore not resulting in the expected economic benefits." It likewise found that the Government did not benefit from the trawler license fees or the fines on illegal activities to the extent anticipated. This notwithstanding, the ICR argued that future income increases for fish processors are likely to increase significantly in the future due to the improved ovens built by the project while the improved enabling environment for aquaculture that it promoted was expected to result in cost savings and greater revenues for fish farmers as well as such social benefits as the empowerment of women, stronger awareness on the part of local stakeholders regarding sector laws and regulations, and better handling practices.

The ICR also identified several important "inefficiencies," mainly with respect to the cost efficiency of project MCS (Monitoring, Control, and Surveillance) activities and unused equipment and consulting outputs. Comparing the experience in Ghana with that in Sierra Leone, for example, it observed that the amount of financing provided to the Navy for fuel, rations, and maintenance associated with fishing-related patrols was more than twice as much on an annual basis than expect. In addition, a Bank supervision mission had determined that nearly US\$1.0 million paid by MOFAD for an Automatic Identification System (AIS) for trawlers was "excessively costly," while the project spent more than US\$200,000 for 4 fiberglass boats that were to be used for an inland canoe frame survey, but were found to be "of unacceptable design, quality, and safety levels," even though the expenses involved were expected to be reimbursed to the Bank.

The GEF resources were apparently used more efficiently, although the project failed to facilitate increased fish production, landings, and processing and did not alleviate the pressure on fish stocks as anticipated. On the other hand, according to the ICR (para. 50, pg. 25), it leveraged US\$215,000 in grant funding from Iceland and similar amounts from Norway, USAID, and the European Union (EU) "to support interventions in illegal fishing, fish diseases research, and use of the VMS [Vessel Monitoring System]." However, there were significant implementation delays, including a 10-month start-up delay on account of elections, changes in the location of the PCU offices, and transition of Bank Task Team Leaders (TTLs), as well as on account of changes in the PCU and late recruitment of specialists. As a result the closing date needed to be extended twice, in December 2017 and June 2018, respectively. Even despite this, the post-harvesting processing facilities (i.e., the ovens) were not started until 2018 nor completed at the time of closing due to delays in delivering needed parts to all of the beneficiary communities. In a communication between the Bank ICR team and IEG, it was learned that "reports from the Fisheries Commission post-closing say that all ovens in the Central Region, which is the region where most of the ovens had not been completed at closing, have been completed and some training has been carried out, allowing the women to start using several of the ovens". However, it was also observed that "the accurate completion rate is currently unavailable (although) this activity is highly likely to be completed given the reasons mentioned in the report."



Given these various shortfalls and shortcomings in the project's efficiency, IEG concurs with the ICR's Negligible rating for Efficiency.

Efficiency Rating

Negligible

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	17.90	100.00 <input type="checkbox"/> Not Applicable
ICR Estimate		0	0 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The project's relevance is rated High, but Efficacy (rated on average across four objectives, both before and after restructuring) is rated Modest, and Efficiency is rated Negligible (in part because of the inability to replicate the economic analysis undertaken in the PAD and also on account of significant implementation delays and other inefficiencies identified in the ICR. These results, as illustrated in the table below, indicate an overall outcome of the project as Unsatisfactory.

Item	Before Restructuring	After Restructuring
Relevance of PDO	High	High
Efficacy	Modest	Modest
Efficiency	Negligible	Negligible
Outcome Ratings	Unsatisfactory	Unsatisfactory
Numerical Value of Ratings	2	2
Disbursements	US\$27.92 million	US\$7.395 million
Share of Disbursements	79.1 %	20.9%
Weighted Value of Ratings	1.582	0.418
Final Outcome Rating	(1.582+0.418 = 2.0)	Unsatisfactory



a. Outcome Rating
Unsatisfactory

7. Risk to Development Outcome

Risks to development outcome vary according to the outcome being considered for this multi-dimensional project. On the one hand, some project-financed interventions are expected to be sustained without the need for additional support including the vessel registry managed by the National Information Technology Agency and which is updated quarterly, the observer program that is financed by vessel owners, and fish quality laboratories and aquaculture centers which are staffed by Government civil servants. The remaining ovens for fish processing are likewise expected to be completed by the Government which had earmarked resources for this purpose. On the other hand and more importantly, control over fishing activities in both the artisanal and industrial subsectors and Monitoring, Control, and Surveillance (MCS) activities clearly need to be strengthened, which will require stronger Government commitment than was evident during this project's implementation period. Longer-term sustainability of the fisheries, moreover, will depend on a reduction of fishing activities which, as the ICR (para. 89, pg. 39) correctly puts it "requires political courage and a profound behavioral change within the administration and stakeholders." Climate change impacts both on coastal and inland fisheries also need to be assessed.

Despite these challenges, it appears that a previously planned Bank-financed second phase WARFP operation in Ghana is still uncertain. According to information provided by the Bank's ICR team to IEG, "the Bank has listed conditions for the Government to meet in order to have a Phase II project as lack of political commitment has been the biggest challenge, and, without it, the project will likely fail. So far, the Government has not formally responded to the letter; however, it has mentioned that it was ready to engage with the Bank again and has taken actions on announcing a closed season for all the fisheries, increasing license fees, and rotating trawlers' licenses. However, none of these have been formally communicated to the Bank."

8. Assessment of Bank Performance

a. Quality-at-Entry

As part of a broader regional program, project design, which was supported by Bank technical specialists and consultants in various areas, was fundamentally sound with a focus on both ocean and freshwater (i.e., Lake Volta) fisheries and aquaculture. Fiduciary and safeguard due diligence was also successfully carried out during preparation and appraisal. The project nevertheless suffered from several design shortcomings, including those associated with the original PDO indicators and the Results and M&E Frameworks that are summarized in Section 9 (M&E Design, Implementation, and Utilization) below, as



well as what the ICR (para. 83, pg. 37) appropriately describes as the lack of "a deep understanding of the political economy of Ghana's fisheries sector."

Quality-at-Entry Rating
Moderately Satisfactory

b. Quality of supervision

Changes in the Bank task team leaders (TTLs) contributed to the project's start-up delays. Supervision missions, however, were reported to have been carried out on a regular basis and in close coordination with the Regional Program unit and other donors (i.e., USAID, Norway, Iceland, and the EU). Video conferences and other forms of communication were also used to maintain contact with the PCU between missions. However, according to the ICR (para 85, pg. 37), the Bank failed to take "firm and timely decisions on the future of the project, and procurement and financial management reviews did not adequately reflect fiduciary setbacks." Instead, it characterized the Bank's decisions regarding the proposed initial restructuring as "soft and delayed." This phase was subsequently clarified in a communication from the Bank's ICR team to IEG "the term 'soft' we refer to the fact that the Bank did not suspend, cancel or approve a Level 1 restructuring of the project, and the term 'delayed' refers to the fact that while a decision was made to restructure the project already at mid-term (early 2015), the first restructuring took place in June 2017." This restructuring, more specifically, was delayed by one year due to an extended discussion with the Ministry of Finance regarding cancelation of US\$10 million from the IDA credit, and procurement oversight was insufficient (see Section 10 -- Other Issues -- below). PCU members stated that feedback from the Bank project team "lacked clarity and was delayed at times," specifically citing delayed no-objections responses, piecemeal approvals of the 2017 work plan, and lack of clarity on the status of agreed restructurings, which allegedly contributed to the "launch of several unauthorized investments and the making of unfulfilled promises to local stakeholders."

Quality of Supervision Rating
Moderately Unsatisfactory

Overall Bank Performance Rating
Moderately Unsatisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

There were several shortcomings with the original Results and M&E Frameworks as designed. Some of the initial outcome indicators proved very difficult to measure while others referred to results of the sector as a whole rather than of project interventions more specifically. Still others, such as the establishment of a "zoning regime" for Lake Volta were not adequately defined. As a consequence, they needed to be replaced at the time of the June 2017 restructuring. However, according to the ICR (para. 74, pg. 34) even the revised Results Framework still contained some inadequacies, such as the use of an output indicator



(new fish health laboratories) to measure a desired project outcome (i.e., increased value and profitability of the fisheries sector) and lack of definition, as in the case of proposed "scoring system" for aquaculture development. Thus, the original M&E design problems were only partly resolved by the restructuring. In a communication to IEG in connection with this review, the ICR team reiterated that "M&E design had shortcomings related to the inclusion of difficult to measure PDO indicators with the insufficiently available sectoral data, including the original PDO indicator 3" (annual net economic benefits from targeted fisheries: motorized marine canoe fisheries; non-motorized marine canoe fisheries; and Lake Volta fisheries (US\$ millions)).

b. M&E Implementation

M&E was implemented by two specialists in the PCU with support from the program's Regional Coordination Unit (RCU). However, as suggested above, M&E implementation was constrained by the issues with the original and revised indicators already mentioned above. In addition, the Bank expressed concerns with the accuracy and quality of some of the data presented by the PCU, with regard to the operation of the Vessel Monitoring System (VMS) for example. On the more positive side, several surveys and impact evaluations were carried out by the M&E specialists, sectoral data were fed into national and regional dashboards, and a GEF International Waters tracking tool was applied.

c. M&E Utilization

The information generated through the M&E activities was used by the PCU for semiannual and annual progress reports with, according to the ICR (para. 76, pg. 34) "varying levels of quality and timeliness," as well as for preparation of midterm and completion reports. This information, together with the findings of Bank supervision missions, were also used to help guide the restructuring in June 2017 and to report on project progress to the WARFP Regional Steering Committee. In addition, a comparison between reported results with project expenses led the Bank project team to request more detailed reviews of the project's fiduciary performance.

M&E Quality Rating

Modest

10. Other Issues

a. Safeguards

The project was classified in Category B and triggered the Environmental Assessment (OP. 4.01), Involuntary Resettlement (OP. 4.12), and Projects on International Waterways (OP. 7.50) safeguards policies. According to the PAD (para. 53, pg. 15), because the project would "support small-scale infrastructure and works to construct integrated fish landing site clusters, with final site identification to be identified during implementation," an Environmental and Social Management Framework (ESMF) was prepared with mitigation measures incorporated in project design. Environmental and Social Impact Assessments (ESIAs) or Environmental and Social Management Plans (ESMPs) were also to be carried out during implementation. OP 7.50 was triggered because Lake Volta was part of the internationally-shared



Volta Basin. However, the PAD observed that all project interventions were downstream of the riparian countries and were not expected to have any negative impacts on them. OP 4.12 was triggered because of possible restriction of access to natural resource use, livelihood impacts, and need for land acquisition, which led the project to prepare a Resettlement Policy Framework (RPF) with site-specific Resettlement Action Plans (RAPs) to be prepared during implementation.

During implementation, however, several "minor" cases of non-compliance were reported by the ICR (para. 78, pg. 35), specifically: (i) the initiation of small rehabilitation works prior to submission of the required safeguard documents for approval and disclosure, although they were allowed to proceed by the Bank on an exceptional basis because of their minimal environmental impact; (ii) failure to properly follow health and safety guidelines in the rehabilitation of an aquaculture demonstration and research center; and (iii) fencing in another pilot aquaculture center began without a plan. In addition, the required grievance redress mechanism (GRM) included in the RPF was only established in 2016 when a social specialist was engaged by the PCU, and 33 complaints were subsequently recorded with regard to compensation delays by relocated traders and implementation delays for the fish smoking ovens and landing facilities. No other environmental or social safeguard issues were reported by the ICR however.

b. Fiduciary Compliance

Procurement. The project was often not in full compliance with the Bank's procurement requirements and, in the words of the ICR (para. 80, pg. 35) "experienced consistent procurement delays and it demonstrated low value for money and weak contract management." There was non-compliance with respect to the unauthorized extension of the first Coordinators contract and, as suggested, in the section on Safeguards above, several civil works were initiated without prior Bank no objection. In addition, a more detailed review in 2018 determined that procurement of several items had occurred without adequate competition, among other issues. These shortcomings were attributed to weak compliance with Bank procedures by the first Project Coordinator and insufficient experience of the project procurement specialists despite training provided by the Bank.

Financial Management. A similar situation characterized project FM because there were several ineligible expenditures. The ICR (para. 81) states, more specifically, that "the accounting system was operated manually, financial records were incomplete and unreliable in part, the petty cash was inadequately managed, and recommendations of external audits were not properly addressed." The PCU was, however, in compliance with two of the project's FM-related legal covenants -- appointment of a project accountant and adoption of a financial manual -- but with delays. Two payments for a total of nearly US\$208,000 were later found to have been made to fraudulent accounts. While annual audits were submitted as required and quarterly interim unaudited reports were presented on time, the latter "were not always signed and dated by responsible officials and lacked supporting documentation" (para 81). Concerning ineligible expenditures, in a communication to IEG, the Bank ICR team updated the situation as follows: "The Bank has requested a refund, which, however, the Government has not paid yet. The Government sent a letter on April 9, 2019 to provide additional evidence of the legitimacy of some of the expenditures, but the Bank's FM specialists concluded that none of the evidence provided within the timeframe and thus the argument was not accepted."



c. Unintended impacts (Positive or Negative)

1. The approval of the National Fisheries Management Plan and project interventions to curb illegal fishing prevented an extension of the "yellow card" warning by the European Union to the Government and closing of EU markets to fish caught in Ghana.
2. The use of brown wrapping paper instead of commonly used cement bag paper is considered likely to have reduced fish contamination.
3. The reduced use of dynamite and DDT (Dichlorodiphenyltrichloroethane) fishing had both positive safety and health impacts.
4. Data generated by the Vessel Monitoring System (VMS) reportedly helped to resolve a boundary dispute between Ghana and Cote D'Ivoire.

d. Other

Compliance with legal covenants. In addition to the delayed compliance with FM-related legal covenants mentioned above, two other such covenants -- registration of all industrial and semi-industrial fishing vessels and closing the registration to new entrants -- were only partially complied with, and two others were not complied with at all, specifically: (i) an effective moratorium on the issuance of new industrial and semi-industrial licenses; and (ii) ensuring that the entire active industrial trawler fleet was in full compliance with the Fisheries Act, health and safety regulations, and all applicable license requirements. According to the ICR (para 82, pg. 36), moreover, one other covenant proved to be irrelevant, namely proper management of the alternative livelihoods program, as this subcomponent was effectively never implemented.

Gender. While most fishing in Ghana is carried out by men, nearly all post-catch fish handling, processing, and trade is undertaken by women. The project sought to strengthen women's participation in the sector by providing them with a national platform (NAFPTA). The ICR (para. 53, pg. 26) estimates that 42,005 women benefitted directly from project-financed investments, corresponding to 14.5 percent of its total direct beneficiaries. While this female participation rate was higher than that anticipated at appraisal (12 percent), it was considerably lower than the regional average (27.3 percent, according to a 2014 study by the UN Food and Agricultural Organization (FAO)). This difference is attributed to the relatively limited scope of the post-harvest interventions financed by the project.

Institutional Development. The project reportedly invested considerably in the Government's ability to implement the Fisheries and Aquaculture Sector Development Plan for 2011-2016, with institutional development activities included in all four of its major components, including development of the 2015-2019 National Fisheries Management Plan, improved vessel registration and monitoring facilities (such as establishment of a MCS agency), creation of fish health and research laboratories, and efforts to strengthen the enabling environment for aquaculture production, as well as through the training of government officials and other staff in all of these areas. However, as the ICR points out (para 54) and reiterated in the section on Risk to Development Outcome above, "the rate at which these instruments will be put in use in the future depends on the Government's commitment to do so, including through allocation of appropriate budgets."



Poverty Reduction and Shared Prosperity. Intended project impacts in this regard were very limited due to the failure to establish the fisheries co-management arrangements and the failure to implement the alternative livelihoods program, as well as the delay in constructing and making operational the fish smoking ovens. However, as observed in the ICR (para 56), "the biggest issue remains the overcapacity of all fishing segments, resulting in a continued decline of fish stocks," which has serious implications with regard to future prospects for income generation and poverty reduction in the sector as well as for the sustainability of project investments.

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Unsatisfactory	Unsatisfactory	
Bank Performance	Moderately Unsatisfactory	Moderately Unsatisfactory	
Quality of M&E	Modest	Modest	
Quality of ICR	---	High	

12. Lessons

The ICR presents several useful lessons, the most important of which are:

1. Study and understand the sector's political economy during project preparation. Failure to adequately understand this resulted in a limited understanding of the risks both to project implementation and to the project's ultimate effectiveness. As the ICR states (para. 91) "a key impediment to the achievement of the project's governance objective was weak political commitment to transition to more sustainable fisheries management, which invariably required a reduction in the fishing effort in both the artisanal and industrial segments." In this regard, the ICR recommends, appropriately, that "projects aiming to affect sectoral reforms where conflicting interests are identified or suspected should thoroughly analyze the sector's political economy to undercover stakeholders' interests and incentives and put in place adequate measures to address these findings." More specifically, this should be a required part of the up-front project social assessment.

2. Where high-level government commitment cannot be secured, place more emphasis on local actions. In this regard, the ICR (para 93) indicates that "if a government does not demonstrate a firm commitment to controlling the industrial segment an alternative approach to improving the health of fisheries and fishing communities' livelihoods could be a focus on providing fishing communities with legal access rights and promoting co-management systems in as many fishing communities as feasible. This approach has proven to be effective in Senegal and Liberia, where fishing communities with legal access rights introduced new harvesting rules, local surveillance, stock enhancement measures, and local site monitoring, resulting in increased catch rates and the reappearance of species. This, however, requires considerable time and support to communities to succeed." Although not mentioned in the ICR, this lesson also testifies to the



advantages of undertaking and Bank support for a regional program such a WARFP as it permits cross-country comparisons, learning, and sharing of experience.

3. An internal discussion is needed on how the World Bank addresses breaches of covenants. As indicated above, several legal covenants were only partly complied with or not at all, but the Bank hesitated to take strong action in response. A more detailed consideration as to why this was the case is justified in order to provide clearer guidance to staff encountering similar situations in the future.

In addition to the above, this review concluded that the project illustrates the following lesson:

4. Greater attention should be given by Bank operational staff to the quality (and realism) of project Results Frameworks and to the implementability of associated M&E arrangements during project preparation and appraisal. In the present case, there were design shortcomings in the original Results Framework that were only partly resolved at the time of restructuring and hindered the eventual full assessment of project outcomes. Greater effort is needed during appraisal and midterm reviews to ensure that original and revised Results and M&E Frameworks are logical and relevant.

13. Assessment Recommended?

Yes

Please Explain

While the ICR is straightforward, comprehensive, and of good quality (see the next section), as this project is part of a multi-phased regional program for West Africa using both IDA and GEF resources, it would be useful to include this largely unsuccessful operation as part of a cluster evaluation of the relevance, effectiveness, and efficiency of this broader initiative at both the individual country and regionwide levels. Among the critical questions that could be further explored in such an evaluation considering the political economy constraints and associated weak government commitment identified by the ICR, is why greater attention was not given to this by the Bank during preparation and appraisal, the extent to which similar problems affected other projects in the regional program, if so, whether they were more successful in addressing them, and, again, if so, through what means and how helpful was the Bank in this regard? Given the continuing pressure on fish stocks in Ghana, the answers to these questions may have important implications for the future sustainability of this declining resource, which may be significant both for maintaining -- if not enhancing -- the livelihoods and incomes of a relevant part of the national population and for food security. And it will also be important for the Bank and other donors as they ponder how best -- and more effectively -- to (or continue to) support Ghana and its neighbors in pursuing more sustainable management of their coastal and inland fisheries and the related environmental challenges. This and other similar projects in Africa have highlighted the importance and difficulties of designing and implementing sustainable fisheries projects.

14. Comments on Quality of ICR



The ICR is of high quality. It is straightforward and assesses the project's design, implementation problems and results (efficacy) in detail and with candor. The high standard of analysis is also evident in the ICR's assessment of the project's performance vis a vis safeguards, procurement, financial management, compliance with legal covenants, gender, institutional development, and poverty reduction. The proposed ratings in the ICR are also well-justified. Finally, it provides useful lessons.

a. Quality of ICR Rating

High