Report No: ICR00332

IMPLEMENTATION COMPLETION AND RESULTS REPORT

(IDA-56050, IDA-D7220, TF-A4876, TF-A7195, and TF-B5971)

ON A CREDIT
IN THE AMOUNT OF SDR248 MILLION
(US$350 MILLION EQUIVALENT)

AND

A MULTI-DONOR TRUST FUND GRANT
IN THE AMOUNT OF US$73.6 MILLION

A GLOBAL AGRICULTURE AND FOOD SECURITY PROGRAM (GAFSP) GRANT
IN THE AMOUNT OF US$27 MILLION

AN IDA GRANT
IN THE AMOUNT OF SDR56.7 MILLION
(US$80 MILLION EQUIVALENT)

A GAFSP GRANT
IN THE AMOUNT OF US$5 MILLION

TO THE

FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

FOR THE

SECOND AGRICULTURAL GROWTH PROJECT
January 10, 2025

This ICR replaces the version published in Board Operations System on January 7, 2025. The text has been updated in Paragraph 36 page 12 and Paragraph 34 (Annex 5) on page 44

Global Department for Agriculture and Food
Eastern and Southern Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective December 24, 2024)

Currency Unit =	Ethiopian Birr (ETB)
ETB 127.32 =	US$1
US$1.30 =	SDR 1

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Victoria Kwakwa
Country Director:	Maryam Salim
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ABBREVIATIONS AND ACRONYMS

AECID	Spanish Agency for International Development Cooperation
AF	Additional Financing
AGOA	African Growth and Opportunity Act
AGP	Agricultural Growth Project
AI	Artificial Insemination
CDSF	Capacity Development Support Facility
CIG	Common Interest Group
COVID-19	Coronavirus Disease
DP	Development Partner
EHS	Environment, Health, and Safety
EIAR	Ethiopian Institute of Agricultural Research
EIER	Endline Impact Evaluation Report
EIRR	Economic Rate of Return
ENPV	Expected Net Present Value
EOP	End of Project
ESMP	Environmental and Social Management Plan
FHH	Female-Headed Household
FM	Financial Management
FPCU	Federal Project Coordination Unit
FREG	Farmer Research and Extension Group
FTC	Farm Training Center
GAFSP	Global Agriculture and Food Security Program
GEMS	Geo-Enabling Initiative for Monitoring and Supervision
GoE	Government of Ethiopia
GRM	Grievance Redress Mechanism
GTP	Growth and Transformation Plan
HHI	Household Irrigation
I&D	Irrigation and Drainage
ICR	Implementation Completion and Results Report
IA	Implementing Agency
ISR	Implementation Status and Results Report
M&E	Monitoring and Evaluation
MDTF	Multi-Donor Trust Fund
MHH	Male-Headed Household
MTR	Midterm Review
NNP	National Nutrition Program
PAP	Project-Affected Person
PDO	Project Development Objective
PO	Producer Organization
PPE	Personal Protective Equipment
SD	Standard Deviation
SHF	Smallholder Farmer
SSI	Small-Scale Irrigation
STEP	Systematic Tracking of Exchanges in Procurement

TA	Technical Assistance
THH	Total Households
ToC	Theory of Change
TTL	Task Team Leader
USAID	United States Agency for International Development
WUA	Water User Association

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DATA SHEET

BASIC DATA

Product Information

Operation ID P148591	Operation Name Second Agricultural Growth Project
Product Investment Project Financing (IPF)	Operation Short Name Second Agricultural Growth Project
Operation Status Closed	Approval Fiscal Year 2015
Original EA Category Partial Assessment (B) (Approval package - 31 Mar 2015)	Current EA Category Partial Assessment (B) (Restructuring Data Sheet - 15 Jun 2023)

CLIENTS

Borrower/Recipient Federal Democratic Republic of Ethiopia	Implementing Agency Ministry of Agriculture

DEVELOPMENT OBJECTIVE

Original Development Objective (Approved as part of Approval Package on 31-Mar-2015)

The Project Development Objective is to increase agricultural productivity and commercialization of small holder farmers targeted by the project.

Current Development Objective (Approved as part of Additional Financing Package Seq No 1 on 15-Sep-2020)

The Project Development Objective is to increase agricultural productivity and commercialization of small holder farmers targeted by the project.

FINANCING

Financing Source	Original Amount (US$)	Revised Amount (US$)	Actual Disbursed (US$)
World Bank Financing	430,000,000.00	430,000,000.00	413,759,983.66
IDA-56050	350,000,000.00	350,000,000.00	339,565,013.34
IDA-D7220	80,000,000.00	80,000,000.00	74,194,970.32
World Bank Administered Financing	105,597,006.68	105,597,006.68	105,597,006.68
TF-B5971	5,000,000.00	5,000,000.00	5,000,000.00
TF-A7195	27,000,000.00	27,000,000.00	27,000,000.00
TF-A4876	73,597,006.68	73,597,006.68	73,597,006.68
Non-World Bank Financing	15,500,000.00	0.00	0.00
Borrower/Recipient	15,500,000.00	0.00	0.00
Total	**551,097,006.68**	**535,597,006.68**	**519,356,990.34**

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Type	Amount Disbursed (US$M)	Key Revisions
21-Apr-2017	Portal	67.20	
22-Mar-2018	Portal	132.09	
17-Jun-2020	Portal	398.92	• Loan Closing Date Extension
15-Jun-2023	Portal	481.31	• Loan Closing Date Extension

KEY DATES

Key Events	Planned Date	Actual Date
Concept Review	01-May-2014	01-May-2014
Decision Review	22-Jan-2015	22-Jan-2015
Authorize Negotiations	18-Feb-2015	18-Feb-2015
Approval	26-Mar-2015	31-Mar-2015
Signing		07-May-2015
Effectiveness		31-Aug-2015
ICR/NCO	06-Jan-2025	--

Restructuring Sequence.01	Not Applicable	21-Apr-2017
Restructuring Sequence.02	Not Applicable	22-Mar-2018
Restructuring Sequence.03	Not Applicable	17-Jun-2020
Additional Financing Sequence.01	Not Applicable	15-Sep-2020
Restructuring Sequence.04	Not Applicable	15-Jun-2023
Mid-Term Review No. 01	12-Sep-2018	29-Oct-2018
Operation Closing/Cancellation	07-Jul-2024	07-Jul-2024

RATINGS SUMMARY

Outcome	Bank Performance	M&E Quality
Moderately Satisfactory	Satisfactory	Substantial

ISR RATINGS

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US$M)
01	30-Jun-2015	Satisfactory	Satisfactory	0.00
02	21-Feb-2016	Satisfactory	Satisfactory	13.09
03	22-Aug-2016	Satisfactory	Satisfactory	16.79
04	10-Mar-2017	Satisfactory	Satisfactory	67.20
05	08-Nov-2017	Satisfactory	Moderately Satisfactory	111.62
06	21-May-2018	Satisfactory	Moderately Satisfactory	148.82
07	19-Dec-2018	Satisfactory	Moderately Satisfactory	241.10
08	29-Oct-2019	Satisfactory	Moderately Satisfactory	353.11
09	01-May-2020	Satisfactory	Moderately Satisfactory	398.92
10	06-Nov-2020	Satisfactory	Moderately Satisfactory	395.56
11	17-May-2021	Satisfactory	Moderately Satisfactory	395.56
12	17-Nov-2021	Satisfactory	Moderately Satisfactory	397.74
13	07-Mar-2022	Satisfactory	Moderately Satisfactory	419.47

14	23-Oct-2022	Satisfactory	Moderately Satisfactory	464.14
15	06-Jul-2023	Satisfactory	Moderately Satisfactory	481.31
16	08-Feb-2024	Satisfactory	Moderately Satisfactory	502.60

SECTORS AND THEMES

Sectors

Major Sector	Sector	%	Adaptation Co-benefits (%)	Mitigation Co-benefits (%)
FY17 - Agriculture, Fishing and Forestry	FY17 - Agricultural Extension, Research, and Other Support Activities	25	0	0
	FY17 - Crops	11	0	0
	FY17 - Fisheries	6	0	0
	FY17 - Irrigation and Drainage	44	0	0
	FY17 - Livestock	6	0	0
	FY17 - Public Administration - Agriculture, Fishing & Forestry	8	0	0

Themes

Major Theme	Theme (Level 2)	Theme (Level 3)	%
FY17 - Finance	FY17 - Finance for Development	FY17 - Agriculture Finance	7
FY17 - Human Development and Gender	FY17 - Gender		11
	FY17 - Nutrition and Food Security	FY17 - Food Security	5
		FY17 - Nutrition	5
FY17 - Private Sector Development	FY17 - Jobs		100
FY17 - Urban and Rural Development	FY17 - Rural Development	FY17 - Rural Infrastructure and service delivery	63
		FY17 - Rural Markets	11

ADM STAFF

Role	At Approval	At ICR
Practice Manager	Tijan M. Sallah	Frauke Jungbluth
Regional Director		Iain G. Shuker
Global Director	Juergen Voegele	Shobha Shetty
Practice Group Vice President	Laura Tuck	Juergen Voegele
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Regional Vice President	Makhtar Diop	Victoria Kwakwa
ADM Responsible Team Leader	Andrew Goodland	Karishma Wasti
Co-Team Leader(s)		Elliot Wamboka Mghenyi, Hayalsew Yilma
ICR Main Contributor	Jeren Kabayeva	

B. STAFF TIME & COST

Stage of Project Cycle	Staff Time & Cost	
	No. of Staff Weeks	US$ (including travel and consultant costs)
Preparation		
FY14	9.700	105,707.16
FY15	25.725	298,780.46
FY16	6.349	11,590.62
FY17	1.000	1,420.40
FY18	0.000	89,925.00

FY19	0.000	323,944.91
FY20	0.000	323,720.00
Total	42.77	1,155,088.55
Supervision/ICR		
FY16	13.425	86,672.59
FY17	87.710	418,521.01
FY18	138.436	867,384.30
FY19	120.418	1,093,327.43
FY20	128.959	1,297,779.73
FY21	112.271	1,334,082.48
FY22	76.583	439,265.29
FY23	74.565	509,106.68
FY24	65.997	496,653.02
FY25	9.600	68,623.24
Total	827.96	6,611,415.77

I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

Context

1. At appraisal in 2013–2014, Ethiopia had experienced strong economic growth over the past decade. Economic growth averaged 10.7 percent per year from 2003/04 to 2011/12, compared to the regional average of 5.0 percent. The growth reflected a mix of factors, including agricultural modernization, the development of new export sectors, strong global commodity demand, and government-led development investments. Private consumption and public investment drove demand-side growth, with the latter playing an increasingly important role. On the supply side, growth was driven by the expansion of the services and agricultural sectors, while the role of the industrial sector was relatively modest. At the same time, growth in the export of goods had moderated, and a decline was observed in 2012/13 for the first time since 2008/09.

2. Although Ethiopia was one of the world's poorest countries, it had made substantial progress in social and human development over the past decade before appraisal. The country's per capita income of US$570 was substantially lower than the regional average of US$1,257 and among the 10 lowest worldwide. Ethiopia ranked 173 out of 187 countries in the Human Development Index of the United Nations Development Programme. High economic growth, however, had helped reduce poverty in both urban and rural areas. Since 2005, 2.5 million people had been lifted out of poverty, and the share of the population below the poverty line fell from 38.7 percent in 2004/05 to 29.6 percent in 2010/11 (using a poverty line of close to US$1.25 per day). However, because of high population growth, the absolute number of poor (about 25 million) had remained unchanged over the preceding 15 years. The Government of Ethiopia (GoE) was in the process of implementing its ambitious Growth and Transformation Plan (GTP; 2010/11–2014/15), which set a long-term goal of becoming a middle-income country by 2025, with growth rates of at least 11.2 percent per year during the plan's period. It particularly prioritized key sectors such as industry and agriculture as drivers of sustained economic growth and job creation.

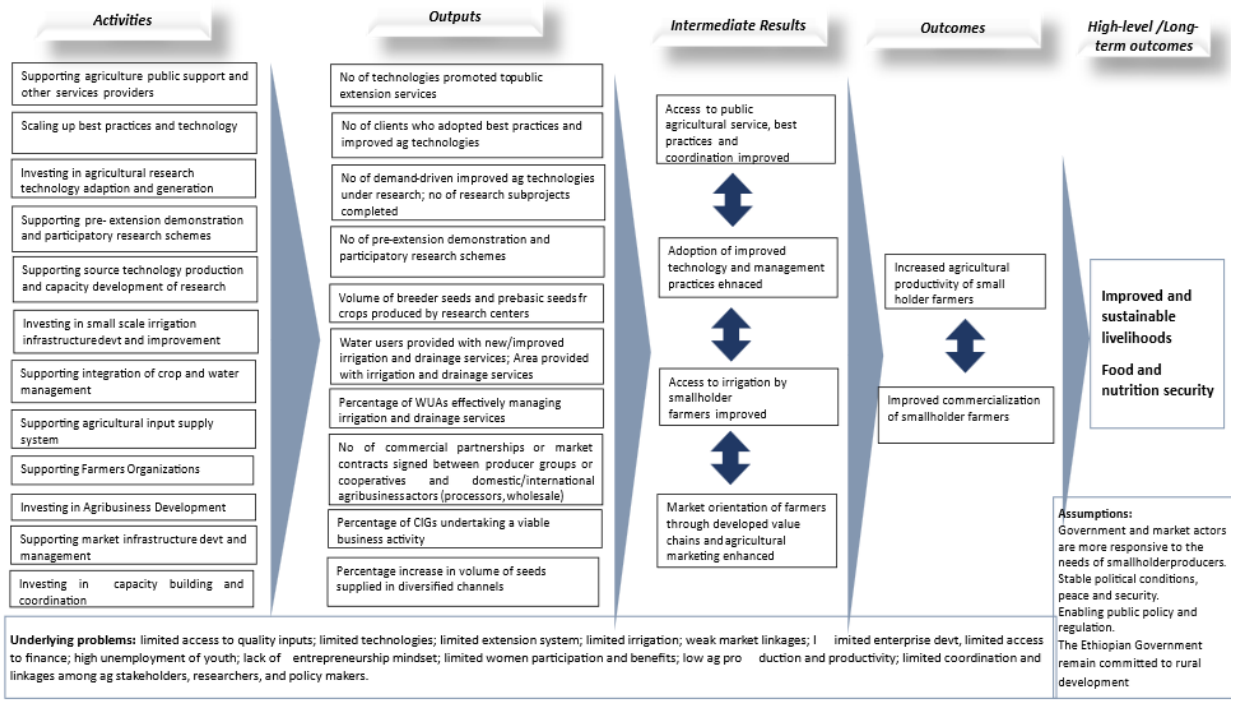
3. The agricultural sector was a dominant force in the country's economy, contributing 45 percent of total output and employing 78 percent of the workforce. It was also a major contributor to export earnings, accounting for over 80 percent of goods exports. Despite its declining share in the economy, agriculture grew rapidly, with an average growth rate of 7 percent per year over the 15 years before project appraisal, driven by increased cultivation areas and productivity improvements due to significant public investments in agricultural extension, rural roads, and land tenure security. This growth was linked to poverty reduction for smallholder farmers and positive impacts on non-farm rural economies. However, despite substantial investments in public agricultural services, particularly extension services, capacity weaknesses persisted, hindering the identification and dissemination of productivity-enhancing technologies. Strengthening research and extension links, expanding extension services, and improving farmer access to inputs were necessary to support these investments. Additionally, animal health and production services faced capacity limitations and low outreach, resulting in low productivity and quality across various animal products. Agricultural water development was crucial for improving smallholders' livelihoods by enabling crop diversity and multiple cropping seasons. With only 16 percent of cultivated land irrigated, the GoE aimed to reach over 5 million ha. As uncultivated land limits were met, conserving resources and reducing degradation became urgent due to climatic variability and intensive practices. Agricultural growth needed to be gender sensitive, as female farm managers produced 23 percent less per ha than males. Aligning agricultural growth with nutritional goals was also critical, as 40 percent of Ethiopian children under five suffered from stunting. The National Nutrition Program (NNP) was revised in 2013 to address these issues, linking agriculture with nutrition.

4. Phase 1 of the Agricultural Growth Project (AGP1) was operational at AGP2's appraisal, covering 96 woredas across four regions: Amhara; Oromia; Southern Nations, Nationalities, and Peoples' Region; and Tigray. AGP1 effectively supported improved public agricultural services, technology transfer, market access and marketing, infrastructure development (including irrigation, feeder roads, and market centers), and capacity building. Building on AGP1's success, AGP2 aimed to expand geographical coverage, consolidate investments, and address emerging sector challenges. Additionally, AGP2 explicitly prioritized enhancing the participation of women and youth in the agricultural sector.

Theory of Change (Results Chain)

5. Since a Theory of Change (ToC) was not required at appraisal, it has been reconstructed (figure 1) for this review based on the project description in the Project Appraisal Document to illustrate the causal relationships within the project. Its long-term strategy aimed to contribute to improved and sustainable livelihoods as well as enhanced food and nutrition security in Ethiopia. The four key project impact pathways were designed to achieve these objectives and strategy: (a) improving access to public agricultural services by strengthening institutional capacity and building relevant skills and knowledge among key stakeholders; (b) enhancing the supply of demand-driven and improved agricultural technologies, focusing on crop, livestock, natural resource management technologies, agricultural mechanization, and other innovations; (c) improving access to and efficient utilization of irrigation water for smallholder farmers through the development of new small-scale irrigation (SSI) infrastructure and the improvement of existing systems as well as supporting water user associations (WUAs) and farmer organizations for irrigation development; and (d) promoting commercialization of smallholder farmers by improving access to input and output markets, supporting agricultural input supply systems, strengthening farmer organizations and common interest groups (CIGs), promoting agribusiness development, and advancing market infrastructure development and management.

Figure 1. Theory of Change



Project Development Objectives (PDOs)

6. The PDO is to increase agricultural productivity and commercialization of smallholder farmers targeted by the project.

Key Expected Outcomes and Outcome Indicators

7. The following PDO-level indicators aimed to capture the fundamental goals reflected in the PDO:

Table 1. Key Expected Outcome Indicators as Planned during Appraisal (2015)

	PDO Indicator	Baseline	End Targets
1	Percentage increase in yield for selected crops in targeted households (percentage) disaggregated by total households (THH) and female-headed Households (FHH)	Cereal/pulses (quintals per ha): THH: 15.3 FHH: 13.7 Vegetables/fruits THH: 67.42 FHH: 55.79	 THH: 21.8 FHH: 22.9 THH: 28.6 FHH: 30.6
2	Percentage increase in yield for selecting animal products in targeted households (percentage, liters day/cow), disaggregated by THH and FHH	THH: 0.70 FHH: 0.71	THH: 21.8 FHH: 22.9
3	Proportion of production sold by targeted households for selected crops (percentage) disaggregated by THH and FHH	Cereal/pulses THH: 17.08 FHH: 15.29 Vegetables/fruits THH: 37.19 FHH: 30.77	 THH: 26.59 FHH: 25.49 THH: 44.49 FHH: 39.97
4	Proportion of animal production sold by targeted beneficiaries for selected products (percentage) disaggregated by THH and female (FHH and married females)	THH: 26.97 Female: 27.36	34.67 35.30
5	Number of direct beneficiaries Female beneficiaries (percentage)	0 0	1,590,730 40

Components

8. The project comprised the following five components.

Component 1: Agricultural Public Support Services (US$129 million, of which US$98.26 million IDA)

9. The component aimed to increase access to public agricultural services for smallholder farmers through the following three activities:

(a) Identification of local priorities for public services through the establishment, operation, and strengthening of Agriculture Development Partners Linkage Advisory Councils and links to other planning mechanisms including community consultation and local strategic planning.

(b) Strengthening of public services delivery, including for agricultural extension; livestock production and animal health; crop production and plant health; natural resource management; soil fertility management; and agricultural mechanization.

(c) Support for the scale-up of 'best practices' of agricultural technologies and management practices in agricultural production and post-harvest activities.

Component 2: Agricultural Research (US$51.4 million, of which US$49.92 million IDA)

10. This component aimed to increase the supply of demand-driven agricultural technologies through the following four activities:

(a) Identification of prioritized technologies and the release of technologies to the agricultural extension system.

(b) Support for the adaptation and generation of proven agricultural technologies through pre-extension demonstration, participatory research programs, and establishing and strengthening of farmer research and extension groups (FREGs), with a total of 700 FREGs to be supported.
(c) Support for the production of source technologies, including the production of breeder and pre-basic seeds for major crop varieties, multiplication of disease and insect-free tissue culture, production of source livestock and forage technologies, and multiplication of land and water resources technologies.

Component 3: Small-Scale Irrigation (US$218.6 million, of which US$158.36 million IDA)

11. This component aimed to increase access to and efficient utilization of irrigation water by smallholder farmers through the following two activities:

(a) Increased availability of irrigated water by (i) rehabilitation, upgrading, and/or improvement of existing SSI schemes; (ii) establishment of new SSI systems integrated with access roads where necessary; and (iii) household irrigation (HHI) systems.
(b) Improved water management services by establishing and/or strengthening irrigation WUAs and introducing improved irrigated agricultural management.

Component 4: Agriculture Marketing and Value Chains (US$120 million, of which US$15.46 million IDA)

12. The component aimed at commercializing smallholder farmers through increased access to input and output markets through the following five activities:

(a) Promotion and distribution of agricultural inputs, specifically seed, by supporting community-based seeds and forage production groups, scaling up direct seed marketing, and strengthening the input tracking system.
(b) Strengthening of the input and output marketing regulation and certification.
(c) Support to farmer organizations, including formal farmer organizations (unions, primary cooperatives) and informal, commercially oriented farmer groups focused on women and youth. The project support was to include (i) business plan preparation and implementation, (ii) capacity support to service providers, and (iii) improved access to credit (both rural savings and credit cooperatives).
(d) Strengthening of selected livestock and crop value chains to be identified through a market analysis process, including a range of activities such as technical assistance (TA) to cooperatives and market buyers, links between value chain participants, including from importing markets (such as participation in trade shows), competitive matching grants, and innovation grants. This subcomponent was to be financed through a parallel financing mechanism funded by the US Agency for International Development (USAID).
(e) Market infrastructure development and management, including (i) construction and modernized management of 131 public market centers at the woreda level; (ii) where a clear rationale and exit strategy for public sector investment is demonstrated, to support the construction of 135 warehouses, storage and grading facilities; and (iii) 61-foot bridges which address critical market access bottlenecks for communities.

Component 5: Project Management, Capacity Building and Monitoring and Evaluation (US$62.8 million, of which US$28 million IDA)

13. The component aimed to ensure project implementation, effective monitoring and evaluation (M&E) of results, and a consistent and effective approach to capacity development through the following three activities:

(a) Project management and coordination, including (i) financing the staffing of federal, regional, and woreda coordination units and Steering Committees; (ii) procurement, financial management (FM), safeguards functions, and communication; (iii) capacity development for core functions and cross-cutting issues; and (iv) goods and equipment to support project management and implementation.

(b) M&E and learning, including (i) evaluation of outcomes and impact; (ii) gender impact evaluation; (iii) regular monitoring of project inputs, outputs, selected outcomes, and processes; (iv) safeguards monitoring; (v) internal learning and participatory M&E; and (vi) capacity building for planning and M&E.

(c) Capacity Development Support Facility (CDSF), which was to provide technical support to all human capacity development throughout the project to (i) improve the quality of capacity development interventions and (ii) strengthen the institutional capacity of implementing agencies (IAs).[1]

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION

Revised PDOs and Outcome Targets

14. Following the Additional Financing 1 (AF1) of US$80 million on August 19, 2020, and subsequent restructuring, the PDO indicators were revised as follows:

(a) **Commercialization.** The indicator "Proportion production sold by targeted beneficiaries for selected Crops and livestock products - Cereals/Pulses, Vegetables/Fruits, Milk, Honey, Eggs" was changed to "Percentage increase in real revenue from selected crops and livestock products - Cereals/Pulses, Vegetables/Fruits, Milk, Honey, Eggs," as the proportion sold did not properly capture the project's achievements related to commercialization since farmers' engagement in commercialization was not simply a matter of increasing the proportion of production sold on the market. It also involved value addition and shifting production to higher-value products in response to market signals, which might mean that less was sold on the market though at better value. Also, with rapid increases in production (as has been the case with AGP2 beneficiaries), the share of production sold did not necessarily increase even though farmers engaged more with markets (and sold more in terms of volume).

(b) **Livestock productivity and commercialization.** The livestock index (combining milk, honey, and eggs) was found to be difficult to measure and interpret and was replaced with separate indicators for the different products (milk, honey, and eggs) to measure livestock productivity and commercialization.

(c) The baseline value of all the percentage indicators in the Results Framework was changed to zero at the time of the AF to ensure unit consistency and the target included for newly added indicators on real revenue.

(d) In the intermediate results, to enhance safeguard performance, three new indicators were added: (i) percentage of GRM[2] addressed from the total claims received; (ii) percentage of project-affected persons (PAPs) whose land has been affected by AGP2 and received compensation (in kind or in cash); and (iii) percentage of subprojects for which environmental and social mitigation measures were implemented.

Table 2. Changes in PDO Indicators (2020)

		Baseline		Target Outcomes	
	PDO Indicator	**Original**	**Revised**	**Original**	**Revised**
1	Percentage increase in yield for selected crops in targeted households (percentage) disaggregated by total households (THH) and female-headed households (FHH)	Cereal/pulses (quintals/ ha): THH: 15.3 FHH: 13.7 Vegetables/fruits THH: 67.42 FHH: 55.79	 *0.00* *0.00* *0.00* *0.00*	 THH: 21.8 FHH: 22.9 THH: 28.6 FHH: 30.6	 THH: 21.8 FHH: 22.9 *THH: 48.6* *FHH: 55.0*

[1] This subcomponent was financed through a parallel financing provided by the Department of Foreign Affairs, Trade and Development of Canada.

[2] GRM = Grievance redress mechanism.

		Baseline		Target Outcomes	
	PDO Indicator	**Original**	**Revised**	**Original**	**Revised**
2	Percentage increase in yield for selected animal products in targeted households (percentage, liters day/cow), disaggregated by THH and FHH	THH: 0.70 FHH: 0.71		THH: 21.8 FHH: 22.9	*Deleted*
New	*Percentage increase in yield for selected animal products in targeted households*		*0.00* *0.00*		*THH: 41.24* *FHH:10.52*
New	*Percentage increase in yield for selected animal products in targeted households - Eggs*		*0.00* *0.00*		*THH: 45.50* *FHH: 85.25*
New	*Percentage increase in yield for selected animal products in targeted households – Honey*		*0.00* *0.00*		*THH: 85.75* *FHH: 285.81*
3	Proportion of production sold by targeted households for selected crops (percentage) disaggregated by THH and FHH	Cereal/pulses THH: 17.08 FHH: 15.29 Vegetables/fruits THH: 37.19 FHH: 30.77		THH: 26.55 FHH: 25.49 THH: 44.49 FHH: 39.97	*Deleted*
New	*Percentage increase in real revenue from selected crops in targeted households - Cereals/Pulses*		*0.00* *0.00*		*THH: 128.00* *FHH: 54.00*
New	*Percentage increase in real revenue from selected crops in targeted households - Vegetables/Fruits, percentage*		*0.00* *0.00*		*THH: 90.00* *FHH: 29.00*
4	Proportion of animal production sold by targeted beneficiaries for selected products (percentage) disaggregated by THH and female (FHH and married females)	THH: 26.97 Female: 27.36		34.67 35.30	*Deleted*
New	*Percentage increase in real revenue from livestock products in targeted households - Milk*		*0.00* *0.00*		*THH: 214* *FHH: 348*
New	*Percentage increase in real revenue from livestock products in targeted households - Honey*		*0.00* *0.00*		*THH: 54* *FHH: 35*
New	*Percentage increase in real revenue from livestock products in targeted households - Eggs*		*0.00* *0.00*		*THH: 44* *FHH: 49.2*

Revised Components

15. No changes.

Other Changes

16. AGP2 underwent six Level II restructurings for (a) inclusion of the Agricultural Transformation Agency and the Ministry of Livestock and Fisheries as IAs (on April 17, 2017); (b) inclusion of the AGP2 Multi-Donor Trust Fund (MDTF) as a source of financing (on March 22, 2018); (c) extension of the project closing date by 15 months from October 10, 2020, to January 10, 2022, to ensure completion of the remaining project infrastructure investments (ongoing small-scale schemes, market centers, and warehouses) due to overrun of project resources and to provide TA to explore mechanisms for financial sustainability of SSI (on June 17, 2020); (d) inclusion of US$80 million (AF1), a closing date extension of the parent project from January 10, 2022, to June 15, 2023, and changes to the Results Framework to more accurately capture the accomplishments of the project and ensure that issues such as GRMs or environmental and social issues are documented (see paragraph 14) (on August 19, 2020); (e) inclusion of US$5 million (AF2) from the Global Agriculture and Food Security Program (GAFSP) to respond to the coronavirus disease (COVID-19) impact on poor, vulnerable smallholders (on June 25, 2021); and (f) extension of the project closing date from June 15, 2023, to July 7, 2024, resulting in a cumulative extension of 44 months from the original closing date of October 10, 2020, to allow for full implementation of infrastructure investments (on June 15, 2023).

Rationale for Changes and Their Implication on the Original Theory of Change

17. These changes did not affect the ToC. AF1 amounting to US$80 million from IDA was to address financing gaps resulting from cost overruns on the project's infrastructure activities (investment in SSI schemes, warehouses, and market centers) arising from enhanced design features and increased unit costs due to double-digit inflation. AF2 in the amount of US$5 million from GAFSP was to support interventions which mainly focused on direct response to the COVID-19 crisis, including support with (a) agricultural inputs and marketing; (b) production and post-harvest management of marketable irrigated crops; and (c) supply of personal protective equipment (PPE) for COVID-19 preventive measures. AF2 also took the opportunity to revise the Results Framework to more accurately capture the accomplishments of the project and ensure that information such as GRM and environmental and social safeguards issues is well documented.

II. OUTCOME

A. RELEVANCE OF PDO

Assessment of Relevance of PDOs and Rating

18. The relevance of the PDO is rated as **High** due to its significant economic impact and alignment with the GoE's growth and transformation agenda. AGP2 aimed to achieve agricultural growth targets crucial for Ethiopia's development and gross domestic product growth as set in the GoE's GTP and subsequent GTP2. Both programs prioritized industry and agriculture as drivers of economic growth and job creation. The project specifically supported GTP2's objectives to enhance domestic engineering and production capacity, improve productivity and competitiveness in agriculture and manufacturing, and advance structural transformation by increasing efficiency and quality in productive sectors. Further, the project was aligned with the NNP, emphasizing the need for nutrition-sensitive agricultural growth and promoting nutrient-rich food diversification, irrigation for horticulture, and nutrition-sensitive technologies. Additionally, AGP2 addressed climate change challenges by integrating climate-smart agriculture in line with Ethiopia's Climate Resilient Green Economy Strategy for carbon-neutral growth.

19. AGP2 was also aligned with the World Bank's Country Partnership Strategy (Report No. 71884-ET) for FY13–16, primarily supporting Pillar 1 by fostering competitiveness and employment in the agricultural sector, as well as addressing gender, nutrition, and climate change issues. Further, the project supported the objective of Pillar 1 of the latest World Bank Country Partnership Framework (Report No. 119576-ET) for FY18–22 (which was extended to FY25) to promote structural and economic transformation through increased productivity, revenue generation, export promotion, import substitution, and employment creation. AGP2 supported the World Bank's goals of ending extreme poverty and increasing shared prosperity, as agricultural growth has been pivotal in reducing poverty in Ethiopia. Ultimately, AGP2 was designed to address the sector challenges identified at appraisal, as described above. Its relevance, however, was tested and proven to be resilient, particularly during turbulent times when the project had to adapt to evolving urgent needs arising from external conflicts, climate disasters, the COVID-19 pandemic, and economic and political instability (details provided in paragraphs 45-46).

B. ACHIEVEMENT OF PDOs (EFFICACY)

Assessment of Achievement of Each Objective/Outcome

20. The project's performance on the achievement of the PDO is rated Substantial. The project substantially achieved its development objectives of (a) increasing agricultural productivity and (b) increasing commercialization of smallholder farmers supported by the project. In some areas, the project exceeded its targets for the abovementioned outcomes. However, there were some notable shortcomings in the achievement of certain livestock product indicators, particularly for eggs and honey. The efficacy was assessed based on the level of achievement of the PDO and intermediate indicators as per the project's Results Framework. The analysis was drawn from the borrower's

Project Completion Report, the borrower's Endline Impact Evaluation Report (EIER), project Aide Memoires, project progress reports, and mission findings of the Implementation Completion and Results Report (ICR) team. The efficacy assessment was also supplemented with relevant data and evidence from the analytical and research papers featuring AGP2. All data sources and references are listed in annex 7.

PDO 1: Increased agricultural productivity

21. Agricultural productivity was defined as yields for selected key crops and animal products. The relevant PDO and intermediate indicators established under the Results Framework were either achieved or overachieved, with the exception of eggs and honey, as summarized in table 3.

Table 3. PDO 1: Increased agricultural productivity among targeted smallholder farmers (in percentage)

	Baseline	Target	Actual	Achievement (%)
PDO Part 1 Indicator				
Increase in yield for selected crops in targeted households (HH) - cereals/pulses (TTH/FHH), (quintals per ha)	0.00 0.00	21.80 22.90	24.53 25.27	113 110
Increase in yield for selected crops in targeted HH - vegetables/fruits (THH/FHH), (quintals per ha)	0.00 0.00	48.60 55.00	45.09 59.04	93 107
Increase in yield for selected livestock products in targeted HH - milk (THH/FHH), (liters day/cow)	0.00 0.00	41.24 10.52	209.80 183.80	509 1,747
Increase in yield for selected livestock products in targeted HH - eggs (THH/FHH), (eggs /week/chicken)	0.00 0.00	45.50 85.25	3.30 −3.40	7 −4
Increase in yield for selected livestock products in targeted HH - honey (THH/FHH), (kg/beehives/year)	0.00 0.00	85.75 285.81	13.84 14.31	16 5

Source: AGP2 EIER (based on survey data collected in March 2017 and May 2024).

22. Based on the findings of the AGP2 EIER (see Table 4.1), the project significantly enhanced agricultural productivity among targeted smallholder farmers in Ethiopia. Aggregate crop yield increased by 29 percent, rising from 16.2 percent at baseline to 20.9 percent at endline. FHHs showed remarkable progress, with a 35.4 percent increase, surpassing the 26.2 percent growth achieved by male-headed households (MHHs). Vegetables and fruits experienced the highest productivity growth at 45.09 percent, compared to cereals and pulses, which grew by 24.53 percent. Crop yield indexes were computed for the aggregated data and the two categories of AGP2 crops, as presented in Table 4.1. These indexes were calculated based on the yields of individual AGP2 crops, weighted by their respective total cultivated areas. While control households (non-AGP2 woredas) also demonstrated positive changes in yield indexes, the growth was notably lower than that of AGP2 beneficiaries, particularly in the fruits and vegetables category, where minimal improvement was observed.

23. It must be clarified that the project assessment lacked a 'genuine' control group. First, two-thirds of the control woredas that participated in AGP1 were used as a control group for AGP2. Second, several AGP2 interventions, such as agricultural extension services, distribution of fertilizer and improved seeds, sustainable land management practices, and activities addressing climate vulnerability and market integration, were also implemented in non-AGP2 woredas by the Government and its development partners (DPs), including the German Agency for International Cooperation, USAID, and Mercy Corps. Additionally, armed conflict and political instability led to internal displacement within both AGP2 and non-AGP2 groups. Finally, since the control households were sampled from woredas adjacent to those served by AGP2, they could easily interact with and benefit from the knowledge and infrastructure ('spillover effect') gained by AGP2 beneficiaries.

24. Overall, the quantitative findings of the EIER provided compelling evidence that AGP2 interventions significantly increased crop productivity. This success was attributed to the project's holistic approach that enhanced public agricultural services by transforming 2,663 farm training centers (FTCs) into hubs for technology adoption and farmer learning. These centers facilitated 373,040 on-farm demonstrations, showcasing innovative technologies in gender-sensitive, nutrition, and climate-smart agriculture. Additionally, 9,791 field days were organized, exposing over 1.28 million farmers to improved farming practices. Irrigation development played a pivotal role, with 4,233 irrigation structures constructed or rehabilitated, benefiting 163,246 households. Strengthened WUAs ensured the efficient management of these systems. Irrigation activities played a critical role in climate adaptation, diversified production, and increased cropping frequency. The project also introduced 671 innovative agricultural technologies, including improved crop varieties and mechanization tools. Fruit and coffee nurseries produced over 2.4 million seedlings annually, benefiting 88,250 smallholder farmers and enhancing crop diversity. Soil and water management initiatives rehabilitated degraded areas, treating 320 ha of gullies and constructing 890 ha of terraces. Enhanced soil testing and mapping capabilities supported the tailored application of fertilizers, improving land productivity. Capacity-building efforts trained over 892,000 farmers and 25,478 extension agents in advanced agricultural practices. The project also adapted and released 54 productivity-enhancing crop technologies, fostering local innovation. Mechanization interventions, including labor-saving tools and post-harvest technologies, further improved efficiency and reduced losses.

25. The project achieved remarkable success in milk production, with yield per cow increasing by over 200 percent for both MHHs and FHHs, as detailed in Table 4.2. This outstanding performance is attributed to AGP2 interventions in the dairy sector, which included improved supply of artificial insemination (AI) services, better access to livestock health centers and services, introduction of improved cow varieties, enhanced training and field demonstrations, and availability of improved feed. Results in table 4.2 show that households in non-AGP2 woredas also registered a higher growth rate in milk productivity and production. This was due to their participation in other similar projects in the area (which AGP2 beneficiaries were not part of), as well as spillover benefits from AGP2 interventions, such as improved roads, market centers, health facilities, and bridges.

26. In contrast to the notable improvements in milk production, the increase in egg production was relatively modest, particularly for FHHs, while honey production remained stagnant with no significant improvement. As shown in Table 4.3 for AGP2 households, weekly egg production per hen increased slightly from 3.08 to 3.19, reflecting a growth rate of 3.3 percent during this period. While MHHs experienced a significant increase in egg production, the increase for FHHs was not statistically significant. The poultry sector's modest performance can be attributed to several factors including limited attention to poultry under AGP2 interventions; conflicts in key egg-producing regions, such as Oromia and Amhara; frequent outbreaks of poultry diseases; poor poultry management practices, including feed, sanitation, and housing; inadequate veterinary services for poultry; and weak supply chains connecting commercial chicken farms with smallholder farmers. Moreover, many egg production initiatives were implemented by CIGs composed of women and youth, which faced significant challenges and were mostly unsuccessful. At the same time, non-AGP2 woredas demonstrated a stronger performance, with weekly egg production per hen increasing by approximately 9 percent between the baseline and endline periods. This growth was driven by participation in parallel programs in addition to benefiting from the spillover effects of AGP2 interventions.

27. Honey productivity (kg/year/beehive) did not statistically significantly increase for either traditional or modern beehives between the baseline (2017) and endline (2024) for both AGP2 and non-AGP2 households (see Table 4.4). Similarly, no productivity increase was observed if differentiated by the gender of household heads over this period. Overall, honey production and productivity did not register significant growth among both AGP2 and non-AGP2 households between the baseline and endline periods. This poor performance in the apiculture subsector can

be attributed to several factors. Conflicts in key honey-producing regions such as Tigray, Amhara, and Oromia significantly disrupted production. Additionally, the EIER qualitative survey data revealed that the use of herbicides and pesticides for crop protection adversely affected bee populations. Limited availability of modern beehives, as noted by key informants, further constrained productivity improvements. Moreover, droughts in northern regions, particularly in Tigray, along with deforestation, pests, and predators, also negatively affected honey production and productivity.

28. Overall, AGP2 interventions played a vital role in increasing milk productivity and overall livestock production among households in AGP2 woredas. These successes were driven by several key initiatives, including the adoption of demonstrated and innovative yield-enhancing livestock technologies such as AI and the provision of improved cow breeds. The project also provided demonstration-based training on livestock production, including the establishment of four Dairy Herd Performance Recording Systems at Training Centers, which delivered critical data on milk production and facilitated the identification of superior breeding animals. Additionally, the expansion of animal health centers, with over 155 clinics and 607 health posts established in intervention areas, significantly improved access to veterinary care. The project further supported livestock health by supplying medical tablets free of charge, contributing to the overall success of dairy sector productivity initiatives.

PDO Part 2: Increased commercialization among targeted smallholder farmers (in percentage)

29. Commercialization was defined in terms of the percentage increase in real revenue from selected crops and livestock products—cereals/pulses, vegetables/fruits, milk, honey, and eggs. The project exceeded its targets for increased real revenue from the sale of cereals and vegetables. However, revenues from honey and egg sales fell short due to lower-than-expected production (as described above). Notably, milk sales were puzzlingly low, despite the highest milk productivity being achieved under the project. Possible reasons for this discrepancy may include increased household consumption, diversion of fresh milk for dairy and baked goods production, and disruptions to milk collection centers due to security issues. Additionally, the revenue targets set during the midterm review (MTR) stage may have been overly ambitious given the high productivity at the time.

Table 4. PDO Part 2: Increased commercialization among targeted smallholder farmers (in percentage)

	Baseline	Target	Actual	Achievement (%)
PDO Part 2 Indicator				
Increase in real revenue from selected crops in targeted HH - cereals/pulses (THH/FHH), (percentage, ET-Birr)	0.00 0.00	128 54	148 135	116 250
Increase in real revenue from selected crops in targeted HH - vegetables/fruits (THH &FHH), (percentage, ET-Birr)	0.00 0.00	90 29	96 66	107 228
Increase in real revenue from selected livestock products in targeted HH - milk (THH/FHH), (percentage, ET-Birr)	0.00 0.00	214 348	117 82	55 24
Increase in real revenue from selected livestock products in targeted HH - honey (THH/FHH), (percentage, ET-Birr)	0.00 0.00	54 35	40 —[a]	74 —
Increase in real revenue from selected livestock products in targeted HH - eggs (THH/FHH), (percentage, ET-Birr)	0.00 0.00	44.4 49.2	33 11	74 22

Source: AGP2 EIER (based on balanced survey data collected in March 2017 and May 2024).
Note: a. This value was statistically insignificant due to the small sample size resulting from a decline in the number of women honey producers.

30. At the same time, the EIER results (see Table 4.5) showed that average household revenues from the sale of crops, livestock, and livestock products in AGP2 woredas increased significantly, with crop sales alone rising by 86 percent, from ETB 2,617 in 2017 to ETB 4,869 in 2024, and FHH experiencing a 76 percent growth. AGP2 woredas

consistently outperformed non-AGP2 woredas in crop revenue, highlighting the project's success in promoting commercialization through targeted interventions. These included improved market infrastructure (roads, market centers, and storage facilities), strengthening farmer organizations for collective bargaining, agribusiness training, adoption of high-yield crop varieties and efficient irrigation systems, as well as enhancing market integration by linking farmers to input supply systems and agro-processors and improving access to market information. These combined efforts enabled smallholder farmers to transition toward market-oriented production, achieving higher financial returns and enhanced economic resilience.

31. **Going beyond PDO: Additional AGP2 Impact.** Although not part of the PDO, the project had substantial impacts on *nutrition and job creation* (contributing to the GoE's high-level objectives), which is worth highlighting in the efficacy section.

32. **Nutrition.** Based on the findings from the EIER, AGP2 made notable strides in improving nutrition through interventions focused on increasing dietary diversity and food security. The percentage of households classified as having "poor food security" status, based on the Food Consumption Score, decreased by approximately 10 percentage points, from 48.6 percent at baseline to 39 percent at endline. There were also improvements in household dietary diversity, particularly for children aged 6-23 months, with a 3.1 percentage point increase in the number of children consuming more than the minimum number of food groups in AGP2 households. Pregnant women in AGP2 households experienced a statistically significant increase in the consumption of milk and meat, while the dietary diversity of lactating and non-pregnant women also improved, albeit to a lesser degree. Additionally, the project promoted the consumption of nutrient-dense crops and animal products, such as vegetables and eggs, which improved household consumption practices. Despite these successes, challenges such as cultural practices, limited food variety, and external factors like conflicts affected the full realization of the project's nutrition impact.

33. **Unlocking jobs.** With the increasing demand for jobs in the country, a study was conducted to assess AGP2's effectiveness in creating employment opportunities for the rural population. Specifically, the study explored the extent to which AGP2 created more and better jobs that could contribute to rural development, poverty reduction, and inclusive economic growth. The findings showed that AGP2 created nearly a million jobs (approximately 934,394 jobs) during its implementation; of these, about 76 percent were temporary or seasonal. The project generated around 396,000 jobs for women and 505,000 jobs for youth, significantly contributing to rural employment. Agriculture marketing and value chain development (Component 4) accounted for the largest share (57 percent) of all jobs created. Interventions related to SSI accounted for 14 percent of the total jobs created under the project. The construction of SSI schemes, micro-irrigation systems, and the repair of irrigation canals by WUAs were key contributors to job creation under SSI interventions.

Justification of Overall Efficacy Rating

34. Overall efficacy is rated **Substantial**. The project disbursed 99 percent of its resources and completed all its activities. AGP2 facilitated the adoption of improved agricultural technologies, enabling higher yields and production surpluses for market sales. Furthermore, irrigation activities helped farmers diversify cropping patterns, increase cropping frequency, improve climate adaptability, and transition to market-oriented farming, ultimately resulting in higher household incomes. AGP2 significantly boosted commercialization among smallholder farmers through a range of interventions. It developed critical market infrastructure, including roads, animal health and market centers, and storage facilities, to enhance accessibility and reduce transaction costs. The project supported the establishment and strengthening of farmers' organizations and CIGs, fostering collective marketing and better market linkages. Training on agribusiness development and value chain integration equipped farmers with the knowledge to maximize returns

on their produce. By improving access to input and output markets, promoting crop diversification, and fostering a market-oriented mindset, the project drove significant increases in agricultural productivity and revenues from both crop and livestock sales, contributing to the improved livelihoods and resilience of smallholder households.

C. EFFICIENCY

Assessment of Efficiency and Rating

35. The project aimed to enhance the productivity and commercialization of smallholder farmers. The key economic benefits expected from the project included increased agricultural production through the adoption of improved technologies, enhanced efficiency of water use via SSI development, and improved market opportunities for smallholders and Producer Organizations (POs). Additionally, the project aimed to increase cash incomes for participating smallholders, improve household food security and nutrition, reduce transaction costs, enhance value added within targeted value chains, and generate incremental employment opportunities. At the appraisal stage, the project's economic internal rate of return (EIRR) was estimated at 18 percent, with an expected net present value (ENPV) of US$191 million, reflecting high expectations for its economic impact. The analysis was based on anticipated benefits from improved irrigation, adoption of better farm practices, and enhanced market access.

36. At the project's completion, an ex post economic analysis was conducted using actual data on beneficiary outreach, subproject implementation, and expenditures. This analysis revealed an EIRR of 25.8 percent and an ENPV of US$27.1 million. While the ex-post EIRR is substantially higher than the appraisal estimates and proves the economic viability of the project, the lower ENPV at ex post (ICR) analysis than of ex ante (design stage) results can be mainly explained by the delays in implementation and other external economic factors. Between 2016 and 2024, Ethiopia experienced several significant economic shocks, including the Tigray, Amhara, and Oromia conflicts, the COVID-19 pandemic, removal from the African Growth and Opportunity Act (AGOA), and severe climate events. These events collectively led to disruptions in agricultural productivity, increased poverty and food insecurity, high inflation, a devalued currency, significant job losses, especially in industrial sectors, and a substantial debt crisis. The cumulative effect of these shocks slowed economic growth, strained government resources, and necessitated comprehensive recovery efforts. Notably, inflation peaked at 34.2 percent in March 2023, and the Ethiopian birr's value fell drastically, with the official exchange rate at ETB 56 per US$ compared to ETB 110 per US$ on the parallel market by January 2024. For reference, the exchange rate used at the design stage was ETB 20.2 per US$. In the absence of the factors described above, the project could have resulted in higher ENPV due to the overachievement of physical targets. Efficiency is, therefore, rated **Substantial** since the main issues were caused mainly by external economic shocks, which were not under the control of the project. The detailed efficiency analysis is provided in annex 5.

D. JUSTIFICATION OF OVERALL OUTCOME RATING

37. The overall outcome rating is **Moderately Satisfactory**. While the project completed all its activities and substantially achieved its development objectives, some livestock-related PDO targets—both on productivity and revenue from sales—fell short of expectations, as detailed in the Efficacy section. Regarding efficiency, the overall economic performance was lower than anticipated due to external factors beyond the project’s control, as previously discussed, alongside delays in completing infrastructure works. Despite these challenges, the project achieved significant progress in enhancing agricultural productivity and commercialization, demonstrating resilience in the face of unexpected implementation difficulties and external turmoil.

E. OTHER OUTCOMES AND IMPACTS

Gender

38. AGP2 effectively mainstreamed gender sensitivity by tailoring activities to women, achieving commendable progress in agricultural productivity, commercialization, dietary diversity, and gender equality. The project significantly increased women's participation in training programs, with approximately 29 percent of women (out of total 5.8 million trainees) receiving training in crop and livestock production, natural resource management, and irrigation. Notably, 418 gender-sensitive technologies—exceeding the target of 101—were demonstrated, and about 37,790 women out of 188,509 targeted beneficiaries received irrigation services. Efforts to improve women's access to services such as animal health centers, credit and savings institutions, and horticultural nurseries were also successful. Women farmers (570,000 women or 35 percent of total farmers) showed increased adoption of improved seeds, organic fertilizers, and agrochemicals. The establishment and strengthening of women's CIGs empowered participants, with 63 percent of women engaging in viable business activities, generating income, and enhancing their bargaining power. However, the project's EIER highlights remaining challenges to achieving a more equitable and sustainable agricultural sector in Ethiopia. A significant gender gap persists in crop and livestock productivity, with women farmers lagging men in yield and overall output. The project was less effective in promoting mechanization among women, limiting their access to labor-saving technologies. Additionally, disparities in access to public agricultural services, such as fertilizer application and extension services, remain a concern.

Institutional Strengthening

39. AGP2 contributed to the institutional strengthening of project stakeholders and smallholder farmers, particularly in enhancing access to public agricultural services. Key interventions included the establishment and strengthening of laboratories for soil, plant, and animal health, as well as the management of natural resources through local land use planning and community watersheds. The project also focused on scaling up best agricultural practices, emphasizing climate-smart agriculture, nutrition, and gender. FTCs have been strengthened, providing training on new farming methods, improved seed varieties, and fertilizer application. Additionally, support for animal health services has been bolstered through the establishment of animal health centers, clinics, and health posts. In agricultural research, the project has made significant strides in technology adaptation and generation, focusing on crop, livestock, soil, and water management technologies. Pre-extension demonstration and participatory research schemes have been implemented to assess the viability of new technologies. The project also supported the production of breeder and pre-basic seeds, planting materials, and animal breeds, alongside capacity development initiatives to enhance the capabilities of federal and regional research institutions. These efforts have collectively contributed to increased agricultural productivity, commercialization, and dietary diversity.

Mobilizing Private Sector Financing

40. AGP2 demonstrated significant potential for accelerating growth in Ethiopia by better leveraging the private sector. While the project focused on public services and cooperative development, USAID parallel financing supported value chain development of selected agricultural commodities. This ultimately highlighted opportunities for promoting plurality in agricultural systems and leveraging multiple sources (public and private) of financing for development, which aligns with the World Bank's Maximizing Financing for Development approach.

Poverty Reduction and Shared Prosperity

41. AGP2 has made significant improvements in poverty reduction and shared prosperity through its focus on agricultural productivity, income generation, and food security. By boosting crop and livestock productivity, the project has led to higher incomes for participating households, directly contributing to poverty reduction. The emphasis on dietary diversity and improved food security has also reduced vulnerability to food insecurity and malnutrition, which are major contributors to poverty. The project's design, which targets smallholder farmers,

particularly women and youth, has promoted inclusive growth and empowered marginalized groups through training, access to resources, and market opportunities. AGP2's participatory approach, involving communities in planning and implementation, has fostered a sense of ownership and promoted local development, ensuring that benefits are distributed more equitably within communities. The project's efforts to reduce the gender gap in agricultural productivity and income by targeting women farmers with tailor-made interventions were a key aspect of shared prosperity. However, it was difficult to quantify the project's specific contribution to poverty reduction as the project documents did not provide references to direct measures of poverty reduction, such as changes in poverty incidence or headcount. Despite this, the project's focus on agricultural growth, income generation, food security, and inclusive development highlights its potential to have significantly contributed to poverty reduction and shared prosperity in Ethiopia.

Other Unintended Outcomes and Impacts

42. AGP2 has resulted in several unintended outcomes and impacts, both positive and negative. Among the positive outcomes, the project heightened farmers' awareness, increasing demand for farm technologies and reducing pressure on marginal lands through improved productivity. Anecdotal evidence suggests that infrastructure improvements, such as bridges and roads, enhanced access to health services, particularly for pregnant and lactating mothers. The project also fostered a sense of community and teamwork among woreda-level offices, encouraging a multistakeholder approach to sustainable agriculture. Additionally, AGP2 inspired youth to organize and create jobs using local resources while strengthening social cohesion, community engagement, and the empowerment of women and marginalized groups. A particularly remarkable example came from conflict-affected regions, where farmers used knowledge gained from AGP2 to produce biodigesters locally when access to commercial fertilizer was disrupted by conflict. On the negative side, some unintended impacts include the adverse effect of chemical applications aimed at increasing crop productivity on honey production. Furthermore, while the project has built market centers, proper market links were not always created, leading to underperformance in livestock commercialization in some areas. These unintended outcomes highlight the complexity of large-scale agricultural projects and the need for comprehensive planning and monitoring to mitigate negative impacts.

III. KEY FACTORS AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

43. **AGP2 was built on the success of AGP1.** The World Bank, in collaboration with several of Ethiopia's DPs, supported agricultural growth through AGP1 from 2011 to 2017, yielding encouraging results. This initiative fostered collaboration among DPs, consolidating fragmented interventions under a unified framework. An external impact evaluation by the Ethiopian Development Research Institute revealed that AGP1 substantially increased agricultural productivity for its direct beneficiaries, with productivity 50 percent higher than that of non-beneficiary households. Notably, FHHs among the beneficiaries saw even greater success, with yields 60 percent higher than those of non-beneficiary FHHs. The project also had a positive impact on agricultural commercialization, with beneficiary households earning ETB 1,703 (US$61) more in annual revenue compared to nonparticipants. Encouraged by the successful AGP1, the GoE aimed to scale up interventions from 83 woredas in four regions under AGP1 to 167 woredas in AGP2, adding components on agricultural research and extension.

44. **AGP2 had a strong financial boost.** AGP2 received substantial financial support, positioning it as a comprehensive national program with a diverse range of interventions for DPs and donors to contribute. The original financing included an IDA credit of US$350 million, a US$100.6 million grant through the MDTF, a US$27 million grant from the GAFSP, with US$3 million grant allocated to the Food and Agriculture Organization for TA. Additionally, USAID provided US$60 million in parallel financing to support value chain development (Component 4), and Global Affairs

Canada established an US$11.9 million CDSF to enhance the capacity of AGP2 IAs. The Spanish Agency for International Development Cooperation (AECID) contributed a US$6 million grant directly to the GoE for project preparation.

B. KEY FACTORS DURING IMPLEMENTATION

45. **Factors beyond project control.** AGP2 was implemented during an incredibly challenging period marked by external conflicts, natural disasters, the COVID-19 pandemic, and economic and political instability. The violence and security issues, particularly in the Tigray, Oromia, and Amhara regions, led to the destruction of vital project infrastructure such as FTCs, market centers, and irrigation canals, crippling the project's progress. Compounding this, the COVID-19 pandemic, locust infestations, and droughts severely disrupted activities, further delaying implementation and affecting agricultural productivity. Economic (debt crisis and devalued currency) and political turmoil, including internal displacements and regional crises, added to the already overwhelming challenges, making it difficult to carry out the project's objectives and achieve its full potential.

46. **Implementation challenges and canceled SSI subprojects.** The project experienced serious delays in the completion of SSI subprojects, leading to an extension of the project closing date from October 2020 to June 2023. This extension was necessary to cover cost overruns and complete ongoing construction projects. Challenges faced by the project throughout its life included the following: (a) there were weak institutional capacities and competencies across employers, contractors, and consultants; (b) the COVID-19 pandemic exacerbated existing issues, causing workforce disruptions, supply chain problems, and importation difficulties; (c) extreme price escalation, without appropriate contractual mechanisms to adjust for inflation, resulted in financial constraints, budget overruns, compromised quality, contract disputes, and scope reductions; (d) political instability, security concerns, and institutional restructuring further compounded the challenges, fostering investment uncertainty, bureaucratic inefficiencies, security vulnerabilities, contractual uncertainties, project delays, and reputational risks; (e) shortage and unavailability of critical construction materials, such as cement and reinforcement bars, hampered progress, leading to time delays, increased costs, and quality concerns; and (f) the shortage of foreign currency hindered the importation of irrigation equipment. Furthermore, the lack of a dedicated power supply policy for the agriculture sector obstructed the implementation and operationalization of pump-based SSI subprojects. While the project accomplished remarkable feats during the extended implementation period to complete the SSI subprojects, it also canceled 17 subprojects that would have covered 900 ha (out of total 62,228 ha covered by the project) due to the implementation challenges.

IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

A. QUALITY OF MONITORING AND EVALUATION (M&E)

M&E Design

47. The M&E arrangements for AGP2 were well designed to ensure effective project implementation and capacity development across all levels. A multi-tiered approach involved federal, regional, woreda, and kebele levels, with dedicated M&E officers at each level responsible for data collection, analysis, reporting, and TA. The project also included participatory M&E by farmers on a pilot basis and capacity building through training on M&E skills for federal and regional staff, woreda coordinators, and selected farmers. This comprehensive system ensured continuous monitoring, feedback, and capacity development throughout the project's implementation. The M&E system also included the baseline, midline, and endline surveys. The only shortcoming was related to the methodology to measure some of the PDO and intermediate indicators, which was corrected during AF1 processing (see paragraph 14 for details).

M&E Implementation

48. The Federal Project Coordination Unit (FPCU) was responsible for planning, collecting, verifying, and analyzing information, as well as providing periodic progress reports, including quarterly and annual updates, along with the borrower's Implementation Completion Report. The project's M&E activities were guided by a comprehensive plan, supported by regular capacity-building efforts to standardize planning, reporting, and processes across all levels. M&E was further strengthened by using Geo-Enabling Initiative for Monitoring and Supervision (GEMS) tools, such as Kobo Toolbox, Power BI, Google Earth, and Google Studio, focusing particularly on infrastructure works. Due to security concerns in conflict areas and during the COVID-19 pandemic, virtual field visits were conducted via Kobo Toolbox and Google Earth; the World Bank project team shared these insights at the internal Brown Bag Lunches. The project conducted baseline, midterm, and endline surveys, which provided detailed analyses of project progress. Midterm survey findings were used to revise the PDO and intermediate indicators in the Results Framework. The endline survey, conducted post project completion, informed the ICR. The endline survey faced the issue of having a 'genuine' control group, which affected the effective assessment of the project's impact (see paragraph 23). During implementation, the M&E system improved by integrating feedback and learnings, with the project also producing and sharing case studies, success stories, videos, and blogs.

M&E Utilization

49. M&E data were effectively utilized to guide project implementation, management, and decision-making in a timely and appropriate manner. The project leveraged M&E data in several key areas: (a) disbursement and activity performance data were used to identify major bottlenecks, prompting project restructuring and a no-cost extension to ensure key PDO indicators were met; (b) findings from the MTR informed the revision and updating of the Results Framework indicators and targets (with the caveat that some targets were set ambitiously high at that stage); (c) M&E reports shaped the agendas for joint review and support missions, guiding discussions, identifying areas of support, and facilitating key management decisions; (d) data from the Results Framework were essential in preparing Implementation Status and Results Reports (ISRs) and communicating project progress to World Bank management; (e) monitoring of agreed actions supported periodic project reviews and future planning; and (f) the use of GEMS allowed the project to geo-tag infrastructure and provide virtual access to performance data during the COVID-19 pandemic when the task team could not conduct on-site visits.

Justification of Overall Rating of Quality of M&E

50. The quality of M&E is rated **Substantial**. Although there were moderate shortcomings related to the measurement of several PDO and intermediate indicators at the design stage, they were rectified following findings and recommendations of the MTR and its associated survey. The overall M&E system effectively enabled systematic tracking of project progress. The M&E data were used to inform decisions related to project implementation and management; however, two points related to (a) the absence of a 'genuine' control group and (b) the high targets set at the MTR stage may have affected the effectiveness of the endline impact assessment.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

51. **Environmental safeguards performance is rated Moderately Satisfactory.** AGP2 was classified as Environmental Category B, indicating that its environmental risks and social impacts were expected to be minimal, manageable, and mostly reversible. Key policies triggered included (a) Environmental Assessment (OP/BP 4.01), (b) Natural Habitats (OP/BP 4.04), (c) Pest Management (OP/BP 4.09), (d) Physical Cultural Resources (OP/BP 4.11), (e) Safety of Dams (OP/BP 4.37), and (f) Projects on International Waterways (OP/BP 7.50). These policies were triggered due to potential risks associated with biophysical attributes, agrochemical use, chance finds of cultural resources, land acquisition, small dam construction, and water abstraction for irrigation. The project effectively implemented environmental and social management plans (ESMPs), addressing potential environmental risks associated with

activities such as groundwater development, SSI, and construction of feeder roads. Regular monitoring and reporting were conducted to ensure compliance with safeguard policies. This included tracking the implementation of mitigation measures and assessing their effectiveness. Any deviations from the original plans were documented and addressed appropriately. Continuous consultation with affected communities and stakeholders was maintained throughout the project. This ensured that their concerns were addressed, and any issues were promptly managed. Independent evaluations and audits were conducted to verify compliance with environmental safeguards. These evaluations assessed the effectiveness of the ESMPs, the adequacy of mitigation measures, and the overall environmental performance of the project. The project demonstrated commendable environmental risk management performance overall. However, the environment, health, and safety (EHS) risk management practices for the research component did not achieve a satisfactory performance level. Specifically, the EHS risk management practices for project activities implemented by the Ethiopian Institute of Agricultural Research (EIAR)—including EHS screening, preparation of subproject EHS risk management plans such as waste management plans, approval of these plans by the regulatory agency, and the EHS oversight system at EIAR—were not adequately documented and reported.

52. **Social safeguards performance is rated as Satisfactory.** The project triggered several social safeguard policies, including Involuntary Resettlement (OP/BP 4.12) and Indigenous Peoples (OP/BP 4.10). The project effectively implemented security management plans, addressing potential social risks associated with land acquisition and impacts on vulnerable groups. The SMPs included measures for fair compensation, livelihood restoration, and support for affected individuals. Regular monitoring and reporting were conducted to ensure compliance with social safeguard policies. Continuous consultation with affected communities and stakeholders was maintained throughout the project. This ensured that their concerns were addressed, and any issues were promptly managed. The project maintained transparency and communication throughout its implementation. The project ensured that all relevant documents, including the Resettlement Policy Framework and Social Assessment, were disclosed publicly. This transparency helped in maintaining accountability and trust with the affected communities.

53. **Procurement is rated as Moderately Satisfactory.** The project maintained its agreed procurement arrangements and staffing at both federal and regional levels throughout implementation, reflecting commendable effort by the client. The procurement profile showcased a significant reliance on competitive procurement methods, with approximately 70 percent of activities conducted through competitive processes. However, the implementation faced challenges related to security issues and market disruptions, including shortages of key construction inputs like cement and reinforcement bars, as well as price surges. These challenges caused delays, cost overruns, and termination of several contracts, particularly in works such as dam construction. The integrity of procurement processes remained sound, with no major cases of noncompliance, misprocurement, or fraudulent activities reported to the World Bank. However, issues with updating procurement information in the Systematic Tracking of Exchanges in Procurement (STEP) remained a concern. Even after project closure, numerous activities still appear as pending or under process in STEP. The FPCU was urged to coordinate with regional offices to ensure that all procurement information is finalized and uploaded, honoring the client's commitment to complete this task.

54. **FM is rated as Moderately Satisfactory.** The project followed the Government's budget, accounting, computerized accounting, internal control systems, funds transfer, and audit procedures. The Government's accounting policies and procedures were used for the accounting of the project. In addition, the FM manual, which incorporates specific accounting and internal control procedures for the project, was prepared and disseminated to all implementing entities, and the required training was provided for the staff. The Government made efforts to strengthen financial accountability and showed improvements, including the submission of timely and quality interim financial reports and timely and clean audit reports (with some internal control weaknesses that are followed up routinely), and the use of the Peachtree accounting system. The FPCU played a key role in overseeing and coordinating

the project, conducting quarterly evaluations, and organizing annual review meetings. However, gaps remained in follow-up and ownership at the regional level.

C. BANK PERFORMANCE

Quality at Entry

55. The World Bank team made a strong effort to design a project aligned with the Government's goal of transforming the agriculture sector and achieving growth targets through a combination of strengthening public sector capacity, promoting environmentally sustainable and nutrition-sensitive solutions for farmers, and linking them with markets. The design of AGP2 built on the success of AGP1, aiming to scale up support for improved public agricultural services, technology transfer, market access, infrastructure, and capacity building. Despite the strengths of the project's design and implementation plans, some initial shortcomings in the Results Framework (paragraph 14) were resolved during implementation. Additionally, the World Bank successfully leveraged resources for AGP2 from DPs, including USAID, the European Commission, the Netherlands, AECID, the Italian Development Cooperation, and GAFSP.

Quality of Supervision

56. The World Bank team provided close and effective support throughout the project's implementation. Key aspects of the supervision effort included (a) regular supervision missions, with both in-person field visits and virtual oversight during the COVID-19 pandemic; (b) in-country presence, as the Task Team Leaders (TTLs) and most members of the multidisciplinary team were based in Ethiopia, allowing them to offer continuous support to the Ministry of Agriculture and the FPCU; and (c) close collaboration with the Water Global Practice to support the project's irrigation activities. The TTLs' presence in Ethiopia ensured smooth implementation support, especially during the pandemic when international travel was restricted. The World Bank team provided ongoing, effective monitoring and demonstrated flexibility in responding to challenges by restructuring the project, extending the closing date, processing AFs to cover cost overruns for infrastructure activities, and supporting poor vulnerable smallholders during the COVID-19 pandemic.

Justification of Overall Rating of Bank Performance

57. Overall, the World Bank performance is rated **Satisfactory.** The project was highly relevant to the country's needs and fully in line with the World Bank and country policies. It was well prepared (recognizing a few shortcomings in the Results Framework at the design stage) and had a holistic approach for agriculture growth that involved both building capacity of public sectors and farmers. It was professionally and continuously supported during implementation, and corrective measures were taken whenever necessary.

D. RISK TO DEVELOPMENT OUTCOME

58. **Climate change.** The project outcomes face significant climate risks, including rainfall shortages and variability, which constrain crop production by the AGP2 beneficiaries. Droughts, particularly severe in 2020, highlighted the project's vulnerability to these conditions, which are expected to worsen with climate change. Additionally, soil fertility loss from land degradation will threaten the long-term sustainability of project outcomes.

59. **Conflicts and insecurity.** Ongoing conflicts and lack of security in various parts of Ethiopia significantly disrupted the implementation of AGP2 and may affect sustainability of its outcomes in the future. This instability led to the destruction of infrastructure, embezzlement of equipment, and distraction of office utilities, directly affecting the project's ability to reach its intended beneficiaries and achieve its goals.

60. **Sustainability of institutions and infrastructure.** AGP2 laid a strong foundation for sustainable institutional capacity and infrastructure. But key risks such as inadequate maintenance of physical structures due to limited financing and management capacity, high turnover within sector institutions, and challenges in ensuring the continued functionality of CIGs, farmers' groups, and WUAs may affect the sustainability of project benefits. The successor ongoing World Bank Food Systems Resilience Program in Ethiopia (P178566) can help address and mitigate some of these risks and contribute to the sustainability of project investments.

V. LESSONS AND RECOMMENDATIONS

61. **The importance of a holistic approach and participatory implementation.** AGP2's success was largely due to its comprehensive strategy that addressed various aspects of agricultural development, including research, production, marketing, infrastructure, and value chains, while also building links between them that previously did not exist. This integrated approach proved to be more effective than focusing on isolated interventions, ensuring a more sustainable and impactful outcome. AGP2's participatory and demand-driven approach was also crucial for project success. By involving local communities in problem identification, planning, implementation, and monitoring, AGP2 fostered a sense of ownership among the beneficiaries. This inclusive strategy increased the effectiveness of interventions and ensured that the solutions were tailored to the actual needs of the communities. However, while adopting a holistic approach to tackle diverse challenges, it is also essential to maintain focus on emerging issues, such as those observed in the livestock sector, particularly in enhancing productivity and commercialization of eggs and honey.

62. **Project implementation in the emerging conflict and pandemic context.** AGP2 demonstrated valuable adaptability in addressing unexpected challenges arising from conflicts and pandemics. It became the first agricultural sector project to pilot GEMS-supported supervision, enabling effective remote monitoring and supervision when physical field visits were not feasible due to active conflicts in Amhara, Oromia, and Tigray, as well as during the COVID-19 pandemic. Through virtual missions, the project maintained its momentum and continued critical activities, such as updating infrastructure data for already mapped subprojects and completing the mapping of remaining subprojects, ensuring progress despite challenging circumstances.

63. **Continuous and systematic support to the sector.** The project provided a strategic platform for the World Bank to continuously support agriculture in Ethiopia while also assisting, refining, and strengthening the Government's long-term development approach for greater impact. The trio of AGP1, AGP2, and FSRP were strategically designed to complement each other, incorporating lessons learned and ensuring lasting agricultural development in the country. AGP2 remarkably demonstrated resilience during turbulent times, effectively addressing evolving needs and generating positive outcomes for the sector.

ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS FRAMEWORK

PDO Indicators by Outcomes

To increase agriculture productivity and commercialization of small holder farmers targeted								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
Percentage increase in yield for selected crops in targeted households benefiting directly from the project- Cereals/pulses (baseline 15.30 quintals per ha) (Percentage)	0.00	Jan/2015			21.80	Jul/2024	24.49	Jul/2024
Female beneficiaries (baseline 13.70 quintals per ha) (Percentage)	0.00				22.90		25.28	
Percentage increase in yield for selected crops in targeted households benefiting directly from the project- Vegetables/Fruits (baseline 67.42 quintals per ha) (Percentage)	0.00	Jan/2015			48.60	Jul/2024	45.10	Jul/2024
Female beneficiaries (baseline 20.23 quintals per ha) (Percentage)	0.00				55.00		59.04	
Percentage increase in yield for selected livestock products in targeted households benefiting directly from the project - Milk	0.00	Jan/2015			41.24	Jul/2024	208.40	Jul/2024

(Baseline 3.90 liters day/cow) (Percentage) (Percentage)								
Female beneficiaries (Percentage) (Percentage)	0.00				10.52		183.80	
Percentage increase in yield for selected livestock products in targeted households benefiting directly from the project - Eggs (Baseline 4.20 eggs /week/chicken) (Percentage) (Percentage)	0.00	Jan/2015			45.50	Jul/2024	3.30	Jul/2024
Female beneficiaries (Percentage) (Percentage)	0.00				85.25		-3.43	
Percentage increase in yield for selected livestock products in targeted households benefiting directly from the project - Honey (Baseline 6 kg/beehives/year) (Percentage) (Percentage)	0.00	Jan/2015			85.75	Jul/2024	13.84	Jul/2024
Female beneficiaries (Percentage) (Percentage)	0.00				285.81		14.40	
Percentage increase in real revenue from selected crops in targeted household benefiting directly from the project - Cereals/Pulses (Baseline 6279 Birr) (Percentage) (Percentage)	0.00	Jan/2015			128.00	Jul/2024	144	Jul/2024
Female beneficiaries (Percentage) (Percentage)	0.00				54.00		134	
Percentage increase in real revenue from selected crops in targeted household benefiting directly from the project - Vegetables/Fruits (Baseline 8038 Birr) (Percentage) (Percentage)	0.00	Jan/2015			90.00	Jul/2024	85	Jul/2024
Female beneficiaries (Percentage) (Percentage)	0.00				29.00		53	

Percentage increase in real revenue from selected livestock products in targeted household benefiting directly from the project - Milk (Baseline 49 Birr) (Percentage) (Percentage)	0.00	Jan/2015			214.00	Jul/2024	117	Jul/2024
Female beneficiaries (Percentage) (Percentage)	0.00				348.00		82	
Percentage increase in real revenue from selected livestock products in targeted household benefiting directly from the project - Honey (Baseline 112 Birr) (Percentage) (Percentage)	0.00	Jan/2015			54.00	Jul/2024	40	Jul/2024
Female beneficiaries (Percentage) (Percentage)	0.00				35.00		86	
Percentage increase in real revenue from selected livestock products in targeted household benefiting directly from the project - Eggs (Baseline 62 Birr) (Percentage) (Percentage)	0.00	Jan/2015			44.40	Jul/2024	33	Jul/2024
Female beneficiaries (Percentage) (Percentage)	0.00				49.20		11	
Direct project beneficiaries (Number)	0.00	Jan/2015			1,597,730.00	Jul/2024	2,520,672.00	Jul/2024
Female beneficiaries (Percentage)	0.00				40.00		37.00	

Intermediate Indicators by Components

Agricultural Public Support Services								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year

Percentage of farmers using public agricultural services (male farmers) (Percentage)	26.90	Jan/2015			50.56	Jul/2024	83.40	Jul/2024
Percentage of farmers using public agricultural services (female farmers) (Percentage)	20.10				40.56		84.45	
Number of technologies promoted to public extension services (total and disaggregated by gender sensitive, nutrition and climate smart) (Number)	0.00	Jan/2015			280.00	Jul/2024	525.00	Jul/2024
Climate Smart (Number)	0.00				20.00		117.00	
Nutrition (Number)	0.00				80.00		124.00	
Gender sensitive (Number)	0.00				101.00		102.00	
Percentage increase in crop diversity in targeted households benefiting directly from the project (Percentage)	26.50	Jan/2015			39.75	Jul/2024	65.01	Jul/2024
Clients who have adopted an improved agr. technology promoted by the project (Number)	0.00	Jan/2015			1,530,000.00	Jul/2024	1,636,674.00	Jul/2024
Clients who adopted an improved agr. technology promoted by project – female (Number)	0.00	Jan/2015			608,800.00	Jul/2024	578,750.00	Jul/2024
Number of gender sensitive technologies demonstrated in the project area (Number)	0.00	Jan/2015			101.00	Jul/2024	428	Jul/2024

Agricultural Research

Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year

Collaborative research sub-projects under implementation/completed - Total FREGs (Number)	0.00	Jan/2015			700.00	Jul/2024	1,490.00	Jul/2024
Collaborative research sub-projects under implementation/completed - Total Women FREgs (Number)	0.00				280.00		55.00	
Collaborative research sub-projects - under implementation - Total FREGs (Number)	0.00	Jan/2015			0.00	Jul/2024	0.00	Jul/2024
Collaborative research sub-projects - under implementation of Total Women FREGs (Number)	0.00	Jan/2015			0.00	Jul/2024	0.00	Jul/2024
Collaborative research sub-projects - Completed for Total FREGs (Number)	0.00	Jan/2015			700.00	Jul/2024	1,490.00	Jul/2024
Collaborative research sub-projects - completed for Total Women FREGs (Number)	0.00	Jan/2015			280.00	Jul/2024	55.00	Jul/2024
Volume of breeder seeds and pre-basic seeds for criops produced by research centers (quintals/cumulative) (Metric ton)	0.00	Jan/2015			6,290.00	Jul/2024	45,464.50	Jul/2024
Number of demand-driven improved agricultural technologies under research (total and disaggregated by gender sensitive, nutrition and climate smart technologies) (Number)	0.00	Jan/2015			140.00	Jul/2024	912.00	Jul/2024
Number of demand-driven improved agricultural technologies under research (total and disaggregated by	0.00	Jan/2015			140.00	Jul/2024	912.00	Jul/2024

gender sensitive, nutrition and climate smart technologies) (Number)								
Gender sensitive (Number)	0.00				40.00		113	
Nutrition (Number)	0.00				40.00		203.00	
Climate smart (Number)	0.00				40.00		370	

Small Scale Irrigation Schemes

Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
Water users provided with new/improved irrigation and drainage services (number) (Number)	0.00	Jan/2015			190,000.00	Jul/2024	188,509	Jul/2024
Water users provided with irrigation and drainage services - female (number) (Number)	0.00	Jan/2015			78,000.00	Jul/2024	37,790	Jul/2024
Percentage of functional water user associations managing effectively irrigation and drainage infrastructures (Percentage)	0.00	Jan/2015			70.00	Jul/2024	69.00	Jul/2024
Area provided with irrigation and drainage services (ha) (Hectare(Ha))	0.00	Jan/2015			55,000.00	Jul/2024	62,228	Jul/2024
Area provided with irrigation and drainage services - new schemes (Hectare(Ha (Hectare(Ha))	0.00	Jan/2015			15,238.50	Jul/2024	13,010	Jul/2024
Area provided with irrigation and drainage services - Improved (ha) (Hectare(Ha))	8,067.00	Sep/2019			31,184.50	Jul/2024	30,019	Jul/2024
Area provided with irrigation and drainage services –	0.00	Jan/2015			6,693.00	Jul/2024	19,199.00	Jul/2024

micro/HH irrigation schemes (Hectare(Ha))								
Agriculture Marketing and Value Chains								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
Percentage of CIGs undertaking a viable business activity (disaggregated female) (Percentage)	0.00	Jan/2015			65.00	Jul/2024	63.00	Jul/2024
Percentage of CIGs undertaking a viable business activity (disaggregated youth) (Percentage)	0.00				50.00		59	
Percentage increase in volume of seeds supplied through diversified channels (disaggregated per supplier)- Total (Percentage)	0.00	Jan/2015			15.00	Jul/2024	11.95	Jul/2024
Private agents (Percentage)	0.00				15.00		11.50	
Farmers Groups (Percentage)	0.00				15.00		9.85	
Cooperatives (Percentage)	0.00				15.00		14.50	
Number of commercial partnerships or market contracts signed between producer groups or cooperatives (supported by the project) anddomestic/international agribusiness actors (processors, wholesal (Number)	0.00	Jan/2015			45.00	Jul/2024	47.00	Jul/2024
Project Management, Capacity Building, Monitoring and Evaluation and Learning								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
Percentage of trainings delivered using AGP agreed capacity	0.00	Jan/2015			90.00	Jul/2024	85.00	Jul/2024

development approach (Percentage)								
Percentage of GRM addressed from the total claim received (Addressed/received*100). (New Indicator) (Percentage)	0.00	Jan/2015			96.00	Jul/2024	98	Jul/2024
Percentage of PAPs whose land have been affected by AGP II and received compensation (in kind or in cash); (Percentage)	0.00	Jan/2015			100.00	Jul/2024	100.00	Jul/2024
Percentage of subprojects for which environmental mitigation measures have been implemented (Percentage)	0.00	Jan/2015			100.00	Jul/2024	86	Jul/2024
Annual progress reports meets World Bank quality and timely delivery requirements (Yes/No)	No	Jan/2015			Yes	Jul/2024	Yes	Jul/2024

B. KEY OUTPUTS

Objective/Outcome 1 **Increased agricultural productivity**	
Outcome Indicators	1. Increased access to public agricultural services for smallholder farmers 2. Increased the supply of demand-driven agricultural technologies which directly link to the other components 3. Increased the access to and efficient utilization of irrigation water of smallholder farmers
Intermediate Results Indicators	1. Percentage of farmers using public agricultural services 2. Number of technologies promoted to public extension services (total and disaggregated by gender sensitive, nutrition and climate smart) (number) 3. Percentage increase in crop diversity in targeted households benefiting directly from the project (percentage) 4. Clients who have adopted an improved agricultural technology promoted by the project 5. Number of gender sensitive technologies demonstrated in the project area (number) 6. Collaborative research sub- programs completed 7. Volume of breeder seeds and pre-basic seeds for crops produced by research centers 8. Number of demand-driven improved agricultural technologies under research (total and disaggregated by gender sensitive, nutrition and climate-smart technologies) (number) 9. WUAs provided with new/improved irrigation & drainage services Percentage of functional WUAs managing effectively irrigation & drainage infrastructures 10. Area provided with irrigation and drainage services
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	1. Percentage of farmers using public agricultural services (Total – 83.40%; Female – 84.45% against targets for Total – 50.56%; Female – 40.56%) 2. 525 different agricultural technologies promoted to public extension services after being validated, including CST, GS, NS and multiuse technologies. This is 174% compared to EOP target of project. 3. Crop diversity in households benefiting directly from the project (number of project beneficiary HH producing more than three crops) increased by 65.01%; EOP target is 39.75%. 4. 1.63 million SHF (0.570 million/35% female) adopted new improved agricultural technologies/practices promoted by the project; 106% compared to EOP target of 1.53 million SHF and 0.578 million of female. 5. 428 gender sensitive technologies demonstrated in the project area; 414 % compared to EOP target of 101 technologies. 6. 1,490 collaborative farmers research extension group's/FREG/ sub- programs (55 women) established; 213% compared to EOP total FREGS of 700 and 19% compared to EOP women target of 55. 7. 45,464 quintal of breeder seeds and pre-basic seeds for crops produced by research centers to increase farmers access to high yielding crop verity technologies. 723% compared to EOP target of 6,290 quintals 8. 912 demand-driven improved agricultural technologies under research, including 113 climate-smart technology 203 nutrition and 370 gender sensitive technologies and 226 others.571% compared to EOP target of 120 technology.

	9. 188,509 (37,798 female) IWUS provided with new/improved irrigation and drainage services, 97% compared to EOP target of 190,000 (78,000 female). 10. 69% of WUAs are functional and effectively managing project's irrigation infrastructure; EOP target is 70%. 11. 62,228 ha of land is provided with irrigation and drainage services; 111% compared to EOP target of 53,116 ha.
Objective/Outcome 2: Increased commercialization of smallholder farmers supported by the project	
Outcome Indicators	Commercialized SHFs through increased access to input and output markets
Intermediate Results Indicators	1. Percentage of CIG s undertaking a viable business activity 2. Percentage increase in volume of seeds supplied through diversified channels 3. Number of commercial partnerships or market contracts signed between producer groups or cooperatives and domestic/international agribusiness actors (processors, wholesale)
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	1. 63% of female and 59% of youth CIG are undertaking a viable business activity. EOP target is 65% for female and 50% for youth 2. Volume of seeds supplied through diversified channel private agents, farmers groups & cooperatives in the project increased by 11.95% ,9.8% and 14.5% respectively, EOP target is 15 % for all suppliers. 3. 47 commercial partnerships or market contracts facilitated between producer groups or cooperatives and agribusiness actors such as processors, wholesale); 104% compared to EOP target of 45.

ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION[3]

B. TASK TEAM MEMBERS

Name	Role
Karishma Wasti	Team Leader
Elliot Wamboka Mghenyi	Team Leader
Hayalsew Yilma	Team Leader
Massamo Ayele Asele	Financial Management Specialist
Mekdim Hailu Yemane	Financial Management Specialist
Demelash Demssie	Procurement Specialist
Tamru Demsis Temam	Environmental Specialist
Solomon Soroto Tanto	Social Specialist
Simon Sottsas	Social Specialist
Mei Wang	Counsel
Gizework Zewdie Mekuria	Procurement Team
Mohammad Ilyas Butt	Procurement Team
Ingrid Marie Pierre Mollard	Team Member
Assaye Legesse	Team Member
Mekdes Teklay Adhanom	Team Member
Rahel Alemu Workneh	Team Member
Biruktayet Assefa Betremariam	Team Member
Stephen Diero Amayo	Team Member
Shijie Yang	Team Member
Welela Ketema	Team Member
Hanna Simachew Abebe	Team Member
Jeren Kabayeva	Team Member
Pierre Olivier Colleye	Team Member
Hawanty Page	Team Member
Jose C. Janeiro	Team Member

[3] Staff and time costs include the spending of five trust funds and Bank Budget that covered supervision costs, as well as the preparation costs for processing two AFs among others.

Vikas Choudhary	Team Member

C. STAFF TIME & COST

Stage of Project Cycle	Staff Time & Cost	
	No. of Staff Weeks	US$ (including travel and consultant costs)
Preparation		
FY14	9.700	105,707.16
FY15	25.725	298,780.46
FY16	6.349	11,590.62
FY17	1.000	1,420.40
FY18	0.000	89,925.00
FY19	0.000	323,944.91
FY20	0.000	323,720.00
Total	42.77	1,155,088.55
Supervision/ICR		
FY16	13.425	86,672.59
FY17	87.710	418,521.01
FY18	138.436	867,384.30
FY19	120.418	1,093,327.43
FY20	128.959	1,297,779.73
FY21	112.271	1,334,082.48
FY22	76.583	439,265.29
FY23	74.565	509,106.68
FY24	65.997	496,653.02
FY25	7.200	52,593.10

Total	825.56	6,595,385.63

ANNEX 3. PROJECT COST BY COMPONENT

Component	Amount at Approval (US$, millions)	Actual at Project Closing (US$, millions)
Agricultural Public Support Services	129.0	129.00
Agricultural Research	51.4	51.40
Small Scale Irrigation Schemes	218.6	279.43
Agriculture Marketing and Value Chains	120.0	135.07
Project Management, Capacity Building, Monitoring and Evaluation and Learning	62.8	71.90

ANNEX 4. EFFICACY ANALYSIS

Table 4.1. Change in the Yield Index of AGP2 HHs (in quintal per ha) between the Endline and Baseline by Household Categories and Crop

Woreda Status	Index Category	HH Type	Baseline			Endline			% Change	Endline (Imputed in Q/ha)
			N	Mean	SD	N	Mean	SD		
AGP2 Woreda	Aggregate Yield Index	**THH**	**5,786**	**16.20**	**37.61**	**5,752**	**20.90**	**43.22**	**29.01*** **	**20.29**
		MHH	4,257	16.59	39.93	4,170	21.05	45.16	26.92***	21.07
		FHH	1,526	15.13	30.25	1,582	20.49	37.65	35.41***	17.16
	Cereal and pulses	**THH**	**5,218**	**14.70**	**19.74**	**5,123**	**18.30**	**21.88**	**24.53*** **	**18.30**
		MHH	3,870	14.89	19.91	3,770	18.50	22.70	24.27***	20.30
		FHH	1,845	14.16	19.27	1,353	17.74	19.42	25.27***	17.16
	Vegetables and fruits	**THH**	**1,041**	**46.72**	**60.59**	**1,015**	**67.79**	**78.76**	**45.09*** **	**89.37**
		MHH	793	48.59	63.47	730	68.95	80.23	41.91***	92.52
		FHH	248	40.75	49.97	285	64.81	74.90	59.04***	78.92
Non-AGP2 Woreda	Aggregate Yield Index	**THH**	**1,290**	**12.89**	**18.50**	**1,281**	**15.60**	**31.40**	**20.99*** **	**15.60**
		MHH	940	13.45	20.13	925	16.04	32.71	19.24**	16.04
		FHH	350	11.38	13.03	356	14.44	27.72	26.90*	14.44
	Cereal and pulses	**THH**	**1,093**	**12.48**	**16.18**	**1,115**	**15.17**	**23.73**	**21.62*** **	**15.17**
		MHH	805	12.84	17.22	817	15.21	23.98	18.41**	15.17
		FHH	288	11.45	12.80	298	15.08	23.04	31.74**	15.08
	Vegetables and fruits	**THH**	**191**	**46.63**	**69.92**	**202**	**47.86**	**54.69**	**2.64**	**69.07**
		MHH	146	48.16	68.98	155	52.02	56.97	8.02	72.69
		FHH	45	41.65	73.46	47	34.13	44.18	-18.07	55.11

Source: AGP2 EIER (based on survey data collected in March 2017 and May 2024).

Table 4.2. Change in Daily Milk Productivity and Production by Gender and AGP2 Status: 2017–2024

Woreda Status	Livestock Products	Type of HH	Baseline			Endline			P-value	Change (in %)
			N	Mean	SD	N	Mean	SD		
AGP2 Woredas	milk yield (liters/day/cow)	MHH	1,813	0.94	0.71	1,586	2.94	3.9	0.000***	209.8
		FHH	573	0.99	0.75	454	2.81	3.83	0.000***	183.5
		Total	2,386	0.95	0.72	1996	2.93	4	0.000***	207.4
Non-AGP2 Woredas		Total	551	0.97	0.81	447	3.56	4.34	0.000***	266.6
AGP2 Woredas	milk production (liters/day)	MHH	1,813	1.33	0.93	1,586	3.99	5.38	0.000***	200.2
		FHH	573	1.29	0.91	454	3.81	5.27	0.000***	194.9
		Total	2,386	1.32	0.92	2,040	3.95	5.35	0.000***	199.2
Non-AGP2 Woredas		Total	551	1.26	0.97	465	4.85	5.88	0.000***	284.7

Source: AGP2 EIER (based on survey data collected in March 2017 and May 2024).

Table 4.3. Weekly Egg Production and Productivity by Gender and AGP2 Status: 2017–2024

Woreda Status	Livestock Products	Type of HH	Baseline			Endline			p-value	Change (in %)
			N	Mean	SD	N	Mean	SD		
AGP2 Woredas	egg yield (#/week/hen)	MHH	1,948	3.07	1.94	1,400	3.24	2.03	0.0122**	5.68
		FHH	637	3.14	1.94	499	3.03	1.94	0.354	-3.43
		Total	2,588	3.08	1.94	1,899	3.19	2.01	0.0897*	3.3
Non-AGP2 Woredas		Total	711	3.07	1.96	495	3.34	2.05	0.0192**	8.92
AGP2 Woredas	egg production (#/week)	MHH	1,948	9.19	6.78	1,400	9.43	6.5	0.31	2.58
		FHH	637	9.12	6.58	499	8.62	6.13	0.193	-5.45
		Total	2,588	9.17	6.73	1,899	9.22	6.41	0.811	0.52
Non-AGP2 Woredas		Total	711	9.31	7.03	495	9.36	6.27	0.91	0.49

Source: AGP2 EIER (based on survey data collected in March 2017 and May 2024).

Table 4.4. Annual Honey Production and Productivity by Gender and AGP2 Status: 2017–2024

Woreda Status	Livestock Products	Type of HH	Baseline			Endline			P-value	Change (in %)
			N	Mean	SD	N	Mean	SD		
AGP2 Woredas	honey yield (kg/year/ beehive)	MHH	345	3.21	3.11	233	3.74	2.92	0.259	16.51
		FHH	63	2.57	2.77	35	2.94	1.92	0.763	14.31
		Total	408	3.18	3.07	268	3.62	2.83	0.209	13.84
Non-AGP2 Woredas		Total	86	3.85	3.82	80	3.92	2.57	0.894	1.77
AGP2 Woredas	honey yield (kg/year/ traditional beehive)	MHH	326	3.20	3.09	218	3.71	2.93	0.214	15.94
		FHH	58	2.80	2.88	33	2.91	1.93	0.835	4.19
		Total	384	3.14	3.07	251	3.61	2.84	0.19	14.97
Non-AGP2 Woredas		Total	82	3.76	3.72	76	3.94	2.61	0.725	4.82
AGP2 Woredas	honey yield (kg/year/ modern beehive)	MHH	19	4.48	3.28	15	4.08	2.88	0.708	-9.08
		FHH	5	2.57	1.13	2	3.33	2.36	0.558	29.87
		Total	24	4.08	3.05	17	3.99	2.76	0.919	-2.33
Non-AGP2 Woredas		Total	4	5.58	5.89	4	3.38	1.80	0.5	-39.55

Source: AGP2 EIER (based on survey data collected in March 2017 and May 2024).

Table 4.5. Total Revenue from Crops, Livestock, and Livestock Products Sales

Crop Category		Baseline		Endline		Mean Diff. (E- B)	Percentage Change	P-value for Mean Equality t-test	Imputed Value
		N	Mean Revenue (B)	N	Mean Revenue (E)				
Total revenue from crop, honey, live-stock and livestock products sale (ETB), all sample	THH	8,489	4,903	8,489	7,728	2,826	58	0.000	8,679
	AGP HHs	6,953	4,995	6,953	7,994	2,999	60	0.000	9,049
	Non-AGP HHs	1,536	4,485	1,536	6,525	2,040	45	0.000	6,525
	MHHs (AGP)	4,906	5,601	4,769	9,330	3,729	67	0.000	11,092
	FHHs (AGP)	2,047	3,542	2,184	5,077	1,535	43	0.000	5,077
Revenue from all crops sold (ETB), all sample	THH	8,489	2,407	8,489	4,566	2,159	90	0.000	4,893
	AGP HHs	6,953	2,617	6,953	4,869	2,252	86	0.000	5,123
	Non-AGP HHs	1,536	1,456	1,536	3,196	1,740	120	0.000	3,196
	MHHs (AGP)	4,906	2,958	4,769	5,650	2,692	91	0.000	6,306
	FHHs (AGP)	2,047	1,800	2,184	3,162	1,363	76	0.000	2,724
Revenue from all crops sold (ETB), sub-sample of producers of at least one of the crops	THH	7,807	2,584	7,807	4,910	2,326	90	0.000	5,324
	AGP HHs	6,386	2,819	6,382	5,253	2,434	86	0.000	5,599
	Non-AGP HHs	1,421	1,527	1,425	3,376	1,849	121	0.000	3,376
	MHHs	4,634	3,107	4,562	5,875	2,768	89	0.000	6,529
	FHHs	1,752	2,059	1,820	3,693	1,634	79	0.000	3,693
Revenue from livestock sales (ETB), all sample	THH	8,489	1,449	8,489	1,926	477	33	0.000	2,610
	AGP HHs	6,953	1,400	6,953	1,908	507	36	0.000	2,667
	Non-AGP HHs	1,536	1,669	1,536	2,007	338	20	0.036	2,007
	MHHs	4,906	1,592	4,769	2,275	682	43	0.000	3,267
	FHHs	2,047	940	2,184	1,106	167	18	0.099	1,463
Revenue from livestock products sales, for sub-sample of households who produced at least a livestock product (ETB)	THH	3,715	2,154	3,275	2,968	815	38	0.000	2,968
	AGP HHs	2,957	2,045	2,653	2,956	911	45	0.000	2,956
	Non-AGP HHs	758	2,577	622	3,022	445	17	0.177	1,876
	MHHs	2,217	2,047	2,001	3,074	1,026	50	0.000	3,448
	FHHs	740	2,038	652	2,595	557	27	0.036	2,595

Source: AGP2 EIER (based on survey data collected in March 2017 and May 2024).

ANNEX 5. EFFICIENCY ANALYSIS

1. The project aimed to increase the productivity and commercialization of smallholder farmers. The anticipated benefits extended beyond the PDO indicators and intermediate results. The expected primary economic benefits generated by the project included:

- **Increased Agricultural Production**: Adoption of improved technologies for rainfed crops, enhanced access to and efficiency of water use through irrigation development, improved marketing, and increased business opportunities for smallholders and POs).
- **Increased Cash Income**: Participating smallholders experienced increased cash income.
- **Improved Food Security and Nutrition**: The project improved household-level food security and nutrition, reducing vulnerability to external shocks such as climate change and rising food prices.
- **Reduced Transaction Costs**: Benefits included lower bulking, transport, marketing, and financial costs, and reduced production losses through improved access roads and organized bulking and marketing by POs.
- **Increased Value Added**: Smallholders and POs retained more value added within the targeted value chains.
- **Enhanced Market Opportunities**: Improved market linkages benefited supply chain actors, including smallholders, POs, transporters, traders, and agro-industries.
- **Enhanced Bargaining Power and Management Capacity**: Smallholders and their POs gained better bargaining power, market understanding, and management capacity.
- **Incremental Employment**: Increased productivity and production generated additional on- and off-farm employment.
- **Foreign Exchange Savings/Earnings**: The project reduced wheat importation and increased exports of pulses, oil crops, and livestock products.
- **Reduced Animal Diseases**: Improved animal health services reduced trans-boundary animal diseases.
- **Improved Natural Resource Protection**: Enhanced biodiversity, better natural resource protection, and increased resilience to climate change risks were achieved.
- **Improved Social Stability**: The project improved overall well-being, social stability, and livelihoods in the targeted production areas.

Economic and Financial Analysis at Project Appraisal (2015)

2. At the appraisal stage, the economic and financial analyses of AGP2 assessed the project's impact and viability using various approaches. Some project investments were well-defined in terms of scope, nature, costs, and potential benefits. These included strengthening the public extension system, animal health services, and the development of household and SSI schemes (HHI and SSI). The targets for these components were set, and the types of schemes to be rehabilitated or constructed were identified. However, other project benefits, particularly those from support to youth/women groups, value chains development, and cooperative unions marketing, were more challenging to forecast and quantify due to their demand-driven and market-led nature.

3. The financial analysis was based on indicative per hectare crop budgets, applying different cropping patterns suitable for the agroclimatic conditions of various project regions. These per hectare models were extrapolated to cover the total command area of the irrigation and drainage (I&D) infrastructure rehabilitated by the project. Financial prices were converted into economic prices using specific conversion factors, and the overall economic

net incremental benefit stream from I&D investments was identified. Additionally, the expected net incremental benefits from livestock-supported activities and the nutrition component were added to the overall stream to calculate the project's ENPV and EIRR. As a result, the appraisal stage EIRR was estimated at *18 percent*, while the ENPV was calculated at *US$191 million*.

Additional Financing (2021)

4. The project has accessed AF grant from the GAFSP in the amount of US$5 million for the COVID-19 response. The AF supported interventions that mainly focused on direct response to the COVID-19 crisis and included the following: (a) support for agricultural inputs and marketing; (b) support for production and post-harvest management of marketable irrigated crops; and (c) provision and supply of PPE for COVID-19 preventive measures. A separate economic and financial analysis was conducted for a standalone GAFSP funding of US$5 million using nearly the same set of models. This approach posed a limitation, as ideally, the additional costs and benefits should have been incorporated into the original analysis.

Economic and Financial Analysis at Completion

5. At completion, an ex post economic and financial analysis was conducted based on project investments to assess its overall effect, particularly using the actual outreach scheme of beneficiaries, the implementation of subprojects, and the actual project expenditures schedule. These data were provided by the M&E and FM specialists of the project. The purpose of the analysis was to measure the attainment of the project's goal to increase agricultural productivity and food and nutrition security for rural households in selected areas nationwide.

I. Program Cost and Outreach

6. Project Costs and Financing. The project was designed with a total cost of US$581.8 million, which included a financing gap of US$216.3 million, which also included parallel financing and beneficiary contribution. The project was financed through IDA credit of US$350 million, IDA grant of US$80 million, Ethiopia Second Agricultural Growth Project Multi-Donor Trust of US$73.6 million, and two tranches from GAFSP in the amount of US$27 million and US$5 million. The reported actual total project cost was US$535.6 million.

7. The actual allocations for the five components were distributed accordingly: Agricultural Public Support Services (US$129 million), Agricultural Research (US$51.4 million), Small Scale Irrigation (US$279.43 million), Agriculture Marketing and Value Chains (US$135.07 million), and Project Management, Capacity Building, and Monitoring and Evaluation (US$71.09 million).

8. Project outreach. According to the M&E database, almost all of the main physical targets of the project were overachieved. The project benefited 1,636,674 beneficiaries, surpassing the target of 1,530,000 individuals. The main physical achievements used in the analysis are provided in table 5.1.

Table 5.1. Project Actual Outreach

Physical indicator/Activity	Unit	Target	Actual	% Achieved
Farmers adopted best practices	number	1,530,000	1,636,674	107
New Small-Scale Irrigation (SSI) Infrastructure	ha	15,239	11,219	74
Micro and Household Irrigation Infrastructure	ha	6,693	19,203	287
Rehabilitation and/or Improvement of Existing modern SSI	ha	6,952	12,907	186
Demonstration plots beneficiaries	number	27,800	27,958	101
New Community Based Seed Producer groups (two per Woreda) established	number	341	564	165

Physical indicator/Activity	Unit	Target	Actual	% Achieved
Existing Community Based Forage Seed Producer Groups strengthened	number	1,194	777	65
Existing liquid nitrogen plants strengthened	number	17	17	100
Nitrogen refrigerator track provided	number	5	5	100
Artificial Insemination field equipment provided in Sets	number	38	45	118
Office/woreda provided with Artificial Insemination field equipment	number	153	241	158
Cattle crash constructed	number	1,179	828	70
Kebele benefiting from cattle crash	number	15,682	16,545	106
Existing liquid nitrogen plants strengthened	number	17	17	100
Nitrogen refrigerator track provided	number	5	5	100
Artificial Insemination field equipment provided in Sets	number	38	45	118
Construction of Market Centers (crop, livestock, milk, honey and roadside market shade)	number	131	159	121
Warehouse / stores constructed	number	135	111	82

II. Actual Project Benefits

9. The main agricultural benefits were derived from multiple sources, including improved irrigation water supply, the adoption of better farm practices, enhanced market opportunities, and enhanced agricultural profitability through crop diversification. These factors resulted in increased productivity and production and increased value added.

10. Unquantifiable Benefits. These included broader economic development in the agricultural sector due to improved extension systems and capacity building, multiplier effects from increased economic activity in rural areas, avoided water losses due to efficient I&D infrastructure, and mitigation of greenhouse gas emissions through sustainable farming practices.

11. The analysis acknowledges the significant unquantifiable benefits coming from improvements in dietary diversity and nutrition. While these benefits represent critical developmental impacts, they were not quantified in the economic analysis due to the lack of data required to reliably estimate their economic value. While global literature, such as the World Bank's "An Investment Framework for Nutrition[4]", suggests that every US$1 invested in nutrition can yield up to US$10 in economic returns, these global estimates represent broad averages and would require careful adjustments to reflect Ethiopia-specific contexts, including demographic, healthcare, and agroecological factors. Without detailed local data, applying such benchmarks risked overestimating or misrepresenting the actual benefits attributable to AGP2. Despite these limitations, the project's contributions to dietary diversity and other unquantifiable benefits remain central to its overall development impact and reinforce the justification for a strong efficiency rating.

III. General Assumptions Used in the Analysis

12. The ICR EFA used the same set of crop models as those at the design stage, with adjustments to reflect the actual findings and economic changes during the project implementation period. The methodology and main assumptions included:

- Financial analysis aimed to quantify incremental benefits attributable to the project by comparing projections of crop performances with and without the project.

[4] https://documents1.worldbank.org/curated/fr/744761490036804055/pdf/113616-BRI-PUBLIC-Stunting-5-web.pdf

- "With-Project" projections reflected realistic estimates of yield increases and modified cropping patterns due to improved water supply, application of the best practices and better inputs.
- "Without Project" scenarios assumed the continuation of existing cropping patterns and agricultural technology.
- Self-consumption, which was particularly important for AGP2 targeted smallholders as they generally cropped an area ranging from 0.5 to 1.5 hectares and were often food insecure.
- Values were expressed in constant 2023/2024 prices, excluding inflation, ensuring surpluses were sold at different times and prices after harvest.
- Economic values were derived by applying conversion factors to financial prices, with a standard conversion factor of 0.90 used in the analysis.
- Post-harvest losses that reach 5-10 percent for cereals and pulses, and much more (up to 30 percent or more) for fruits and vegetables.
- Family labor was not assumed as a financial cost, but its economic value was considered equal to hired labor. The available family labor was sufficient to carry out most cultural operations, except for some cases where daily hired labor was required.

IV. Financial Analysis

13. The financial analysis was conducted from the perspective of beneficiary households, primarily focusing on farmers as direct beneficiaries. The analysis is based on crop and farm models to assess whether improved technologies and associated risks linked to their adoption under the "with project" scenario generated sufficient additional income and enhanced their food security and resilience to shocks. The analysis also considered post-harvest losses, self-consumption, output prices, and family labor.

14. *Rainfed farm model (0.8 ha).* Typical crop models (per hectare basis) were developed for the main crops currently cultivated by targeted smallholders. These crops included (a) *Cereals:* wheat, barley, teff, maize, and sorghum; (b) *Pulses:* fava (common) bean, haricot bean, chickpea, and lentil; (c) *Oil crops:* sesame, linseed, and nugseed; (d) *Vegetables* (rainfed and irrigated): onion, tomato, head cabbage, and sweet pepper; and (e) *Tubers:* potato and sweet potato.

15. The calculations aimed to compare the "without project" and the expected "with project" (adoption of improved technology) situations. This involved detailing for each crop budget: unit, quantities, cost per unit (in ETB), value (in ETB) for both scenarios. It also specified cropping practices and cultural operations, highlighting labor use that could be a bottleneck in some operations/farming systems (whether family labor or hired labor). The analysis calculated total revenue and cash income (cash derived from sales), detailed input, services, and equipment replacement as well as financial services costs, and calculated production costs (per hectare and per kilogram), gross margins, and net cash income (sales minus cash input costs).

16. The typical "without project" situation was represented by the current average situation of most smallholders targeted under AGP2. Typically, smallholders who had not yet adopted any improved "crop extension packages" followed a traditional cropping pattern/practice characterized by the use of locally/own produced seeds and broadcasting, and minimal use of fertilizer.

17. It was estimated that the average yields by crop recorded at national (and regional) levels by the Central Statistics Agency fairly represented the current "without project" situation of AGP2 smallholders and are same to those used at the design stage. The crop models for “with project” scenario were developed using data provided by

the national team involved in AGP2. Consequently, the "without project" situation in the crop models could not assume that all farmers would start from traditional practices; rather, it assumed some use of the proposed improved practices and higher yields than those obtained under traditional practices. The Project intervention aimed to allow smallholders to enhance access to (a) improved technologies (use of improved certified seeds, higher doses of fertilizers, pooled mechanization services); (b) output markets; (c) financial services; and (d) higher yields.

18. To avoid the risk of overestimating revenue/cash income under each crop model, it was assumed that surpluses were sold at different times and prices after harvest for both scenarios, "without project" and "with project". In both situations, various shares of the surplus production would be marketed: a) the largest share of the surplus would be sold at harvest (at the lowest price as per available market data); b) a smaller share after short storage - maximum 1-2 months (at medium price); and c) a limited share after 2-5 months storage - depending on crop types - at a peak price during the lean season. Thanks to increased marketing opportunities offered to smallholders, increased cash incomes and savings capacity, lesser dependence on collectors, and reduced pressure to sell at harvest to meet urgent expenses, it was assumed that the share of surpluses sold at higher prices after storage would increase in the "with project" situation.

19. Based on the crop models and the actual cropping patterns used by the farmers at completion, a rainfed farm model of 0.8 hectares was constructed. The model showed substantial increases in total net income and cash income. In the “with project” situation, net income increased by 30% from ETB 41,368 to ETB 54,556 per year. The financial results are presented in table 5.2.

Table 5.2. Summary of a Typical Rainfed Farm Model (0.8 ha)

Item	Unit	"With Project" situation											
		Teff	Wheat	Barley	Maize	Sorghum	*sub-total cereals*	Bean	Chickpea	Lentil	*sub-total pulses*	Oil crops	Total
Share of cropped area	%	26%	23%	5%	15%	14%	*83%*	*6%*	*4%*	*4%*	*14%*	3%	**100%**
Area	ha	0.208	0.184	0.04	0.12	0.112	*0.66*	0.048	0.032	0.032	*0.112*	0.024	**0.80**
Total Revenue	ETB	19,010	16,728	4,565	16,990	15,678	*72,971*	*3,654*	*1,894*	*2,187*	*7,735*	628	81,334
Variable & Fixed Costs	ETB	7,166	5,007	770	5,930	3,675	*22,547*	1,637	1,232	1,079	*3,948*	284	26,779
Net Income	ETB	**11,844**	**11,722**	**3,795**	**11,060**	**12,003**	***50,424***	**2,017**	**662**	**1,108**	***3,787***	**345**	**54,556**

Item	Unit	"Without Project" situation											
		Teff	Wheat	Barley	Maize	Sorghum	*sub-total cereals*	Bean	Chickpea	Lentil	*sub-total pulses*	Oil crops	Total
Share of cropped area	%	23%	18%	10%	18%	14%	*83%*	*6%*	*4%*	*4%*	*14%*	3%	**100%**
Area	ha	0.184	0.144	0.08	0.144	0.112	*0.66*	0.048	0.032	0.032	*0.112*	0.024	**0.80**
Total Revenue	ETB	11,956	8,829	6,363	13,448	25,845	*66,442*	*1,152*	*1,044*	*1,361*	*3,557*	483	70,483
Variable & Fixed Costs	ETB	6,891	5,195	3,086	5,206	6,084	*26,461*	1,013	712	704	*2,429*	224	29,115
Net Income	ETB	**5,066**	**3,635**	**3,277**	**8,243**	**19,761**	***39,981***	**139**	**332**	**657**	***1,128***	**259**	**41,368**

20. Micro-Irrigation and Household Irrigation. The household and micro-irrigation technologies supported under AGP2 included a variety of methods such as hand-dug wells, tube wells, shallow wells, and deep wells. These were equipped with either manual (washer and rope or treadle pumps) or motorized pumps (diesel or gasoline). Each technology had different investment, operation, and maintenance costs, as well as varied water delivery capacities, allowing for the irrigation of small areas ranging from 0.25 ha to 10 ha. Due to these variations, it was challenging to develop a single model that could represent the expected situation of all AGP2 smallholders benefiting from HHI technologies.

21. For the technology model, a moderately expensive option was selected: a tube well equipped with a good quality diesel engine pump capable of irrigating 0.5 ha, an area manageable by a typical household. While HHI technology can be made available to a group of smallholders, experience indicated that it typically benefits a single household. This assumption was used in building the typical HHI model.

22. The crops that can be produced under HHI technologies cover a wide range (cereals, vegetables, pulses, fruit, spices, and so on) and vary considerably based on specific site conditions (rainfall, altitude, soil type, water availability), farmers' preferences and cultural techniques, project objectives (commercial or crop/diet diversification), availability and access to inputs (notably improved seeds/seedlings), access to financial services, agro-industries, buyers/wholesalers, local/regional/export market demand, and road conditions. It was assumed that the HHI infrastructure and technologies supported under AGP2 aimed not only at diversifying the household diet but also at generating income.

23. Given the limited land to be irrigated under the chosen model (0.5 ha), it was assumed that it would be cropped exclusively with vegetables during two seasons: the wet "Meher" season (June to November/December) with full or supplementary irrigation and the dry season (December to May). This assumption was valid if there was a neighboring market for the vegetable production or if the farmer was located near a well-connected and maintained road or linked with a main buyer (whether private or cooperative) that could regularly purchase the production at market conditions.

24. Although a wide variety of vegetables could be cropped, the model considered the four main ones: (a) onions (high demand, relatively perishable but can be stored); (b) tomatoes (high demand, sensitive to pest attacks, very perishable, and subject to high price variations, thus risky); (c) green pepper (not easy to produce but in high demand during fasting periods); and (d) head cabbage.

25. While most farmers generally cropped the land twice under HHI (and in some cases three times, like in the Rift Valley, depending on crop choice and market demand), a cropping intensity of only 150 percent (for example, a total cropped area of 0.75 ha per year) was assumed in the model to be conservative. The share of each crop was assumed to be: onion (45 percent), tomatoes (20 percent), head cabbage (20 percent), and green pepper (15 percent).

26. This typical HHI model demonstrates substantial increases in both total net income (before self-consumption) and cash income (after self-consumption) from the land utilized under HHI (0.5 ha). Specifically, the net income per household derived from the irrigated land would more than double, increasing from approximately ETB 32,571 per year in the "without project" situation to around ETB 46,935 per year in the "with project" situation.

27. *SSI.* The financial analysis of SSI schemes considered the cropping intensity and cropping pattern to achieve optimal outcomes. While a cropping intensity of 200 percent or more is desirable, a conservative estimate of 175 percent was used due to the practical challenges of calendar and labor requirements for smallholders managing both rainfed and irrigated plots. This conservative approach ensures realistic projections, acknowledging the variability in short-cycle variety availability and site-specific conditions. The cropping pattern for the "with project" scenario included a mix of commonly cropped cereals and vegetables, ensuring a representative model for financial and economic analyses.

28. The analysis also assumed a progressive yield build-up over five years, starting from the initiation of each SSI scheme operation, before stabilizing at 80 percent of the target yield. This gradual increase accounts for the limited initial exposure of smallholders to SSI and larger-scale vegetable cropping. Full input and operational costs per hectare were expected to be met from the first year, leading to a progressive increase in net income over the five-year period. The financial model incorporated realistic expectations of yields and costs, reflecting the practical implementation and benefits of SSI schemes for smallholders. Financial analyses of the SSI model showed profitability, with a financial internal rate of return of 17.4 percent.

29. Livestock models. The financial analysis of livestock models under AGP2 aimed to quantify the benefits derived from income-generating activities for women and youth CIGs and overall improvements in livestock productivity. The income-generating activities focused on poultry and dairy milk, providing matching grants, capacity building, and access to markets and financial services. Additionally, other beneficiaries experienced enhanced livestock productivity through better advisory services, including agricultural extension, animal production and health services, AI, and efficient research activities. The main benefits included reduced livestock mortality and morbidity, increased parturition rates, higher animal live weight and milk yields, and improved yields for selected fodder crops.

30. To assess these benefits, herd growth projection models for cattle and small ruminants were designed to estimate "with project" and "without project" situations over a 20-year period. These models included equivalent meat production and secondary products (milk, hides, skins, manure, and organic matter), leading to incremental income and financial benefit streams. All models demonstrated a financial profitability, with substantial increases in the households' income.

V. Economic Analysis

31. The economic analysis aims to assess project impact from the country's stand view and includes the following three steps: (a) converting financial prices into economic values (using the conversion factors and removing the VAT of 15 percent) to assess the real costs and benefits from the social (country) point of view; (b) undertaking economic analysis of the overall project by aggregating all costs and benefits; and (c) performing a sensitivity analysis.

32. **Jobs created.** The economic value of jobs was incorporated into the benefit stream by estimating the incremental income generated for beneficiaries through employment. The project created 934,394 jobs, including both temporary/seasonal and permanent positions. Temporary jobs, particularly in agriculture marketing and SSI activities, contributed significantly to household incomes. The economic value of these jobs was calculated using an average daily agricultural wage of 250 Ethiopian Birr (approximately US$4.46 at the November 2023 exchange rate) and multiplied by the duration of employment. Permanent jobs, such as those in irrigation management and value chain development, provided sustained income and economic stability for beneficiaries. By monetizing the incremental income from these jobs, the analysis captured an essential component of the project's broader economic impact, further validating its positive contribution to rural livelihoods and employment generation.

33. The ex post economic analysis demonstrated an overall EIRR of 25.8 percent, with an ENPV of US$27.13 million, proving the project's economic viability. Sensitivity analysis indicated that the economic returns were resilient to changes in costs and benefits, with the EIRR remaining above the discount rate even under adverse scenarios. Table 5.3 sheds more light on sensitivity analysis.

Table 5.3. Sensitivity Analysis

Sensitivity Analysis												
Indicators	All costs	Increase in project costs			Increase in benefits			Decrease in benefits			Delay of benefits	
		10%	20%	50%	10%	20%	30%	-10%	-30%	-50%	1 year	2 years
EIRR	25.8%	23.2%	20.6%	14.2%	24.0%	21.7%	14.5%	23.0%	15.5%	12.9%	20.1%	17.8%
NPV (USD Million)	27.13	12.70	12.08	10.23	15.27	17.22	19.17	11.37	7.47	3.57	10.94	8.78

VI. Discussion and Conclusion

34. The lower ENPV at ex post (ICR) analysis than of ex ante (design stage) results can be mainly explained by the delays in implementation and other external economic factors. Between 2016 and 2024, Ethiopia experienced several significant economic shocks, including the Tigray conflict, the COVID-19 pandemic, removal from the AGOA,

and severe climate events. These events collectively led to disruptions in agricultural productivity, increased poverty and food insecurity, high inflation, a devalued currency, significant job losses, especially in industrial sectors, and a substantial debt crisis. The cumulative effect of these shocks slowed economic growth, strained government resources, and necessitated comprehensive recovery efforts.

35. The depreciation of the Ethiopian Birr (from 20.2/US$ at appraisal to 56/US$ by 2023, with further declines on the parallel market) increased the project's local currency resources, theoretically allowing for more activities to be implemented. This effect was most notable for expenditures on non-traded goods and services, such as local labor and construction materials. For example, the construction of SSI schemes and HHI systems mostly relied on locally sourced materials like sand and gravel and labor-intensive approaches, potentially benefiting from increased Birr resources.

36. However, the negative impacts of depreciation outweighed these advantages. Many irrigation-related investments involved imported components, such as diesel or gasoline-powered pumps and reinforcement bars, which were sensitive to currency depreciation. The increased cost of these imported inputs in local currency terms eroded much of the financial gains from currency depreciation. Additionally, inflation, averaging 20–25 percent annually over the project period, with peaks of 34–40 percent in the later years (2021–2023), further compounded the cost increases, affecting both imported and domestically sourced items. In the absence of the factors described above, the project could have resulted in higher ENPV due to the overachievement of physical targets.

ANNEX 6. BORROWER, CO-FINANCIER AND OTHER PARTNERS/STAKEHOLDER COMMENTS

ግብርና ሚኒስቴር
MINISTRY OF AGRICULTURE

ቁጥር
Ref. No 13/B124/19/830
ቀን
Date 03/01/2025

To: The World Bank Country Office
Addis Ababa, Ethiopia

Subject: Feedback on Bank's Second Agricultural Growth Program ICRR

We have reviewed the Bank's Implementation Completion and Results Report (ICRR) for the Second Agricultural Growth Program (AGP-II). Based on our assessment, the report is well-organized and provides a thorough overview of the program's contributions, along with the successes achieved through the investments made during the program period.

We have summarized our feedback in a three-page document, which is attached to this letter.

On behalf of the Government of Ethiopia, we would like to extend our sincere gratitude to the World Bank team, particularly the AGP-II Task Team Leaders (TTLs), for their continued support and guidance in ensuring the successful implementation of this program. We are deeply appreciative of the World Bank's assistance and look forward to its continued support in the future.

Sincerely,

Keberu Belayneh
National Program Manager
Food Systems Resilience Program

The Federal Democratic Republic of Ethiopia Ministry of Agriculture

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Bole Sub City, Woreda 06, Gurd Shola; Addis Ababa, Ethiopia
ከማምርት በላይ | Beyond Production

Borrower Comments on the ICRR

1. ***Project Implementation Assessment summary of the Second Agricultural Growth Program (AGP-II)***: Ethiopia's agricultural sector faces several challenges, including slow productivity growth, technological stagnation, inadequate irrigation infrastructure, weak market mechanisms, and recurring droughts. In response, the government has launched an integrated approach to address these issues through a multi-donor-funded initiative designed to support agricultural growth. AGP-II builds on the success of its predecessor, focusing on improving agricultural productivity, promoting commercialization among smallholder farmers, and fostering value addition in targeted regions. The main goal of AGP-II was to increase agricultural productivity and commercialization among smallholder farmers. Initially targeting 167 woredas, the program later expanded to 181 woredas, benefiting 2.2 million households across 2,433 rural kebeles. The program has five key components: Public Agricultural Support Services, Agricultural Research, Small-Scale Irrigation Development, Agricultural Marketing and Value Chain Development and Program Management, Capacity Development, Monitoring, and Evaluation. With an initial budget of approximately US$580 million, AGP-II secured an additional US$80 million to cover remaining activities, bringing the total budget to US $660 million. The program was originally planned to run for five years (from March 26, 2015, to October 10, 2020), but due to time and cost overruns, the completion date has been extended to July 7, 2024. Nevertheless, results indicate that the investment made by the project have money positive impact and are reflected in increasing productivity and commercialization of smallholder farmers. It is noted this significant project impact has been well described in the World Bank's ICRR.
2. ***Challenges during implementation:*** AGP-II was the biggest Government's flagship project in the history of the sector and implemented at very crucial junction in the sector. However, while implementing the project, poor integration among stakeholders, lack of adequate technology, soil acidity, lack of appropriate soil fertility treatment measures that reduce nutrient depletion, affected crop growth. Delays in infrastructure activities due to limited expertise / private sectors capacity in design preparation, construction, and construction supervision, coupled with the lack of competent contractors, resulted in cost overruns and slow implementation of construction projects. Challenges in registering IWUAs under cooperative policies also delayed program implementation and affected its sustainability. It was mainly newly formed IWUAs that did not always succeed to collect fees, lacked management experience and struggled with operational responsibilities. Inadequate efforts to establish market linkages for agricultural produce from program schemes to appropriate markets and whole sales or consumer impacted smallholder farmers and hampered the profitability of irrigation farming. Security and external factors, such as transport blockages due to security problems, disrupted program activities, including construction and supervision of program activities in some of the program areas. Procurement challenges led to frequent rebidding, delaying program timelines and increasing costs. Obtaining 'no objection' from the Bank was time-consuming and bureaucratic. Contractual disputes or legal issues arising from prolonged procurement processes were a serious issue. The Covid-19 pandemic affected overall program activities, including marketing and operational continuity. Despite many challenges, the project was

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completed and achieved most of its targets. This fact has also been well elaborated in the ICRR.

3. ***Achievements made by the project***: As indicated in the ICRR, all key targets as defined in the project development objective and its indicators were achieved by the project. The project made significant strides in enhancing agricultural productivity among smallholder farmers. Overall crop yields increased by 29%, rising from 16.2% at the baseline to 20.9% at the end of the program. Vegetables and fruits saw the highest growth at 45.09%, while cereals and pulses grew by 24.53%. These successes can be attributed to the program's holistic approach, which improved public agricultural services by transforming 2,663 farm training centers into hubs for technology adoption and farmer education. These centers facilitated 373,040 on-farm demonstrations, promoting gender-sensitive, climate-smart, and nutrition-focused agricultural practices. As a result, 1,636,674 farmers, including 578,750 women, were introduced to new technologies and practices. The program also introduced 671 innovative agricultural technologies, including improved crop varieties and mechanization tools. Irrigation development played a key role, with 4,233 irrigation structures constructed or rehabilitated, that have a capacity of developing 62,228 hectare of land and benefiting 188,509 households (37,390 female). Strengthened WUAs ensured the efficient management of these systems. In the dairy sector, the program achieved outstanding success, with milk yields per cow increasing by over 200% for both male- and female-headed households. This achievement was driven by improved access to artificial insemination services, livestock health centers, better cow breeds, enhanced training, and availability of improved feed. Revenue generation from the sale of cereals and vegetables exceeded targets, though revenues from honey and eggs fell short due to lower-than-expected production. The average household revenue from the sale of crops, livestock, and livestock products in AGP-II woredas also saw a significant increase, with crop sales alone rising by 86%. This boost in commercialization is attributed to improved market infrastructure (such as roads, market centers, and storage facilities), the strengthening of farmer organizations for collective bargaining, agribusiness training, and the adoption of high-yield crop varieties and efficient irrigation systems. The strengthening of public agricultural services, agricultural research, irrigation development, and agricultural marketing and value chains by the project were crucial to these achievements, and this all has been well elaborated in the ICRR.
4. ***Lessons Learned during implementation and the Way Forward***: The AGP-II intervention highlights the potential for shifting subsistence farming toward market-oriented production. However, the long-term benefits depend on strong market development, which requires focused policy attention. Without corresponding advancements in market infrastructure and access, increased agricultural productivity could become a liability rather than an asset for community development. The Importance of a Holistic Approach and Participatory Implementation: AGP-II's success can be largely attributed to its comprehensive strategy, which addressed multiple facets of agricultural development research, production, marketing, infrastructure, and value chains. This integrated approach proved far more effective than isolated interventions, ensuring sustainable and impactful outcomes. Additionally, the program's participatory, demand-driven approach played a key role in its success. By involving local communities in problem identification, planning, implementation, and monitoring, AGP-II fostered a sense of ownership among beneficiaries. This inclusivity ensured that interventions were tailored to the specific needs

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From: Berhanu Anbesa Bekele <banbesa@mofed.gov.et>
Sent: Monday, January 6, 2025 7:51 AM
To: Ethiopia Abate Temesgen <etemesgen1@worldbank.org>
Cc: ssewasew@mofed.gov.et <ssewasew@mofed.gov.et>; Keberu Belayne <bkeberu@gmail.com>; mandefro.nigussie@ata.gov.et <mandefro.nigussie@ata.gov.et>; Maryam Salim <msalim1@worldbank.org>; Juliana Victor <jcvictor@worldbank.org>
Subject: Re: Ethiopia AGP II ICR for review

[External]
Good morning Ethiopia,

See minor comments to be added under Annex 6; otherwise, the ICR is well-prepared.

The Government of Ethiopia expresses its gratitude to the World Bank for the support provided for AGP2 including by bringing additional support from other donors.
We have noted that the project has significantly enhanced agricultural productivity among smallholder farmers, with notable increases in crop yields. The project also successfully promoted commercialization, with substantial increases in revenue. Most importantly, the construction and rehabilitation of irrigation schemes have allowed for increased cropping frequency and productivity.
We look forward to continued partnership with the World Bank in achieving our Agricultural & Rural Development Policy and Food System and Nutrition Development goals.

With regards,

Berhanu Anbesa

Head
International Financial Institutions Cooperation Division
Ministry of Finance
Tel: Office: +251111114821/4890
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Ethiopia

ANNEX 7. SUPPORTING DOCUMENTS

- AGP2 Baseline Survey Report, October 2017.
- AGP2 Midterm Quantitative and Qualitative Evaluation Reports, September 2019.
- AGP2 Endline Impact Evaluation Report, October 2024.
- AGP2 Completion Report by the Ministry of Agriculture, July 2024.
- AGP2 Project Appraisal Document, March 5, 2015.
- AGP2 Additional Financing Project Paper, August 19, 2020.
- AGP2 Additional Financing Project Paper, June 25, 2021.
- AGP2 Restructuring Papers.
- AGP2 Project Progress Reports.
- World Bank Aide Memoires of Preparation and Implementation Review and Support Missions, 2015–2024.
- World Bank AGP2 Implementation Status and Results Reports (ISRs), 2015–2024.
- *Ethiopia - Country partnership framework for the period FY18 - FY22 (English).* Washington, D.C.: World Bank Group.
- *Ethiopia - Country partnership strategy (FY2013-FY2016) (English).* Washington, D.C.: World Bank Group.
- Job Creation in AGP2, Power Point Presentation, June 2022.

Blogs and Other Online Project Featured Materials:

https://agri-training-et.org/cdsf-impact/
Funded by Global Affairs Canada and implemented by Alinea International, CDSF supported the implementation of Ethiopia's second Agricultural Growth Program (AGP2) between 2016 and 2021. Impacts/Results, success stories

In Ethiopia, the Second Agricultural Growth Project is Improving Nutrition Outcomes

Feature Story on World Bank Website
(20+) agriculture growth program - Search Results | Facebook
https://www.worldbank.org/en/news/feature/2024/05/30/from-quarry-dust-to-emerald-fields-the-transformative-impact-of-irrigation-in-ethiopia-s-dire-dawa

Feature Story on World Bank Website
https://www.worldbank.org/en/news/feature/2018/02/27/seeing-is-believing-digitizing-ethiopia-s-agricultural-extension-service-delivery

Feature Story on World Bank Website
https://www.jobsanddevelopment.org/3-ethiopia-second-agricultural-growth-project-improving-farmers-production-outcomes-of-drought-affected-areas/

Feature story: Ethiopia Second Agricultural Growth Project: Improving Farmers Production Outcomes of Drought-Affected Areas
https://www.gafspfund.org/projects/agricultural-growth-project-ii-agp-ii

Impacts on the Global Agriculture and Food Security Program
https://link.springer.com/article/10.1007/s12571-021-01175-7(paper:

How effective is Ethiopia's agricultural growth program at improving the total factor productivity of smallholder farmers
https://worldbankgroup.sharepoint.com/sites/WBAgriculture/SitePages/Blogs/Enhancing-Capacity-on-GeoEnabling-Initiative-for-Monitoring-and-Supervision-for-Informed-Development-Effort-02182020-112949.aspx (Blog on Geo-enabling Initiative for Monitoring and Supervision capacity building and rollout)

https://w05.international.gc.ca/projectbrowser-banqueprojets/project-projet/details/d002591001

Government of Canada support: Project result