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R2020-0001/1

January 10, 2020

Closing Date: Thursday, January 30, 2020 at 6:00 p.m.

FROM: Acting Vice President and Corporate Secretary

North Macedonia - Agriculture Modernization Project

Attached is the Project Appraisal Document regarding a proposed loan to North Macedonia for an Agriculture Modernization Project (R2020-0001), which is being processed on an absence-of-objection basis.

Distribution:
Executive Directors and Alternates
President
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Vice Presidents, Bank, IFC and MIGA
Directors and Department Heads, Bank, IFC, and MIGA

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Report No: PAD3461

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED LOAN

IN THE AMOUNT OF EUR 46 MILLION
(US$50.5 MILLION EQUIVALENT)

TO THE

REPUBLIC OF NORTH MACEDONIA

FOR AN

AGRICULTURE MODERNIZATION PROJECT

January 7, 2020

Agriculture and Food Global Practice
Europe And Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective November 30, 2019)

Currency Unit =	EUR
EUR 1.0 =	US$ 1.10
US$ 1.0 =	EUR 0.9094

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Cyril E Muller
Country Director:	Linda Van Gelder
Regional Director:	Steven N. Schonberger
Practice Manager:	Frauke Jungbluth
Task Team Leader(s):	Silvia Mauri

ABBREVIATIONS AND ACRONYMS

ABP	Animal By-Products
AFP	Agri-food Platform
AFSARD	Agency for Financial Support of Agriculture and Rural Development
AIR	Annual Implementation Report
AREC	Agency for Real Estate and Cadastre
CAP	Common Agricultural Policy
CCC	Collection and Conditioning Center
CMEF	Common Monitoring and Evaluation Framework
CMES	Common Monitoring and Evaluation System
CPF	Country Partnership Framework
DG AGRI	Directorate-General for Agriculture and Rural Development
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ERR	Economic Rate of Return
ESMF	Environmental and Social Management Framework
ESMP	Environment and Social Management Plan
EU	European Union
EX-ACT	Ex-Ante Carbon-Balance Tool
FAO	Food and Agriculture Organization of the United Nations
FVA	Food and Veterinary Agency
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GPN	General Procurement Notice
GRM	Grievance Redress Mechanisms
IBRD	International Bank for Reconstruction and Development
ICT	Information and Communications Technology
INDC	Intended Nationally Determined Contributions
IPA	Instrument of Pre-accession Assistance
IFR	Interim Financial Report
IPARD	Instrument for Pre-Accession and Assistance for Rural Development
IPF	Investment Project Financing
IRR	Internal Rate of Return
M&E	Monitoring & Evaluation
MAFWE	Ministry of Agriculture, Forestry and Water Economy
MSDP	Market support and direct payments
NBRNM	National Bank of the Republic of North Macedonia
NEA	National Extension Agency
NPV	Net Present Value
PDO	Project Development Objective
PEMP	Public Enterprise for Management of Pasture
PMEF	Performance Monitoring and Evaluation Framework
PMT	Project Management Team
POM	Project Operations Manual
PPSD	Project Procurement Strategy Document

RAP	Resettlement Action Plan
SDG	Sustainable Development Goal
SOE	Statement of Expenditure
SPD	Standard Procurement Document
STEP	Systematic Tracking of Exchanges in Procurement
TSA	Treasury Single Account
UNDB	United Nations Development Business
WUWM	World Union of Wholesale Markets

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
North Macedonia	Agriculture Modernization Project	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P168014	Investment Project Financing	Moderate

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[ ] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Disbursement-linked Indicators (DLIs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
30-Jan-2020	30-Jun-2025

Bank/IFC Collaboration

No

Proposed Development Objective(s)

Improve competitiveness in targeted agricultural sub-sectors and strengthen agricultural public sector readiness for EU accession.

Components

Component Name	Cost (US$, millions)
Agriculture Sector Competitiveness	35.10

Institutional Capacity for EU Accession	14.30
Project Management	1.10

Organizations

Borrower:	Republic of North Macedonia
Implementing Agency:	Ministry of Agriculture, Forestry and Water Economy

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	54.90
Total Financing	54.90
of which IBRD/IDA	50.50
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	50.50

Non-World Bank Group Financing

Other Sources	4.40
EC: European Commission	4.40

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2020	2021	2022	2023	2024	2025	2026
Annual	0.32	2.15	3.24	5.46	9.62	11.88	17.84
Cumulative	0.32	2.47	5.70	11.16	20.78	32.66	50.50

INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture and Food

Contributing Practice Areas

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Substantial
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Substantial
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Moderate
9. Other	Substantial
10. Overall	Moderate

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants

Sections and Description

Unless otherwise agreed with the Bank, not later than two months after the Effective Date, establish and thereafter maintain throughout Project implementation a Project management team within MAFWE (PMT) and a technical committee with composition, resources, terms of reference, and functions acceptable to the Bank.

Sections and Description

Upon completion of the construction of the Collection and Conditions Centers and Agri-food Platform under sub-component 1.2 of the Project, the Government of North Macedonia, through MAFWE, shall enter into a separate management agreement (Management Agreement) with a public and/or private entity, under terms and conditions acceptable to the Bank.

Conditions

Type	Description
Disbursement	For expenditures under Disbursement Category (2), i.e. grants under sub-component 1.1, adopt a Grant Operational Manual in a manner acceptable to the Bank.
Type	Description
Disbursement	For expenditures under Disbursement Category (3), i.e. sub-component 2.3 execute and deliver Co-financing Agreement and all conditions precedent to its effectiveness or to the right of the Government of North Macedonia to make withdrawals under it have been fulfilled.

I. STRATEGIC CONTEXT

A. Country Context

1. **North Macedonia is a landlocked country at the heart of the Balkans, characterized by its mountainous terrain that is intersected by valleys and lowlands**. It is a transit region that sits on two of the ten Pan-European transport corridors, Corridor VIII and Corridor X. Its proximity to the European Union (EU) potentially provides the country with access to a large export market of 650 million customers. According to the last census of 2002, the population is about two million people, of which 25 percent live in the capital Skopje, 40 percent reside in rural areas, and the remaining share lives in smaller urban centers.

2. **An aging population and a long tradition of emigration pose challenges to productivity**. The projected population growth is nearly zero, and estimates based on census data from destination countries (mostly Western European countries and North America) suggest that more than 500,000 citizens reside abroad, one of the largest diasporas in the world as a percentage of the total population. Considering the small size of the workforce and low birth rates, the loss of even a small number of workers affects the overall pool of skills in the economy.

3. **The resolution of the decades-long dispute with Greece over the country's name marks a turning point in North Macedonia's history as an independent nation**. On June 12, 2018, the Governments of North Macedonia and Greece signed the Prespa Agreement[1] aimed at resolving the prolonged name issue[2]. The parliament in Skopje endorsed the necessary constitutional changes introducing the new name of "Republic of North Macedonia" on January 11, 2019. The use of the new name entered into force in February 2019 after ratification of the Prespa Agreement by the Greek Parliament. In parallel, North Macedonia signed the NATO accession protocol, a process that had stalled for years due to the dispute. In April 2018, the European Commission (EC) recommended the opening of negotiations with North Macedonia, but on October 17, 2019, the Council of the EU failed to reach the decision on opening negotiations with North Macedonia. The Council will revert to the issue before the EU-Western Balkans summit in Zagreb in May 2020.[3] Following the European Council's decision, the Prime Minister announced early elections which all political parties agreed to hold on April 12, 2020.

4. **North Macedonia has a good track record of sound macroeconomic management and business environment reforms**. The country managed to decrease public debt from 43.2 percent of Gross Domestic Product (GDP) in 2002 to 23 percent in 2008. Prudent macroeconomic policies prior to the global financial crisis enabled it to create the space for a countercyclical fiscal policy. This fiscal stimuli for public employment, pensions, and public works helped largely mitigate the crisis impact in 2008–09 and again in 2011–12. To spur investment, the Government spent more on road and civil infrastructure and abolished the profit tax on reinvested earnings for 2009 to 2014. It lengthened the list of goods given preferential tax rates; exempted tax for foreign direct investment in technological industrial development zones; and supported consumption by ad hoc pension hikes, a reduction of social insurance contribution rates, and employment subsidy schemes. Monetary policy was also accommodative. The National Bank of the Republic of North Macedonia (NBRNM) reduced interest rates to encourage credit growth and avoid deposit withdrawals. These measures helped the economy to grow at an average of 2.3 percent from 2012 to 2017, despite the political uncertainty during 2015 to 2017

[1] The text of the agreement can be found at https://vlada.mk/sites/default/files/dokumenti/spogodba-en.pdf
[2] The country became a member of the United Nations in 1993, but because of a dispute with Greece over the use of the name Macedonia, it was admitted under the provisional description of "the former Yugoslav Republic of Macedonia."
[3] Council of European Union, https://www.consilium.europa.eu/en/meetings/european-council/2019/10/17-18/

that adversely affected investors' expectations and led to a temporary recession during 2017. Yet, they also exhausted fiscal space since it built up debt to above 48 percent of GDP by 2018.

5. **Growth and fiscal measures helped increase employment and reduce poverty after 2009**. The employment rate increased by 10 percentage points to above 45 percent in 2018. Job creation was supported mainly by public spending for large-scale public projects, new active labor market policies and Government support for employment in Special Economic Zones. Growth has also been pro-poor. Between 2009 and 2018, poverty fell by about 14 percentage points from 35 to 21 percent.[4] It is estimated that during these nine years, 287,000 people were lifted out of poverty. However, unemployment is still high at 17.5 percent in June 2019, and labor-force participation is low, especially for those younger than 25 and older than 55, and for women. In addition, poverty remains high in rural areas, and the reduction in poverty since 2009 has not been sufficient to close rural-urban gaps in living conditions. While the urban poverty headcount is 17 percent the rural poverty headcount remains at nearly 30 percent.

6. **Despite the country's relatively moderate public and publicly guaranteed debt level, macroeconomic risks are significant.** A possible decline in growth related to deterioration in the external - prospects and geopolitical tensions in the region and (b) possible delays in the implementation of consolidation measures, and accumulation of new contingent liabilities. With the EU the country's main trading partner, slower EU growth than expected could dampen recovery of North Macedonia's economy, straining public finances and negatively affecting the fiscal and debt consolidation agenda. Lower economic growth than expected would make it more difficult to achieve the sustain the current level of agricultural subsidies. Given the increasing share of US dollar-denominated public debt, any appreciation of the US dollar would worsen debt metrics and strain public finances. Delays in undertaking consolidation measures and renewed accumulation of arrears and contingent liabilities – including during the pre-electoral season – could worsen refinancing options as a large part of public debt comes due in 2020–21. Support provided by all international partners helps ensure that the authorities remain committed to their ambitious reform program and actively move forward.

7. **The World Bank has been a partner of choice of the Republic of North Macedonia for over twenty-five years.** The current Country Partnership Framework (CPF, Report Number 135030-MK) was discussed on April 18, 2019. Its preparation was informed by broad consultations with various stakeholders, which included members of parliament, government institutions, opposition representatives, non-governmental organizations, academy, private sector. The result of the consultations is a CPF which aims to support North Macedonia's ability to achieve faster, inclusive and sustainable growth and provide its citizens with greater opportunities for a better life. The CPF is organized around three focus areas that will help North Macedonia (a) improve the environment for a dynamic private sector to enhance export-led growth; (b) strengthen human capital for inclusive development; and (c) build sustainability. Prepared after a prolonged period of political turmoil in the country when the World Bank engagement was compromised, the new CPF envisages an ambitious lending program in FY20 to address public finance challenges, modernize agriculture, improve energy efficiency of public buildings, and improve connectivity by investing in local roads.

8. **North Macedonia is highly vulnerable to natural hazards, including floods, droughts, forest fires, landslides, earthquakes and extreme temperatures that are amplified by climate change**. The flood risk is higher than in any other country in the Europe and Central Asia region. Agriculture is the most vulnerable sector to climate change. The annual damage to critical infrastructure from climate-related hazards is expected to double by 2020, and by 2080 it could be more than five times higher. A major flood or earthquake disaster could derail economic growth, affect critical

[4] Poverty is measured as absolute poverty using the poverty line for upper-middle income countries (UMIC), estimated at US$5.5/day in 2011 purchasing power parity (PPP)— the cost in UMIC countries of satisfying a minimum caloric requirement and typical non-food consumption.

infrastructure, cause losses in agricultural incomes, and disrupt rural livelihoods (North Macedonia Systematic Country Diagnostic, World Bank 2018). As temperatures rise and precipitation becomes more variable, droughts will particularly affect southern and eastern part of the country and jeopardize agricultural production and water quality in these regions.

B. Sectoral and Institutional Context

9. **Agriculture is a critical employer in the rural areas of North Macedonia and an important economic sector**. Full-time formal agricultural employment accounts for 18 percent of total employment. The sector also comprises a large number of part-time farmers and a significant number of informally employed. Primary agriculture contributes 11 percent to GDP and the agri-business sector is an important industry. The agri-business sector accounts for 19 percent of total manufacturing jobs and for 23 percent of total manufacturing turnover (World Bank, 2017). More importantly, the agri-business industry turnover is geographically evenly distributed across the country, which underlines the unique role that agriculture can play in promoting broad-based growth and jobs in rural areas. North Macedonia exports vegetables and fruit, tobacco, and beverages (mostly wine), sheep (mutton) and food products represent about 10 percent of total exports. The country's main markets for primary agricultural exports are the Western Balkans, the EU, and Russia.

10. **Agriculture development, however, remains below potential due to several structural constraints**. Primary agricultural production is characterized by low productivity. With an average farm size of less than two hectares and about half of the agricultural producers being semi-subsistent, the potential to sell surplus production to markets, produce at scale and higher quality, promote integration among small-scale producers into higher-value agricultural value chains, and introduce innovation is limited. In addition, smaller agricultural producers and agri-businesses lack access to new technologies and market opportunities, as well as quality agricultural knowledge and skills in various areas, including business management, quality management, logistics, financial literacy, and domestic and international marketing. Agriculture competitiveness is also constrained by the lack of access to inputs.

11. **Small producers mainly participate in short value chains that typically end at local green or wholesale markets**. Contract farming is not widely developed and transactions – in particular for small producers – remain largely ad hoc and contract breaches and delayed payments are frequent issues. Poor post-harvest management and practices, including poor sorting and grading and suitably packaging for transport, undermine product freshness and quality. In addition, North Macedonia has limited and technically outdated cold storage capacities, which are often not adequately located to serve producers and buyers efficiently. The sector requires the establishment of collection and conditioning centers and a food hub with adequate logistical arrangements as well as infrastructure, technology, and know-how to provide a full range of grading, sorting, and packing services that meet buyers' quality and delivery requirements. In addition, technology and capacity to meet food quality and sanitary-and phytosanitary standards to comply with traceability requirements to access the EU and other high-end markets need to be built gradually.

12. **The National Strategy 2012-2020 recognizes agricultural land consolidation as an important instrument to address fragmentation and to improve productivity**. More than 40 percent of the total area of arable land (approximately 240,000 hectares) and 80 percent of the pasture land (approximately 570,000 hectares) in North Macedonia is owned by the State. Nearly one third of the total arable land is either abandoned or not utilized for agricultural production. The farm structure is dominated by small family farms with an average farm size of less than 2 hectares. Pilot projects, funded by the EU and implemented by the Food and Agriculture Organization of the United Nations (FAO) in cooperation with the Ministry of Agriculture, Forestry and Water Economy (MAFWE), have recently initiated the land consolidation process in two regions with the objective to enlarge farm size, optimize farm holdings in

order to increase efficiency of agricultural production and establish necessary infrastructure, including roads and irrigation structures. The state-owned agricultural land represents a valuable asset and provides the opportunity to develop more competitive and productive family farms. At the same time, potential exists to develop a more vibrant agricultural land market, both for land leases and land ownership, which could help facilitate sector modernization. The efforts on land consolidation will remain relevant also in the new national strategy in line with the longer-term goal of increasing agricultural productivity.

13. **Management of state-owned agricultural land remains challenging**. There is currently no single, unified policy or law on public land, its administration or its management. The responsibility for protecting and utilizing state land lies with different organizations depending on whether land is arable, pasture or forest. Management of arable state-owned land falls under the responsibility of MAFWE, management of pasture under the responsibility of the Public Enterprise for Management of Pasture (PEMP), and management of forests under the Public Enterprise for State Forests "National Forests". The Agency for Real Estate Cadastre (AREC) is a national registration agency for all types of land and other real estate objects, recording their physical characteristics, and ownership and related rights. There is no reliable and up-to-date inventory of state land, and the reliability, actuality and correctness of data on state land registered with AREC is not known. For all the institutions involved, it is challenging to manage state land in a sustainable and financially responsible manner, throughout its life cycle, and to support an optimal, cost-effective and efficient delivery of Government programs.

14. **Crop production dominates the agricultural production with an average share of 75 percent in total value. The remaining 25 percent originates from livestock production, where enhancing food safety is of particular concern**. Although food safety standards have improved, food safety and veterinary policies, as well as required infrastructure are not yet aligned with EU standards. In the past few years the systems have received considerable support from the EU Instrument of Pre-accession Assistance (IPA) for harmonizing the national legislation with the EU *Acquis communautaire*, which describes the rights and binding obligations of EU Member States. Aligning food safety standards with EU requirements is essential to successfully grow the food-processing industry and free the movement of agricultural produce in the market. This will also enhance the traceability of the products origin and processing which will improve access to market. As North Macedonia moves towards EU accession, MAFWE's key objectives are to: (a) upgrade its food safety establishments for products of animal origin, including establishments for animal by-products and (b) set-up an EU compliant system for official control of live animals and animal products. The EU is in the process of programming its IPA 2019 with the MAFWE, in which an indicative budget of EUR4.5 million, out of total EUR9 million required, has been allocated towards establishment of a compliant and dedicated system for disposal of animal by- products (ABP) in line with EU requirements.

15. **The Government's current agricultural support measures are not effective in overcoming these sector constraints and are not stimulating investments**. Public support for agriculture has been highly generous in recent years. Between 2010 and 2015, annual budgetary transfers to farmers represented 1.14 percent of GDP and on average were double that of other Western Balkan countries and almost 60 percent higher than the EU28 average. Market support and direct payments (MSDP) per output and area/ animal represent 80 percent of agriculture budget outlays on average. The high share of MSDP has raised questions on the effectiveness of this type of support and its capacity to facilitate the necessary structural adjustments, e.g. land and farm consolidation, productivity enhancement, and modernization through technology investments. The support payments are also skewed towards only a small number and often lower-value products: tobacco received 27.7 percent of total MSDP support (EUR100 million in total or EUR4,350 per tobacco farmer household) although it contributes only 5.1 percent to total agricultural output. Field crops received 14.9 percent of MSDP support, followed by vineyards, grapes, and wine (12.2 percent); cattle (9.3 percent); milk (8.4 percent); fruits

and vegetables (5.2 percent) and sheep and goats (4.5 percent). These support payments entail few incentives for farmers to modernize their practices, and at the same have not been effective in alleviating poverty nor proven to be an effective rural safety net. A rebalancing of public support from the current MDSP toward broader rural development measures in line with EU best practices could bring greater efficiency gains at the farm-level and allow for a better use of public resources.

16. **MAFWE is responsible for sector policy design, management and coordination**. The implementation of agricultural and rural development programs, including national projects and the Instrument for Pre-accession Assistance for Rural Development (IPARD) lies with the Agency for Financial Support in Agriculture and Rural Development (AFSARD), i.e. the Paying Agency. Advisory services are provided by the National Extension Agency (NEA), which operates through 33 local units and supports farmers in their applications for IPARD funds. The Food Safety and Veterinary Agency (FVA) is responsible for food safety and veterinary activities, while the Phytosanitary Directorate of the MAFWE is responsible for phytosanitary control and prevention. Since 2014, the Inspection Services for Agriculture have become a distinct institution. Local governments do not have an explicit agricultural mandate, but most of them employ agricultural and environmental service staff, which mainly provide advice to local farmers on how to apply for IPARD funds for on-farm investments. In general, advisory services that foster improved production and post-harvest practices as well as entrepreneurial skills, such as business management, quality management, logistics, financial literacy, and domestic and international marketing, are rare.

17. **Overall institutional capacity in the sector is weak.** Public agricultural services often do not meet the needs of farmers and agribusinesses to address and comply with the veterinary, phytosanitary, and food safety requirements. In addition, MAFWE Sector for Rural Development, which is responsible for planning, programming, managing, and carrying out the monitoring and evaluation (M&E) of the rural development and national agriculture support program, has no M&E system in place to assess program and policy effectiveness and provide evidence-based decision support to Government for policy reform and adjustment. The M&E system is fragmented within the Ministry with various MAFWE departments collecting their own data not linked to a single integrated data platform.

18. **AFSARD capacity is weak and requires further strengthening to ensure the implementation of an increasing volume of the national and IPARD measures.**[5] Specifically, the ongoing IPARD II program for 2014-2020 envisaged a maximum EU Contribution for IPARD funds of EUR60 million for five measures.[6] In addition to the three accredited measures, IPARD II includes *Investments in rural public infrastructure* EUR9.1 million and *Technical Assistance* EUR2.4 million, for which North Macedonia will not receive accreditation before the end of the IPARD II cycle, given the limited human resources capacity of the Paying Agency. In order not to lose the EUR9.1 million allocated to the *Investments in rural public infrastructure* the EU has agreed the EU has agreed for it to be reallocated to the following measures: *Investments in physical assets of agricultural holdings*; and *Investments in physical assets concerning processing and marketing of agricultural and fishery products*. However, capacity of the Paying Agency will need to be enhanced in order to increase the processing of applications and absorption of the accredited and future funds.

[5] The EU provides access to IPARD funds through the "Entrustment of budget implementation tasks for EU IPARD funds" which certifies that the country has established structures, systems and procedures in compliance with EU requirements for specific entrusted measures. North Macedonia obtained entrustment of budget implementation for Measure 101 "Investments in physical assets of agricultural holdings", Measure 103 "Investments in physical assets concerning processing and marketing of agricultural and fishery products", and Measure 302 "Farm diversification and business development" in March 2009.

[6] The five measures are: (i) Investments in physical assets of agricultural holdings; (ii) Investments in physical assets concerning processing and marketing of agricultural and fishery products; (iii) Farm diversification and business development, (iv) Investments in rural public infrastructure, and (v) Technical Assistance.

C. Relevance to Higher Level Objectives

19. **The Government has identified agriculture as one of its economic priorities.** The *National Strategy for Agriculture and Rural Development 2014-2020* sets the objectives, policies and measures to develop agriculture and rural areas in the country. The Strategy's key policy goal is "increasing the competitiveness of North Macedonia agriculture and food industry, rural development and sustainable management of natural resources", with four specified priority areas: (a) the improvement of technological and market infrastructure; (b) strengthening integration in the agri-food sector; (c) providing access to production factors; and (d) improving rural infrastructure. The proposed project would, in particular, support the first three priority areas of the National Strategy.

20. **The proposed project is aligned with the World Bank CPF 2019-2023 for North Macedonia (Report Number 135030-MK, April 18, 2019).** Specifically, it responds to the CPF objective to improve connectivity and access to markets. The CPF stipulates support investment in agricultural modernization and expansion access to markets. Through advisory services and establishment of purchasing and distribution centers, the project aims to increase capacity to adopt technology and innovate and increase sector competitiveness through uptake of improved production practices by agricultural producers and increased access to domestic and international markets. The project is also in line with IBRD engagement goals, one of which is to contribute to a more productive rural economy with the potential to increase incomes for underserved groups that face greater barriers to achieving sustainable livelihoods, such as women, young people, and minority groups.

21. **The Government is committed to combat climate change.** North Macedonia is a party of the United Nation Framework Convention on Climate Change (UNFCCC) (Official Gazette of RM – 61/97), has ratified the Kyoto Protocol (Official Gazette of Republic of Macedonia - 49/04) and has associated itself with the Copenhagen Accord (2009). The country has also signed (in 2015) and ratified (in 2017) the Paris Agreement. Under the Paris Agreement, the country became the twenty-third in the world to submit its Intended Nationally Determined Contributions (INDC) for Climate Change as per the Decision of the Government No. 42-17/91 of 28 July 2015. Furthermore, North Macedonia is a Contracting Party of the Energy Community, which is movingly quickly to implement EU regulations on measurement, reporting and verification for greenhouse gas (GHG) inventories and steps taken to address climate change. Finally, North Macedonia has adopted targets for the Sustainable Development Goals (SDGs), including SDG 13, "Take urgent action to combat climate change and its impacts." The legal framework on climate change currently falls under the Law on Environment, including the details for the development of national GHG inventories.[7] The proposed project will support the country's efforts to contribute to the INDC goals by implementing climate change adaptation and mitigation activities, as well as activities that will reduce GHG emissions in the agricultural sector.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

Improve competitiveness in targeted agricultural sub-sectors and strengthen agricultural public sector readiness for EU accession.

[7] Biennial Update Report on Climate Change, October 2017

PDO Level Indicators

22. The achievement of the project outcomes will be measured through the following PDO-level indicators:

(a) **Farmers adopting improved agricultural technology.** (Definition: This is a corporate results indicator. In the context of the project, this indicator measures the number of project beneficiaries who have adopted an improved agriculture technology promoted by the project. This refers to beneficiaries' acquired knowledge in modern production techniques, including better pest and disease control, improved production practices, and climate-smart practices, which will allow them to be more competitive in the market.)

(b) **Percentage of agricultural produce marketed in compliance with quality standards.** (Definition: This indicator measures the changes in quantity and quality of marketed agricultural produce by using information from the records of the Collection and Conditioning Centers (CCCs) on (a) volume purchased from beneficiary farmers and (b) produce class sorting for the main project-supported crops. Improvements are expected in terms of volume bought by the CCCs and the quality of the produce, reflecting enhancements related to food safety, food hygiene and product quality classifications.)

(c) **Share of EU CAP 2021-2027 Performance Monitoring and Evaluation Framework Indicators recorded in North Macedonia.** (Definition: This indicator measures the change of the Monitoring and Evaluation system for agricultural and rural development policy design and implementation supported by the project in terms of its coherence with the European Union's Common Agricultural Policy post-2020 requirements, as envisaged in the CAP post-2020 Performance Monitoring and Evaluation Framework.)

(d) **Tons of animal by-products safely disposed annually at the animal by-product facility.** (Definition: This indicator measures the change of safely disposed ABP at the project-supported facility, in compliance with EU requirements.)

B. Project Components

23. The project aims to improve the competitiveness of North Macedonia's agriculture sector and strengthen public institutions in the framework of the country's accession process to the EU. The project is structured along three complementary components:

Component 1: Agriculture Sector Competitiveness (EUR32.0 million)

24. Component 1 aims at enhancing farm-level competitiveness and fostering agricultural produce aggregation and integration of farmers to domestic and/or export markets. The component activities focus on technical assistance (through training and advisory services) and off-farm infrastructure investments to complement existing IPARD measures in on-farm productivity-enhancing investments. It includes the following two sub-components:

25. **Sub-component 1.1 - Access to Training and Advisory Services (EUR1.30 million).** The sub-component aims at providing high-quality training and advisory services for agricultural producers and agribusinesses in two formats: First, it will support targeted trainings on specific topics relevant for the beneficiaries of the CCCs and the Agri-food Platform (AFP) to be established under sub-component 1.2 in the project areas (Resen, Strumica, Skopje). Such topics are envisioned to include but not limited to: improvement of crop varieties specifically for exports; Global Good Agricultural

Practices (GAP); organic agriculture, and climate smart techniques. These trainings will be extended also to the NEA advisors, to increase their capacity. Second, it will provide financial support to producers and agribusinesses throughout North Macedonia in form of matching grants for on-demand advisory services by qualified advisors. Given the existing advisory services by NEA or local government agricultural service staff that primarily support producers' applications for IPARD funds, the project-supported services are expected to enhance access to quality advise on improved production and post-harvest practices, business management skills[8], marketing, etc. This will be done through the establishment of an Advisory One-stop Shop that is expected to strengthen the attractiveness of the CCCs to be established under sub-component 1.2.

26. Specifically, sub-component 1.1 will provide financing for technical assistance and consultants' services to: (a) carry out a skills needs and training analysis of agricultural producers and processors in the project areas; (b) develop a database of vetted local consultants with extensive knowledge and expertise in various fields, including agricultural production/processing, distribution, business planning and management, product innovation, marketing and sales and others; (c) develop a manual of the principles and application procedures for project technical advisory services, including eligibility criteria, contribution ceilings etc.; (d) develop and carry out a public awareness and information dissemination program about the project's technical advisory support program; and (e) the provision of approved eligible advisory services to farmers. The information dissemination activities and the management of application process for technical advisory assistance will be managed under the responsibility of the MAFWE and the NEA branch offices.

27. The project will finance a minimum of 50 percent of the cost of the technical advisory services per eligible approved recipient farmer, based on comparable cost-sharing activities in other projects in the region. Criteria to be considered in the application would also include support to "public goods" elements, such as agri-environmental practices to reduce GHG emissions, adoption of water/ energy efficient technologies, and climate-smart technologies[9], or for specific support to woman, young and small farmers. Introduction of climate resilience and mitigation technologies in the agricultural sector will lower the impacts of climate change to small and medium farmers and build their capacity to better adapt to future climatic pressures. The sub-component – through technical advisory services – would also promote the adoption of digital technologies, including online platforms, videos and other e-extension tools, in particular to attract North Macedonia's young agricultural labor force (40 percent of the agricultural land holders were under 45 years old in 2013).

28. **Sub-component 1.2 - Agriculture and Food Distribution Systems (EUR30.7 million).** This sub-component aims to develop sustainable and competitive food storage and distribution systems to benefit producers, distributors and consumers. The newly constructed centers will include storage capacity to help agricultural producers adapt to the risk of extreme climatic changes by preserving their produce during harsh winters and hot summers. The newly constructed food storage and distribution systems will be designed and built with high energy efficiency standards and the options for use of solar energy will be explored to further reduce GHG emissions; the anticipated impacts of climate change and climate related risks at the three locations will be considered to ensure climate resistance of new systems. The sub-component will support the development and operation of two CCCs in Resen and Strumica municipalities, and an AFP in Skopje suburban area, composed of a wholesale market and a logistics area. Specifically, the sub-component project

[8] Given the increased regulation and transparency on the issue of labor standards in the agribusiness value chain in the EU (such as formulated in the 2015 Modern Slavery Act), trainings will ensure to highlight the need to comply with these regulations in particular related to seasonal, casual and transient workers.

[9] These may include Technical Assistance to identify climate-smart technologies such as soil-crop management, improved livestock feeding, conservation tillage, windbreak barriers, mulching/soil cover, improved irrigation efficiency, water storage/rain harvest, shading/anti-hail nets, manure treatment, drainage, use of biofertilizers, compost, integrated pest management, solar refrigeration, solar heating systems and energy efficiency equipment in processing facilities, appropriate grain storage to limit pest infestations among others.

will support: (a) technical assistance for the preparation of feasibility studies, business plans, environmental and social impact assessments, and detailed designs and construction supervision plans for all three facilities; (b) civil works for the construction of three facilities; and (c) operational guidance for the start-up of activities. The facilities are expected to be built on state-owned land and will be owned by the State. The CCCs will be managed through a public delegation service contract to a private operator (cooperatives and/or agri-food sector company). For the AFP, two options have been identified: (a) a public delegation service contract to a private experienced operator and (b) a public delegation service contract to a semi-public company, with technical assistance for training of local personnel to operate and guide the market operation for several years. Details on the CCCs and AFP and the operational management arrangements are discussed in Annex 1.

Component 2: Institutional Capacity for EU Accession (EUR13.0 million)

29. Component 2 aims at enhancing public support services, including the capacity to design and deliver effective support to the agriculture sector. It includes following three sub-components:

30. **Sub-component 2.1 – Evidence-Based Policy-Making (EUR6.5 million).** The sub-component will support two key activities: (a) the establishment of a M&E system for agricultural and rural development policy design and implementation and (b) an information system for management of state-owned agricultural land. Technical assistance, goods, training and study tours will be supported to strengthen the MAFWE capacity for effective M&E and evidence-based policy making. Technical assistance will be provided for:

- Establishing an M&E system consistent with Common Agricultural Policy (CAP) post-2020 requirements, as described in the recent legislative proposals of the EC. The M&E system will allow to record all relevant indicators -- context, output, result and impact -- as envisaged in the CAP post-2020 Performance Monitoring and Evaluation Framework (PMEF) to guide evidence-based decision making in both agriculture and rural development policy, including associated data collection, surveys, and evaluations.
- Strengthening MAFWE's capacity to re-design the existing direct payment scheme in a manner that facilitates compliance with current EU farm income support measures and integration of rural development measures into a common policy framework.
- Mapping data currently collected (in terms of both variables and software/hardware environment) to assess (a) the needs for and identify data variables to be stored in the platform and (b) the necessary software and hardware infrastructure. The sub-component will provide support to establish one integrated data platform that includes all relevant data associated with agriculture and rural development that is currently compiled by various MAFWE Departments, AFSARD, NEA, State Statistical Office, and others for decision making at central level.
- Identifying a set of agriculture and rural development performance and impact indicators that can guide evidence-based decision-making aligned with the CAP 2021-2027 PMEF.
- Developing data update and quality control procedures.
- Facilitating the creation and functioning of an agricultural and rural development evaluation system, including support for ex-ante, ex-post and thematic evaluations to be carried out by independent experts.
- Creating an information system to improve climate knowledge as well as an information platform with key climatic variables and data to be available to all agricultural stakeholders at the national level.

31. Goods provided for this aspect will include the necessary software and hardware to store existing historical data into both the integrated platform and the satellite databases specific to MAFWE Departments and Institutions in order for all databases to be compatible between them and at the same time, able to transmit data variables to the integrated platform, in accordance to future policy analysis needs. Training for building MAFWE's capacity on M&E, policy analysis capacity, and evaluation quality control and on the use of evaluation findings for policy analysis.

32. Sub-component 2.1 will also strengthen MAFWE's capacity to manage state-owned agricultural land and provide technical assistance, advisory services, and goods (where required):

- Assisting MAFWE in drafting a Government policy on state land administration and management and of relevant legal framework updates;
- Improving data quality and records of leased state arable land and pastures with the AREC;
- Designing and creating a temporary inventory for state arable land and pastures;
- Supporting the data migration on leases of arable land from the MAFWE electronic system, out of maintenance since 2012, from spreadsheets and paper records of MAFWE and PEMP, into a temporary inventory to allow use of the data while developing the new state agricultural land management information system;
- Establishing a new state agricultural land management information system, including equipment and software, assuring interoperability with the systems of AREC, Ministry of Finance, the Paying Agency (Farm Register) and other institutions;
- Ensuring data migration from the temporary inventory into a new state agricultural land management information system and creating a publicly accessible inventory for state agricultural land in support to transparency and good governance; and
- Analyzing and reengineering of business processes in state agricultural land management to achieve better efficiency and transparency.

33. While project support is limited to strengthening MAFWE capacity to manage state-owned agricultural land, a better managed state-owned agricultural land is expected to support the development of the agricultural land market, both related to leasing and ownership, which in turn will facilitate the consolidation efforts supported under other projects.

34. **Sub-component 2.2 - IPARD Implementation Capacity (EUR2 million).** Sub-component 2.2 aims to strengthen AFSARD (Paying Agency) capacity for the implementation of the IPARD accredited measures, in particular for Measure 101 "Investments in physical assets of agricultural holdings", Measure 103 "Investments in physical assets concerning processing and marketing of agricultural and fishery products" which will receive an increase in allocation of EU grant contribution of EUR9.1 million, as well as future measures planned to be accredited, namely the "Improvement and development of rural infrastructure" measure. AFSARD has recruited some 46 new staff (June 2019) and is expected to recruit an additional 21 staff by end of 2019 to ensure adequate staff numbers capacity for the implementation of the accredited measures (as assessed in the workload analysis). The sub-component would support: (a) the renovation of a suitable office building to be identified by the Government to accommodate increased AFSARD staff and (b) office furniture and information technology equipment. The renovation of the office building will include measures to increase energy efficiency, reduce GHG emissions, and increase climate resilience.

35. **Sub-component 2.3 - Safe Disposal of ABPs (EUR4.5 million (IBRD); EUR 4 million (EU IPA grant).** Sub-component 2.3 will support technical assistance, civil works, and goods required for the establishment of an ABP safe disposal system compliant with the provisions stipulated in the EU negotiations Chapter 12 Food safety, veterinary and phytosanitary policy. This will also include support for the operationalization of an ABP control system along the entire chain (production, separation, storage, transport, disposal and/or processing); which comprise also training of inspectors and business operators; establishing documented procedures and check lists for the approval of establishments and inspection thereof, completing the alignment as necessary of the legal and regulatory framework in line with the current and relevant EU acquis; and launching a public information and awareness campaign for the food production and processing industry. Currently ABP are not collected separately; they are discarded together with the other waste and disposed of in landfill sites and dumps. Therefore, this sub-component is expected to significantly reduce GHG emissions from livestock disposal following the establishment of an ABP safe disposal system that is in line with national and EU legislation.

Component 3: Project Management (EUR1 million)

36. Component 3 aims to supporting MAFWE in the efficient implementation of the project; assuring compliance with fiduciary (financial management, procurement), environmental and social safeguards, and M&E requirements according to the agreed project implementation arrangements. Specifically, the component will the provide technical assistance, goods and incremental operational costs associated with the establishment of the Project Management Team (PMT), which will be staffed with a Project Director, Project Coordinator, Component Leaders, Procurement Specialist, Financial Management Specialist, Safeguards Specialist, and Technical Specialists. Staff and civil servants of the MAFWE, AFSARD and FVA will be appointed as Component Leaders for the relevant activities. The PMT will also manage the project's grievance redress mechanism (GRM) and citizen engagement activities. Support for project implementation will also include: provision of technical assistance for the day-to-day coordination, additional technical support, as needed, as well as for fiduciary (procurement, financial management) and safeguards (environmental, social) requirements; training, equipment and incremental operating costs to support project management and monitoring. It will also support financial audits and surveys as required for monitoring and evaluation of project results and impacts.

C. Project Beneficiaries

37. Project support related to the construction of CCCs and an AFP will be implemented in Resen, Strumica and Skopje. Project support for advisory services, various information systems, ABP safe disposal, M&E will be implemented country-wide.

38. Direct beneficiaries of the project comprise: individual agricultural producers, farmers associations, organizations and cooperatives, agricultural holdings/enterprises, traders, wholesalers, that are expected to benefit from the establishment of the collection and conditioning centers. The project is expected to reach about 1,000 producers and processors with advisory service and targeted training; in addition to about 120 advisers; 300 producers, 200 workers in the peak season in Resen and Strumica directly benefitting from the CCCs, and in Skopje about 400 among smallholders, wholesalers, logistics services providers and workers at the AFP. In addition, these activities will indirectly benefit consumers thanks to the increased quality of agri-food products.

39. Livestock producers and about 60 large meat processors will directly benefit from the establishment of the ABP management system, while the population will be the indirect beneficiary as the fast collection of waste within the food establishments is crucial for the prevention of food materials becoming contaminated.

40. Government institutions will also be directly benefitting from the project through capacity building, training, and study visits, including: (a) about 50 MAFWE staff from various departments, including: Rural Development Sector, Agriculture and Policy Analysis, Sector for Registration, Improvement, Management and Sale of Agriculture Land; (b) about 200 AFSARD staff; (c) PEMP staff, and (d) FVA staff, including inspectors.

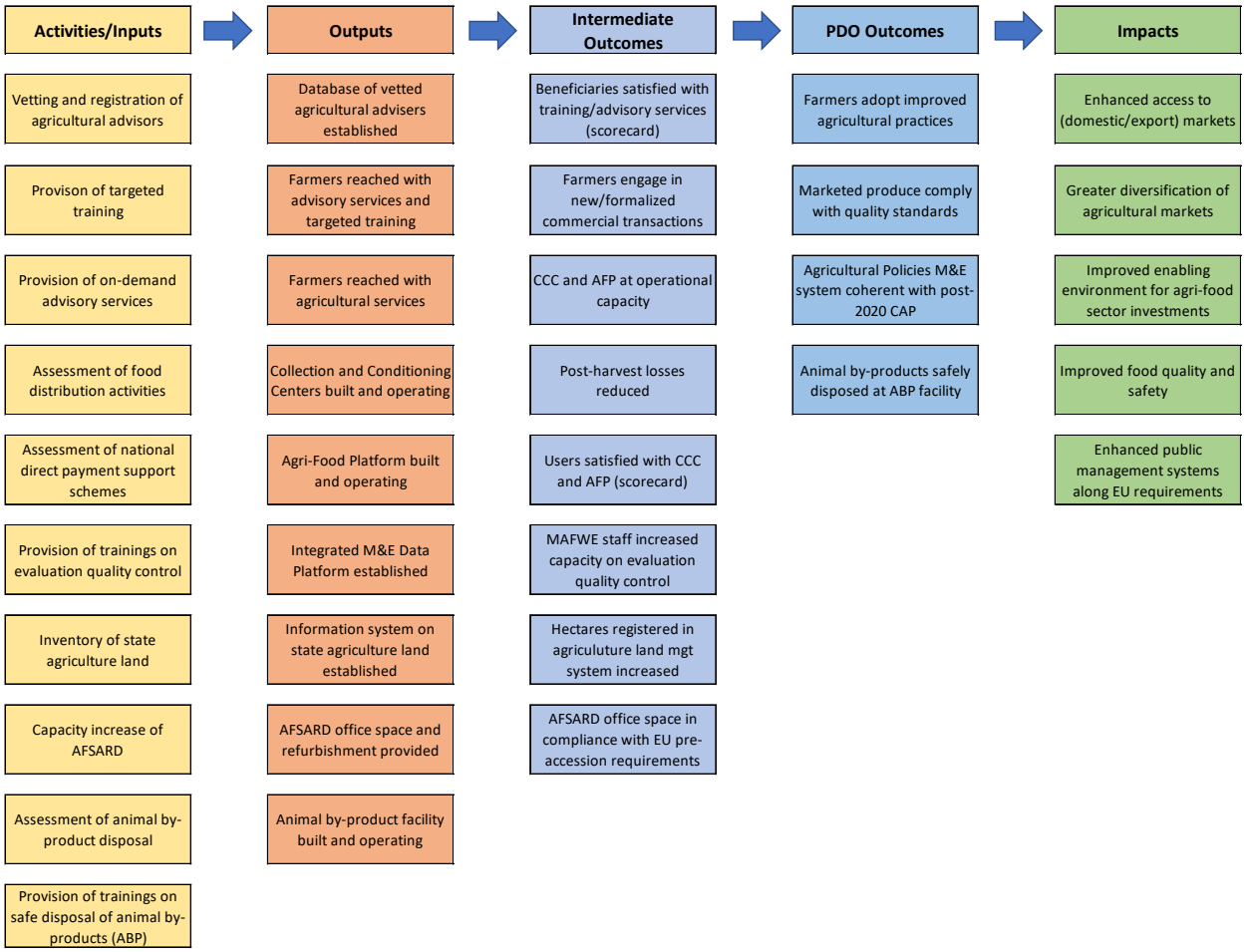
41. The project will pursue the creation of equal opportunities for women and vulnerable groups to increase participation, including in benefitting from the advisory one-stop shop activities.

D. Results Chain

42. The project aims to address structural constraints in the agriculture sector of North Macedonia, improve agricultural producers' competitiveness and market access, and strengthen public agricultural institutions and services. Improved competitiveness refers to farmers' ability to produce agricultural products that meet quality requirements for sale in agricultural product markets, including export markets with stricter quality and food safety requirements, through formalized commercial transactions. The results chain logic supporting the project's aim is based on a two-pronged approach: (a) through the provision of targeted and demand-driven technical and business training and advisory services, the project will promote agronomic practice improvements to enhance disease/pest management, reduce production inefficiencies, support the conversion to higher quality and/or high-value crops, and improve business management and marketing, among others and (b) through the establishment of the Resen and Strumica CCCs, the project will facilitate produce aggregation, sorting by quality categories, (temperature controlled) storing, packaging and logistics to meet different market/buyer requirements.

43. The CCCs are to foster farmers' market integration by providing information on quality requirements of different destination markets, and by supporting the formation of formalized commercial transactions between producers and buyers. This is expected to lower existing transaction costs, such as contract breaches and delayed payments, and to broaden producers' access to local and/or regional value chains. In addition, the Skopje AFP will be the focal infrastructure for the organization of fresh food distribution systems in North Macedonia (in particular for fruits and vegetables), allow smallholder producers of the region to access the market, and the main operators of the sector to organize their activities through synergies and economy of scales. The project also complements these activities by strengthening institutional capacity to enhance North Macedonia's readiness for EU accession. In particular, specific activities are targeted at: (a) MAFWE's policy-making based on evidence for enhanced sector support services; (b) AFSARD capacity in line with pre-accession requirements; and (c) compliance with safe disposal of ABPs. In addition, the project supports improvements in the management of state-owned agricultural land. Figure 1 displays the Theory of Change underlying the proposed project design.

Figure 1. Theory of Change AMP



E. Rationale for Bank Involvement and Role of Partners

44. The proposed project is an important engagement of the World Bank in the agricultural sector of North Macedonia. The last agricultural operation in the country was the Agricultural Strengthening and Accession Project which closed in December 2012. Since then, engagement in the sector has been carried out through technical assistance, including for a public expenditure review and a functional review of the agriculture sector public institutions.

45. The range and complexity of public and private sector issues to be addressed under the proposed project require high-level expertise. The World Bank Group has extensive experience internationally, in the Western Balkan region, and in North Macedonia in supporting different agents of the agriculture sector, enhancing competitiveness and market integration, and strengthening agricultural public-sector institutions. It also has taken and is recognized for an incremental approach towards meeting EU requirements. In particular, the proposed project builds on the work done and lessons learned from the above-mentioned Agricultural Strengthening and Accession Project, the ongoing Functional Review of the MAFWE and related institutions, such as the NEA, the State Agriculture Inspectorate, the Phytosanitary Directorate, the State Phytosanitary Laboratory, and the Seed and Seedlings Authority.

46. The Project has taken into account the Maximizing Finance for Development approach. It has assessed the market failures in the fruit and vegetable value chains and proposes public interventions for enhancing private sector investments and solutions to address these market failures. The key identified market failures for the value chains to be supported by the project are: (a) exclusion of the majority of smallholders from the targeted value chains; (b) lack of required public investments available; and (c) inadequate standards to enter high-value (exports) markets. The project will address (a) by providing inclusive access to grant finance for knowledge and information on improved production and business skills through vetted agricultural advisory services; (b) by supporting public investments and service provision through the CCCs and AFP; and (c) by providing targeted trainings on Global GAP and standards, such as for exports to the EU.

47. Through its continued engagement in the Western Balkans and elsewhere, the World Bank Group has established strong relationships with relevant development partners active in North Macedonia, particularly the EU and FAO. The proposed project is expected to leverage potential funding from the EU and to benefit from FAO technical support during project preparation and implementation.

48. The agricultural sector of North Macedonia has continuously benefitted from receiving support from EU IPA funds, mostly providing support for capacity building necessary for alignment of the legislation harmonized with the *acquis communautaire* and its implementation. These activities include, among others, introducing EU hygiene rules for food production to ensure a high level of food safety; the rules to ensure animal health and welfare, the safety of food of animal origin and animal nutrition, the quality of seed, plant protection material and protection against harmful organisms. In particular with regard to Chapter 12 Food Safety, Veterinary and Phytosanitary Policy, the EU has supported the development of a Strategy for ABP. In this regard the project will partner with EU, which will provide co-financing in the amount of EUR4.5 million to jointly implement Sub-Component 2.3 “Safe disposal of ABPs”.

49. FAO is also active in supporting the agricultural sector of North Macedonia. In particular, the FAO funded project “Support to Privatization of State Agricultural Land” has analyzed the legal and institutional framework related to sale and management of state-owned agricultural land, providing policy recommendation to improve farm structure and ensure access of smallholders to additional land. Recommendations are also provided for the optimal use of state land to catalyze the land consolidation process including the options for land banking. This project complements the ongoing EU funded and FAO implemented project “Mainstreaming of the National Land Consolidation Programme” (MAINLAND). The project will facilitate projects under the MAINLAND, as well the future Government supported programs by creating an up-to-date inventory of state agricultural land with state-owned land that could be used in the process of land consolidation.

F. Lessons Learned and Reflected in the Project Design

50. Project preparation has benefitted from the implementation experience of several similar projects as well as analytical work in the agricultural sector in countries of the Western Balkans with objectives associated with EU pre-accession or/and EU accession requirements, including in Croatia, Kosovo, Montenegro, Serbia, and Bosnia and Herzegovina. The North Macedonia Public Finance Review 2019 highlights the need to rebalance of public support to the agriculture sector from market (price) support and direct payments toward broader rural development measures, along with the modernization of farms and prioritization of high-value production to improve farm efficiency and productivity.

51. The key lessons from these activities and studies have been reflected in the project design, including the need for (a) improved management of public expenditures; (b) timely investments in strengthening capacity of the national agricultural/rural development agencies in meeting EU accession requirements; (c) mechanisms and capacity of both institutions and beneficiaries to implement EU support programs; (d) mainstreaming agri-environmental measures and climate smart agricultural activities in agricultural support programs; and (e) investment support to farmers and processors in upgrading their activities in line with EU food safety, environmental and animal and plant health standards and cross-compliance requirements.

52. Based on the recommendations of the Functional Review of the MAFWE conducted by the World Bank[10], the MAFWE needs to strengthen its M&E capacity to assess the effectiveness of its agricultural and rural development support policies and programs and provide evidence-based decision support to Government for policy reform and adjustment. Sub-Component 2.1 has been specifically designed to address these shortcomings. It will be especially important to implement these activities in view of the country's EU accession ambition and taking also into account the EU generous support provided to agriculture and rural development in the country.

53. The project is also based on the experiences and lessons learnt from programs funded by other development partners in North Macedonia, including the Advice for Small Businesses Program implemented by the European Bank for Reconstruction and Development (EBRD) and the Increasing Market Employability Project supported by the Swiss Agency for Development Cooperation. Both programs provide customized advisory services to small and medium-sized businesses and individual entrepreneurs. The project will implement Sub-Component 1.1 "Access to Advisory Services" that is designed to promote the shift from generic agricultural extension services to better targeted, demand-driven, and specialized technical assistance to the agricultural producers.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

54. **Ministry of Agriculture, Forestry and Water Economy (MAFWE)**. MAFWE will be the lead implementing agency with overall responsibility for project management and implementation. AFSARD and the FVA will be supporting implementing and beneficiary agencies. Activities envisaged under sub-component 2.1 to strengthen MAFWE capacity to manage state-owned agricultural land will be implemented in collaboration with the PEMP and the AREC. The detailed implementation responsibilities of the participating agencies are described in Annex 4.

55. **Project Management Team (PMT)**. A PMT will be established in MAFWE to guide overall implementation and project management. The PMT will be headed by a Project Director and staffed with a Project Coordinator, Component Leaders, a Procurement Specialist, a Financial Management Specialist, a Safeguards Specialist, and Technical Specialists (civil engineer, etc.), as needed. The State Advisor for Rural Development (civil servant), who is also the MAFWE's Gender Focal Point, has been appointed by the MAFWE as Project Director. Staff and civil servants of the MAFWE, AFSARD and FVA will be appointed as Component Leaders for the relevant activities. Given the demanding specific requirement for the implementation of the project, it has been agreed that the Project will provide technical assistance for ensuring day-to-day project coordination, additional technical support as needed, as well as Bank fiduciary and safeguards requirements; training, equipment and incremental operating costs to support project management and monitoring.

[10] Analytical work funded by an EU-supported Trust Fund.

56. The PMT main responsibilities will include: (a) day-to-day project management; (b) coordination and cooperation among various institutions; (c) coordination with stakeholders, the Bank and co-financiers; (d) preparation of annual work plan and budget; (e) preparation and update as necessary of procurement plan; (f) preparation of quarterly unaudited financial reports and annual audited financial statements; (g) monitoring and evaluation of project activities, including updating of the results framework and monitoring and reporting of safeguards compliance; (h) preparation of semi-annual and annual progress reports; (i) briefing of MAFWE on the status of project implementation; and (j) systematic filing of all project-related documents (including procurement and financial management).

57. A Technical Committee, led by the Project Director and involving Project Coordinator, Component Leaders, as well as any additional staff as necessary will be established to ensure coordination at the operational level. The committee will include any technical staff on a case by case base according to the topics to be discussed and should meet at the least once a month to ensure there is good progress in planned activities, or in case it would identify bottlenecks and solutions to move forward.

58. Other supporting implementing and beneficiary agencies are AFSARD and FVA. Activities relevant to strengthen MAFWE's capacity to manage state-owned agricultural land will be coordinated with AREC and PEMP.

B. Results Monitoring and Evaluation Arrangements

59. The Project's M&E system will be aligned with the Results Framework and Theory of Change presented above. M&E activities will focus on: (a) continuous data collection for the Results Framework and related indicators; (b) regular results monitoring of all project component activities; (c) a Mid-Term Review; and (d) and end-of-project impact assessment. Data collected during project preparation will serve as baseline for some indicators, while for other baselines will be established early in project implementation and will be compared against follow-up data collected during and at the end of project implementation. The component leaders will be responsible for the M&E activities of their respective component and data collection and monitoring of outcomes and results will occur at the level of the various institutions involved in implementation (CCCs, AFP, MAFWE, AFSARD, FVA), while the project-level M&E data compilation will be centralized with the Project Coordinator. The Project Coordinator will provide semi-annual progress reports, including agreed monitoring variables based on the Results Framework. If needed, adjustments to the agreed monitorable variables can be made during project implementation.

60. M&E capacity building under sub-component 2.1 will facilitate understanding of gender dimensions and inequalities in the sector. The project will provide technical assistance to encourage MAFWE to introduce measures of gender inequality in their M&E system. Indicatively, these could include the development of specific mixed-method indicators to track gender (surveys, focus groups, specific evaluations), gender-specific evaluations, and use of diagnostics to recognize gender-specific constraints or opportunities and design policy interventions which could address these problems. The project will also explore better governance of the area payments and the shift of rural development payments as a way of deepening financial inclusion, particularly of women.

C. Sustainability

61. Sustainability of the project activities beyond the implementation period is expected to be high. The project is embedded in the broader framework of North Macedonia's EU accession agenda. The institutional capacity building

activities supported under the project will ensure that MAFWE can strengthen its institutional capacity and human resources to be able to better manage the state-owned agricultural land and deliver support to the sector in line with the CAP 2021-2027. In addition, support to AFSARD and FVA will enhance their ability to meet EU negotiations chapter closing benchmarks. The involvement of the MAFWE staff, and of other relevant institutions, in project implementation will ensure its sustainability as experience developed during the project will be retained within the Government. Sustainability of the CCCs and AFP will be ensured by involvement of cooperatives in the management of the CCCs, as well by the technical assistance and management knowledge transfer provided under the project.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

62. The project aims to improve the competitiveness of North Macedonia's agricultural sector and strengthen public institutions in the context of the country's aspirations to advance its accession to the EU. Aligning agricultural production with EU accession requirements implies costs for producers and institutions and requires investments in both private production units and public goods. The project aims to support some of these investments and to strengthen the capacity of the different private and public actors for the more competitive markets that would come with a future EU accession.

63. Quantifiable benefits are expected from project investments as follows: (a) improved productivity of small and medium scale producers resulting from access to finance (matching grants) for high-quality demand-driven advisory services; (b) higher incomes of producers resulting from enhanced compliance with product quality classification and product safety requirements that translate into higher sales prices; (c) improved market access resulting from better access to market information, sorting and cold storage facilities at the CCCs and the AFP; (d) improved processing, packaging and marketing of agricultural products through increased efficiency and reduced transaction costs; (e) higher product quality and reduced post-harvest losses. Additional indirect project benefits are: (f) improved infrastructure providing better access to existing and new markets; (g) spillover effects of knowledge and skills gained through the project into economic activities beyond the project scope; (h) employment opportunities in rural areas; (i) improved government systems and efficiency gains that strengthen the enabling environment for agricultural producers in terms of absorption of EU (IPARD) and national scheme funds; (j) improved management of state-owned agricultural and pasture land; and (k) increased food safety through the safe ABP disposal.

64. The economic and financial analysis was carried out in line with the Bank's guidelines on economic and financial analysis and in line with the guidance on assessing the shadow price of carbon. The calculation of economic benefits of the project is challenging due to the demand-driven nature of the advisory services, the CCCs, and the AFP services (Component 1) and the difficulty of quantifying the benefits of the different institutional capacity-building activities supported by the project (Component 2). Hence, the analysis is based on an assessment of quantifiable benefits expected to result from project. A cost-benefit analysis of eight indicative models was carried out using respective farm-level and geographical information on yields, quality classifications of the production, market prices, farm cost structure, among other variables for the country's eight major vegetable and fruit crops.

65. Based on the quantifiable benefit and cost streams of the eight indicative models, the Project's overall Economic Rate of Return (ERR) is estimated at 27.5 percent. The Net Present Value (NPV) of the project's net benefit stream, discounted at 7 percent, is US$22.1 million. The benefit stream was mainly generated by the activities of Component 1,

which represent 70 percent of the overall project costs. The shadow price of carbon was taken into account for the projected 15-year period. Based on the GHG accounting (Annex 5) the net carbon sink is estimated at 22,100 tCO_2-eq per year. If a low estimate of the shadow price of carbon is taken into account, then the ERR would be 22.9 percent with an NPV equal to US$ 17.2million; if high estimate of the shadow price of carbon is taken into account, then ERR would be 32.4 percent with NPV equal to USS$27 million.

66. **Sensitivity Analysis.** The sensitivity analysis assessed the effect of variations in benefits and costs and for various lags in the realization of benefits. A decrease in total project benefits by 20 percent and an increase in total project costs by the same proportion would reduce the base ERR to about 18 and 19 percent, respectively. A one-year delay in project benefits reduces the ERR to about 19 percent. With a two-year delay in project benefits, the ERR falls to about 15 percent. Hence the project demonstrates quite a good resistance to the variations in benefits and costs. Details of the Economic and Financial Analysis are described in Annex 6.

B. Fiduciary

Financial Management

67. The Project will follow standard financial management arrangements. The PMT within the MAFWE will oversee the fiduciary responsibilities for the project, including financial management.

68. The Borrower will provide annual audited project financial statements to the Bank within six months of the end of each fiscal year and at the closing of the project. The audit will be conducted by an independent auditor acceptable to the Bank and in line with agreed Terms of Reference. These will be provided by MAFWE/ PMT, subject to Bank review and no objection, and will be attached to the Minutes of Negotiations.

69. The Borrower will send an unaudited Interim Financial Report (IFR) combined for all components for each calendar quarter throughout the life of the project. The IFR is due 45 days after the end of each quarter. The PMT will be responsible for the preparation of the IFRs, as well as annual project financial statements. The format of the IFRs will be agreed between the Government and Bank and attached to the Minutes of Negotiations. Accounting software, acceptable to the Bank, will be used for project accounting and reporting, including principal financial reports being quarterly IFRs and annual project financial statements.

70. Internal controls and procedures to be used by the project will be described in the Financial Management Manual, which will include financial management aspects, detail procedures and processes on planning and budgeting, accounting, financial reporting, internal controls, flow of funds and external audit for the project. It will also describe roles and responsibilities and communication channels and modes between the MAFWE and the PMT. This will minimize risk of an error, safeguard project's assets and ensure use of funds for intended purposes. The Bank's supervision will verify application of the controls and procedures.

71. Two Designated Accounts in foreign currency for administering the project funds will be opened in the NBRNM and will be managed by the MAFWE, while the PMT will process the payments in scope of their fiduciary role. The funds will flow from the Designated Accounts through the transit MKD account opened for the project within the Treasury Single Account (TSA) to the MAFWE project account within the TSA (which will provide enough level of transparency and ability to track the project funds only as separate line item). The control environment in the NBRM is acceptable.

Statement of Expenditures (SOEs) based disbursement will be applied, with advances being the primary disbursement method, but direct payments and reimbursement also allowed.

72. Overall financial management risk is assessed to be substantial due to the complexity and specifics of the project.

Procurement

73. **Procurement Policy and Procedures.** The Bank's Procurement Framework, effective as of July 1, 2016, governs procurement management under the project. Procurement of contracts for goods, works non-consulting and consulting services financed from the project will be carried out in accordance with the World Bank Procurement Regulations for Investment Project Financing (IPF) Borrowers – Procurement in IPF of Goods, Works, Non-Consulting and Consulting Services (Regulations), issued in July 2016, revised November 2017 and August 2018.[11] The Bank's Standard Procurement Documents will be used as required by the Regulations.[12]

74. The project will be subject to using the Bank's electronic platform Systemic Tracking of Exchanges in Procurement (STEP). STEP will be used by the PMT initially to create and later to revise the Procurement Plan for the project and to monitor performance, manage and store related documentation for all steps for each procurement activity. The Procurement Plan and any updates of the Procurement Plan are subject to Bank review and no objection.

75. **Project Procurement Strategy for Development (PPSD).** As required by the Procurement Framework, a PPSD was prepared. The PPSD is the basis for the procurement arrangements under the project. The PPSD includes details on project overview. strategic assessment of the operating context, and the Borrower's capability to manage procurement, procurement risk analysis, procurement objectives, procurement approach options and recommendations, preferred arrangements for low value low risk contracts, and a summary Procurement Plan. The PPSD addresses how procurement activities will support the development objectives of the project and deliver the best value for money under a risk-based approach. It also provides an adequate justification for the selection methods in the Procurement Plan. The level of details and analysis in the PPSD are proportionate to the risk, value and complexity of the project procurement. The PPSD also provides information on the procurement specific risks and the proposed mitigation measures. The proposed procurement and review thresholds applicable to the project are aligned with the Bank's most recent Thresholds for Procurement Approaches and Methods. An initial summary Procurement Plan covering the first 18 months of the project will be agreed with the Bank prior to negotiations.

76. **Capacity Assessment.** MAFWE will be the implementing agency with overall responsibility for project management and implementation. A PMT will be established in MAFWE to guide overall implementation and project management, including management of procurement. The project will finance contracts of various procurement categories, value and complexity, and it is important that a seasoned Procurement Specialist is hired, with general experience in procurement, preferably in managing procurement under projects financed from international financial institutions, as well as good knowledge of the English language. In order to strengthen the procurement capacity of the PMT, it is recommended that an international Procurement Consultant is hired on a part time basis to provide assistance to the PMT with the complex, high value contracts.

77. Based on the assessment of capacity of the implementing agency, the risk for procurement is rated as High. It will be revisited during project implementation and may be updated, based on capacity enhancement. Procurement

[11] http://pubdocs.worldbank.org/en/178331533065871195/Procurement-Regulations.pdf
[12] The regulations are accessible at: www.worldbank.org/procurement.

implementation support missions will be carried out twice a year, or on an as-needed-basis. Contracts not subject to prior review by the Bank, as per the Procurement Plan, will be post reviewed by the Bank's Procurement Specialist, assigned to the project. Post review of contracts shall be carried out once a year. At a minimum 1 out of 5 contracts will be randomly selected for post review.

C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

D. Environmental and Social

78. The environmental risks of the project are mainly related to the construction and future operation of the CCCs, the AFP and the ABP. The negative environmental impacts may include the generation of waste, including organic waste, noise, dust, odor, disturbance to local communities and landscapes. The typical environmental impacts as well as the legislative and regulatory framework, procedures, outline and institutional responsibilities for mitigating the potential impacts are considered and addressed by the Environmental and Social Management Framework (ESMF) developed by the MAFWE prior to the project appraisal. The ESMF was duly disclosed in-country on November 4, 2019 and discussed at the public consultation meeting held on November 11, 2019. The specific environmental impacts cannot be pre-determined and quantified at appraisal but will be identified for each specific site where civil works will be carried out as part of the formulation of the subproject-specific Environment and Social Management Plans (ESMPs). The sub-project-specific ESMPs will also be disclosed and consulted in-country once these are available during the project implementation.

79. The social risks associated with the project are: (a) risks of exclusion of small producers and vulnerable groups from project benefits, especially exclusion from access to technical services (sub-component 1.1) and access to the marketing facilities (sub-component 1.2); (b) risk of land acquisition; and (c) labor issues related risks.

80. *Risk of exclusion*. The biggest challenge, which could pose a social risk, is how to how to engage and empower small producers and vulnerable groups to participate in the value chain approach that the project promotes. Government capacity in reaching out to small producers, agro-processors, and vulnerable/ marginalized groups is limited. MAFWE has gained experience and has a solid track record in engaging with organized (formal) producers and producer groups through EU support in the context of the accession preparations. The EU provided about EUR50 million over the past seven years to strengthen MAFWE capacity to meet accession requirements. However, MAFWE has limited experience in engaging with small producers who tend to be not organized, informal and dispersed throughout the country. To minimize the risk of exclusion, the project supports MAFWE to strengthen the inclusion of marginalized producers through the general consultation process. A stakeholder engagement plan will be used to ensure implementation reaches out and incorporates small producers, women and young farmers. The project will build capacity in MAFWE to mainstream engagement of vulnerable groups in their regular cycle of policy design and implementation. The project will build capacity in MAFWE to include also the poorest farmers in the process, in particular for training and advisory services.

81. *Land acquisition*. At the appraisal-stage, the specific locations for the CCC, AFP and the ABP facility had not yet been determined. All these facilities would be newly constructed. In addition, the project would support the upgrading of AFSARD premises. The project will avoid land acquisition, where possible. Land acquisition for the construction of CCCs, AFP, and ABP facility, if any, would be limited in space and impact and the risks and impacts related to potential loss of land and property are expected to be limited. However, there is the remote possibility that some of the locations where project construction investments will take place, could be private land and therefore some limited land acquisition may be possible. In the situation site specific abbreviated Resettlement Action Plan (RAP) will be prepared and implemented. However, it is unlikely that significant physical or economic displacement would result as there is a sufficient choice of parcels available to ensure that the chosen sites are outside inhabited areas and do not require the acquisition of property.

82. *Labor issues related risks*. Labor-related risk is low. Labor-related issues will not be a major challenge when it comes to contract workers (i.e. employees of civil works contractors). Based on experience with contracts of similar monetary value, both in World Bank and Government projects of this size, the contractors will be national companies experienced in managing public works contracts. Labor will come from surrounding areas of where the CCCs and the AFP will be built. No influx of outside influx is expected. However, labor related issues may be experienced when project beneficiaries (small producers and agro-processors) employ seasonal labor. Formalizing seasonal employment has been challenge until now in North Macedonia. This aspect will be further assessed, and appropriate measures will be undertaken during implementation.

83. *Citizen Engagement.* Enhanced engagement and outreach activities will improve the outcomes of the project. Component 1 will target agricultural producers and agro-processors with customized training and on-demand advisory one-stop services. The project will carry out beneficiary satisfaction surveys (using scorecards and other feedback mechanisms) upon completion of project supported activities. The project will also conduct ex ante inclusive group discussions to elicit the demand for training topics and delivery mechanisms, with emphasis on group discussions with vulnerable (small, young) producers as well as women-only groups. These will be organized annually as participatory social monitoring activities with the objective to engage with stakeholders and address gender gaps in the agriculture sector. MAFWE welcomes the proposed citizen engagement activities to enhance its current non-standardized consultation processes with producers with a systematically structured approach. The results framework incorporates indicators that measure citizen engagement to be adopted by the project, including the establishment of a Grievance Redress Mechanism and beneficiary feedback reporting on the establishment of effective engagement processes in the activities related to sub-component 1.1 (scorecards to assess satisfaction and usefulness for participants of training and advisory services provided, provide feedback on assessment and realign sub-component activities based on feedback) and sub-component 1.2 (scorecards to assess satisfaction of users of the CCCs and AFP before, during, and after investments/ construction activities).

84. *Gender.* Full-time formal agricultural employment accounts for about 18 percent of total employment in North Macedonia, of which only one third are women. A recent study on the role of women in agriculture in North Macedonia[13] analyzes the current disempowerment of women in agriculture sector along five domains: production, resources, income, leadership and time allocation. Some of the key barriers to gender equality and women's active engagement in the sector the study identified include: (a) for production, decreasing participation of women in the decision-making processes on the productive activities and management of agricultural holdings (down from 11 percent in 2013 to 10 percent in 2016); (b) for resources, 96/88 percent of women do not own property/land (compared to 4/12 percent of men), 90.3 percent

[13] Faculty of Agricultural Sciences and Food of the Saint Cyril and Methodius University of Skopje (2019). "Measuring Women's Empowerment in agriculture with survey-based and experimental economics method".

of men make decisions on activities related to the land, whereas 50 percent of female landowners are not actively making decision on activities related to the land; 48 percent of women perceive that they are not eligible for credit by banks; and of high relevance to the project, 62 percent of women perceive themselves as not eligible for the IPARD/Rural Development program of MAFWE, thus benefit less often from them, negatively affecting their productivity and market access; (c) for income, the study found that women responsible for farm accountancy are more empowered in the decision-making of income use; (d) for leadership, only 5 percent of women are active members in groups or associations; and (e) for time allocation, women in rural areas work on average 11 hours per day (of which 42 percent is unpaid) compared to 9.7 hours for men (which is mostly paid), reflecting also women's more limited employment opportunities in rural areas. In addition, the study found that the lack of gender disaggregated data limits gender needs analyses in agriculture and, therefore, gender sensitive evidence-based policy design. Another recent research by the EU on North Macedonia[14] finds that female agricultural holding owners more often operate without a clear specialization in terms of agricultural production compared to men. The same study states that women face more limitations than men when gaining access to key productive resources (i.e. land) and services (i.e. loans, extension services). Furthermore, along the general trend of rural outmigration due to lacking employment opportunities, poor infrastructure and services, especially young women from rural areas leave the rural life and marry into urban areas - which is reflected in an increasingly imbalanced gender distribution in rural North Macedonia. Overall, the income gender gap in North Macedonia is twice as high in rural areas as compared to urban areas and women are more often un(der)employed than men.

85. The project will focus on three key gender gaps that it aims to address: (a) inequality in the participation of women in targeted trainings and agricultural advisory support services to improve and specialize their production, and to inform them of their eligibility to the sector grant programs; (b) the lack of data availability for gender disaggregated analysis and policy-making; and (c) inequality in the access to employment opportunities and income in rural areas. Regarding the first gap, the project - in particular under Sub-Component 1.1- will assess and address the needs of women producers on targeted training and advisory services in the project areas. The project will design the trainings and services based on participatory discussions to gather feedback from women farmers and rural women who are indirectly related to agriculture, in order to improve the outreach and service provision to women in terms of advisory service topics and delivery mechanisms (e.g. taking into account women's schedules and other responsibilities to ensure maximum women participation). Also, women-focused outreach activities will be conducted to ensure that public awareness and information dissemination activities promoting applications for finance for on-demand training, advisory services, and grants reaches and attracts women. To ensure this is effective, the eligibility criteria for the project-supported advisory services matching grant program will include favorable terms for women. Further, the project will increase access for female farmers to female agricultural advisers through the registered database of vetted agricultural advisers, since it has been shown that female farmers who receive advice from female extension officers have higher levels of awareness of and participation in extension services. Regarding the second gap, the project -through the M&E capacity building under Sub-component 2.1- will enhance the understanding and policy-making of gender dimensions and inequalities in the sector by developing indicators to track gender differences and promote diagnostics to recognize gender-specific constraints or opportunities to design policy interventions to address these problems. Regarding the third gap, the project -particularly under Sub-Component 1.2- will provide employment opportunities in rural areas through the to be newly built CCCs. It is expected that employment opportunities at the CCCs will include, but are not restricted to, the CCCs' need for processing and sorting personnel - tasks often attractive for by women. To expand women's opportunities to higher skilled job, the project will conduct skills trainings targeted for women in the areas where the two project-supported CCCs will be built (Resen, Strumica), considering the skills demand of the future CCC operators. Also, the prospective operators will be responsible for suggesting in their bidding documents ways to make CCCs female-friendly. To track closing of the gender gap for women, the project will monitor the percentage of vetted female agricultural

[14] EU (2019). Report on the Perspectives of Women in Rural and Agricultural Regions of the Republic of North Macedonia

advisers in the project-supported database, disaggregate the indicators measuring uptake of farmers of improved practices, agricultural assets, and commercial transactions by sex (among other indicators), design the M&E system within MAFWE to include gender-sensitive indicators which will measure the decrease of the identified existing gender gaps, and account for the percentage of women working at the CCCs in different skill-level jobs.

V. GRIEVANCE REDRESS SERVICES

86. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate GRS, please visit www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

VI. KEY RISKS

87. **Political and Governance.** On October 17, 2019, the Council of the EU failed to reach a decision on opening negotiations with North Macedonia. The Council announced it will revert to the issue before the EU-Western Balkans summit in Zagreb in May 2020.[15] Following the European Council's decision, the Prime Minister announced early elections, which all political parties agreed to hold on April 12, 2020, two months after the project scheduled Board date. This may cause delays in project effectiveness.

88. **Mitigation measure.** The project is designed according to the priority identified in the National Strategy for Agriculture and Rural Development 2014-2020, as well as country goal of preparedness for EU accession. The Project Operations Manual (POM) prepared by Negotiations includes draft Terms of Reference for the first activity to be launched under each sub-component of the project, hence allowing immediate launching of project activities as soon as project is declared effective.

89. **Sector Strategies and Policies.** The structure of current subsidies provided to the agricultural sector negatively impacts the technical efficiency of farms in North Macedonia. This is particularly evident in case of heavily supported sub-sectors, such as tobacco and livestock. This finding and the fact that public spending on agriculture in North Macedonia, as a share of GDP, is much higher than in other countries in the region and far above the EU-28 average explains why the reduction in direct farm subsidies is an important short-term priority for the Government. Continuing payment of subsidies to inefficient producers will prevent them from becoming competitive.

[15] https://www.consilium.europa.eu/media/41123/17-18-euco-final-conclusions-en.pdf

90. **Mitigation measure.** The project will support the MAFWE in revising the structure of subsidies based on the evaluation of current support so to improve the efficiency of farms and enable the reallocation of scarce public resources towards broader and more effective rural development measures.

91. **Institutional Capacity for Implementation and Sustainability.** MAFWE has limited institutional capacity for carrying out its own mandate as well as to implement additional projects. In addition, the MAFWE organizational structure has not fully kept up with the development of new legislation and policy directions in recent years and suffers from severe functional gaps, for example in program monitoring and evaluation. There are also redundancies in the departments dealing with international cooperation which creates unnecessary institutional coordination challenges. The last World Bank supported project implemented by MAFWE closed in December 2012, and there is little institutional knowledge in MAFWE in how to implement Bank-funded projects.

92. **Mitigation measure.** The Bank carried out a Functional Review of the MAFWE (funded by the EC) which provided recommendations on how to improve the effectiveness and efficiency of MAFWE on its path towards EU accession. To ensure ownership and adequate implementation capacity, the project will support the establishment of a PMT with a mixed composition of MAFWE staff and external consultants to ensure adequate implementation capacity.

93. **Other.** The project will provide on-demand grants for advisory services for agricultural producers and agribusinesses based on a cost-sharing formula dependent on the type of service requested, as well as dependent on the beneficiary applicant. Although examples of similar programs successfully implemented in the region have been reviewed, there is the risk of low absorption of the available grant funding for advisory services.

94. **Mitigation measure.** The project envisages a first round of training which will at the onset of the project target all producers in the areas of Resen, Strumica and Skopje where the CCCs and AFP will be constructed. This will ensure a pool of potential beneficiaries will be informed of the benefit of receiving advisory service. Further, the project will support a skill needs and training analysis of agricultural producers and processors in order to develop a database offering the required expertise. In addition, the use of information and communications technology will facilitate the access to the service, and interest of young farmers.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework
COUNTRY: North Macedonia
Agriculture Modernization Project

Project Development Objectives(s)

Improve competitiveness in targeted agricultural sub-sectors and strengthen agricultural public sector readiness for EU accession.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Improve competitiveness in targeted agricultural sub-sectors							
Farmers adopting improved agricultural technology (CRI, Number)		0.00	50.00	125.00	200.00	275.00	350.00
Farmers adopting improved agricultural technology - Female (CRI, Number)		0.00	8.00	20.00	30.00	40.00	50.00
Farmers adopting improved agricultural technology - male (CRI, Number)		0.00	42.00	105.00	170.00	235.00	300.00
Percentage of agricultural produce marketed in compliance with quality standards (Percentage)		40.00	40.00	50.00	60.00	70.00	75.00
Strengthen agricultural public sector readiness for EU accession							

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Share of EU CAP 2021-2027 Performance Monitoring and Evaluation Framework Indicators recorded in North Macedonia (Percentage)		0.00	10.00	30.00	50.00	60.00	70.00
Tons of animal by-products safely disposed annually at the animal by-products facility (Tones/year)		0.00	0.00	0.00	0.00	4,000.00	4,880.00

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Agriculture Sector Competitiveness							
Database of vetted agricultural advisers established (Yes/No)		No					Yes
Percentage of female agricultural advisers registered in the database (Percentage)		0.00	0.00	10.00	15.00	20.00	30.00
Farmers reached with agricultural assets or services (CRI, Number)		0.00	0.00	300.00	700.00	1,100.00	1,500.00
Farmers reached with agricultural assets or services - Female (CRI, Number)		0.00	0.00	45.00	105.00	165.00	225.00

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Satisfaction of agricultural services beneficiaries (Percentage)		0.00	0.00	0.00	60.00	65.00	70.00
Farmers engaged in new/formalized commercial transactions (Number)		0.00	0.00	0.00	100.00	250.00	400.00
Female farmers engaged in new/formalized commercial transactions (Number)		0.00	0.00	0.00	10.00	25.00	40.00
Satisfaction of Collection and Conditioning Centers and Agri-Food Platform users (Percentage)		0.00	0.00	0.00	60.00	65.00	70.00
Percentage of loss in post-harvest produce (Percentage)		30.00	30.00	30.00	27.00	23.00	20.00
Operational capacity of Collection and Conditioning Centers and Agri-Food Plaform (Percentage)		0.00	0.00	0.00	0.00	50.00	80.00
Operational capacity of CCC in Resen (Percentage)		0.00					80.00
Operational capacity of CCC in Strumica (Percentage)		0.00					80.00
Operational capacity of AFP in Skopje (Percentage)		0.00					80.00
Percentage of women working at project-supported Collection and Conditioning Centers (Percentage)		15.00					30.00
Institutional Capacity for EU Accession							
Number of MAFWE staff		0.00	0.00	5.00	10.00	15.00	20.00

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
trained on M&E system and evaluation quality control (cumulative) (Number)							
Hectares of leased agriculture land recorded in the project-supported state agriculture land management information system (Number)		0.00	0.00	0.00	0.00	40,000.00	100,000.00
Percent of AFSARD staff with office space in compliance with EU pre-accession requirements (Percentage)		30.00	30.00	30.00	50.00	65.00	80.00
Project Management							
Percentage of beneficiaries who report that effective engagement processes have been established (Percentage)		0.00	60.00	65.00	70.00	75.00	80.00
Grievance Redress Mechanism established for all project activities (Yes/No)		No	No	Yes	Yes	Yes	Yes

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Farmers adopting improved agricultural technology	This indicator measures the number of farmers (of	Annual	MAFWE	Survey. In the context of the project, this	MAFWE

	agricultural products) who have adopted an improved agricultural technology promoted by operations supported by the World Bank. NB: "Agriculture" or "Agricultural" includes: crops, livestock, capture fisheries, aquaculture, agroforestry, timber and non-timber forest products. Adoption refers to a change of practice or change in use of a technology that was introduced or promoted by the project. Technology includes a change in practices compared to currently used practices or technologies (seed preparation, planting time, feeding schedule, feeding ingredients, postharvest storage/ processing, etc.). If the project introduces or promotes a technology package in which the benefit depends on the application			indicator measures the number of project beneficiaries who have adopted an improved agriculture technology promoted by the project through training and advisory services. This refers to beneficiaries' acquired knowledge in modern production techniques, including better pest and disease control, improved production practices, and climate-smart practices. The information will be disaggregated by category of technology adopted, gender and youth/non-youth.	

	of the entire package (e.g., a combination of inputs such as a new variety and advice on agronomic practices such as soil preparation, changes in seeding time, fertilizer schedule, plant protection, etc.), this counts as one technology. Farmers are people engaged in farming of agricultural products or members of an agriculture related business (disaggregated by men and women) targeted by the project.				
Farmers adopting improved agricultural technology - Female					
Farmers adopting improved agricultural technology - male					
Percentage of agricultural produce marketed in compliance with quality standards	This indicator measures the (expected positive) changes in the quantity and quality of marketed agricultural produce by using information from the records of the Collection and Conditioning Centers (CCCs) on (a) volume purchased from beneficiary farmers and (b) the produce	Annual	Baseline: Data from Faculty of Agricultural Sciences and Food of the Saint Cyril and Methodius University of Skopje	Production information from Collection and Conditioning Centers	MAFWE/Collection and Conditioning Centers

	class sorting at the CCCs for the main project-supported crops. Improvements are expected in terms of volume sold to the CCCs by beneficiary farmers and the quality of the produce, reflecting enhancements in are expected to related to food safety, food hygiene and product quality classifications Data will be disaggregated volume sold by crop, quality classification, and destination market (domestic or export).				
Share of EU CAP 2021-2027 Performance Monitoring and Evaluation Framework Indicators recorded in North Macedonia	This indicator measures the progress of the Monitoring and Evaluation (M&E) system for agricultural and rural development policy design and implementation supported by the project in terms of its coherence with the European Union's Common Agricultural Policy post-2020 requirements, as envisaged in the CAP 2021-2027 Performance Monitoring and Evaluation Framework (PMEF). The	Annual	MAFWE	Review of M&E system data	MAFWE

	European Commission has proposed for PMEF 2021-2027, 35 Output Indicators, 38 Result Indicators and 28 Impact Indicators. 50 Context Indicators are discussed for 2021-2027. The indicator measures the PMEF 2021-2027 indicators recorded in North Macedonia as a percentage share of PMEF Indicators adopted by the EU.				
Tons of animal by-products safely disposed annually at the animal by-products facility	This indicator measures the (expected positive) change of safely disposed ABP at the project-supported facility.	Semi-annual	FVA/ABP Facility	Records ABP Facility	FVA/ABP Facility

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Database of vetted agricultural advisers established	This indicator measures the (expected positive) change in farmers' access to quality advisory services through the establishment of a national database for vetted agricultural advisers.	Annual	MAFWE	Verification and analysis of database	MAFWE

Percentage of female agricultural advisers registered in the database	This indicator measures the percentage of female advisers in the project-supported national database for vetted agricultural advisers.	Annual	MAFWE	Analysis of database	MAFWE
Farmers reached with agricultural assets or services	This indicator measures the number of farmers who were provided with agricultural assets or services as a result of World Bank project support. "Agriculture" or "Agricultural" includes: crops, livestock, capture fisheries, aquaculture, agroforestry, timber, and non-timber forest products. Assets include property, biological assets, and farm and processing equipment. Biological assets may include animal agriculture breeds (e.g., livestock, fisheries) and genetic material of livestock, crops, trees, and shrubs (including fiber and fuel crops). Services include research, extension, training, education, ICTs, inputs (e.g., fertilizers, pesticides, labor),	Annual	MAFWE/AFSARD/CCCs/AFP/ABP Facility	Surveys/Records. In the context of the project, this indicator includes the number of farmers who (i) requested and received demand-driven advisory services provided by the project, (ii) who received targeted trainings provided by the project, (iii) who gained access to project-supported CCCs, (iv) who gained access to the project-supported AFP, (v) who received enhanced supported from AFSARD (i.e Paying Agency) due to increased capacity, (iv) who gained access to the services of the ABP facility.	MAFWE/AFSARD/CCCs/AFP/ABP Facility

	production-related services (e.g., soil testing, animal health/veterinary services), phyto-sanitary and food safety services, agricultural marketing support services (e.g., price monitoring, export promotion), access to farm and post-harvest machinery and storage facilities, employment, irrigation and drainage, and finance. Farmers are people engaged in agricultural activities or members of an agriculture-related business (disaggregated by men and women) targeted by the project.				
Farmers reached with agricultural assets or services - Female		Annual	MAFWE/AFSARD/CCCs/AFP/ABP Facility	Records/Surveys	MAFWE/AFSARD/CCCs/AFP/ABP Facility
Satisfaction of agricultural services beneficiaries	This indicator measures the satisfaction rate expressed by participants of the project-supported (i) demand-driven advisory services and (ii) targeted trainings, in the scorecards used for participatory	Annual	Citizen Engagement Scorecards	Survey/Scorecards	MAFWE/Advisers/Trainers

	feedback. The information will be disaggregated by sex. The feedback from the satisfaction surveys will also be used to modify training and advisory activities.				
Farmers engaged in new/formalized commercial transactions	This indicator measures the formation of commercial transactions between a producer and buyer(s) that are either new or previously existing but not formalized through a contract. It captures a producer's ability to sell products that meet the demand requirements of a (new) market/buyer, such as the project-supported the CCCs and AFP.	Baseline/Endline	Survey	Survey	MAFWE
Female farmers engaged in new/formalized commercial transactions		Baseline/Endline	Survey	Survey	MAFWE
Satisfaction of Collection and Conditioning Centers and Agri-Food Platform users	This indicator measures the satisfaction rate expressed by the users of the project-supported CCCs and AFP users in the scorecards used for participatory feedback in the citizen engagement activities. The information will be disaggregated by sex.	Annual	Citizen Engagement Scorecards on CCCs and AFP	Surveys/Scorecards	MAFWE/CCCs/AFP

Percentage of loss in post-harvest produce	This indicator measures the (expected negative) change in produce loss given technical training and demand-driven advisory services on improved production management, as well as support post-harvest infrastructure provided by the CCCs.	Annual	Records of Collection and Conditioning Centers	Records of Collection and Conditioning Centers	Collection and Conditioning Centers
Operational capacity of Collection and Conditioning Centers and Agri-Food Plaform	This indicators captures the operational capacity of the project-supported CCCs and AFP. The data will be collected separately for the Resen CCC, the Strumica CCC, and the Skopje AFP. Key milestones to achieve operational capacity are (i) construction achieved, (ii) managing company operational, and (iii) commercial activity of the facilities operational.	Annual	CCCs, AFP	Records of CCCs/AFP	MAFWE/CCCs/AFP
Operational capacity of CCC in Resen		Annual	CCC Resen	Records of CCC Resen	MAFWE/CCC Resen
Operational capacity of CCC in Strumica		Annual	CCC Strumica	Records of CCC Strumica	MAFWE/CCC Strumica
Operational capacity of AFP in Skopje		Annual	AFP	Records of AFP	MAFWE/AFP

Percentage of women working at project-supported Collection and Conditioning Centers	This indicator measures the percentage of females working at the project-supported CCCs. Where possible, the data will distinguish by type of job.	Baseline/Endline	Employment records of CCCs	Employment records of CCCs	CCCs/MAFWE
Number of MAFWE staff trained on M&E system and evaluation quality control (cumulative)	This indicator measures a change in the MAFWE staff capacity on direct payments and rural development measures to use information from the project-supported Integrated Monitoring and Evaluation Data Platform coherent with the EU CAP's post-2020 PMEF requirements.	Annual	MAFWE	Training documents	MAFWE
Hectares of leased agriculture land recorded in the project-supported state agriculture land management information system	This indicator measures the number of hectares of leased arable land and pastures, managed by MAFWE and PEMP, expected to be recorded in the project-supported state agriculture land management information system.	Annual	MAFWE/PEMP	Statistics generated in the state agriculture land management information system	MAFWE
Percent of AFSARD staff with office space in compliance with EU pre-accession requirements	This indicator measures the (expected positive) change in North Macedonia's AFSARD (i.e. Paying Agency)	Annual	AFSARD	Verification of AFSARD capacity/Survey	MAFWE/AFSARD

	capacity to operate in compliance with EU pre-accession requirements. The main related activities include the refurbishing of the necessary office space for the number of staff required for Paying Agency to implement IPARD measures.				
Percentage of beneficiaries who report that effective engagement processes have been established	This indicator measures the project's use of effective citizen engagement processes, such as scorecards or focus group discussions.	Bi-annual	MAFWE	Surveys/MAFWE data collection from beneficiaries	MAFWE
Grievance Redress Mechanism established for all project activities	This indicator is is related to citizen engagement efforts of the project.	Semi-annual reports on GRM details	MAFWE/GRM	Analysis GRM data	MAFWE

ANNEX 1: Collection and Conditioning Centers and Agri-Food Platform

COUNTRY: North Macedonia
Agriculture Modernization Project

1. The project supports the establishment and operation of two Collection and Conditioning Centers (CCCs) in the municipality of Resen and Strumica, and an Agri-food Platform (AFP) in Skopje (Sub-component 1.2). The CCCs and AFP will be designed and built with high energy efficiency standards and the options for use of solar energy will be explored to further reduce GHG emissions; the anticipated impacts of climate change and climate related risks at the three locations will be considered to ensure climate resistance of new systems. The general locations for these logistics infrastructure investments have been identified based on: (a) proximity of the CCCs to the main production areas of North Macedonia: Resen (mainly apples), Strumica (vegetables) and Skopje region; (b) the proximity of the AFP to Skopje, with 600,000 inhabitants the main consumption area of the country, and the main road networks that connect to the rest of the Balkan region and provide a unique opportunity for agro-logistics; and (c) a demand analysis based on qualitative interviews with the agri-business operators and a pre-feasibility study conducted by the Faculty of Agricultural Sciences and Food of Skopje that highlights the need for facilities for collection and conditioning activities, as well as a stronger supply network for the AFP in the Balkan region.

2. The initial demand/ market analysis was based on meetings with producers, cooperatives, collectors, wholesalers, processors, importers, exporters, and retailers and underlined the broad stakeholder interest in such infrastructure. Potential export markets will be reachable through the improvement of quality and sanitary standards and will provide greater value to producers and develop more sustainable value chains. Many potential users have already been identified and expressed their interests to have access to such facilities for their activities.

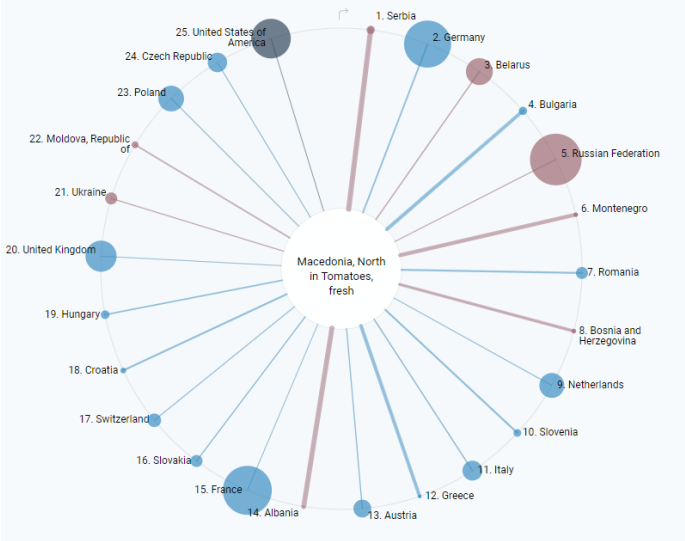
3. Specifically, for the proposed CCCs, users would include two cooperatives of producers and between 80 to 100 small holders of the region in Resen; and 150 to 200 smallholder producers and one collector or agri-food company managing the CCC in Strumica. Main buyers in both cases would be supermarkets and retailers (domestic and international) and wholesalers and exporters. The lack of standardized production and conditioning facilities does not allow meeting international sanitary standards. The majority of the production dedicated to export is mainly to Russia, even though the main export potential identified by ITC analysis is located in EU countries. The main buyers expressed their interests in buying products from CCC as these will meet international standards with important market opportunities in domestic market for supermarkets, Balkan region and EU (Figure 1).

4. For the AFP, main users of the wholesale market would include producer cooperatives, small holders, main wholesalers/collectors, and for the logistics area: big retailers; importers and exporters, and logistics companies. The AFP is not expected to create distorting competition for existing markets but rather support a transition to modern agro-food logistics infrastructure and services. Existing facilities are very degraded, often operating on informal arrangements, lack international sanitary standards, are spatially constrained and can't expand, and are very limited in the range of activities taking place. In fact, to enhance and accelerate the start-up of AFP activities, its profitability and secure the supply of Skopje area, the Government could – in parallel to project implementation – consider: (a) drafting regulations regarding the organization of wholesale activities on food products in a unique AFP with a reference perimeter, justified by public interest purposes, modeled after international successful model, like the *Marché d'Intéret National (France)* and (b) developing a plan to phase-out over -time existing under-performing markets that do not meet modern standards. The AFP over time would then constitute a single area for wholesale activities and any new establishment or extension of wholesale activity on certain protected food products is, in principle, prohibited, with the

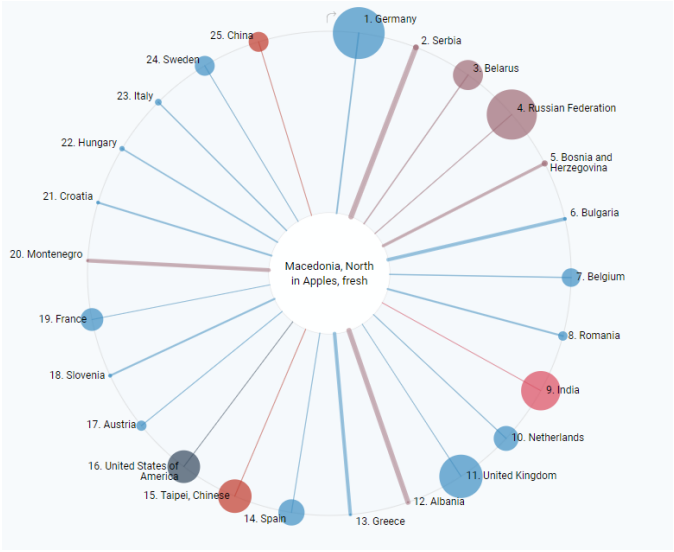
aim of conferring these activities to the AFP. This could support the start-up of the AFP activities in the first years of operation and attract private operators.

Figure 1: Examples of export potential for North Macedonia

Fresh tomatoes



Apples



Source: Trademap ITC 2019

Collection and Conditioning Center in Resen Municipality

5. The Municipality of Resen accounts for 95 percent of the total apple production in the Pelagonija Region and for 84 percent of the total apple production in North Macedonia. In 2018, the total production in Pelagonija reached 105,000 tons. Total production potential is estimated at 150,000 tons. The sector is characterized by the limited availability of modern cold storage and conditioning facilities, resulting in sub-optimal quality, grading, and storage of the produce, resulting in high losses and forgone revenue. In Prespa, the current total cold storage capacity is about 8,000 tons. Two companies operate facilities with larger capacity while a small number of individual farms have built small cooling facilities for their own production and can partly meet their own needs. Modern storage chambers with controlled atmosphere for long-term storage are installed in a single distribution center in the vicinity of Resen with a capacity of 5,000 tons.

6. The CCC in Resen will fill a critical gap in cooling and conditioning facilities, which will be instrumental for more standardized production and quality management, including sorting and packaging, for domestic and international markets. The integrated cooling and conditioning facility will be technology innovative and can serve as important demonstration for future scale-up. The CCC will be linked into the national food distribution system organized around the central AFP in Skopje and will provide the facilities and conditions to: (a) improve food safety and quality in compliance with international standards; (b) enhance competitiveness of the apple value chain through quality sorting, grading and packaging; (c) enhance aggregation and horizontal integration of small holders for greater market and price negotiation power; (d) contribute to the organization of a national food distribution system through logistics linkages to Skopje; and (e) create an enabling environment for private investments in the processing and services sectors as quantities and quality becomes more predictable and organized.

7. The CCC would be constructed by Government. The basic design parameters for the CCC would include: a 10,000 square meter floor area; a 5,000 square meters facility, flexible to anticipate possible increase of quantities; a total handling capacity of 5,000 to 8,000 tons per year; storage capacity of 5 cells of 500 square meters each; a sorting and grading line. The CCC is expected to create up to 100 new jobs during the peak season. CCC operation and management would be contracted to a producer association of cooperatives through a concession agreement. The concessioner would organize the operation and maintenance of the site for profit. The MAFWE and/or a local authority could be associated to the management of the facility. The project could provide capacity building support in management and operation to the association of cooperatives/cooperative that would manage the CCC. The model could be a subsidized concession, including specific conditions to ensure the local production access to market and quality standard increase.

Collection and Conditioning Center in Strumica Municipality

8. The Strumica-Radovis Valley and the Gevgelija-Valandovo Valley in the Southeast are the main areas for vegetable production. The total production of the five main vegetable crops – pepper, tomato, cucumber, cabbage, watermelon – represent nearly 60 percent of North Macedonia's total production of 380,000 tons. The main producer areas area the municipalities of Strumica, Vasilevo, Gevgelija, Bosilevo, Novo Selo, Bogdanci and Valandovo.

9. The CCC in Strumica would serve as a critical facility in a region of intensive vegetable production where surpluses of produce cannot immediately access the market and therefore require cold storage, sorting, packing or preparation for processing. While some local operators have already invested in private conditioning centers for their own business, the remaining gap in such facilities is large, negatively impacting directly smallholders producer that do not have access to such facilities, and as well as the volume and quality of produce that can be exported to high value markets. Most of the international big retailers do currently not consider the Southeast Region as supplier for their supermarkets as produce originating from there generally does not meet the required sanitary standards. For a region with a comparative advantage in vegetable production, the CCC would be critical to strengthen competitiveness, access new high value markets and realize higher prizes, which in turn would bring direct and spillover economic benefits to the region. Specifically, the CCC in Strumica would allow for standardized product handling, support aggregation of volumes and increase market power, and provide the necessary infrastructure and services to meet quality and sanitary and phytosanitary standards required for accessing high value markets, which would be particularly important and impactful for smallholder farms. The CCC could also be expected to attract further investments of agri-businesses, processors, and service providers as the entire production is being upgraded.

10. The CCC would be part of the national food distribution system organized around a central food hub in Skopje. The CCC would provide for 12,000 square meters of area, 6,000 square meters of built facilities, flexible to anticipate an expansion; a handling capacity for 25,000 tons of fresh and processed vegetables; storage capacity; a multi-functional sorting and grading line; and an expected up to 100 new jobs (during the peak season).

11. The CCC management and operation would be contracted to a private operator or an association of cooperatives through a concession agreement. The concession agreement would include a target number of small-holders to be involved in supplying the CCCs. The concessionaire would organize the operation and maintenance of the site. The MAFWE and/or a local authority could be associated to the management of the facility. In case the association of cooperatives/cooperative would be the concessioner capacity building would be essential in order to train the future managers of the site. The model could be a subsidized concession including specific conditions to ensure the local production access to market and quality standard increase.

Agri-food Platform in Skopje

12. The AFP in Skopje, consisting of a wholesale market and a logistics area, would be the focal infrastructure for the organization of fresh food aggregation and distribution systems in North Macedonia and serve as connector to different CCCs. The AFP is expected to allow smallholders and other producers of the region and the main buyers (wholesalers, exporters, hyper & supermarkets) to sell and purchase produce and organize service activities around this platform, achieving synergies and economy of scales.

13. The AFP would include:

- A physical (wholesale) market to organize the supply of fresh food products of the extended urban area around Skopje for producers and consumers;
- A logistics area offering dry or cold warehouse facilities for use by market participants;
- An administrative area providing office space for the Platform managing company and other operators, companies and service providers in the food sector, which will be attracted by the activities of Agri-food Platform. This may include technical and advisory service companies, logistics operators, administrative services, banks, insurance, accountants, restaurants, etc.; and
- A technical area dedicated to the reception of all technical support activities such as truck cleaning station, trucks and cold equipment repair station, auxiliary equipment for the platform as a waste sorting point where the wholesale companies as well as retailers can separately dispose of the waste from their commercial activity (organic matter, cardboard, plastic, wood, expanded polystyrene, etc.).

14. The AFP would have the following functionalities:

- Organize and improve the supply in safe and standardized fresh food products for the Skopje with a total population of around 600,000 people;
- Provide access to a modern market for local fresh foods (Skopje produces 46,000 tons of vegetables); and
- Provide logistics and other services for agri-food sector, for both, domestic and international markets.

15. The AFP would deliver the following benefits:

- Support aggregation and distribution of fresh foods efficiently;
- Access to high quality fresh foods for local consumers
- Improve the competitiveness of producers (fruits and vegetables) through easy and on-demand accessibility of to an array of services in logistics, food quality and sanitary controls, advisory services etc.;
- Food safety improvements as wholesale markets offer opportunities for efficient food quality and sanitary inspections and monitoring;
- Incubator function through easy access and low-cost entry for new entrepreneurs;
- Internal Market and Competition: combined infrastructure facilitate the movement of goods;
- Food losses reduction, and proper waste management; and
- Food handling and hygiene improvement.

16. With regard to management and operation of the AFP, two options have been identified: (a) a public delegation service contract to a private experienced operator and (b) a public delegation service contract to a semi-public company, with technical assistance for training of local personnel to operate and guide the operation of the market for several years. Options considered for the long-term management and operation of the AFP to be explored during project implementation include:

- **Private Operator-Concession arrangement**. An experienced private sector operator would manage the AFP based on a concession arrangement. This solution would allow to support an efficient start-up of the activity by professionals of the sector. In particular, management companies of international reputation and experience in agri-logistics management are likely to be interested in managing the AFP. A market scoping exercise would be conducted early in project implementation to gauge international interest in such a model. Prospective private operators would not be expected to invest equity capital and/or finance the construction and/or equipment of the AFP but would be solicited and employed because of their expertise and experience in operating such platforms for profit.

- Semi-public Company-Concession arrangement. The AFP would be managed by a semi-public company that would operate the site under a concession arrangement with the Government. The following features would be considered: (a) a public authority keeps a strategic control over the activities; (b) the managing company supports and manages all the operating costs and, possibly, future investments for the platform development; and (c) the AFP becomes a regional or even a national development tool. A separate international service provider could be procured to provide capacity building in operational management aspects.

International benchmarks

17. The majority of wholesale markets world-wide are public or semi-public (83%) as the analysis of wholesale market ownership by World Union of Wholesale Markets (WUWM) shows based on its 141 members (Table 1). There are also examples of purely privately operated markets, including for example Saint Charles in Perpignan and Lyon (Lyon-Corbas). On the other hand, market management is mostly private or semi-public (55%) (Table 2). The general trend is in the direction of a relative autonomy of the management companies from local or national authorities, in order to make management more agile and ready to adapt to the speed of changes in the sector. In Germany, for example, the management of the markets originally all managed directly by the cities, changed gradually in private management type.

Table 1. Wholesale Ownership Distribution (2018)

	Ownership		Management	
Private	24	17%	32	22%
Public	83	59%	60	43%
Semi-public	34	24%	49	35%
Total	141	100%	141	100%

Table 2. Examples of management models of several agri-food platforms in Europe

Figures 2018	Paris	Lyon	Madrid	Barcelona	London	Frankfurt	Milan	Verona	Turin
	Rungis	MARCHÉ	mercamadrid	mercabarna		FRISCHE ZENTRUM	SogeMi	VERONAMERCATO	CAAT
Total area	234 ha	12ha	222 ha	90 ha	23,6 ha	13,3 ha	81 ha	44 ha	57 ha
Turnover (Million EUR)	108	300. M (all cies)	26,2	26	17,8	-	12,7	7,6	6,8
Company Structure	Semi public company (2/3 public-1/3 private)	Ownership private Management through Association Syndicale Libre	Public Limited company (99% public)	Public Limited Company (99% public)	Public Company (100% public)	Wholesaler association /City of Frankfurt Semi public company	Joint Consortium Company (99% public)	Joint stock consortium company (84% public)	Joint stock consortium company (97% public)

ANNEX 2: EU Accession and Terminology

COUNTRY: North Macedonia
Agriculture Modernization Project

1. **Common Agricultural Policy (CAP)**. The CAP is the EU's agricultural policy, whose main goals are insuring the living standards of farmers, stability and security of supply of food at affordable prices, while preserving the rural areas. The basic principles of CAP are:

- The Single Market – all Member States form a single market providing with uniform rules for all the states, with regards to both the common market and trade with third countries.
- EU priority is to avoid market distortions and establish stability in the supply of agricultural products.
- Financial solidarity is pertinent to all EU Member States, without exception. The Member States contribute towards CAP expenses, but not all the Member States contribute in equal parts.

2. **Instrument for Pre-Accession Assistance in Rural Development (IPARD)**. The EU pre-accession assistance for rural development to candidate countries is granted through the IPARD. To start using the IPARD funds, each candidate country needs to fulfil two key conditions: (a) prepare the IPARD Program tailored to the country's needs to be accepted by the European Commission (EC) and (b) build institutions for the management, implementation and financial management of IPARD funds to which the management right will be transferred by the EC. This was earlier called *accreditation* and is now referred to as *entrustment of budget implementation tasks for EU IPARD funds*. The institution for the implementation and financial management of IPARD funds is generally called the *Paying Agency*.

3. The IPARD 2014-2020 program for North Macedonia as accepted by the EC includes 11 measures (Table 1). Five measures were expected to be implemented during the 2014-2020 program. Three of these had already been accredited by the time of preparation of the project. The accredited measures are *Investment in physical assets of agricultural holdings*, *Investment in physical assets concerning processing and marketing of agricultural and fishery products*, and *Farm diversification and business development*, while *Investment in rural public infrastructure* and *Technical Assistance* were envisaged to receive accreditation at a later stage.

Table 1. North Macedonia IPARD 2014-2020

MEASURES	EU Contribution								
	2014	2015	2016	2017	2018	2019	2020	2014-2020	
Investments in physical assets of agricultural holdings	2.150.000	2.150.000	2.050.000	2.280.000	3.600.000	4.620.000	4.950.000	**21.800.000**	**36%**
Support for the setting up of producer groups	0	0	0	0	0	0	0	**0**	**0%**
Investments in physical assets concerning processing and marketing of agricultural and fishery products	2.250.000	2.250.000	1.850.000	1.980.000	3.200.000	5.180.000	5.250.000	**21.960.000**	**37%**
Agri-environment- climate and organic farming measure	0	0	0	0	0	0	0	**0**	**0%**
Implementation of local development strategies - LEADER approach	0	0	0	0	0	0	0	**0**	**0%**
Investments in rural public infrastructure	0	0	400.000	900.000	2.000.000	2.800.000	3.000.000	**9.100.000**	**15%**
Farm diversification and business development	400.000	400.000	500.000	600.000	800.000	840.000	1.200.000	**4.740.000**	**8%**
Improvement of training	0	0	0	0	0	0	0	**0**	**0%**
Technical assistance	200.000	200.000	200.000	240.000	400.000	560.000	600.000	**2.400.000**	**4%**
Advisory services	0	0	0	0	0	0	0	**0**	**0%**
Establishment and protection of forests	0	0	0	0	0	0	0	**0**	**0%**
TOTAL	**5.000.000**	**5.000.000**	**5.000.000**	**6.000.000**	**10.000.000**	**14.000.000**	**15.000.000**	**60.000.000**	**100%**

4. Accession to the EU is conditioned by the adoption of the *Acquis communautaire* which comprises all founding rights and obligations of the EU and its institutional framework. The *Acquis* is divided into 35 chapters, which are at the same time considered negotiating chapters. Prior to accession, each country is obliged to assume all the *Acquis* and to be capable of implementing it effectively. If a candidate country considers that for justifiable reasons it will require a longer period of time for harmonization in a particular chapter, it may request during negotiations on that chapter the so-called transitional periods. In certain cases, candidate countries may also request derogations from the *Acquis*, which are permanent exceptions in particular areas.

5. MAFWE is in charge of the following three negotiating chapters:

Chapter 11 - Agriculture and Rural Development. The *Acquis* in the area of agriculture and rural development covers a large number of mandatory rules, many of which are directly applicable. Their proper application and their effective enforcement by the public administration are essential for the functioning of the CAP. Proper application and efficient implementation of the CAP is dependent on having established a Paying Agency and the system for management and control such as Integrated Administration and Controls System, as well as capacities for the implementation of rural development measures, direct payment schemes and the common market organization for various agricultural products.

Chapter 12 – Food safety, veterinary and phytosanitary policy. The *Acquis* in this area aims to ensure a high level of protection for consumer health, and health and well-being of animals and plants, whilst at the same time preventing the spread of infectious and parasite diseases and organisms harmful to the plants in the EU. This Chapter also include regulations related to genetically modified organisms. The EU applies an integrated approach from the field to the table, which includes three mutually supporting parts:

- Food safety: hygiene rules for food production and distribution, official control and mechanisms for ensuring food safety;
- Veterinary policy: rules on animals and animal products distribution, animal health, official control of third-country imports, and monitoring of animal migration;
- Phytosanitary oversight: rules on the control of harmful organisms in plants and plant materials, market placement of plant protection products, seeds and planting materials, control of pesticide residue in plant products.

Chapter 13- Fisheries. Fisheries is an important industry in the EU countries. The EU's Common Fisheries Policy (CFP) covers the exploitation and management of renewable fisheries resources as well as issues of market regulation, structural policy, oversight, control, and international cooperation in fisheries. The CFP used to be part of the CAP but was articulated as a separate policy after the EU accession of countries with large fishing fleets and maritime resources and the need to solve emerging problems, such as protection of fish resources.

GLOSSARY OF EU TERMINOLOGY

Acquis communautaire, sometimes called the EU *Acquis* and often shortened to *acquis,* is the accumulated legislation, legal acts, and court decisions which constitute the body of European Union law.

Common Agricultural Policy (CAP) is the set of legislation and practices adopted by the European Union to provide a common, unified policy on agriculture. The initial measures were introduced in 1962. Since then, the policy has been adapted and developed and has undergone a number of reforms.

Common Fisheries Policy (CFP) is a set of rules for managing European fishing fleets and for conserving fish stocks. Designed to manage a common resource, it gives all European fishing fleets equal access to EU waters and fishing grounds and allows fishermen to compete fairly.

Direct Payments. EU farmers receive support in the form of direct payments, on the condition that they respect strict rules on human and animal health and welfare, plant health and the environment. The amount of support they receive is not linked to the quantities they produce and is designed to provide farmers with a safety net against volatile market prices. Additional payments are available, for example for farming methods that go beyond basic environmental protection or for farmers working in areas with natural constraints.

Integrated Administration and Control System (IACS) is an obligatory system used by member states for the management and control of payments made to farmers under the CAP, using advanced techniques to check parcels by aerial or satellite photography, and to cross-check farmers claims with computer databases. Specifically, the IACS ensures that payment irregularities are revealed and that queries are followed up. In this way, payments to farmers are made correctly and any amounts which have been unduly paid are recovered.

Instrument for Pre-Accession Assistance in Rural Development (IPARD) aimed at providing assistance for the implementation of the acquis concerning the CAP and contributing to the sustainable adaptation of the agricultural sector and rural areas in the candidate country.

Land Parcel Identification System (LPIS) is a database which contains all agricultural areas that are eligible for CAP direct payments. It is used to cross-check the parcels for which payments have been claimed by the farmer. The land parcel identification system ensures that the farmer is paid for the correct area and that overpayment is avoided.

ANNEX 3: Common Agricultural Policy Monitoring and Evaluation Framework

COUNTRY: North Macedonia
Agriculture Modernization Project

European Union - Common Monitoring and Evaluation Framework

1. The EU has established a Common Monitoring and Evaluation Framework (CMEF) of the Common Agricultural Policy (CAP) for the programming period of 2014-2020. The CMEF covers Pillar I Agricultural Income Support and Pillar II Rural Development Support. Regulation (EU) 1303/2013 provides the general provisions for the evaluation of the CAP: (a) improving the quality of the design and implementation and (b) assessment of effectiveness, efficiency and impacts. The CMEF (Article 110, Regulation (EU) 1306/2013) describes the instruments related to the monitoring and evaluation of CAP measures, in particular of direct payments, market measures, rural development measures, and the application of cross compliance.

2. CAP measures are to be assessed in view of three general CAP objectives: viable food production; sustainable management of natural resources and climate action; and balanced territorial development. These objectives are broken into specific objectives, some of which are common to both Pillar I (agricultural income and market support) and Pillar II (rural development), whereas others are linked to either Pillar I or to Pillar II. Pillar I and II measures link to CAP specific and general objectives through specific intervention logics. For Pillar I, the EC's Directorate-General for Agriculture and Rural Development (DG AGRI) defines a multi-annual evaluation plan. Evaluations are carried out by independent external contractors and under the responsibility of the EC. For Pillar II, evaluations are carried out by/on behalf of the Member States, while DG AGRI supervises the ex-ante and ex-post evaluations prepared by the Member States. The EC can request additional evaluations on rural development topics.

3. For Pillar II, Regulation (EU) 1305/2013 establishes the Common Monitoring and Evaluation System (CMES) as part of the CMEF, its objectives and the common indicators. These indicators relate to the initial situation (context indicators) as well as to the financial execution, outputs, results/targets and impacts of the program. Indicators are based on available data and linked to the structure and objectives of the rural development policy framework. Five types of common indicators are defined under the Commission Implementing Regulation (EU) 834/2014 that link to different types of CAP objectives, including: (a) 45 context indicators describing the general operational environment of the policy (Pillar I and II); b) output indicators measuring activities directly related to policy interventions; (c) 41 result indicators: 16 result indicators for the first pillar measuring the direct and immediate effects of interventions and 25 result indicators for the second pillar (of which 19 correspond to target indicators); (d) 24 target indicators (of which 19 correspond to result indicators) used to set quantified objectives at the beginning of the programming period; and (e) 16 impact indicators measuring the impact of policy interventions (Pillar I and II) at longer term and beyond immediate effects (of which 13 are also included in the context indicator set). For each common indicator, information sheets are prepared that include the definition of the indicators, the data sources, the level of geographical detail, the reporting frequency and timing. In addition, sub-indicators are included when a split was considered necessary.

4. According to paragraph 5 of Article 110, the EC synthesizes the evaluations and produces assessments on the performance of the CAP to the European Parliament by 31 December 2018 and 31 December 2021. In case of Pillar I, Member States have to report the values of output and result indicators on to the EC on an annual basis. For Pillar II, in addition to common indicators, the CMES elements include common evaluation questions; provisions on data collection, storage and transmission; the evaluation plan, and the ex-ante and ex-post evaluations and all other evaluation activities

linked to the rural development program, including those required to fulfil the increased requirements of the Annual Implementation Reports submitted in 2017 and 2019.

5. Member States are responsible for the collection and monitoring information. In addition, starting in 2016, and each year until 2024, Member States have to submit an Annual Implementation Report (AIR), which provides information about the implementation of the rural development program, as well as the evaluation plan.

6. Regulations (EU) 1303/2013, 1305/2013, 1306/2013 and the respective delegated and implemented acts, define the responsible institutions of CMEF. Monitoring data is collected by the Paying Agencies and other national institutions; based on indicator fiches developed by the EC, output indicator values are provided by the Member States, while monitoring data used for impact, context and result indicators is provided to EC services, which update these indicators on an annual basis. For Pillar II, monitoring data are compiled from data items recorded at operation (project) level by the Managing Authority/ Paying Agency /Local Action Group in their operations database. Each approved operation is included in the operations database containing key information about each project and beneficiary. The database is used to generate aggregate information for the AIRs. Information on the complementary result indicators and net impact indicators is generated through evaluation activity, through appropriate methodologies. For rural development an evaluation plan is developed (as a mandatory component of the RDP) and specifies stakeholders involved in M&E, as well as actors, mechanisms and activities involved.

Performance Monitoring and Evaluation Framework (2021-2027)

7. The proposals for the post-2020 CAP shift the emphasis from compliance and rules towards results and performance. During the 2021-2027 programming cycle, a new Performance Monitoring and Evaluation Framework (PMEF) will be organized around three general and nine specific objectives, common to both CAP pillars. These reflect the economic, environmental and social challenges in rural areas, and one cross-cutting objective on fostering knowledge, innovation and digitalization in agriculture and rural areas. Member States will have more flexibility to develop their own pathways to achieving these common objectives through the formulation of a CAP Strategic Plan, which includes direct payments, sectoral interventions and rural development interventions. Overall policy performance will be assessed multi-annually by the EC. Annual performance monitoring and reporting will be based on the full list of result (or performance) indicators, while output indicators link expenditures with policy implementation. Importantly, in the legal proposals, it is proposed to further reduce the number of performance monitoring and evaluation indicators in a way to reflect as closely as possible whether the supported interventions contribute to achieving the objectives. Furthermore, certification bodies would have to ensure the reliability of the performance reporting on outputs and results, and data availability would be improved both by further data sharing between existing sources and by the adoption and use of new technologies.

8. Member States will organise and carry out an ex-ante evaluation to improve the quality of the design of their CAP Strategic Plans; and mid-term and ex-post evaluations which will assess the effectiveness, efficiency, relevance, coherence and impact of the Strategic Plan to CAP general and specific objectives. Similarly, to previous programming periods, Member States shall entrust these evaluations to functionally independent experts.

ANNEX 4: Implementation Arrangements and Support Plan

COUNTRY: North Macedonia
Agriculture Modernization Project

Project Institutional and Implementation Arrangements

1. **Ministry of Agriculture Forestry and Water Economy (MAFWE).** MAFWE will be the lead project implementing agency and will have overall responsibility for project management, implementation, and M&E. The Agency for Financial Support to Agriculture and Rural Development (AFSARD) and the Food and Veterinary Agency (FVA) will be supporting implementing and beneficiary agencies for sub-component 2.2 and 2.3 respectively. Activities envisaged under sub-component 2.1 to strengthen MAFWE capacity to manage state-owned agricultural land will be implemented in collaboration with the Public Enterprise for Management of Pasture (PEMP) and the Agency for Real Estate and Cadastre (AREC).

2. **MAFWE - Project Management Team (PMT)**. A PMT will be established in MAFWE. The PMT main responsibilities will include: (a) day-to-day project management; (b) coordination and cooperation among various government agencies institutions; (c) coordination with the Bank and the EU (co-financier); (d) preparation of annual work plans and budgets; (e) preparation and regular update of the Procurement Plan; (f) preparation of quarterly unaudited financial reports and annual audited financial statements; (g) monitoring and evaluation (M&E) of project activities, including measuring and updating of the results framework indicators, and monitoring and reporting of safeguards compliance; (h) preparation of semi-annual and annual progress reports; (i) briefing of MAFWE on the status of project implementation; and (j) systematic filing of all project-related documents, including procurement and financial management.

3. The PMT will be headed by a Project Director and include: a Project Coordinator, Component Leaders, Procurement Specialist, Financial Management Specialist, Safeguards Specialist, and Technical Specialist. The State Advisor for Rural Development (civil servant) has been appointed by the MAFWE as Project Director. S/he also serves as MAFWE Gender Focal Point. Civil servants of the MAFWE, AFSARD and FVA will be appointed as Component Leaders for the relevant activities. Given the demanding specific requirement for the implementation of the project. Additional technical assistance will be recruited for day-to-day project coordination, fiduciary and safeguards functions, M&E, and technical advisory along with training, office equipment and incremental operating to support overall project management.

4. **Technical Committee**. A Technical Committee, led by the Project Director and involving Project Coordinator, Component Leaders, as well as any additional staff as necessary will be established to ensure coordination at the operational level. The committee will include any technical staff including of the MAFWE, AFSARD, FVA, AREC, PEMP, etc. on a case by case base according to the topics to be discussed and should meet at the least once a month to ensure there is good progress in planned activities, or in case it would identify bottlenecks and solutions to move forward.

Financial Management

Implementing Entity and Staffing

5. The MAFWE will be the implementing agency of the project. MAFWE will be accountable for the execution of project activities. Project implementation will rely on MAFWE's existing structures, supported by the PMT.

Implementation arrangements place an emphasis on continually strengthening the MAFWE's ability to promote long-term sustainability of the system. The PMT will support implementation from procurement and financial management aspects. The project will support the hiring of qualified financial management staff, with qualifications satisfactory to the Bank.

Planning and Budgeting

6. The project's budget will be prepared by the MAFWE with support from the PMT. MAFWE has sufficient planning and budgeting capacity to manage project funds, including funds allocation, liquidity planning, and overall performance. Variances of actual versus budgeted figures should be checked on a regular basis, appropriately analyzed, and corrective actions taken. The PMT will prepare in-year financial plans and cash forecast based on the project's budget, thus ensuring adequate liquidity management and withdrawal of funds.

Accounting System

7. Acceptable accounting software will be procured by the project and administered by the PMT. Accounting records should include proper analytics of expenditures per contracts and each specific payment.

8. The project will follow cash basis of accounting (cash based IPSAS), recording transactions when actual payment is done, rather than when they are incurred. Transactions should be accounted for within 8 days after incurring. There should be proper back up of accounting records on external drives, as well as proper security regulation on access and editing rights of the financial information.

Internal Controls

9. Procedures and controls to be applied on the project will be detailed in the POM. Some of the key internal controls to be applied for the project should include:

(a) Appropriate authorizations and approvals of all purchases, relevant documentation, transactions of payments etc.;
(b) Segregation of duties as different persons handles different phases of a transaction;
(c) Reconciliations between project accounting records and other relevant sources of information (Client Connection, bank account statements etc.) performed at least monthly by the Senior Finance Management Officer; and
(d) Original documentation supporting all project transactions properly filed.

Contract Management

10. Contract implementation will be checked in the software and checks and controls of the total contract amount and payments which are due will be checked before each payment under contracts. Respective technical staff and financial department will review and approve invoices and accompanying documentation against contracts provisions for ceilings, dynamics of payments and quality of deliverables.

Financial Reporting

11. Unaudited Interim Financial Reports (IFRs) which will include financial information relating to the whole project will be prepared for each quarter and will be due 45 days after the end of each quarter. IFRs will be prepared in line with cash basis of accounting. The format of the IFRs will be agreed between the Government and Bank and attached to the minutes of negotiation. The PMT will handle preparation of the IFRs, as well as annual project financial statements. The reporting currency will be EUR. IFRs will include the following reports (subject to any modifications agreed with the implementing entity between the date of the report and negotiations):

(a) Cash Receipts and Payments, including comparison of budgeted versus actual amounts;
(b) Uses of Funds by Activity;
(c) Designated Account statement; and
(d) Accounting policies and explanatory notes.

External Audit

12. The annual audit of the project financial statements will be conducted by an independent audit firm acceptable to the Bank and in line with agreed Terms of Reference acceptable to the Bank. The audit report will be submitted to the Bank no later than six months after the end of the audited period. The Terms of Reference will be agreed between the Government and Bank and attached to the minutes of negotiation and included in the POM. In addition, the audit will review compliance with procedures laid out in the POM. The project will fund the audit of project financial statements. The audited project financial statements will be posted by the client on the MAFWE website within 2 weeks upon the audit report being accepted by the World Bank.

Financial Management Covenants

13. The financial management covenants for the project will be as follows:

(a) PMT to support an adequate financial management system.
(b) PMT to prepare IFRs for each calendar quarter and deliver to the Bank no later than 45 days after the end of the reporting quarter.
(c) Annual project financial statements audited by a private audit firm acceptable to the Bank and such audit to be delivered to the Bank not later than six months after the end of the audited period.

Funds Flow and Disbursement Arrangements

14. The project envisages opening of two separate Designated Accounts in the NBRNM: one for Category 1 and the second one for Category 2 - Matching Grants. Statement of Expenditures (SOEs) based disbursement will be applied, with advances being the primary disbursement method, but direct payments and reimbursement also allowed. Project funds will flow from: (a) the Bank – either as an advance via a Designated Account, which will be replenished under transaction based disbursement method, and managed as described below in the section on disbursement arrangements; or (b) by direct payment on the basis of direct payment withdrawal applications and other disbursement letter envisaged in the disbursement letter; or (c) reimbursement of the budget expenditures.

15. The PMT will administer the Designated Accounts in the following manner: (a) the PMT will prepare withdrawal applications for replenishment of the Designated Accounts which will have to be signed by MAFWE senior officials

designated as authorized signatories for the account; and (b) payments from the Designated Accounts are executed by the means of payment orders as approved by the MAFWE and processed by the PMT. After all the procedures with respect to flow of documents, verifications and authorizations described in internal controls section are applied, including confirmation by the technical staff in the PMT that service rendered/goods delivered are of acceptable quality and in line with the respective contracts, payment order signed by the MAFWE authorized signatories is submitted by the PMT to the NBRNM. In the case of Direct Payment, the application form for such method payment is sent to the Bank with the same authorized signatories as described above.

16. The Ceiling for the Designated Accounts is defined in the disbursement letter, as well as thresholds for minimum withdrawal application amount and direct payment threshold. Documentation requirements for replenishment will follow standard Bank procedures, as described in Disbursement Handbook. Monthly bank statements of the Designated Accounts, which have been reconciled, will accompany all replenishment requests.

Procurement

17. **Project Implementation Arrangements and Capacity for Procurement.** MAFWE will be the implementing agency with overall responsibility for project management and implementation. A PMT will be established in MAFWE to guide overall implementation and project management, including management of procurement. The project will finance contracts of various procurement categories, value and complexity, and it is important that a seasoned Procurement Specialist is hired, with general experience in procurement, preferably in managing procurement under projects financed from international financial institutions, as well as good knowledge of the English language. In order to strengthen the procurement capacity of the PMT, it is recommended that an international Procurement Consultant is hired on a part time basis to provide assistance to the PMT with the complex, high value contracts.

18. **Procurement Policy and Procedures.** The Bank's Procurement Framework (PF) effective as of July 1, 2016 will be governing procurement under the proposed project. Procurement of contracts for goods, works non-consulting and consulting services financed from the project, will be carried out in accordance with the World Bank Procurement Regulations for Investment Project Financing (IPF) Borrowers – Procurement in IPF of Goods, Works, Non-Consulting and Consulting Services, (Regulations) issued in July 2016, revised November 2017 and August 2018.[16]

19. **Procurement Documents.** The Bank's Standard Procurement Documents (SPD) will be used as required by the Regulations. They are all accessible at www.worldbank.org/procurement

20. **Systematic Tracking of Exchanges in Procurement (STEP).** The project will be subject to using the Bank's electronic platform ***STEP.*** It will be used by the PMT initially to create and later to revise Procurement Plan for the project, and to monitor performance, manage procurement procedures and store related documentation for all steps in a procurement activity.

21. **Publication of Procurement Notices.** The General Procurement Notice (GPN) and all procurement notices for contracts following international market approach will be published in United Nations Development Business (UNDB) and on the World Bank's external website through STEP. Procurement notices for contracts following national market approach will be published on the electronic system for public procurement, hosted by the Public Procurement Bureau

[16] http://pubdocs.worldbank.org/en/178331533065871195/Procurement-Regulations.pdf

at https://e-nabavki.gov.mk/PublicAccess/Home.aspx#/home, on the website of the MAFWE and/or in national newspapers with wide daily circulation.

22. **Project Procurement Strategy for Development (PPSD).** As required by the Procurement Framework, a PPSD was prepared. The PPSD is the basis for the procurement arrangements under the project. The PPSD includes details on project overview, strategic assessment of the operating context, and the Borrower's capability to manage procurement, procurement risk analysis, procurement objectives, procurement approach options and recommendations, preferred arrangements for low value low risk contracts, and a summary Procurement Plan. The PPSD addresses how procurement activities will support the development objectives of the project and deliver the best value for money under a risk-based approach. It also provides an adequate justification for the selection methods in the Procurement Plan. The level of details and analysis in the PPSD are proportionate to the risk, value and complexity of the project procurement. The PPSD also provides information on the procurement specific risks and the proposed mitigation measures. The proposed procurement and review thresholds applicable to the project are aligned with the Bank's most recent Thresholds for Procurement Approaches and Methods. An initial summary Procurement Plan covering the first 18 months of the project will be agreed with the Bank prior to negotiations.

23. **Frequency of Procurement Supervision and Oversight.** Procurement implementation support missions will be carried out twice a year, or on an as-needed-basis. Contracts not subject to prior review by the Bank, as per the Procurement Plan, will be post reviewed by the Bank's Procurement Specialist, assigned to the project. Post review of contracts shall be carried out once a year. At a minimum 1 out of 5 contracts will be randomly selected for post review.

24. **Procurement Risk Analysis**. Based on the assessment of capacity of the implementing agency, the risk for procurement is rated as ***High*****.** It will be revisited during project implementation and may be updated, based on capacity enhancement. The procurement specific risks, the proposed mitigating measures and the risk owner are indicated in Table 1:

Table 1. Procurement specific risks

	Risk Description	Description of Mitigation	Risk Owner
1.	Lack of PMT and a Procurement Specialist, experienced in managing procurement under World Bank financed projects.	• Establishing PMT • Initiating selection of seasoned Procurement Specialist prior project effectiveness • Providing training to the PMT Procurement Specialist by the World Bank's Procurement Specialist, assigned to the Project, • PMT Procurement Specialist will attend formal training courses on specific topics and/or formal training, including regional, organized by the World Bank.	MAFWE/PMT
2.	Use of World Bank's procurement policies and procedures, SPDs, and relevant procurement	• Formal and/or on-the-job training of relevant staff in the PMT on the respective procurement policies and procedures and applications	MAFWE/PMT

	applications (STEP)		
3.	Need to clearly elaborate the roles and responsibilities of various stakeholders in the project management	• Elaborate roles and responsibilities in detail in the POM	MAFWE/PMT
4.	STEP is a new operational tool and the MAFWE has no experience in the tool.	• The World Bank's Procurement Specialist, assigned to the Project, will organize either on-the-job or a formal training for the relevant PIU staff who will use STEP and refresher trainings on an as-needed basis.	MAFWE/PMT
5.	Complexity of the activities	• Seasoned Procurement Specialist be hired, with general experience in procurement, preferably in managing procurement under projects financed from international financial institutions, as well as good knowledge of the English language. • An experienced international Procurement Consultant is hired on a part time basis to provide assistance to the PMT with the complex, high value contracts.	MAFWE/PMT/Contractors
6.	Quality of designs	• PMT shall carried out quality check and give recommendations for improvement of the design documents. • Design company will be contracted to prepare high quality design documents.	MAFWE/PMT
7.	Contract management and supervision	• Supervision consulting companies will be contracted for direct supervision according to the local legislation.	MAFWE/PMT
8.	Availability of the contractors	• International and local contractors shall be approached, and their availabilities and capabilities are tested in previous projects.	MAFWE/PMT
9.	Social and environmental safeguards	• Bank's Social and Environmental Safeguard Specialist will monitor the social and environmental issues related to civil works contracts.	MAFWE/WB
10.	Time and Cost overrun	• Close support and supervision during contract implementation phase with adequate resources and tools from MAFWE/PMT.	MAFWE/PMT

11.	Lack of procurement performance indicators linked to inability of collecting and interpreting data	• Invest in systematic approach of procurement processing and introducing STEP system as a tool to tracking and monitoring.	MAFWE/PMT

Strategy and Approach for Implementation Support

25. The Implementation Support will focus on accomplishing the following objectives: (a) provide necessary technical advice to the client and bring international experiences and good practices to ensure that the project meets the Bank's technical standards; (b) ensure that the Implementing agency's measures meet the standards approved by the Bank in terms of project supervision; and (c) ensure that the required fiduciary, social, and environmental safeguards are put in place and implemented per the Financing Agreement and other project documents.

26. Given the diversity of activities that the project supports, the Bank task team will require a corresponding range of skills covering general agriculture, agribusiness and value chain, CAP and overall agriculture policy design and evaluation, agricultural land management, IT systems, EU accreditation and IPARD program, food safety and veterinary polices and services (Table 2).

27. The expertise should have sufficient adaptability to cover operational and technical aspects of project activities, as well as related policy issues. Enhanced implementation support will be critical during the first 18 months of implementation, with appropriate resources required. The Bank team will review implementation progress at least 2 times a year, provide recommendations and guidance, and agree on the action plan/next steps. More frequent interaction will be carried out by the staff based in the region if needed.

28. **Procurement Supervision and Ex-post Review.** Routine procurement reviews and supervision will be provided by the procurement specialist based in the region. In addition, two supervision missions are expected to take place per year during the first year of implementation, and once every subsequent year during which ex-post reviews will be conducted for the contracts that are not subject to Bank prior review on a sample basis (20 percent in terms of number of contracts). One ex-post review report will be prepared per fiscal year, including findings of physical inspections for not less than 10 percent of the contracts awarded during the review period.

29. **Financial Management.** The Bank will supervise the project's financial management arrangements in two main ways, namely through: (a) reviewing the project's interim un-audited financial reports for each calendar quarter, as well as the project's and implementation entity's annual audited financial statements and auditor's management letter and (b) performing on-site supervision and reviewing the project's financial management and disbursement arrangements to ensure compliance with the Bank's minimum fiduciary requirements. The on-site supervision will include monitoring of agreed actions, review of randomly selected transactions, review of internal controls, and other specific supervision activities.

30. **Environmental and Social Safeguards Implementation Support.** A Bank Environmental Specialist will review the implementation of the ESMF and the specific ESMPs and provide guidance to the PMTs safeguards specialist and the Project implementing agencies to ensure compliance with the Bank's environmental safeguards policies. Similarly, a Bank Social Development Specialist will review the implementation of the ESMF to ensure compliance with social

safeguards policies and the citizen engagement plan, including the gender dimension, and provide support to the PMT regarding the implementation of the grievance mechanism.

Table 2: Skills mix required for the duration of project implementation

Skills Needed	Number of Staff Weeks/Year	Number of Trips
Task Team Leader/ Agriculture Specialist	8	At least 2 mission per year
Technical (Agribusiness and Value Chain)	4	At least 2 missions per year
Technical (M&E and IT System)	4	At least 2 missions per year
Technical (Agriculture Policy and CAP)	4	At least 2 missions per year
Technical (Land Management Specialist)	4	At least 2 missions per year
Technical (Civil Engineer)	4	At least 2 missions per year
Technical (Food Safety and Veterinary Specialist)	4	At least 2 missions per year
Project Assistant (Operations)	4	At least 2 missions per year
Environmental Specialist	3	At least 1 mission per year
Social Specialist	2	At least 1 mission per year
FM Specialist	3	Site visits as needed
Procurement Specialist	5	Site visits as needed

ANNEX 5: Greenhouse Gas Emission Assessment

COUNTRY: North Macedonia
Agriculture Modernization Project

Background and Methodology

1. The World Bank Group's Environment Strategy 2012-2022 articulates an agenda to support green, clean, resilient paths for developing countries and mandates the World Bank to conduct GHG emission accounting for investment lending projects. The quantification of GHG emission is an important step in managing and ultimately reducing GHG emission.

2. To estimate GHG emissions and carbon sequestration in its agricultural investment projects, the World Bank has adopted the Ex-Ante Carbon-Balance Tool (EX-ACT)[17], which was developed by FAO in 2010. EX-ACT is a land-based appraisal system that allows the assessment of a project's net carbon-balance, defined as the net balance of CO_2 equivalent GHGs that were emitted or sequestered as a result of project interventions compared to a business-as-usual scenario. EX-ACT estimates the carbon stock changes, i.e. net emissions or sinks of CO_2, as well as GHG emissions per unit of land, expressed in equivalent tons of CO_2 per hectare and year. EX-ACT can be applied for a wide range of agriculture and forestry development projects as it covers a wide range of activities, including afforestation, agroforestry, improved crop and livestock production practices, improved water management, use of inputs, building of infrastructure. It aims at supporting project designers in identifying project activities with high potential for climate change mitigation impacts.

Application of EX-ACT for the Project

3. **Project area.** The proposed project finances investments to enhance the competitiveness of the agricultural sector in North Macedonia and strengthen public sector capacity, including the management of state-owned agricultural land and the compliance with food safety regulations for ABP. Specifically, sub-component 1.1 finances advisory services to agricultural producers to promote the adoption of improved agronomic practices and nutrient management. Given that fruit and vegetable production is dominated by smallholder producers, the average plot size per farm to benefit from the advisory services is assumed to be 1 hectare[18], leading to an expected total project area of 660 hectares under this sub-component. Sub-component 1.2 finances the construction of two CCCs – one in Strumica and one in Resen – and one AFP in Skopje. Sub-component 2.1 finances a management information system and reengineering of business processes in management of state-/co-owned agriculture land, which is expected to lead to an increased cultivation of parts of this land. Sub-component 2.3 finances the construction of an ABP facility that complies with EU regulations for the safe disposal of ABP. The establishment of the ABP safe disposal and control system is expected to significantly reduce GHG emissions from livestock disposal. Currently ABP are not collected separately; they are discarded together with the other waste and disposed of in landfill sites and dumps. Therefore, this sub-component is expected to significantly reduce GHG emissions from livestock disposal following the establishment of an ABP safe disposal system that is in line with national and EU legislation. The GHG accounting with EX-ACT considers the investments in advisory services, changes in non-forest state-owned agricultural land use, and off-farm infrastructure (CCCs, AFP, ABP) and the resulting changes in EX-ACT's "Cropland", "Land Use Change" and "Inputs" modules. Because the EX-ACT does not include a module to integrate the reduction in GHG emissions from livestock disposal, GHG emission reduction estimates from the ABP facility are conservative.

[17] http://www.fao.org/tc/exact/carbon-balance-tool-ex-act/en/
[18] The exception are apple producers, who on average own 3 hectares of land.

4. **Data sources.** Data and information for the GHG accounting is drawn from sources generated for the preparation of the project: (a) a sector study[19] carried out by the Faculty of Agricultural Sciences and Food of the Saint Cyril and Methodius University of Skopje, (b) the estimated non-forest land use change of state-owned agricultural land, (c) the technical specifications for the CCCs and AFP, and (d) the feasibility study for the planned ABP facility.

5. **Basic assumptions**. North Macedonia has a warm temperature climate and moist moisture regime. The dominate soil type is High Activity Clay soil. The project implementation phase is five years and the capitalization phase is 10 years. This amounts to 15 years total duration, which is in the standard range for the use of EX-ACT and in line with the project's economic and financial analysis assumptions. For the analysis, the *business-as-usual* scenario is expected not to differ from the *baseline scenario*. This default scenario is deemed reasonable as changes in agricultural activity depend on the technology available, which is a contribution of the project. The GHG analysis assumes that the dynamics of change are linear over the duration of the project.

6. **Crop production.** It is assumed that the activities of Component 1 will lead to improved agronomic practices, which is captured in EX-ACT's Cropland module. Specifically, the land area of the project for the GHG analysis is assumed to be 660 hectares. Production of annual crops encompasses 320 hectares and is expected to remain the same during project implementation, but with improved agronomic and nutrient practices. In addition, 340 hectares are used for perennial crops at baseline and are expected to remain in perennial crop production, but with improved agronomic practices and nutrient management. The assumed adoption rate of improved agronomic practices and nutrient management among project beneficiaries of the advisory services is 70 percent. The area and proportionality of annual and perennial crop cultivation is assumed not to change during project implementation and is displayed in Table 1.

Table 1. Crop cultivation

Area under annual systems (ha)			Area under perennial systems (ha)		
	at baseline	*at endline*		*at baseline*	*at endline*
Tomato	88	88	Apple	242	242
Pepper	145	145	Plum	42	42
Cabbage	71	71	Peach	25	25
Cucumber	16	16	Cherry	31	31
Total	**320**	**320**	**Total**	**340**	**340**

7. **Land use change.** Activities of sub-component 2.1 related to state-owned agricultural land management are assumed to lead to non-forest land use change. This change is captured in EX-ACT's LUC module. The activities are expected to lead to 20,000 hectares of land to be newly rented and cultivated. Based on MAFWE information, 30 percent of this land is considered currently degraded. In terms of type of crops expected to be cultivated because of project support, we assume the current distribution described in the sector study, leading to 53 percent of land cultivating annual crops and 14 percent with perennial crops. The analysis does not assume any changes in management practices.

8. **Inputs.** Key inputs considered in the GHG analysis are: (a) the construction of the two CCCs, AFP and ABP facility, (b) the electricity use for the CCCs, AFP, and ABP facility, and (c) the estimated fuel use for the required transport for ABP collection. Regarding the construction of agricultural buildings, the project plans to build a CCC in Resen of about 5,000 square meters, a CCC in Strumica of about 6,000 square meters, an AFP in Skopje of 28,600 square meters, and an ABP

[19] See details on the study in the Economic and Financial Analysis.

facility of about 8,000 square meters. For the two CCCs and the AFP, the total annual electric consumption is estimated at 2,940 Megawatt hours, based on electricity use of similar infrastructures in Europe. The project plan to install photovoltaic panels at the AFP to reduce the consumption is not considered in the EX-ACT tool. For the ABP facility, annual electricity use has been calculated at 1,000 kilowatt hours, based on the technical specification study for the ABP facility. Fuel consumption related to collection and transport has been calculated at 714,000.00 liters per year. From expertise shared by the Food and Veterinary Agency, currently ABP are transported to regional centers, so we assume that 30 percent of the estimated transport with an ABP facility.

Results

9. **Net carbon balance.** The net carbon balance indicates tons of CO_2 equivalent (tCO_2-eq) GHGs sequestered as a result of project implementation compared to the *business-as-usual* scenario. Over the project duration of 15 years, the project constitutes a carbon sink of 331,498 tCO2-eq (or 22,100 tCO2-eq annually). Most of the carbon sequestered is due to land use change to perennials and associated biomass growth and soil carbon sequestration, and improved agronomic practices and nutrient management of perennial and annual crop cultivation, which add to 283,220 tCO2-eq. The increase in annual crop cultivation from non-forest land use change of state-owned agricultural land also adds to the carbon sink with 78,486 tCO2-eq (Table 2). Project inputs are the main carbon sources. In particular, the construction and energy use of the CCCs, AFP and ABP facility generate carbon emissions of 32,672 tCO2-eq .

Table 2: Results of the Ex-Ante GHG analysis

Project activities	Over the economic project lifetime (tCO2 eq)			Annual average (tCO2 eq/year)		
	GHG emissions of "without project" scenario (1)	Gross emissions of "with project" scenario (2)	Net GHG emissions (2–1)	GHG emissions of "without project" scenario (3)	Gross emissions of "with project" scenario (4)	Net GHG emissions (4–3)
Non-forest LUC	0	-78,486	-78,486	0	-5,232	-5,232
Annual Agriculture	0	-2,464	-2,464	0	-164	-164

Caveats. The project will finance advisory and post-harvest (collection, conditioning, storing, etc.) services and infrastructure that are demand-driven and not known ex-ante. Hence, the extent and type of the services to be provided cannot be accurately estimated.

ANNEX 6: Economic and Financial Analysis

COUNTRY: North Macedonia
Agriculture Modernization Project

1. **Objective.** The project aims to improve the competitiveness of North Macedonia's agricultural sector and strengthen public institutions in the context of the country's aspirations to advance its accession to the EU. Aligning agricultural production with EU accession requirements implies costs for producers and institutions and requires investments in both private production units and public goods. The project aims to support some of these investments and to strengthen the capacity of the different private and public actors for the more competitive markets that would come with a future EU accession. The primary beneficiaries of the project include agricultural producers, producer cooperatives, and agribusinesses that will benefit from the project's agricultural support services, as well as public sector institutions that will benefit from the support to institutional development.

2. **Benefits.** Quantifiable economic benefits are expected from project investments as follows: (a) improved productivity of small and medium scale producers resulting from access to finance (matching grants) for high-quality demand-driven advisory services; (b) higher incomes of producers resulting from enhanced compliance with product quality classification and product safety requirements that translate into higher sales prices; (c) improved market access resulting from better access to market information, sorting and cold storage facilities at the CCCs and the AFP; (d) improved processing, packaging and marketing of agricultural products through increased efficiency and reduced transaction costs; (e) higher product quality and reduced post-harvest losses. Additional indirect project benefits are: (f) improved infrastructure providing better access to existing and new markets; (g) spillover effects of knowledge and skills gained through the project into economic activities beyond the project scope; (h) employment opportunities in rural areas; (i) improved Government systems and efficiency gains that strengthen the enabling environment for agricultural producers in terms of absorption of EU (IPARD) and national scheme funds; (j) improved management of state-owned agricultural and pasture land; and (k) increased food safety through the safe ABP disposal.

3. **Methodology.** The economic and financial analysis was carried out in line with the Bank's guidelines on Economic and Financial Analysis and in line with the guidance on assessing the shadow price of carbon. It is based on an assessment of the incremental benefits generated by the project investments in the CCCs and the associated advisory services (Component 1), which together account for 70 percent of the total project costs. A cost-benefit analysis was conducted based on a sector study carried out by the Faculty of Agricultural Sciences and Food of the Saint Cyril and Methodius University of Skopje[20] in preparation of the project. The study is based on the analysis of primary and secondary data. Primary data was collected for: farm cost structure, quality classifications of the production, and market prices for the main vegetable and fruit crops. The quantifiable benefit is the incremental income from improved productivity and product quality/ price resulting from improved technology, quality, and safety of agricultural products, and from more effective aggregation, sorting, temperature-controlled cold storage, and marketing.

[20] The sector study was conducted based on data from secondary sources (desk research) and primary field research for different parts of the value chain and interviews (field research). The analysis focused on the key vegetables and orchard products of North Macedonia in terms of volume of production, which for vegetables are tomatoes, peppers, cabbage, melons (watermelon) and cucumber, and for fruits are apples, plum, peach and cherry. The desk research analyzed available data related to the production, trade of fruit and vegetables derived from the State Statistical Office (SSO), the MAFWE, the AFSARD, the FVA and the State Agricultural Inspectorate (SAI). The field research conducted in March and April 2019 was based on structured surveys with key actors in the value chains, focus group discussions, and individual site visits organized in the most important manufacturing centers in the country. One hundred primary producers of fruits and vegetables were interviewed in addition to other key actors in the chain (buyers, wholesalers, retailers, etc.) and representatives of relevant organizations and sector institutions.

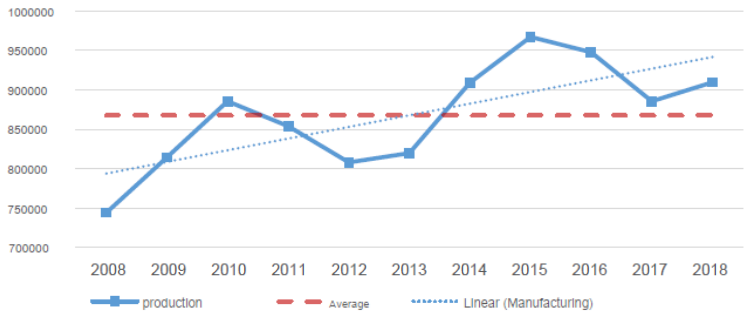
4. The calculation of economic benefits of the advisory services and the CCCs is challenging due to their demand-driven nature. The specific interventions will be identified during project implementation, considering the demands of beneficiaries, the economic conditions at a particular location, and the services needed. However, possible activities and investments that the beneficiaries of the advisory services, the CCCs and the AFP may undertake have been identified during the appraisal process. These also take the experience of similar investments in the region into account. As a result, eight indicative production models were prepared for the economic and financial analysis to identify and value the incremental benefits that Component 1 will generate. The analysis focuses on vegetable and fruit crops given their great export potential.

5. Crop production generates 73 percent of the value of total agricultural production (2015-2017) in North Macedonia. Vegetable production is the most significant, accounting for 51 percent of the total agricultural output value while fruit production accounts for 14 percent. The main vegetable crops considered for the economic and financial analysis are *tomatoes, peppers, cabbage and cucumber*. The main fruit crops are *apple, plum, peach, and cherry*. Although the average farm size in North Macedonia is 1.8 hectares, the land plot taken for analysis of crop production models is one hectare (with the exception of apple producers, who on average own 3 hectares for apple production). Fragmented agricultural holdings dominate North Macedonia's agriculture: 58 percent of farms operate with less than 1 hectare and 95 percent with less than 5 hectares, as highlighted in the 2019 World Bank public expenditure analysis.[21] The assumption on land size hence ensures the inclusion of both small and medium farms. Results are then extrapolated to the whole project to calculate project's overall economic impact. All models show positive returns on investment derived from the access to advisory services, improved technologies, and services provided through the CCCs and AFP, supporting the financial viability of the investment.

Vegetables

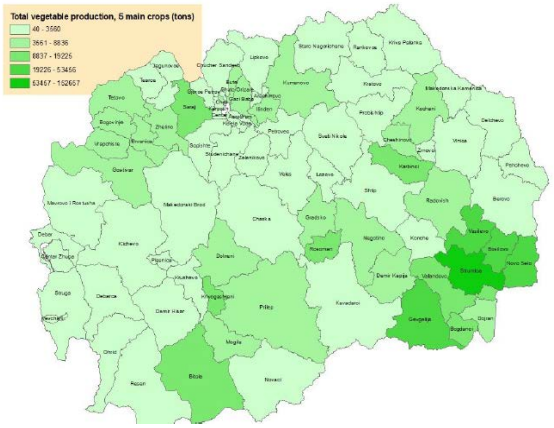
6. Favorable soil and climatic conditions allow the cultivation of many types of vegetables in North Macedonia. Vegetable production takes place on about 50,000 hectares (State Statistical Office, 2019). The selected crops for purposes of this analysis (tomato, pepper, cabbage, cucumber) are planted on about 26,000 hectares on average during 2015-2017. Pepper production covers 35 percent of the total vegetable production areas, followed by tomatoes (22 percent), cabbage (18 percent) and cucumber (4 percent). During 2008-2018, average annual production of vegetables was about 869,000 tons (Figure 1). Production and yields have generally been increasing over the past decade. Vegetable production typically takes place on small farms between 0.2 - 0.5 hectares. In 2016, about 60,000 farms were growing vegetables versus 51,000 farms in 2013 (State Statistical Office, 2014 and 2017), mostly in unconditioned greenhouses and open fields. The main areas for vegetable production are located in the Southeast (Figure 2).

Figure 1. Dynamics of Vegetables Production, tons (2008-2018)



[21] World Bank, 2019: Rebalancing Public Support for Agriculture to improve Sector Performance.

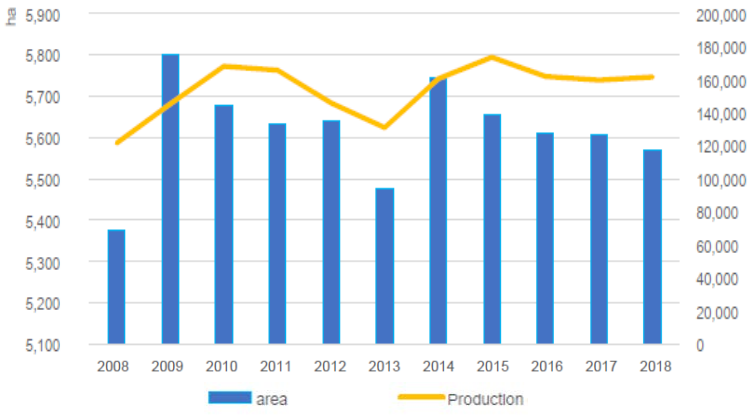
Figure 2. Geographical concentration of five studied vegetables (2018)



7. *Tomato.* Tomatoes are produced on 5,622 hectares (average area over the last decade). Production volume varies between 120,000 to 170,000 tons per year depending on weather conditions during the growing period (Figure 3). Production is concentrated in the Southeast Region with 1,200 hectares under cultivation (22 percent of the total area under tomatoes) providing 58 percent of total supply. The highest concentration of tomato production is in Strumica Municipality where about 50,000 tons are produced annually. The second most important tomato production areas is Skopje, with a production of about 13,000 tons, mostly in the municipalities of Saraj and Gazi Baba. Yields are highest with 76 tons per hectare in the Southeast while only 18 tons per hectare are achieved in Skopje.

8. *Tomato model.* The financial model assumes a positive change in price received due to better product quality, class quality sorting, and storage equipment in the CCC. Specifically, yields of a beneficiary tomato producer are expected to increase by 25 percent from 65 to 80 tons per hectare. In addition, the access to CCC sorting and storage equipment is expected to increase the share of producers sorting their produce and selling their produce at the extra and/or first-class category and price from 50 percent to 80 percent. With a 15-year projected period, the model shows a positive Net Present Value (NPV) and an Internal Rate of Return (IRR) of 14.4 percent at a 7 percent discount rate.

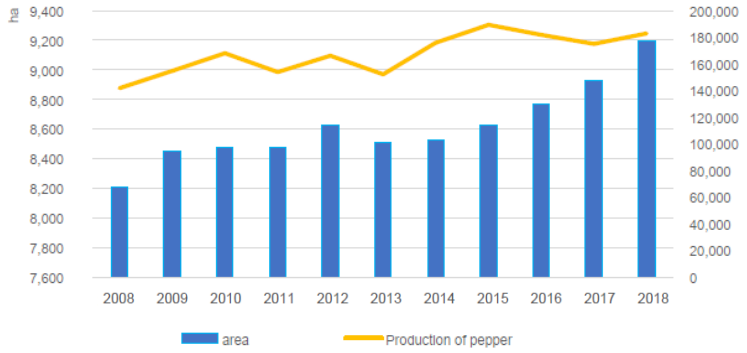
Figure 3. Tomato production, ha and tons (2008-2018)



9. *Pepper.* Pepper production has grown over the last decade from about 8,200 hectares in 2008 to 9,200 hectares in 2018, with total production reaching 180,000 tons in 2018 (Figure 4). Pepper is produced mainly in the Southeast and Pelagonija regions, covering an area of approximately 2,400 hectares or approximately 28 percent of the total cultivation area. The Southeast region produces about half of the total domestic supply and, with an average yield of about 37 tons

per hectare, generates significantly higher yields as compared to other regions. In 2018, the total cultivation area increased across all regions, but the production did not change notably, resulting in reduced yields per unit area, especially in Vardar and Southeast. Production is concentrated in the southeastern municipality of Strumica, where annual production is about 40,000 tons. Vasilevo, Bosilovo and Novo Selo are also important production areas (43,000 tons). Skopje municipality produces about 12,000 tons, mostly in Saraj and Gazi Baba.

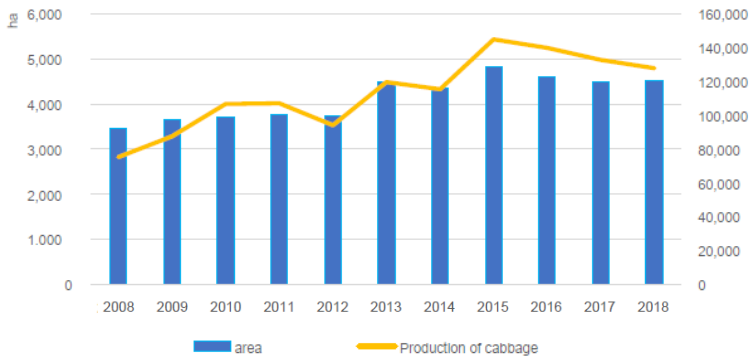
Figure 4. Pepper production, ha and tons (2008-2018)



10. *Pepper model.* The model assumes a positive change in price received through better product quality from improved practices and introduction of/increase in class quality sorting and storage equipment provided in the CCCs. Yields of beneficiary pepper producers are expected to increase by 25 percent from 33 to 41 tons per hectare. Moreover, the farmers' access to CCC sorting and storage equipment is expected to increase the share of producers who sort and sell their produce at the extra and/or first-class category and price from 70 percent to 85 percent. With a 15-year projected period, the financial model shows a positive NPV and an IRR of 23 percent at a discount rate of 7 percent.

11. *Cabbage.* Production increased from 3,500 hectares in 2008 to 4,500 hectares in 2018. Annual production ranges between 80,000 to 110,000 tons (Figure 5). Production is concentrated in the Southeast region, comprising about 57 percent of the total cabbage production area and 75 percent of total production in the country. Among the top producing municipalities are: Strumica, Bosilovo, Novo Selo, Bogdanci, Valandovo, Vasilevo and Dojran. Average yield per hectare (Southeast region) is around 40 tons per hectare.

Figure 5. Cabbage production, ha and tons (2008-2018)

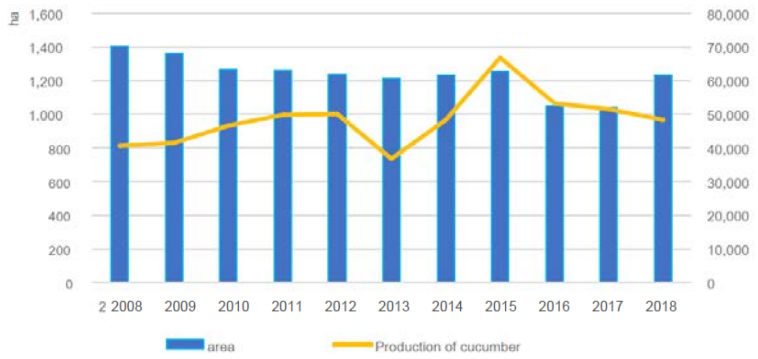


12. *Cabbage model.* The model assumes a positive change in price received through better product quality from improved practices and introduction of/increase in class quality sorting and storage equipment provided by the CCCs

and AFP. Yields of beneficiary cabbage producers are expected to increase by 25 percent from 39 to 48 tons per hectare. Farmers' access to CCC sorting and storage equipment is expected to increase the share of producers sorting and selling their produce at the extra and/or first-class category and price from 50 percent to 80 percent. With a 15-year projected period, the financial model shows a positive NPV and an IRR of 46 percent at a discount rate of 7 percent.

13. *Cucumber.* Cucumber is produced on 1,000 to 1,400 hectares, and total production has been decreasing since the peak year of 2015 with a total output 65,000 tons (Figure 6). Production is concentrated in the Southeast which comprises half of the total cucumber production area of North Macedonia. Main cucumber production is located in the Southeast, which generates 85 percent of total supply. More than half of cucumber production is concentrated in the municipality of Strumica, which produces an average of about 30,000 tons annually. The average yield in the Southeast region is about 87 tons per hectare, while the national average is 52 tons per hectare.

Figure 6. Cucumber production, ha and tons (2008-2018)



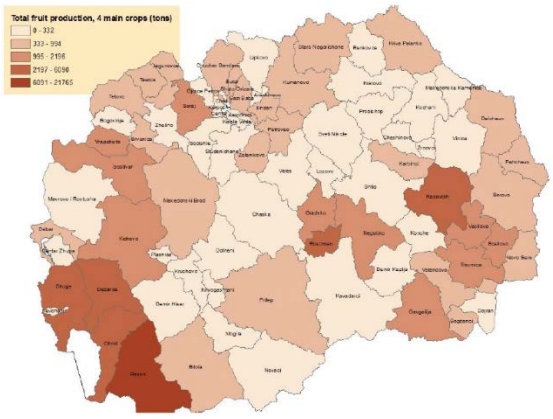
14. *Cucumber model.* The financial model assumes a positive change in price received due to better product quality from improved practices and introduction of/increase in class quality sorting and storage equipment provided by the CCC. Specifically, yields of a beneficiary cucumber producer are expected to increase by 25 percent from 84 to 105 tons per hectare. Farmer access to CCC sorting and storage equipment is expected to increase the share of producers sorting their produce and selling their produce at the extra and/or first-class category and price from 50 percent to 80 percent. With a 15-year projected period, the financial model shows a positive NPV and an IRR of 44 percent, at a discount rate of 7 percent.

Fruits

15. North Macedonia cultivates over thirty fruit species. The total orchard areas have been growing since 2007 from 13,400 hectares (or 2.5 percent of arable land) to 16,800 hectares (or 3.2 percent of total arable land) in 2018. Apple orchards are the most important fruit trees (4,346,000 trees), followed by plums (1,662,000 trees), cherries (922,000 trees), peaches (537,000 trees), pears (408,000 trees). Local varieties are dominant and account for over 90 percent of orchards. Production has been volatile because of fluctuations in spring temperatures and late frost which affected the flowering of trees. Over the past decade, average annual fruit production fluctuated around 200,000 to 220,000 tons.

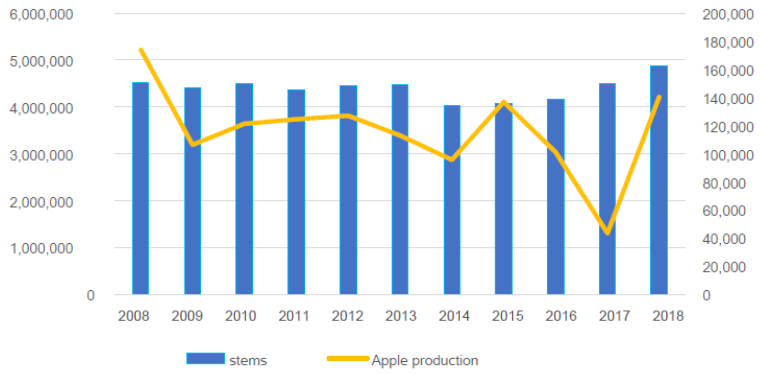
16. Orchards are generally owned by individual farms occupy an area of 14,500 hectares (87.6 percent of total area), while the area under orchards owned by agricultural cooperatives occupies 2,043 hectares (12.4 percent). Fruit production is common in all regions of the country, but there are regional strongholds for certain crops, such as the Pelagonija region for apples (particularly the municipality of Resen) and the Bitola region for sour cherry (Figure 7).

Figure 7. Geographical concentration of four studied fruits (2018)



17. *Apples.* Apples are by far the most produced fruit crop in North Macedonia, with almost 60 percent of total fruit production during the last decade. While annual apple production varies in response to climatic conditions, annual production averaged 117,000 tons during 2008-2018 (Figure 8). In 2017, production dropped markedly due to extremely low spring temperatures, which contributed to the destruction of the vast bulk of apples. The total area under apple orchards is estimated to be about 5,500 hectares. Nearly 95 percent of the area under apple orchards are owned by individual farms. Apples are typically produced on small lots ranging from 0.1 to 1 hectare, and there is only a small number of business entities that have organized production of apples on lager areas. Production is geographically concentrated in Resen. Apple yields per unit area are quite variable, depending on the year, variety, technology of cultivation, and other factors, but average around 25 tons per hectare. In a typical year, there is a surplus of apple production: total annual consumption of apples in North Macedonia is around 25 million kilograms or 12 kilograms per capita, while the annual production is about three times higher than the annual consumption of apples in the country.

Figure 8. Apple production, ha and tons (2008-2018)

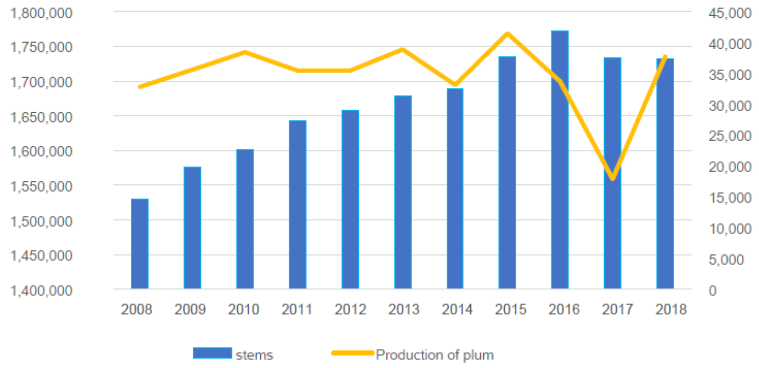


18. *Apple model.* The financial model illustrates the incremental benefits for an apple producer with 1 hectare (1,000 tress in full production) who accessed project technical and advisory services. The model assumes a positive change in price received due to better product quality from improved practices, diversification to higher-value/export-oriented varieties, and introduction of/increase in class quality sorting and regulated cold storage equipment provided by the project-supported purchasing and distribution center. Yields of a beneficiary apple producer are expected to increase by 25 percent from 28 to 35 tons per hectare. In addition, the farmer's access to sorting and cold storage equipment for regulated temperature and humidity at the CCCs and AFP are expected to increase the share of producers sorting their

produce and selling their produce at the extra/first class category and price from 60 percent to 85 percent. With a 15-year projected period, the financial model shows a positive NPV and an IRR of 25.5 percent at a 7 percent discount rate.

19. *Plums*. Plum production accounted for 17 percent of total fruit production during the last decade, the highest share after apples. Annual plum production varies by year depending on the climatic conditions in the respective year. Average annual production during 2008-2018 was about 34,600 tons (Figure 9). The notable deviation of output in 2017 was due to the extremely low spring temperatures, which destroyed part of the production. In a typical year without extreme bad weather conditions, total production reaches 35,000 tons. Production is widespread throughout the country, with the major production centers being Delcevo region (532 hectares dedicated to plum production and annual production of about 3,500 tons), Berovo region (497 hectares, 2,400 tons) and Radovis (258 hectares, 2,400 tons). Yields are variable depending on the year, variety, technology of cultivation but average 25 tons per hectare.

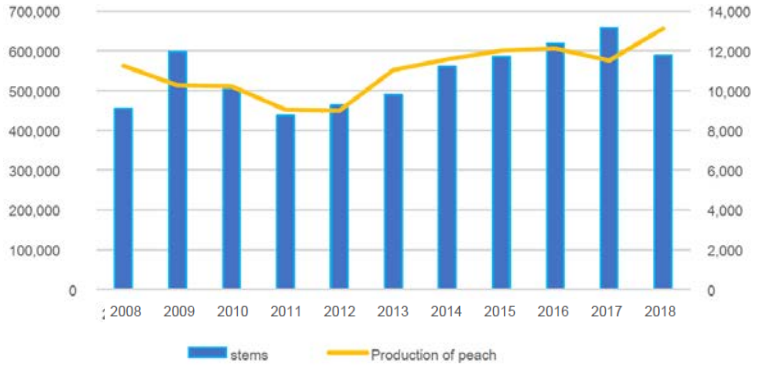
Figure 9. Plum production, ha and tons (2008-2018)



20. *Plum model.* The financial model illustrates the incremental benefits for a plum producer with 1 hectare (500 tress in full production) who has accessed the project's technical and advisory services. The model assumes a positive change in price received due to better product quality from improved practices, diversification to higher-value/export-oriented varieties, and introduction of/increase in class quality sorting and regulated cold storage equipment provided by the CCCs and AFP. Yields of a beneficiary plum producer are expected to increase by 25 percent from 24 to 30 tons per hectare. As producers are utilizing sorting and cold storage equipment for regulated temperature and humidity at the CCCs and AFP are expected to increase the share of produce sold at extra class category produce and in price resulting increases from 50 percent to 80 percent. With a 15-year projected period, the financial model shows a positive NPV and an IRR of 9.5 percent at a 7 percent discount rate.

21. *Peaches.* Peach production has increased during the past decade and accounts for about 5.5 percent of total fruit production in North Macedonia. Between 2008 and 2018, total annual production averaged around 11,000 tons (Figure 10). Yields per unit area vary by year but typically are around 20 tons per hectare and 22 kg per tree. Based on available data, the total peach production area is approximately 1,800 hectares. Production is concentrated in the Vardar region (particularly Rosoman Municipality) and the regions of Veles, Strumica, Negotino, and Skopje. Almost 76 percent of total production is generated by small individual farms with a production area of less than one hectare. There is a growing number of business entities that own larger parcels of peach orchards.

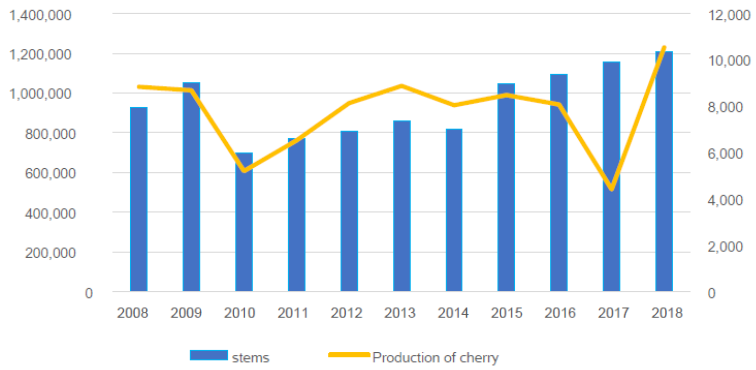
Figure 10. Peach production, ha and tons (2008-2018)



22. *Peach model.* The financial model for 1 hectare (500 trees in full production period) assumes a positive change in price due to better product quality from improved practices, diversification to higher-value/export-oriented varieties, and introduction of/increase in class quality sorting and regulated cold storage equipment of the CCCs and AFP and project-supported technical and advisory services. Yields of a beneficiary peach producer are expected to increase by 25 percent from 22 to 27 tons per hectare. In addition, farmer access to sorting and cold storage equipment for regulated temperature and humidity at the CCCs and AFP are expected to increase the share of producers sorting and selling their produce at the extra class category and price from 50 percent to 80 percent. With a 15-year projected period, the financial model shows a positive NPV and an IRR of 21.2 percent at a discount rate of 7 percent.

23. *Sour Cherries.* Cherry production accounts for about 3.8 percent of total fruit production. Average annual production of cherries reached 8,000 tons during 2008-2018. The number of fruit trees and cherry production has continuously increased over the years and estimated at 1.2 million (Figure 11). Production takes place throughout North Macedonia but is most concentrated in the East (41 percent of total production) and Pelagonija (19 percent). The largest cherry production areas in the East are Delcevo (19 percent of total production), Cheshinovo/Kocani (10 percent). Yields per unit area are quite variable, but average around 10 tons per hectare. According to State Statistical Office data, yields per tree ranged from 4 to 10 kilogram. Sour cherries are grown mainly on larger plantation, of which over 69 percent are owned by agricultural enterprises.

Figure 11. Cherry production, ha and tons (2008-2018)



24. *Cherry model.* The financial model illustrates the incremental benefits for a producer with 1 hectare (500 trees in full production) who has accessed the project's technical and advisory services. The model assumes a higher product price due to better product quality from improved practices, diversification to higher-value/export-oriented varieties, and introduction of/increase in class quality sorting and regulated cold storage equipment. With the project, yields are

expected to increase by 25 percent from 18 to 22 tons per hectare. In addition, access to sorting and cold storage equipment for regulated temperature and humidity at the CCCs and AFP is expected to increase the share of producers sorting their produce and selling their produce at the extra class category and price from 50 percent to 80 percent. With a 15-year projected period, the financial model shows a positive NPV and an IRR of 12.3 percent at a discount rate of 7 percent.

Public Sector Capacity

25. Component 2 provides investments in public sector capacity to: strengthen evidence-based policy-making; manage state-owned agricultural and pasture land; absorb IPARD and other funds; and manage safe ABP disposal. Efficiency gains are expected through an improved public expenditure monitoring system. Similarly, the improved management of state-owned agricultural and pasture land is expected to enhance efficiency and lead to increased revenues. With respect to project activities enhancing the capacity for IPARD fund absorption, these funds could ideally be assessed and considered as benefits of the project. However, it is not possible to conduct such an assessment accurately, as the extent to which the project will contribute to making these resources available is unclear. The investments in food safety and veterinary and phytosanitary infrastructure (ABP disposal system) will support the country to meet the closing benchmarks of Chapter 12 of the EU *acquis*, including: (a) setting up an official control system for ABP and safely disposing of all categories of ABP; (b) strengthening the phytosanitary laboratory diagnostic capacity; and (c) support to inspection services and increase readiness of North Macedonia for future EU accession.

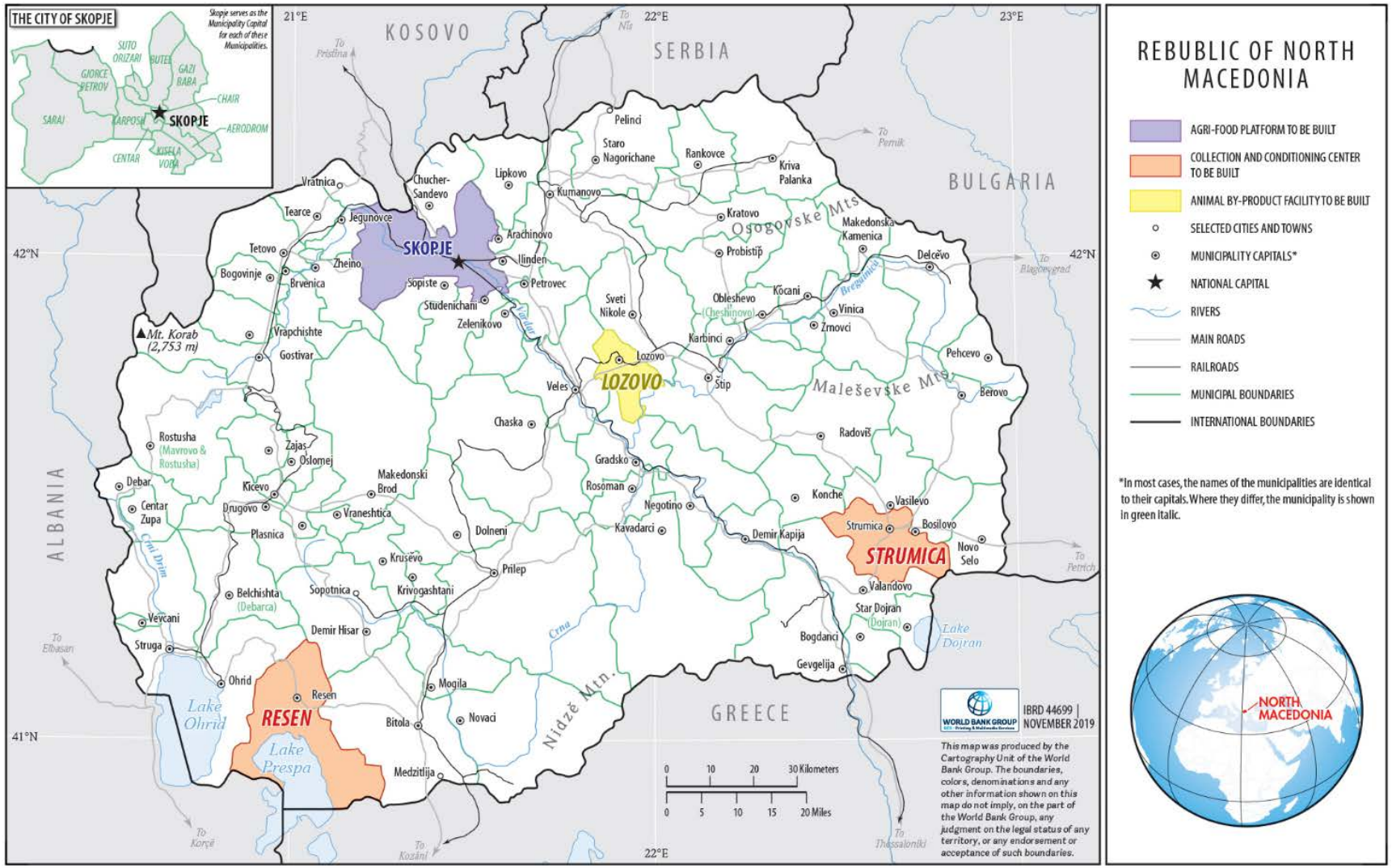
26. **Overall economic return of the project.** Based on the quantifiable benefit and cost streams of the eight indicative models, the project's overall Economic Rate of Return (ERR) is estimated at 27.5 percent. The NPV of the project's net benefit stream, discounted at 7 percent, is US$D 22.1 million. The benefit stream was mainly generated by the activities of Component 1, which represent 70 percent of the overall project costs. The shadow price of carbon was taken into account for the projected 15-year period. Based on the GHG accounting (Annex 6) the net carbon sink is estimated at 22,100 tCO2-eq per year. If low estimate of the shadow price of carbon is taken into account, then ERR would be 22.9 percent with NPV equal to USD 17.2 million; if high estimate of the shadow price of carbon is taken into account, then ERR would be 32.4 percent with NPV equal to USD 27 million.

27. **Sensitivity Analysis**. The sensitivity analysis shows that a decrease in total project benefits by 20 percent and an increase in total project costs reduces the base ERR to about 18 and 19 percent, respectively. A one-year delay in project benefits reduces the ERR to about 19 percent. With a two-year delay in project benefits, the ERR falls to about 15 percent. Overall, project demonstrates quite a good resistance to the variations in benefits and costs (Table 1).

Table 1. Summary of Sensitivity Analysis

Sensitivity Analysis (15-year period)	Base case	Costs Increase			Increase of Benefits		Decrease of Benefits			Delay of Benefits	
		+10%	+20%	+50%	+10%	+20%	-10%	-20%	- 30%	1 year	2 years
ERR	**27.5%**	23.1%	19.6%	12.1%	32.6%	38.1%	22.7%	18.1%	13.6%	19.6%	15.4%
ENPV (EUR million)	**22.1**	19.3	16.6	8.4	27.0	32.0	17.1	12.2	7.2	18.2	14.6

ANNEX 7: Map


THE CITY OF SKOPJE
Skopje serves as the Municipality Capital for each of these Municipalities.
SUTO ORIZARI
BUTEL
GAZI BABA
GJORCE PETROV
CHAIR
SARAI
CAIR
SKOPJE
AERODROM
CENTAR
KISELA VODA
KOSOVO
SERBIA
BULGARIA
GREECE
ALBANIA
SKOPJE
LOZOVO
STRUMICA
RESEN
Lake Ohrid
Lake Prespa
Lake Dojran
Mt. Korab (2,753 m)
Osogovske Mts
Maleševske Mts
Nidžė Mtn.
Crna
Vardar
Bregalnica
Pelinci
Staro Nagorichane
Rankovce
Kriva Palanka
Lipkovo
Kumanovo
Chucher-Sandevo
Vratnica
Tearce
Jegunovce
Arachinovo
Ilinden
Kratovo
Makedonska Kamenica
Delčevo
Probištip
Tetovo
Bogovinje
Brvenica
Zheino
Sopiste
Petrovec
Studenichani
Zelenikovo
Sveti Nikole
Obleshevo (Cheshinovo)
Kočani
Vinica
Zrnovci
Karbinci
Lozovo
Štip
Pehcevo
Berovo
Radoviš
Vrapchishte
Gostivar
Veles
Chaska
Rostusha (Mavrovo & Rostusha)
Zajas
Oslomej
Debar
Kičevo
Centar Župa
Drugovo
Makedonski Brod
Vraneshtica
Plasnica
Dolneni
Gradsko
Rosoman
Negotino
Kavadarci
Demir Kapija
Konche
Vasilevo
Strumica
Bosilovo
Novo Selo
Valandovo
Star Dojran (Dojran)
Bogdanci
Gevgelija
Krushevo
Prilep
Sopotnica
Krivogashtani
Belchishta (Debarca)
Vevcani
Struga
Demir Hisar
Ohrid
Resen
Bitola
Novaci
Mogila
Medzitlija
Rivers
Main roads
Railroads
Municipal boundaries
International boundaries
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21°E
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To Niš
To Pernik
To Blagoevgrad
To Petrich
To Elbasan
To Korçë
To Kozani
To Thessaloniki
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REBUBLIC OF NORTH MACEDONIA
AGRI-FOOD PLATFORM TO BE BUILT
COLLECTION AND CONDITIONING CENTER TO BE BUILT
ANIMAL BY-PRODUCT FACILITY TO BE BUILT
SELECTED CITIES AND TOWNS
MUNICIPALITY CAPITALS*
NATIONAL CAPITAL
RIVERS
MAIN ROADS
RAILROADS
MUNICIPAL BOUNDARIES
INTERNATIONAL BOUNDARIES
*In most cases, the names of the municipalities are identical to their capitals. Where they differ, the municipality is shown in green italic.
NORTH MACEDONIA