Public Disclosure Authorized

Report Number: ICRR0022214

1. Project Data

Project ID P114236 Country Burkina Faso	BF:Ag	ect Name gricultural Productivity & Foo tice Area(Lead) ulture and Food	d Sec.	
L/C/TF Number(s) IDA-H5210,IDA-H9740,		ng Date (Original) n-2016	Total Pro	oject Cost (USD) 108,204,516.74
Bank Approval Date 10-Dec-2009		ng Date (Actual) v-2019		
	IBRD	/IDA (USD)		Grants (USD)
Original Commitment	40	0,000,000.00		0.00
Revised Commitment	40	40,000,000.00		0.00
Actual	108,237,929.76 0.00			
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2. Project Objectives and Components

a. Objectives

The Project Development Objective (PDO), as stated in the financing agreement for this Agricultural Productivity and Food Security Project (PAPSA), was "to improve the capacity of poor producers to increase food production and to ensure improved availability of food products in rural markets".

For the purpose of assessing the extent to which the PDO was achieved in Section 4, this Review will parse the PDO into two objectives, namely:

Objective 1: Improve the capacity of poor producers to increase food production;

Objective 2: Ensure improved availability of food products in rural markets.

- b. Were the project objectives/key associated outcome targets revised during implementation?
 No
- c. Will a split evaluation be undertaken?
- d. Components

Component 1: Improving food production (Original allocation: US\$26.7 million; Actual: US\$68.7 million). This component aimed at improving food production through two complementary sub-components: 1.1: matching grants; 1.2: community works which supported the adoption of high-performing technology packages for improved productivity by poor households, including support for crop production, animal production and fish farming;

Component 2: Improving the availability of food products (Original allocation: US\$5.4 million; Actual: US\$17.20 million). This component helped to strengthen stakeholders' capacity to manage the variability of food supplies at the local and national level, through four complementary sub-components:

- 2.1: Investment support for improving post-harvest management through 3 types of interventions: (i) disseminating improved technologies to reduce post-harvest losses, including improved grain storage facilities and triple bagging; (ii) supporting multifunctional platforms to facilitate the adoption of food processing equipment; and (iii) reinforcing improved small-scale food processing units managed principally by women's groups in rural areas;
- 2.2: Development of warrantage * mechanism in food surplus areas, which also enabled access to microfinance;

 * Warrantage is an inventory credit system in which microfinance institutions provide credit, using stored grain as collateral, similar to a warehouse receipt system (ICR, footnote 4).
- 2.3: Support to community storage; and
- 2.4: Reinforcing market information systems.

Component 3: Institutional development and capacity building (Original allocation: US\$7.1 million; Actual: US\$25.70 million). This component reinforced the capacities of key institutions directly involved in implementing PAPSA, including: (3.1): building the capacity for extension; (3.2): strengthening agricultural input supply; (3.3): strengthening capacity for producer organizations; (3.4): supporting the monitoring and evaluation (M&E) activities of the Project Implementation Unit (PIU).

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

- (i) Project Costs: The total project cost at approval was US\$ 39.2.0 million (PAD). The actual cost at project closing was US\$111.60 million (ICR, Annex 3, which reflects some small exchange rate differences). The difference was due to an increase in project financing to expand the scope of project activities, involving all 3 components, especially component 1 (to increase food production). Corresponding outcome and output targets were revised upwards and achieved, and were surpassed in some cases.
- (ii) Financing: At approval, the IDA credit was US\$40.0 million. During implementation, there were two project restructurings in the form of two additional financings:(AFs), namely in 2014, a Trust Fund contribution from GAFSP for US\$37.1 million; and in 2018, an additional IDA credit of US\$35.95 million.

<u>Borrower Contribution</u>: At approval, the Borrower counterpart contribution was supposed to have been US\$14.0 million. However, Government counterpart funding became zero (on paper), because the envisioned counterpart expenditures were paid directly by Government, and included: office rent, water and electricity; and salaries of project staff.

- (iii) Dates: The project was approved on December 10, 2009, and became effective July 28, 2010. The original planned closing date was June 30, 2016; the actual closing date was November 29, 2019. A Mid-Term Review (MTR) was carried out in July, 2013.
- (iv) Restructuring: As noted above, the project was restructured in 2014 and in 2018. The first restructuring was in conjunction with Additional Financing (AF) from the Bank's Global Agriculture and Food Security Program (GAFSP) and IDA, which together enabled the scaling up of project activities. The restructuring: revised most targets upwards, reduced the target for grain storage from 25,000 tons to 10,000 tons; updated disbursement profiles to reflect reallocations among the 3 components and disbursement categories; and extended the project closing date from June 30, 2016 to June 30, 2018. A second restructuring in 2018 extended the closing date from June 30, 2018 to November 29, 2019, and revised some end-of-the project targets.

Since the PDO was not changed, and amendments to most PDO indicators raised the level of ambition. The only lowering of ambition was the reduced target for grain storage. Consequently it was not considered necessary to conduct a split rating of outcomes in this review.

3. Relevance of Objectives

Rationale

The project objectives were "to improve the capacity of poor producers to increase food production and to ensure improved availability of food products in rural markets". The project objectives and components demonstrated **high relevance** by: (a) addressing strategic elements of the Government's national and agricultural strategies; and (b) supporting the implementation of the Bank's country strategies. The discussion of the relevance of the project's objectives to Government and Bank strategies that follows is based to a large extent on the evidence in the ICR in paras. 3 - 5, and paras. 25 - 27. The project's objectives remained relevant during the entire implementation period.

Government Development Strategy:

- (a) National Rural Development Strategy (SDR, 2003) highlighted the need to strengthen national_food security. Three of the seven strategic pillars of the SDR prioritized agriculture and food security, namely: (i) increasing, diversifying, and intensifying crop, livestock and forestry and fishery production; (ii) reinforcing links between production and markets (primarily domestic ones); and (iii) increasing and diversifying income sources:
- **(b) National Program for the Rural Sector (PNSR, 2008- 2013)** had the objective to contribute to sustained food and nutrition security, strong economic growth, and poverty reduction, building on the SDR. The PNSR planned to ensure better coverage of food needs and improve nutritional outcomes by promoting agricultural intensification through irrigation, input use, and market linkages for agro-silvo-pastoral production. The PNSR was the framework for operationalizing the National Strategy for Accelerated Growth and Sustainable Development (2011-2015), as well as providing the reference framework for all strategies, policies, and plans related to agriculture, animal resources, water, fisheries and the environment;
- (c) National Strategy for Accelerated Growth and Sustainable Development: 2011-2015 (SCADD). PNSR provided the framework for operationalizing the SCADD, with respect to the agrarian sector, and its key subsectors;
- (d) National Plan for Economic and Social Development (2016-2020) (PNDES): At the time this project (PAPSA) closed, its objectives remained aligned with the Government's PNDES. The second pillar of PNDES, human capital development, prioritizes the development of a productive and resilient agro-silvo-pastoral and fisheries sector that would be more market-oriented and based on core principles of sustainable development. Strategic Objective 3.1 of the PNDES states: "....sustainable development of productive and resilient agro-silvo-pastoral, wildlife, and fish farming sectors, with a greater market orientation." The PNDES strategy prioritizes key elements of the PAPSA, namely: irrigation, access to inputs, equipment and agricultural finance, promoting agricultural and agro-food entrepreneurship, improving resilience of the sector to hazards, strengthening market linkages, and mitigation of and adaptation to environmental impacts; and
- (e) PNSR II: 2016 2020 operationalizes the PNDES throughout the agricultural sector. PAPSA remained aligned with and supported interventions under all six pillars of PNSR II, including: (i) food and nutritional security; (ii) access to markets, to be achieved through competitive agro-silvo-pastoral, fisheries, and wildlife sectors; (iii) environmental governance; (iv) water, sanitation and living environment; (v) land tenure security and strengthening of human capital in the rural sector; and (vi) capacity building and coordination.

World Bank Assistance Strategy:

- (a) The World Bank's Country Assistance Strategy (CAS) of FY10 12 had a strong alignment with the Government's SDR and SCADD (ref. above), emphasizing the role of agriculture as a source of shared growth, increased employment and reduced income risks in rural areas. With the Government carrying out several strategic measures to address the impacts of the food crisis, PAPSA was aligned with the CAS and the Government's strategy by providing relevant support to poor producers to increase their food production and market their produce, and helping to lay the groundwork for stronger national food security systems in the medium to longer term; and
- **(b)** The Bank's Country Partnership Framework (CPF: 2018 2023) had objectives and interventions of PAPSA that remained highly relevant at closing of PAPSA. Those interventions were designed to promote

inclusive growth and shared prosperity throughout the country through three high-priority intervention areas, supported by PAPSA, namely: (i) accelerate sustainable private sector led-growth for job creation; (ii) invest in human capital and social protection systems; (iii) strengthen governance, and (iv) support citizen engagement. Objective 1.1 of the CPF for the first intervention area was to "improve agriculture productivity and agribusiness value chains in targeted areas" (para. 56), which was fully consistent with PAPSA's PDO and activities.

To summarize, the project development objective (PDO) supported achievement of the aspirations of poor farmers to produce food crops more efficiently; and help meet the needs of poor consumers through increased food supplies by improving farmer access to markets throughout the year. Accordingly, the project contributed to securing short and long-term food supply and hence meeting the food demands of poor consumers. This made the PDO highly relevant to the welfare of both food producers and consumers which together would potentially improve national food security.

Rating

High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

Objective 1: To improve the capacity of poor producers to increase food production

Rationale

<u>Theory of Change (ToC)</u>: While the project's design included a Results Framework (RF), the project appraisal_did not develop a theory of change/ToC to explicitly describe the results chain that would show how the project's inputs, outputs, intermediate outcomes and eventually final outcomes would be achieved. Accordingly, a ToC was reconstructed in the Implementation Completion Report/ICR for PAPSA (see ICR, Figure 1, p. 7). Overall, this ToC is sound and consistent with the ICR's analysis. The institutions that facilitated the achievements of outcomes implied in the ToC were the relevant National and Regional Chambers of Agriculture, which played key roles in coordinating the roles of the four participating ministries and their local entities.

Outputs

(a) Irrigation: PAPSA's efforts to expand irrigation, especially to produce horticultural crops, met with limited success. The project provided a total of 825 hectares under irrigation, compared with a project target of 2,000 ha. This shortfall was due to several factors outside the control of the project (e.g. unforeseen price increases for construction materials and technical factors such as soil erosion):

- **(b)** Crop production: The project supported key activities involving the generation and dissemination of improved technologies, and farmer training activities, which enabled PAPSA beneficiaries to increase their crop yields and production levels (ref. outcomes, see below).
- (i) <u>Erosion control.</u> The project supported erosion control activities on 16,341 ha., directly benefiting 27,500 farmers growing key food crops (sorghum, maize, millet, cowpeas, and other crops);
- (ii) <u>Compost pits.</u> The project supported farmers to construct 15,626 compost pits, with the capacity of 3.5 MT per unit to produce high-quality organic fertilizer to restore or improve soil fertility without depending on purchase of chemical fertilizers. The project provided construction equipment and technical support, and farmers provided the labor to develop the units. The impact assessment study cites other studies confirming the role of composting in improving soil health and land productivity. The ICR cites 112,142 farmers (51% women) benefited from the project-supported lowland rehabilitation and erosion control activities:
- (c) Fish Production: The project made good progress in promoting increased fish production and in the development of fish farming services. The project invested in capacity building and input provision (fingerlings and feed) for fish farmers. The project also completed construction of 13 weighing centers and 3 fish input shops to support fish farming in the project area. During the last 2 years the project introduced a matching grant scheme for entrepreneurs to develop fish ponds.
- (d) Warrantage System: PAPSA introduced an innovative warrantage system, with multiple benefits of expanding producers' storage options, availability of food in the markets (although not explicit in the PAD and ICR), and expanded access to finance, mainly to enable expanded food production:
- (i) <u>Training:</u> 1,879 farmers received training on how the warrantage system operates, and 574 warrantage arrangements were supported;
- (ii) <u>Storage:</u> The project built 67 storage facilities for producers to aggregate their harvested produce, and thereby enable these farmers to comply with the warrantage requirements. Producers stored 18,808 MT of their production, surpassing the end-of-project target by 39%;
- (iii) <u>Credit:</u> PAPSA signed an agreement with financing institutions to facilitate producers' participation in the warrantage system/loans; accordingly, producers were able to access FCFA 1.4 billion in credit from microfinance institutions based on farmers' guaranteed grain stocks. The PAPSA impact assessment study also shows that the credit obtained by participating farmers was invested in income-generating activities and also for meeting family key social needs (schooling and health care expenses).
- (iv) <u>Producer prices:</u> The PAPSA Impact Assessment Study (2019) shows that the warrantage supported by PAPSA provided additional income to participating farmers through receiving higher prices for their produce, compared with the prices received by farmers who did not participate in the Project's warrantage system;
- (d) *Innovation Platforms:* The ICR presents evidence that PAPSA supported 5 innovation platforms for key food crops which helped to increase the availability of produce in the markets and improved coordination of the participants in the platform (10,154 farmers, including 51% women). The ICR cites 2 collaboration protocols totalling FCFA 384 million between the project and each of the innovation platform management committees. The funds were used to finance activities in the platform action plans, including production, post-

harvest and processing activities (with farmer contributions of 25% and project matching grants for the other 75%).

- **(e)** Strengthened institutional capacity of public and private service providers to farmers: Regional Agricultural Chambers (RCAs) in the project area received direct support from PAPSA, including training and equipment, which enabled the RCAs to deliver improved extension services to beneficiary farmers. PAPSA trained 9,140 public and private service providers, exceeding the target of 8,500.
- **(f)** *Electronic Voucher Distribution System*: PAPSA successfully piloted the first electronic distribution system for inputs in Burkina Faso, and unveiled the potential of using ICT to promote agricultural development. For the first time, PAPSA used an e-voucher system to distribute seed and fertilizer, reaching 69,095 farmers for the 2019 growing season. This effort involved the partnership of various actors, whereby the e-voucher system was piloted over 2 seasons and covered 6 of 13 regions of the country (for more details, see Figure 2 of the ICR).

Outcomes (information based on the ICR, paras.29-35, and Annex 1).

- (a) *Crop Productivity*: Yields and production of selected food crops in the PAPSA target zones both lowlands and in areas under sustainable land management increased significantly, and can be attributed largely to the PAPSA interventions as explained in the ICR, para. 32: (e.g., crop yield increases for cowpeas (70%), maize (48%) and rice (46%). The project strengthened farmers' capacity and supported technologies that contributed to increased production for selected crops in the target areas. For example, the project impact assessment/PIA report (2019) and project's final report (2020) showed the following (although attribution is not entirely clear):
- (i) <u>Community-based lowland development.</u> PAPSA developed 10,978 ha. of lowlands using a highly intensive community labor approach. The development of lowlands, coupled with the increased use of fertilizer and seed of improved varieties provided by PAPSA, increased yields and production of priority crops (ICR, Figure 2), and also made important contributions toward national production levels (e.g. an increase of 8 10% to national paddy production);
- (ii) Results based on the project M&E data. Due to the project-supported technological packages and capacity strengthening of beneficiary farmers, the ICR stated that they significantly increased their yields and production, which contributed to achieving the national production targets for selected crops. Based on the project's M&E system, it documented large increases in yields in the PAPSA project area for cowpea, maize and rice (71%, 48.5%, 45.6%, respectively), compared with a 20% target yield increase set at appraisal;
- (iii) <u>National statistics.</u> Although the attribution to PAPSA is not clear, the ICR noted that national production of key food crops was 5.85 million MT, whereas the target set by PAPSA was 5.79 MT, an achievement representing an increase of about 1.0%. The ICR Figure 3 shows the average yields in PAPSA-supported areas compares favorably with average yields at the national level.
- **(b) Fish Production.** Fish production was curtailed because the fingerling production center at Bazega <u>was not rehabilitated</u> and construction of a new center at Yakouta was not achieved, due to the country's insecurity context. Nevertheless, increased total fish production attributable to the project at the end of the project was 560 MT, slightly higher than the target of 540 MT.

- (c) Warrantage System. PAPSA introduced an innovative warrantage system, with multiple benefits for food producers and consumers.
- (i) <u>Producer prices.</u> The PAPSA Impact Assessment Study (2019) shows that the warrantage provided additional income to participating farmers through receiving higher prices for their produce, compared with the prices received by farmers who did not participate in the project's warrantage system (ICR, para 36);
- (ii) <u>Benefits for consumers</u>. According to the Bank project team the PAPSA impact assessment study concluded that the warrantage system resulted in an increased storage duration and reduced post-harvest losses up to six months, compared to one month without the project intervention; strengthened the market information system/cereal stock exchange, and cereal commercialization by cooperatives; and improved on food security for beneficiaries compared with non-beneficiaries based on the WFP-FAO Food Consumption Score.
- (d) Innovation Platforms. The project's final report shows the 5 platforms generated revenue of FCFA1.6 billion from agricultural products sold in rural markets (ICR, Table 2).
- (e) Strengthened Institutional Capacity of Public and Private and Service Providers to Farmers. Together with the government extension services, RCAs have been instrumental in delivering trainings to farmers on different technologies, and thereby contribute to increased productivity.
- **(f)** *Electronic Voucher Distribution System*:. The ICR concluded that the e-voucher system piloted under PAPSA resolved several key challenges with the Government's previous input distribution system, especially challenges related to the efficiency of distributing public funds. The e-voucher system also catalyzed the private sector in the fertilizer industry of Burkina Faso (ICR, para. 43). Overall, the enhanced electronic inputs system contributed to increased productivity, as part of objective 1.

Based on the outputs and outcomes achieved, and claimed by the ICR to be largely attributable to the project, this review rates the efficacy of those achievements as **substantial**.

Rating Substantial

OBJECTIVE 2

Objective

Objective 2: "To ensure improved availability of food products in the rural markets"

Rationale

<u>Theory of Change</u>: An explicit theory of change/ToC for achieving this second objective was partially included in the draft ICR, aside from the overall ToC for the Project. The elements of the ToC for this second objective include: (a) an increase in the quantity of incremental production stored through the project-supported warrantage scheme in the project area; (b) increase in milk collected in the milk processing unit (UTL); (c) various key outputs, including: number of warrantages formed; number of farmer trained in post-harvest handling; number of cereal cooperatives strengthened; restructuring of 298 marketing cooperatives; improved

market information system; number of milk collection centers constructed. the relevant processes which would lead to the "improved availability of food products in rural markets; identifying clearly who are supposed to be the key actors in the marketing process, and how they were supposed to function collaboratively (e.g., use of free markets, cooperatives, government regulatory functions, traders, the relevant platforms, and presumably, a combination of these various processes/mechanisms were supported by the project, see ICR, p. 36-40).

Below is a **summary of key evidence** on both outputs and outcomes together based on information provided in the ICR with respect to the progress toward achieving Objective 2 (based on the ICR, paras. 36 - 43; the Impact Evaluation Report, pages: 36-40, 82). Note that the warrantage system, the expanded role of the Regional Agricultural Chambers (RCAs) and the electronic voucher system fit better as activities to help achieve Objective 1. Nevertheless, these interventions also contributed to Objective 2 given the emphasis in the PAD and ICR on the role of these 3 mechanisms to provide farmers with enhanced incentives to produce more food. It is therefore noted below that these mechanisms also contributed to "ensuring availability of food products in rural markets".

Outputs and Outcomes:

- (a) Warrantage System: See the reference to the warrantage system in connection with the achievement of Objective 1, while also recognizing the more direct contribution of the warrantage system to the achievement of Objective 1 compared to Objective 2;
- **(b)** Livestock-based production and incomes: The project activities listed below were financed by the project. They were financed by the project and generated additional income from livestock, through project support for milk collection, animal fattening and poultry production.
- (i) <u>Milk collection centers.</u> The project built 30 centers that collected 7 million liters of milk, well above the project target of 5 million liters, and enabled milk producers to earn an additional income, and also contributed to improved quality of milk available in rural market;
- (ii) <u>Genetic improvement.</u> 3,396 cows were artificially inseminated, which was well below the project target of 9,000 (about 33%), due to the nomadic nature of livestock in the project area;
- (iii) <u>Livestock fattening.</u> A total of 1,704 beneficiary farmers supported by PAPSA initiated livestock fattening businesses, which enabled the additional production of 69,248 head of cattle and sheep in 3 regions;
- (iv) <u>Poultry Vaccinations</u>: PAPSA contributed to a significant increase in vaccinations of poultry against Newcastle disease in project areas, resulting in a large increase in coverage (from 26% in 2014 to 53% in 2018). Accordingly, the project's contribution represents 66% of the total increase at the national level in livestock vaccination coverage.

From the ICR, it is not clear to what the extent increased livestock production (milk and beef) generated by the project contributed to the objective of an "improved availability of food products in the rural markets".

(c) *Innovation Platforms:* Similar to the warrantage system, the innovation platforms contributed more directly to Objective 1, and contributed indirectly to objective 2, through promoting production increases of

food commodities which could contribute to decreased food prices at the retail level and to increased food availability. However, the ICR does not provide clear evidence.

- (d)_*MIS*: With PAPSA support for establishing a market information system (MIS). It was possible to monitor the increase of food availability in rural markets, although, the ICR made no explicit reference to the results of tracking prices for "food products in rural markets". The ICR did, however, make reference to the MIS providing regular market price information (para. 39), but the ICR was not clear on whether the reference was for retail or wholesale prices. The MIS stated there were 67,553 market actors receiving bids on 1.1 million MT of cereals and non-timber forest products, sale offers on 1.1 million MT, and concluded transactions on 0.477 million MT of cereals and forest products. The project MIS was restructured in 2019 to become more digital and include more commodities in the marketplace platform.
- (e) *Increased Incomes and Enhanced Resource Management:* The ICR presents evidence that PAPSA contributed to more sustainable sources of income and wildlife resource management for people living near protected areas (ICR, para. 40). The project supported development of non-timber forest products and implemented sustainable development plans for wildlife protected areas, generating FCFA 504 million for these local populations, which exceeds slightly the target of FCFA 500 million. Also, the project introduced the use of civil drones to monitor wildlife in protected forests to help safeguard income from tourism, and thereby, at least indirectly, contribute to access to food by enabling beneficiaries increased incomes from tourism.
- (f) **Support to Regional Agricultural Chambers** (RCAs), which included a countrywide network, enabled their members to collect information on weekly food prices (wholesale and retail prices), and to support the MIS with respect to the achievement of Objective 2.
- (g) **Electronic Voucher Distribution System:** As stated above, this component/activity is more directly linked to objective 1, while also, providing an indirect contribution to the achievement of Objective 2.

Rating Substantial

OVERALL EFFICACY

Rationale

The ICR presents evidence (ICR, Table 1) that the core 5 targets for the PDO indicators were achieved, and in some instances, significantly surpassed them by PAPSA's closing date, notwithstanding the shortcomings/delays in infrastructure development, especially involving irrigation. In summary, the project made overall good progress with respect to key targets for Objective 1, including: (a) increased crop yields and production of key food crops; (b) expanded fish production; (c) enabled additional income generation for livestock producers; (d) expanded the capacity/affordability of consumers to access food; (e) developed a warrantage system which expanded producers' storage options and access to finance; (f) expanded role of cereal marketing cooperatives; (g) established an MIS that became a useful tool to track and promote improved food product availability in rural markets. While the ICR provided some evidence toward

meeting the second objective of ensuring improved availability of food products in rural markets, the project impact study (2019) and the Bank project team provided additional information and documents to help support a conclusion of good progress towards achieving Objective 2. In addition, there are 3 key aspects which the project contributed toward Objective 2, including: the project's direct support to strengthening marketing cooperatives, including the restructuring of 298 marketing cooperatives; establishment of a market information platform; and linkages with the state-owned agency managing food security stocks.

It is noted that the project experienced shortcomings in meeting key targets for irrigation and horticultural commodities, which_also were linked to the second objective, through reduction of some food availability in local markets, due to various reasons cited in the ICR.

There is an important aspect of the project design affecting the efficacy and sustainability of the project objectives. Other country experience highlights the importance of including several key elements in an integrated manner: strengthening the agricultural research system and prioritized agenda; improving systems for generation and dissemination, including adequate funding and strong linkages between agricultural research and extension systems. Some of these key elements were supported directly by PAPSA, coupled with an on-going parallel Bank-supported project (e.g., West Africa Agricultural Productivity Program/WAAPP) as part of helping to lay the project's envisioned "foundations for increased food supply and its availability", thereby contributing to the efficacy of the design with respect to meeting the project objectives in a sustainable manner.

Later during implementation, the project used the innovation platforms to expand the dissemination of improved technologies (ICR, para. 38), and also the PIU signed several MOUs with the National Agricultural and Environmental Research Institute (INERA). Also, the separate and parallel regional WAAP was addressing more explicitly the agricultural research agenda in Burkina Faso.

In summary, and also elaborated by the Bank's Project team, and the project's impact evaluation study (2019), the project was implemented in a broader context, with the support of other relevant Bank-financed projects and programs in Burkina Faso and the Region, which were contributing to increased agricultural productivity and increased food supplies in local markets (PAPSA, AF, PAD, paras. 14,51, 72 and Annex 1), Accordingly, the overall efficacy rating is "substantial".

Overall Efficacy Rating

Substantial

5. Efficiency

Overall, the project demonstrated substantial efficiency, based on a sound methodology which applies several evidenced-based tools, as presented in the PAD (paras. 55-61, and Annex 9), and in the ICR (paras. 45-49, and Annex 4).

The findings of the ex-post EFA presented in the ICR followed two complementary approaches: an economic and financial analysis of the project, and an analysis of project disbursements and expenditures. The analysis of the project's efficiency in the ICR is complemented by a comprehensive Project Impact Evaluation Study/IES

carried out for PAPSA (IES, November, 2019). Below is a summary of the main results of the analysis of this project's efficiency.

Economic and Financial Analysis/EFA:

The ICR states that two EFAs (at appraisal and AF stages) conducted during the life of the project, together with the EFA at the ICR stage, concluded that PAPSA was economically and financially viable. Below is a summary of these results (with further details presented in the ICR (paras. 45 - 49, and Annex 4).

- (a) <u>EFA in PAD:</u> the efficiency analyses focused on the financial analysis of representative farm models, and economic analyses, to generate returns on "without" and "with" project scenarios, including: returns on family labor; returns on producers' investment; gross profits; internal financial rates of return, using financial and economic prices, and sensitivity analysis on various key parameters. The EFA for the design/approval phase (2009) focused on the financial analysis of investment models supporting agriculture (cereals and cowpeas) and livestock (poultry and milk production), under Component 1 (increased food production). No specific models were defined for activities under component 2; instead their benefits were included in the analysis of component 1 activities by estimating reductions in post-harvest losses and increased prices at the producer level (based on "best guess", rather than using a model). **The economic internal rate of return (EIRR)**, estimated at appraisal, considering only component 1 costs and incremental benefits, was estimated at 46.6%, and a net present value (NPV) of US\$111 million The sensitivity analysis highlighted the importance of crop yields (e.g., reduction in crop yields of 20% would lower the EIRR from 46.6% for Objective 1 to only 9%).
- (b) <u>EFA at the additional financing stage</u> (AF, 2014): It analyzed 13 investments, including irrigation, the addition of the initial phase interventions to develop lowlands and restore degraded land through erosion control, livestock interventions, honey production and processing, and storage of cereal crops. The benefits of the AF were estimated using data on the achievements of the project to date (2014). The resulting NPV was \$44.1 million and an EIRR of 16.8%.
- (c) <u>EFA at ICR</u>: The ICR followed a methodology similar to that used in the PAD, with various adjustments to reflect actual conditions and updated assumptions. It did not include an assessment of component 3, and also included and excluded an assessment of the environmental benefits (which was not included in the PAD). The ICR included an assessment of the environment benefits and impact as part of the overall economic benefits/EFA, using greenhouse gas (GHG) accounting methods detailed below:
- (i) Ex-ante carbon-balance tool (EX-ACT. This tool, developed by FAO, was used to estimate the economic value of the GHGs mitigated as a result of the PAPSA interventions. Based on the EX-ACT analysis total reductions in carbon emissions and increases in carbon sequestration arising from PAPSA are estimated at 618,614 tons of CO2 equivalent over 25 years, corresponding to 24,745 tons of CO2 equivalent annually (ICR, para. 48).
- (ii) Environmental impact. The project's environmental impact contributed significantly to its economic benefits. The ICR estimated the monetary value of the GHG balance, and added this value to the economic benefits (using WB guidelines for estimating the shadow price of carbon, using a low and high shadow price of carbon). The annual average of the low and high shadow price was used to calculate the project's overall economic benefits. Also, the ex-post/ICR EFA used a 6% discount rate, as suggested by WB guidelines when including environmental benefits; the previous 2 EFAs (see above) excluded environmental benefits, and assumed discount rates of 12% and 10%, respectively).

According to the ICR, when the environmental benefits are taken into account, using the average carbon shadow price, the estimated ex-post EIRR is 26.4%, with a NPV of US\$88.6 million. If these environmental benefits are excluded, the ICR estimated an EIRR of 19.8%, and a NPV of \$69.9 M --- well below the ex-ante EIRR of 46.6%, and closer to the EIRR estimated at the appraisal of the Additional Financing/AF, equaling, 16.8% (para. 49).

Overall, and notwithstanding various assumptions used in the PAD and ICR, the results of the efficiency analysis in the ICR provides assurance that the resources allocated to the PAPSA Project were economically justified. The inclusion of the benefits from the project's environmental interventions also reconfirms their important efficiency benefits.

(2) Implementation Efficiency

- (a) <u>Disbursements.</u> The ICR states that delays in disbursement under PAPSA were "significant" (ICR, para. 47), when considering the original closing date. By the end of 2018, the project planned to reach a disbursement of 100%. However, by the end of 2018, disbursement was only 74%, because some project activities had not been completed -- most notably, irrigation investments. With the extension of the closing date (from June 2018 to November 2019), the project had disbursed 99.6 % of IDA resources and 96.8 % of the GAFSP funds when the project closed
- (b) Expenditures. Although the project reallocated significant shares of resources from Components 1 and 2 to Component 3 at the time of restructuring, mainly to support capacity building for extension and advisory services, the activities for Component 3 was significantly overspent (174%). While it is difficult to assess explicitly the efficiency benefits of component 3, it is likely that component 3 contributed to the overall efficiency and incremental benefits of the project (e.g., via improved extension services and resulting productivity increases, which was documented in the Project's IES, 2019). Activities for "strengthening agricultural input supply delivery systems" had the lowest level of expenditure (12%), compared to the allocated amount.. At completion, expenditures related to "public service delivery" only slightly exceeded the budget allocated at restructuring (105%).

Overall this review assess the efficiency of PAPSA as Substantial

Efficiency Rating

Substantial

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	✓	27.40	0 □ Not Applicable

ICR Estimate	✓	26.50	0 □ Not Applicable	
* Refers to percent of total project cost for which ERR/FRR was calculated.				

6. Outcome

Based on the ratings of the project's relevance (High), efficacy (Substantial), and efficiency (Substantial) the overall outcome for PAPSA is rated "Satisfactory".

In summary the rationales for the ratings of the 3 core elements mentioned above were as follows:

- (i) Relevance of Objectives: A "high" rating reflects the project's sound design and alignment with the Government's national and sectoral development strategies and with the Bank's country assistance strategy/country partner frameworks (ref. Section 3.0 in this review, aimed at contributing to: increased food productivity and production levels; improved availability of food products and food security.
- (ii) Efficacy: A "substantial" rating reflects: this review's assessment of the project's solid achievement of Objectives 1 and 2, as evidenced in the ICR. The project was supported by several other regional programs and operations (e.g., WAAPP) to consolidate and strengthen the sustainability of this project's achievements.
- (iii) Efficiency: A "substantial" rating is justified, based on the available evidence on the rate of return of a number of activities in the project presented in the ICR, as well as efficient implementation, despite disbursement delays, and several other shortcomings beyond the control of the project, most notably with respect to the irrigation sub-component.
- a. Outcome Rating Satisfactory

7. Risk to Development Outcome

There is **modest risk** to sustaining the expected and realized outcomes of the Project as outlined above.

While the ICR identified key challenges to ensure the achievement and sustainability of the project's benefits, the ICR did not prepare an explicit sustainability action plan which could serve as a useful instrument for the Bank's agricultural team in Burkina Faso, also, in the context of a relatively large agricultural sector portfolio. Further discussion with the Bank's project team revealed that the Bank has provided, and continues to provide, strategic financial and technical support to consolidating and sustaining the project's objectives, including a subsequent (from 2017 onwards) Bank-supported Development Policy Operation/DPO and an Agriculture Resilience and Competitiveness Project (PReCA) also provided support to further consolidating and scaling-up the e-voucher system, warrantage schemes, access to microfinance, as part of providing increased support to expanding the role of the private sector to sustain these initiatives.

The ICR (para 79) noted some of the main project outcomes which need close monitoring and possible follow-up support by the Bank's agricultural team in Burkina Faso, building on the on-going support provided

by PReCA, include: (a) strengthening the newly established water user associations and irrigation committees for the irrigation schemes, when completed; (b) sustaining agricultural research and extension; and (c) continued role of the private sector to sustain the mechanisms introduced by the project for promoting improved marketing efficiency by the project.

8. Assessment of Bank Performance

a. Quality-at-Entry

The quality at entry for this project is rated **Moderately Satisfactory** by this review, for the following main reasons:

- (a) The project's design was relevant to addressing key contemporary challenges facing the agricultural sector, especially the low agricultural productivity. The design was strongly aligned with Government and Bank national and sectoral strategies (ICR, para 76). The project activities were aimed to address short-term food needs arising in 2008, in the context of a pattern of chronic stagnating productivity and rapid population growth, while also contributing to developing more sustainable food security systems over the longer term;
- (b) However, according to this review, the project's design missed an opportunity to strengthen the agricultural research system to generate a sustainable flow of appropriate agricultural technologies suitable for smallholders, coupled with stronger linkages with the agricultural extension system, notwithstanding that the project did provide limited support to strengthening the extension system, including the role of the innovation platforms.
- (c) The project design embedded the project in the existing government implementing institutions, which helped to secure ownership and contribute to strengthened systems and implementation capacities, while also establishing a PIU which would help streamline and enhance vital interagency coordination;
- (d) While the M&E design was generally sound, it did not foresee the complexity of the necessary M&E system and the capacity requirements needed to make it work from the outset. Accordingly, the generation of data and functioning of the system were delayed because of the extent of recruitment and training needed in the national PIU and the implementing agencies to ensure a functional and effective M&E system;
- (e) the pre-selection of WFP as a service provider for the inputs voucher scheme did not materialize due to the failed procurement arrangement by the technical operator company, which resulted in delayed implementation (ICR, para 76).

Quality-at-Entry Rating Moderately Satisfactory

b. Quality of supervision

The quality of supervision is rated **satisfactory** by this review for the following reasons:

- (a) The World Bank team, including an active role of the Bank's country office staff, carried out regular implementation support missions, at least twice per year (and for a total of 18 missions over 9 years). The Bank supervision missions mobilized relevant expertise required to support implementation of PAPSA, across all 3 components, as well as compliance with safeguards (ICR, para. 76);
- (b) The mid-term review in 2013 generated valuable assessment information to help guide the restructuring carried out in 2014 (although it did not involve a major restructuring);
- (c) Each implementation support mission generated a constructive Aide Memoire and corresponding Implementation Support Reports/ISRs, which provided accurate and candid assessments of progress and identified key issues that required priority attention, and which were used to monitor agreed follow-up actions:
- (d) The multiple implementation ministries/agencies (4 line ministries, the National Chamber of Agriculture/NCA and Regional Chambers of Agriculture/RCA in 13 regions) designated permanent focal points/persons for the project, who facilitated and tracked the implementation of its activities, and reported on/validated the results achieved, on behalf of their respective institutions. This arrangement also enabled the project to promote greater integration and sustainability of project activities within each Ministry/agency (although the extent of progress on integration and sustainability is not clear from the ICR);
- (e) Given the importance of the M&E system, and the initial delays, the Bank's PAPSA's team was active and successful in supporting and holding Government accountable to address the challenges and operationalize a functional and usable M&E system;
- (f) The Bank team supported the achievement of a functional and adequate financial management (FM) system throughout implementation;
- (g) The Bank team worked closely with the relevant Government officers to untangle procurement issues which delayed some contracts and project implementation, and which were resolved, thereby enabling better implementation;
- (h) Supervision missions established a good quality operational dialogue and working relationship with Government (at various levels), which also was instrumental in enabling the mobilization of additional funds from IDA and GAFSP (which almost doubled the initial financing):
- (i) Based on guidance from WB experts, the Bank's and Government's project teams were able to take appropriate steps to cope with growing political insecurity in Burkina Faso by geo-referencing sites, using civil drones and training staff to use Geo-enabling initiative for Monitoring and Supervision/GEMS.

Quality of Supervision RatingSatisfactory

Overall Bank Performance Rating Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

Overall the M&E design was sound for the following reasons:

- (a) during appraisal, the PAPSA team developed a results framework/RF, albeit without being underpinned by a theory of change, implementation arrangements and roles, which together provided the basis for designing a functional M&E system and arrangements;
- (b) The Bank and Government teams also prepared a Project Implementation Manual, which clarified the roles and responsibilities of the participating technical institutions and the M&E arrangements;
- (c) These tools also were used to develop annual work plans and budgets, with corresponding and supporting M&E system, involving the various agencies/entities at national and local levels. The National and Regional Chambers of Agriculture were responsible for collecting M&E information, and providing it to the PIU for compilation (ICR, para. 64);
- (d) However, at the design and appraisal stages the Bank teams did not adequately assess the limited capacities within the relevant agencies responsible for implementing M&E to identify relevant capacity building needs, and most importantly, to devise and support appropriate capacity building actions.

b. M&E Implementation

- (a) Due to the M&E design challenges outlined above involving weak institutional capacities and experience, PAPSA encountered difficulties in implementing the designed M&E framework/system immediately following project effectiveness. The ICR states that throughout the first four years of project implementation, the participating institutions, especially at the local level, faced problems in compiling essential information and reporting on project achievements: "the main issues were insufficient capacity to collect and report project data and inadequate monitoring of investments in the field by the deconcentrated technical services" (ICR, para. 65);
- (b) These M&E challenges led the Bank to intensify its focus on M&E, and to provide additional implementation support, eventually enabling the project to improve and move ahead with a more functional M&E system. These improvements, with Bank support, included: improved yield estimates; two intermediate results studies (2010-14 and 2015-16); acquisition of software for M&E (DELTA) and data analysis and processing with improved programs (SPHINX iQ2 (from 2017); training of the M&E team in the use of software and methods for project impact evaluation; contracting out and completing a project impact evaluation study (2019);

c. M&E Utilization

The ICR reports that throughout implementation, but especially in the last two years, PAPSA routinely generated and used information from the Project's M&E system to help guide operational decisions. For example:

- (a) the GIS localization of project investments made it possible to monitor more closely progress in implementation;
- (b) the General Directorate of Sectoral Studies and Statistics/DGESS at each Ministry involved in implementation periodically conducted field visits to project activity sites and provided technical advice for improving project M&E activities. The ICR also reports (ICR, para. 67) that the participating ministries used the Project's M&E information to inform their decisions;
- (c) the Bank's PAPSA Project team used the findings of the M&E system as inputs for two subsequent Bank operations (DPO and PReCA, as cited above), which also provided avenues for the Bank to promote sustainability of various strategic interventions (especially involving expanded role of the private sector and a strengthened extension system).

M&E Quality Rating Substantial

10. Other Issues

a. Safeguards

PAPSA was rated as a Category B project due to the scale of potential environmental impacts, and triggered the Bank's Operational Policy (OP/BP 4.01) on Environmental Assessment, Involuntary Resettlement (OP/BP 4.12), and Pest Management (OP 4.09). The ICR concluded that the execution and compliance of environmental safeguards under PAPSA were satisfactory. All other project safeguards instruments were also prepared in full compliance with WB and national safeguard policies, based on extensive consultations. The Project supported the implementation of three sound safeguard measures (see ICR, para. 69), implemented compensatory measures and conducted environmental monitoring of activities in the field. Nevertheless, a key safeguard management shortcoming was the absence of an environmental safeguard specialist within the PIU at the beginning of implementation of the project, which delayed the nationally coordinated implementation of safeguard measures.

PAPSA's implementation complied with the requirements for social protection, including the formulation, approval and public release of a Resettlement Policy Framework (for the initial project phase, and updated in 2014 for the AF). Prior to the AF, the Bank conducted a social audit in 2014, and confirmed the project's compliance with all the Bank's safeguard policies to that point. During implementation of PAPSA, more than 300 simplified environmental and social safeguard studies were conducted, reflecting the project's achievements and priority given to complying with the safeguard requirements (ICR, para. 70).

b. Fiduciary Compliance

Financial Management:

During preparation, the financial management (FM) risk was rated moderate. Accordingly, the project developed and implemented a FM action plan to ensure the PIU would have the capacity and systems for sound FM of the project. During implementation, the overall FM performance of the project was rated moderately satisfactory. The ICR rated the FM risk to be Substantial. The main FM constraint encountered during implementation was the resignation of the Project Financial Management Specialist during the last year of implementation. Rather than recruiting a replacement, the Project Manager opted to engage the consultant services of a former Project FM specialist. Various FM delays resulted (preparation/submission of unaudited financial reports, regular PIU designated account). With Bank support, the PIU FM work caught up. Financial audit reports were received mostly on time, all without qualifications, and accordingly, no ineligible expenditures were recorded during implementation (ICR, para. 73).

Procurement:

Procurement, as foreseen at appraisal, proved to be a major challenge during implementation, given the project's national coverage, the nature of project investments (especially infrastructure), and the number and fragmentation of implementing agencies mentioned above (four line ministries, National and Regional Chambers of Agriculture). The low capacity of local entrepreneurs and complexity of the national procurement system are recognized constraints affecting all donor-funded projects in Burkina Faso. Accordingly, it was appropriate that the project included in the M&E system an indicator to monitor the management/execution of contracts; in the event the project was able to achieve the target of 80% of contracts which were "successfully managed/executed". This achievement was achieved by the PIU because it was_adequately staffed with a senior procurement specialist throughout implementation. The ICR reports that procurement for PAPSA proceeded in line with WB procedures. Post procurement reviews were conducted on a regular basis, and recommendations were adequately implemented. The ICR concluded that procurement performance for PAPSA was rated as Moderately Satisfactory, due to delays from the lengthy authorization processes within the national system and delays in completing various contracts. There was no mis-procurement recorded in the ICR (para. 75).

c. Unintended impacts (Positive or Negative)

The ICR highlighted 4 other positive impacts arising from the project. It needs to be recognized there are challenges to demonstrate clear attribution to the PAPSA project. The nature of these benefits are highlighted below (with further details presented in the ICR, paras. 52-55, and supported by evidence collected in the Project's Impact Evaluation Report, 2019).

(1) Gender Benefits: The ICR presents evidence which shows that project activities provided direct benefits to large number of women, enabling them to increase their household incomes from agriculture. The project provided benefits to about: 260,000 women, representing about 30% of the estimated direct beneficiaries; 120,000 young people, representing about 14% of the total beneficiaries. The ICR presents the shares of benefits accruing to women, according to project intervention: 52% from developing low land agriculture; 41% from warrantage activities;65% from pig farming; 39% from poultry production; 61% from sheep fattening.

- **(2) Institutional Strengthening:** With the project being implemented by four national ministries and deconcentrated local entities, these arrangements enabled the strengthening of these entities, while also strengthening coordination arrangements for other programs/projects in the agricultural sector. The ICR draws a significant conclusion: "the project has provided a template for empowering government technical services by providing support through a PIU rather than displacing or bypassing government services." (para 82).
- (3) Mobilizing Private Sector Financing: The project mobilized additional financing for the rural sector through several approaches, including: (a) piloting successfully the first electronic distribution system of inputs, through an e-voucher system, which opened opportunities for the infant private sector to play its role in importing and distributing inputs. The digital technology facilitated the participation of private firms and lifted the burden on the government to invest public funds for a private good, and thereby to enable reallocation of funds in the provision of public services, and also for Government to focus on regulatory and quality assurance interventions; (b) successful introduction of the warrantage system, by providing loan guarantees to microfinance institutions based on stored commodities, enabled those institutions to allocate in loans amounting to FCFA 1.4 billion to participating farmers; and (c) the matching grant approach encouraged investments in small and medium enterprises in the project area. Each of these mechanisms offer the potential for being scaled-up, and thereby further expanding the role of the private sector in promoting agricultural development. The recommendation made in the ICR is for the Bank agricultural team in Burkina Faso to follow up more systematically in its operational dialogue with Government, and possible follow up actions.
- **(4) Poverty Reduction and Shared Prosperity:** The project's design and M&E findings, including the Project's Impact Evaluation Study, presented information which concludes that PAPSA made "positive contributions to beneficiary incomes and food security", vis-a-vis the "without PAPSA scenario". The recommendation made in the ICR is for the Bank agricultural team to use its other on-going and proposed projects to build on and scale-up the relevant approaches and interventions which succeeded in PAPSA, with a view to scaling-up and sustaining these incremental income and poverty reduction benefits. This follow up Bank support is observed through two Bank-supported operations, as cited above: the DPO and the on-going PReC Project.
- d. Other

 Not Applicable

11. Ratings			
Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Satisfactory	
Bank Performance	Satisfactory	Moderately Satisfactory	The ICR actually shows a rating of "moderately satisfactory" (ICR, para. 77). This rating is justified given the shortcomings

			identified in the project's design at appraisal.
Quality of M&E	Substantial	Substantial	
Quality of ICR		Substantial	

12. Lessons

The ICR lists six lessons arising from the project (para 80-83), of which this review has chosen 4 as being most useful for similar projects. Based on available information arising from the project's implementation, IEG suggests two additional lessons which were stimulated by this review.

The ICR highlighted in a sound manner 4 strategic lessons, as summarized below.

Lesson 1: Scaling-up a warrantage system can enhance access to finance for smallholders and improve food supplies to rural markets. This project supported warrantage arrangements to stabilize the supply of basic food in local markets while also providing an opportunity for farmers to access microfinance loans, guaranteed by warranted cereal stocks. During project implementation, farmers mobilized loans totalling FCFA1.4 billion, which offered them the means to pay for vital family needs (e.g. children's school fees/expenses) and investments in their agricultural activities/enterprises). Also, in a Sahelian country like Burkina Faso, with only one rainy season, food storage at all levels is an important food security tool for managing climate shocks and building community resilience against climate change. The lesson from this project is that scaling-up this initiative requires explicit and appropriate policies and regulations to govern the warrantage or warehouse receipt system, to ensure quality infrastructure to minimize postharvest losses, as well as capacity building among farmers in post-harvest storage strategy and among warehouse managers to ensure regular food supplies in rural markets at competitive prices while also covering storage costs.

Lesson 2: An E-Voucher System can encourage the private sector to expand its participation in input distribution in the agricultural sector. The introduction of an E-Voucher System in this project (the first in Burkina Faso) contributed to a strong foundation for the growth of the fertilizer and seeds industries, driven by a more competitive private sector. The lessons arising from this experience include the need to: (a) establish timely advance planning of the e-voucher operation; (b) compile a reliable and complete potential beneficiary database; (c) strengthen or change distributors for better control of the platform; (d) strengthen awareness campaigns for producers on the various aspects of the operation; and (e) communication to farmers on eligibility criteria for participation in the input voucher system (especially seed and fertilizer) in conjunction with a warrantage system.

Lesson 3: Strengthening Government's collaborative_capacity can provide improved delivery of support services to farmers: The project provided a sound template for empowering government technical services to provide support services through a PIU. The ICR identifies key elements which PAPSA promoted to achieve this approach namely: (a) adherence to performance-based management for the participating government institutions; (b) strengthening the staff capacity of implementers (using project funds); and (c) motivating and incentivizing them to meet project

targets in service delivery. The lesson is that these elements were successful in this project and could be successfully applied other similar projects;

Lesson 4: Multi-stakeholder innovation platforms, driven by private sector actors can lead to improved value chains. The project supported innovation platforms as a means to: (a) expand the role of private sector actors in value chain development; (b) ensure compliance with regulations to ensure farmers deliver products which comply to a standard that the private sector can process and sell on domestic and international markets; and (c) improve agricultural processing and enhance coordination of value chain actors. The lesson is that farmers and processors need to produce products which meet the standards established in national and international markets;

There one additional lessons arising from this ICR review, as follows:

Lesson 5: Importance of Financing the Strengthening Agricultural Research System and Research-Extension Linkages: An assumption of the project, as implied in the PAD (and the ToC in the ICR) is that there will be a national agricultural research system with the required capacities and effectiveness to generate and sustain appropriate technologies on an on-going basis, especially suited for smallholder needs, coupled with strong and explicit research-extension linkages, to ensure high levels of farmer adoption. Experiences from other countries which aim to promote expanded, competitive and sustainable food production and market supplies highlight the importance of including explicit support for these 2 key elements, which were not included in the PAPSA design, although recognizing that there was a parallel project providing support to the agricultural research system in Burkina Faso (WAAPP). Therefore, there may have been a "missed opportunity", by relying entirely on the WAAPP, which also was trying to cover other countries, while also some aspects of the research system were addressed to some extent during implementation. The lesson is that Bank teams can use the results from past and on-going agricultural research and extension projects in a country (as relevant) and include research and extension modules new projects to continue to strengthen and scale up agricultural technological advances in contemporary operations.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

Overall, the ICR is well written, analytical, including a very thorough EFA analysis, candid, results-focused, and most sections were supported by relevant evidence (aside from the evidence regarding achievement of objective 2), including inputs from a comprehensive Project Impact Evaluation Study (2019) which provided timely inputs and evidence-based information for the ICR. Finally, the ICR derived sound lessons from the project..

In the ICR's Theory of Change for PAPSA there were two key elements which were addressed only partially, in terms of their contribution to a comprehensive explanation of the generation of the expected project outcomes. They were:

- (a) Agricultural Research and Extension: The ICR was not clear on the extent to which there was other non-Bank support (especially via the PReCA Project, and through the WAAPP) that strengthened agricultural research and extension which were implicitly assumed in the design of the reconstructed Theory of Change for PAPSA; and
- (b) <u>Marketing</u>: There was no evidence of marketing arrangements/mechanisms (such as cooperatives or marketing associations) to facilitate the increased and sustained flow of food to the rural markets. Clarifications and evidence regarding enhanced marketing arrangements were, however, provided in a separate communication to IEG from the Bank project team.
 - a. Quality of ICR Rating Substantial