US Agency for International Development (USAID)
Regional Mission to Ukraine and Belarus
Initial Environmental Examination (IEE)

Activity Data

Activity Name:	Agriculture Growing Rural Opportunities (AGRO) Activity	
Assistance Objective:	Inclusive, Sustainable Market-Driven Economic Growth	
Program Area:	EG 5: Private Sector Productivity	
Country(ies) and/or Operating Unit:	**Ukraine**	
Originating Office:	Office of Economic Growth	Date: March 4, 2019
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Recommended Environmental Determination: Categorical Exclusion: ☒ Positive Determination: ☐ Negative Determination: ☒ Deferral: ☐		
Additional Elements: Conditions: ☒ Local Procurement: ☐ Government to Government: ☐ Donor Co-Funded: ☐ Sustainability Analysis (included): ☐ Climate Change Vulnerability Analysis (included): ☐		

1. Background and Activity Description

1.1. Purpose and Scope of IEE

The purpose of this document, in accordance with Title 22, Code of Federal Regulations, Part 216 (22CFR216), is to provide a preliminary review of the reasonably foreseeable effects on the environment of the USAID intervention described herein and recommend determinations and, as appropriate, conditions, for these activities. Upon approval, these determinations become affirmed, and specified conditions become mandatory obligations of implementation. This IEE also documents the results of the Climate Risk Management process in accordance with USAID policy (specifically, ADS 201mal).

This IEE is a critical element of USAID's mandatory environmental review and compliance process meant to achieve environmentally sound design and implementation. Potential environmental impacts should be addressed through formal environmental mitigation and monitoring plans (EMMPs).

1.2. Activity Overview

The objective of Agriculture Growing Rural Opportunities (AGRO) activity is to accelerate economic development of rural communities in highest need in the east and south of Ukraine through a better governed agricultural sector, to encourage more productive, modern, and profitable small and medium agricultural businesses that are successfully integrated into competitive markets both in Ukraine and internationally.

The activity will be implemented in the south and east of Ukraine, specifically in Odeska, Mykolaivska, Khersonska, Zaporizka, Dnipropetrovska, Donetska, Luhanska, and Kharkivska oblasts.

To achieve its objective, the AGRO activity has been designed with three complimentary components, detailed in section 1.3.

1.3. Activity Description

1.3.1 Component 1: Agricultural SME Productivity and Market Access.

Agricultural productivity in Ukraine still lags behind mature agricultural markets. Productivity gains are especially important for micro-, small- and medium agribusinesses and farmers who produce roughly 50 percent to 90 percent of Ukraine's fruit, vegetables, meat, and dairy output, and face significant production inefficiencies. The activity will select target value chains within those four subsectors based on analysis and then design and implement specific interventions to increase the productivity. An important part of the approach should be to improve the supporting infrastructure, including that related to irrigation and post-harvest handling.

Irrigation. Access to irrigation is increasingly important for agricultural productivity, especially in the south of Ukraine. Existing irrigation infrastructure is largely inefficient and dilapidated. The activity will assist local partners and communities to implement solutions that will ensure sustainable access to irrigation for farmers and rural communities. The activity will give particular focus to smart energy and water efficient irrigation technologies. These technologies will be integrated into small-scale irrigation solutions with the purpose of supporting rural agricultural development and yields. When the new National Irrigation Strategy is approved by the Cabinet of Ministers, the activity will provide assistance in its implementation including but not limited to training and capacity building of new institutions that will be established at the local level and integrated into the decentralized management of existing and future irrigation systems. Types of irrigation projects will be determined during annual work planning process and will be coordinated with BEO. **The activity will implement demonstration projects for scale and replication.**

Infrastructure for Post-Harvest Handling, Storage, and Processing. Ukraine's agricultural output and exports are dominated by grain, sunflower oil, and oilseeds. These low value-added commodities collectively contribute 60 percent of total agricultural exports. The lack of an efficient processing industry and limited high-value added services and processes presents a missed opportunity for Ukraine in realizing increased revenues from agri-food product sales. To maximize profitability, Ukrainian farmers need access to supporting infrastructure, technology, markets, knowledge transfer, and services. Efficient modern infrastructure for supporting value added products does not exist in Ukraine at the scale that could transform Ukrainian agriculture into a more inclusive and diversified sector. **The activity will assist in the development of modern post-harvest handling, storage, and processing facilities that agricultural SMEs need in order to stimulate the development of the high value products target value chains.**

Market Access. Productivity and value-add at the farm level are suboptimal without efficient and effective marketing. Until the Euromaidan events in 2014, Russia and Central Asia were the largest buyers of Ukrainian fruit, vegetables, and dairy products. These traditional markets had a low threshold in respect to food safety and quality, therefore Ukrainian producers had little or no incentive to invest in higher quality produce compliant with international food safety standards. Since the Euromaidan, Ukraine has shifted exports of its fruit and vegetables from Russia towards the European Union, the Middle East, Asia, and Africa. To be successful in these new markets, Ukrainian companies have to implement higher standards of product safety and food quality, which in turn requires them to seek knowledge about how to meet these new standards and market demands. AGRO will assist target value chains to increase quality of produce and meet international safety standards. Organic production and use of organic fertilizers will be supported where feasible.

The activity will assist partners in target value chains to evaluate and enter new markets both in Ukraine and internationally. A key element of this assistance will be in building the capacity

of the target value chains to better understand and implement international food safety and quality standards.

1.3.2 Component 2: Access to Finance.

Achieving productivity gains and meeting the demands and requirements of new markets presents Ukrainian agricultural producers with significant economic investment challenges. The activity will build linkages with the financial sector—both bank and non-bank financial institutions—to increase agricultural businesses' access to financial products and services that are fair and affordable. With the establishment of an agricultural land market in Ukraine, **the activity will develop and implement solutions to unlock availability of financing for land market as soon as possible**. Examples of interventions may include but not be limited to building the capacity of financial service providers to issue loans for land purchases and to facilitate financial transactions that will help in Ukraine's rural finance transformation.

1.3.3 Component 3: Better Policy and Enabling Environment for Small and Medium Agricultural Enterprises.

The activity will partner with public and private sector stakeholders to develop more inclusive, transparent, and effective agricultural policies that are free of corruption opportunities. As the Ministry of Agrarian Policy and Food has undergone major institutional restructuring since 2018, the activity will look for opportunities to support the Ministry's effort to build stronger capacity to develop and implement sector reforms. It will also continue building capacity and engaging sector associations in policy dialogue to make sure they contribute to policy making in a meaningful way. The activity will also seek to streamline sector regulation by building the capacity of sector associations to assume regulatory functions over select sectors in line with the best EU and international practices. Of the policy areas where the activity will engage, land reform will be central.

Land Reform. Ukraine has unfinished business of establishment of an agricultural land market. This is one of the most critical reforms for the country that will transform the economy, attracting billions in new investment and stimulating the long-term development of the agricultural sector. While the exact date for establishing the land market is yet to be determined, the market will likely be established during the life of the activity. **The activity will combine top-down and bottom-up approaches to build commitment and demand for reform among stakeholders and the broader public.**

Local Enabling Environment. The activity will partner will rural communities to build their capacity to determine and address community development priorities, mobilize domestic resources, combat corruption, increase investment in community infrastructure, and manage available resources, such as land. These efforts will create a more attractive operational environment for agricultural SME development. Under this focus area, **the activity should also build opportunities and capacity of non-agricultural SMEs that have potential to drive economic development in rural areas, especially those concentrating on service provision.**

Component 1 and 3 of AGRO includes grant subawards. The size of individual grants will be determined based on final activity design and will be incorporated into the AGRO award. No new construction is envisioned. AGRO will support procurement and installation of equipment, renovation and/or improvements of already existing building/premises that will be implemented in compliance with GOU regulations. All grants will receive additional environmental compliance screening and will be required to adhere to site specific mitigation and monitoring plans as applicable. All grants will be provided based on cost sharing by grantees.

2. Baseline Environmental Information

2.1. Locations Affected and Environmental Context

Ukraine is the second largest country in Europe with a population of approximately 44.2 million, the majority of whom live in urban areas. It is a lower middle income country, with the services, industry and agriculture sectors being main contributors to the country's GDP. Ukraine faces a number of environmental challenges, as identified in its National Environmental Strategy 2020 (NES). Key

among these are: air pollution; quality of water resources and land degradation; solid waste management; biodiversity loss; human health issues associated with environmental risk factors; in addition to climate change.

Ukraine's has a temperate continental climate, and rainfall is unevenly distributed, highest in the northwest and much less in the southeast. AGRO will be implemented in the south and east of Ukraine, specifically in Odeska, Mykolaivska, Khersonska, Zaporizka, Dnipropetrovska, Donetska, Luhanska and Kharkivska oblasts which fall in the Steppe ecological region of Ukraine. Per the 2017 USAID Biodiversity Analysis, this region represents "the potential natural vegetation of about 40% of Ukraine (National Atlas of Ukraine, 2008), and originally covered approximately 243,000 km2 in southern and eastern Ukraine, or 40%, of the country. Steppe is a dry temperate grassland ecosystem, generally on chernozem or chestnut soils with a high humus content, and annual precipitation ranging from 300-450 mm per year. Steppe vegetation is dominated by drought-tolerant grasses such as fescue (Festuca spp.) and feather grasses (Stipa spp.), and forbs. The large grazing mammals that were once found on the Ukrainian steppe, such as red deer, saiga antelope, and wild horses, were hunted until locally extinct, and are no longer present except in a few protected areas. The present fauna of the steppe is dominated by ground-dwelling rodents and ground-nesting birds and their predators.

Conversion of native vegetation to agriculture fields was most extreme in the steppe region, mainly because of its fertile soils. Native steppe vegetation now covers only about 4% of Ukraine, approximately one-tenth of its original area (Parnikoza and Vasiluk, 2010). Steppe habitats continue to be fragmented, degraded, and converted to agriculture or industrial uses. Steppe is the least-conserved ecosystem in Ukraine, and roughly one-third of the plant and animal species found in the Ukraine Red Data Book (2009) are steppe species (Parnikoza and Vasiliuk, 2010). Of the total land area in the steppe zone of Ukraine (1981), 64.9 percent is cultivated, 2.4 percent is under perennial plantings, 0.8 percent is hayfields, 10.8 percent is pastures, 4.2 percent is woodland (mostly riverbank and shelterbelt plantings), and the remaining 16.9 percent is devoted to other uses. AGRO will only work with already farmed land, steppes will not be impacted. Grains occupy one-half of the cropped area, among which winter wheat is prevalent. Among industrial crops sunflower and sugar beets in the northeast and the Kuban are important. Heat-loving melons and vegetables such as tomatoes are produced in the Donbas, near Kherson, and near Odesa. Vineyards are common west of Odesa and near Kherson. Livestock densities are not high, but sheep are dominant on the dry pastures of the southern steppe. Moisture deficit, drought, and dust storms have hindered agricultural production. Attempts to counter such climatic hazards have included shelterbelt afforestation and irrigation as well as the improvement of salinized soils following improper irrigation.

Surface and groundwater availably as well as quality varies greatly across the AGRO oblasts, as does annual precipitation.

2.2. Description of Applicable Environmental and Natural Resource Legal Requirements Policies, Laws, and Regulations

The scope of Ukrainian environmental legislation is quite broad and comprehensive (more than 300 legal acts). However, environmental legislation is largely declaratory in nature and does not have all the essential enforcement mechanisms, many of the acts are not coordinated with each other, and legislation undergoes limited analysis of its impact and is frequently changed. The signature of the EU-Ukraine Association Agreement is expected to spur the enhancing environmental legislation by bringing in line with the EU directives. Ukraine's legislation provides for the use of a wide spectrum of direct and indirect environmental policy instruments. However, implementation requires strengthening to ensure that they are in line with international good practices:

Environmental Regulations and Standards are based mainly on the use of maximum allowable concentrations. Only recently, Ukraine started introducing changes for implementation and adoption of the EU Integrated Pollution Prevention and Control Directive and use of the principle of best available techniques. ***Component 1 of AGRO, which will assist in the development of modern post-***

harvest handling, storage, and processing facilities, serves as a valuable opportunity to demonstrate Integrated Pollution Prevention and Control.

Environmental and Compliance Monitoring and enforcement: A number of government agencies have responsibilities for environmental monitoring, but the efficiency of their work is undermined by outdated equipment, lack of qualified personnel, corruption, and insufficient funding. There is need to clearly divide responsibilities between the state bodies at the national and regional levels. The Oblast State Administrations (OSA) environmental departments lost some of the functions that regional Ministry of Ecology and Natural Resources (MENR) departments had. Cooperation between departments of OSA and oblast branches of State Ecological Inspectorate is weak. Additionally, division between functions of control and service provision by government agencies is needed to reduce opportunities for corruption and increase efficiency of those functions.

Environmental Licensing: The environmental licensing system is broad, and it is characterized by a large number of permits. By the Law of 2012 (mentioned above), responsibilities for environmental permits were divided between the central government and OSA environment departments. Most functions stayed with the central agency, which also reserves the right to revoke any permit approved by regional authorities.

Environmental Impact Assessment and Strategic Environmental Assessment: Efforts to modernize and adopt Environmental Impact Analysis (EIA) and Strategic Environmental Assessment (SEA) processes in line with EU norms have advanced in recent years, but have not passed into law. The MENR, the Ministry of Regional Development and Construction plays an important role in regulating requirements to EIA, as well as in reviewing EIA documentation. The Law of Ukraine "On Environmental Impact Assessment" and the Law of Ukraine "On Strategic Environmental Assessment" were drafted in response to the adaptation of Ukraine's legislation to EU norms. They were adopted on 4 October 2016, by the Rada but subsequently vetoed by the President of Ukraine. There was substantial resistance to the passage of these laws from multiple trade groups, particularly those representing livestock growers.

Market-Based Instruments / Economic Instruments: Market-based mechanisms/instruments are not well developed in Ukraine. Environmental economic instruments that are in use in Ukraine include emission charges, taxes for special use of natural resources, sanctions on environmental pollution, and excises and customs duties on environmentally harmful products. However, in many cases, emission charges and sanctions are low and do not stimulate the introduction of environmentally sound technologies. AGRO will not work at the policy level.

National Irrigation Strategy. USAID and the World Bank joined forces to develop a new Irrigation Strategy for Ukraine. The strategy promotes a decentralized approach to irrigation systems management, divides control and service provision functions of State Agency of Water Resources, and offers incentives for stronger private sector engagement. Once approved by the GOU as expected in early 2019, the strategy will address the challenges posed by the lack of reliable, efficient irrigation in Ukraine and reduce associated farming risks. AGRO will comply with applicable Ukrainian requirements for sustainable irrigation rates. Additionally, the activity will prioritize technologies that use minimum water.

Ukraine is party to the **Aarhus Convention on Access to Information, Public Participation, and Access to Justice on Environmental Protection**. The MENR publishes some information and the results of its work on its Web site, and so do environmental departments of OSA and other agencies. Agencies also share, when available, information they have upon request. Public participation is effected through the MENR Public Council (Hromadska Rada), which fulfills the functions of consultation and of an advising body for the development of environmental policy. Similar councils exist as advisory bodies at OSAs. There is significant scope for enhancing public access to information and public participation by activating the public consultation and participation

mechanisms of the different policy instruments and strengthening the environmental monitoring and data availability.

The **National Environment Strategy (NES)–2020** aims to implement incentives for enterprises to introduce clean technology production, various energy-efficient and environmental measures, corporate social responsibility, and environmental audit and certification to stimulate Private Sector Engagement in Environmental Management.

2.3. Country/Ministry/Municipality Environmental Capacity Analysis

From an environmental management perspective, several key institutional challenges exist for Ukraine's attracting public and private investments and fostering sustainable development. To address its environmental challenges, Ukraine has made important steps in building its environmental institutions and management: the country developed a comprehensive regulatory framework for environmental protection; became signatory to major international conventions; established the Ministry of Ecology and Natural Resources (MENR) and a number of agencies with environmental protection responsibilities. **MENR** is the main state authority tasked with the key role of developing and ensuring the implementation of environmental policy at the central government level. The ministry coordinates several agencies, including the State Ecological Inspectorate, State Agency of Water Resources, State Service of Geology and Mineral Resources, and State Agency of Ukraine on Exclusion Zone Management. MENR also supervises three research institutes and nine state enterprises.

MENR collaborates with other Ministries, of relevance to AGRO are:

The Ministry of Agrarian Policy and Food which develops and ensures the implementation of state agrarian policy, agriculture and food safety policy; fishery and fish industry policy, protection and restoration of water living resources; regulation of fishing and safety; veterinary medicine; safety of food provision in the sphere of quarantine and plant protection; land relations, and topography-geodesic and cartography activities; forest and hunting management; as well as monitoring and control of the agro-industrial complex. The ministry coordinates the State Agency of Forest Resources; State Service of Ukraine for Geodesy, Cartography and Cadaster; State Agency of Fishery, and State Veterinary and Phyto-Sanitary Service. As the Ministry of Agrarian Policy and Food has undergone major institutional restructuring since 2018**, under Component 3, AGRO *will look for opportunities to support the Ministry's*** effort to build stronger capacity to develop and implement sector reforms.

The State Ecological Inspectorate (SEI) agency implements state policy on monitoring and control in the area of environmental protection, rational use, recreation, and protection of natural resources.

The State Agency of Water Resources of the MENR implements state policy regarding the management, use (including recreational use) of surface water resources; development of water industry and land reclamation; and maintenance of state waterworks facilities, inter-economic irrigation, and drainage systems. It is responsible for monitoring water quality in rivers, water reservoirs, canals, irrigation systems, water supply systems, transboundary watercourses and water bodies in the area of impact of nuclear power plants. Water quality control is conducted for physical and chemical parameters at 72 water reservoirs, 164 rivers, 14 irrigation systems, and 5 canals.

Synergies for Strengthening Ukraine's Environmental Institutions. The ongoing decentralization reform and the EU–Ukraine Association Agreement create an opportunity and an impetus for the much-needed reform of the environmental management system in Ukraine. Strengthened environmental institutions would help Ukraine to more efficiently and cost-effectively address the country's environmental priorities; would contribute towards ensuring that Ukraine's economic growth and development objectives are met in an environmentally sustainable manner; and facilitate Ukraine's ability to be in line with international financing institutions' requirements for environmental and social safeguards, thus improving the country's attractiveness for investments.

Strengthened environmental management system will also contribute towards facilitating the implementation of the signed EU-Ukraine Association Agreement.

2.4. Sustainability Analysis

AGRO will partner with the private sector to advance progress in areas that are most critical for agriculture sector development. This will catalyze the private sector as a driving force based on business incentives. In particular, effective, transparent, and corruption-free land management is an important prerequisite for businesses to invest in their growth and to create jobs. Establishing a fair and equitable agricultural land market is a powerful impetus for attracting investment in the sector. Increased investment will stimulate development of areas with higher profit margins and more added value, e.g., orchards, berries, livestock, and food processing. To date, those areas remain underdeveloped as a result of limited investment and an inability to secure long-term land arrangements due to uncertainty related to land market establishment. Components such as scalable projects that demonstrate productivity gains; successful models for penetration of more competitive markets based on higher quality and market understanding; and concomitant outreach and communication campaigns, would help AGRO develop a critical mass of sector champions able to sustain sector development beyond U.S. engagement. Building on the local land management model developed and implemented by its predecessor activity, Agriculture and Rural Development Support (ARDS), AGRO will focus on building the capacity and commitment of rural consolidated communities to create a better enabling environment for SMEs, mobilize local resources, and thus increase living standards for poor rural citizens.

2.5. Climate Change Vulnerability Analysis

According to USAID's Climate Change Risk Profile for Ukraine (2016), an increase in average annual temperatures of 0.8°C occurred from 1991 – 2010 (compared to the 1961 – 1990 average). Further, a 0.5-degree C to 1.0 degree C increase in temperature is projected for Ukraine with increased overall temperatures by 2050 and higher rates of increase expected in the winter; seasonal and regional rainfall patterns are expected to change; and increased incidences of extreme weather events, such as floods and droughts are projected. Some key impacts that are likely to result from these projections are: shifting agricultural production zones; decreased surface water quality and quantity; decreased energy efficiency and power supply interruptions; increased forest fire risk; and exacerbation of cardiovascular and respiratory diseases.

Of importance for AGRO, agriculture and related industry in the south and southeast are most vulnerable to current and projected droughts. The industrial sector leads water withdrawal. Precipitation is expected to decrease in the Forest-Steppe and Steppe eco-regions, decreasing mean annual runoff. Drought risk is expected to increase in the southern Forest-Steppe and Steppe zones. Ukraine's agriculture readiness for expected climatic changes is relatively low; the Donetsk and Lugansk regions have no regional adaptation program, whereas farm businesses have low levels of awareness of required actions. In the future, it will become necessary to account for climatic changes in production development plans, review the composition of agricultural crops in favor of those more resistant to climatic changes, adapt land-utilization structure, develop irrigation, and improve agro-climatic monitoring and prediction. At the same time, there is a possibility of reducing the climatic impact of these industries, e.g., through restricted plowing, protection of multi-year pastures, and use of waste biomass to generate heat and electricity. Maximizing drip irrigation and use of drought tolerant species will add in long term gains.

3. Analysis of Potential Environmental Impact

CRM for this activity has been conducted in accordance with Climate Risk Management for USAID Projects and Activities, Mandatory Reference for ADS Chapter 201. CRM for the recently approved Mission's new CDCS (2018-2023) was conducted at the country strategy-level, with the expectation that subsequent climate risk screening will occur as part of the design process for projects and activities (e.g., at the PAD and activity-level). Therefore, climate risks have been assessed at the activity level and results of this assessment are summarized in the table below.

3.1. Component 1: Agricultural SME Productivity and Market Access. The activity will select target value chains based on analysis and then design and implement specific interventions to increase the productivity. An important part of the approach should be to improve the supporting infrastructure, including that related to irrigation and post-harvest handling. These activities have the potential to adversely impact the environment, particularly with respect to increased irrigation which can lead to waterlogging, soil salination, ecological damage from input runoff, over withdrawal from wells can lead to land subsidence and saltwater intrusion along the coast. Processing facilities also have the potential to increase local water and air pollution.

Defined/Illustrative Activities	**Potential Impacts**	**Potential Climate Risk**	**Climate Risk Rating**	**Opportunities for Climate Resiliency**
1.1 Provide grants to private sector partners in target value chains (fruit, vegetables, meat, dairy) to improve the supporting infrastructure for post-harvest handling and processing.	• Potential impacts to land, water, air	• Damage to crops and reduced productivity (including for livestock) • Decreased crop productivity due to increased moisture evaporation from the soil surface combined with reduced capacity of the soil to retain moisture as a result of erosion from extreme wind and water events • Price volatility and price spikes due to increasing climate variability and extremes, including floods and droughts. • Small agribusinesses discouraged from investing and limit operations due to concerns over climate impacts • Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts. • Surface water fed irrigation schemes coupled with decreased seasonal rainfall	Moderate	• Ensure infrastructure investments consider severe flood events, site drainage, etc.
1.2 Provide grants and expert advice to local private and public sector partners to implement projects that will increase access to reliable irrigation based on modern efficient technology.	• Direct impacts of irrigation include reduced downstream river flow, increased evaporation in the irrigated area, increased level in the water table as groundwater recharge • Indirect impacts from improper irrigation application include: waterlogging, soil salination, ecological damage from input runoff. If water is drawn from wells there is potential for land subsidence and saltwater intrusion along the coast.		Moderate	• Promote application of modern, energy efficient irrigation equipment • Promote BAT for water conservation in irrigation • Promote drought tolerant plant varieties • Provide targeted TA for long term agricultural planning taking into consideration climate models and precipitation changes
1.3 Conduct market assessment and feasibility studies to help agricultural SMEs penetrate new export and	• No adverse impacts are likely		Moderate	

Defined/Illustrative Activities	Potential Impacts	Potential Climate Risk	Climate Risk Rating	Opportunities for Climate Resiliency
domestic markets.		can have a compounding effect on downstream communities water availably.		
1.4 Develop marketing strategies to facilitate access of agricultural SMEs to international markets.	• No adverse impacts are likely		Low	
1.5 Provide technical assistance and grants to agricultural producer organizations (cooperatives) to increase productivity and comply with international standards (upgrade production and post-harvest handling technologies in cooling, sorting, packing, and/or processing of agricultural produce).	• Direct Impacts are not anticipated from TA • Direct Impacts of grants may result including impacts to land, water, air		Moderate	

3.2. Component 2: Access to Finance. Achieving productivity gains and meeting the demands and requirements of new markets presents Ukrainian agricultural producers with significant economic investment challenges. The activity will build linkages with financial sector—both bank and non-bank financial institutions—to increase agricultural businesses' access to financial products and services that are fair and affordable. The direct impact of activities designed to increase access to finance does not pose an environment threat. Indirectly establishment of new agro-production industries and expansion of agriculture do pose potential environmental impacts including water quality, habitat alteration, resource depletion, waste generation, and/or human health.

Defined/Illustrative Activities	Potential Impacts	Potential Climate Risk	Climate Risk Rating	Opportunities for Climate Resiliency
2.1 Assist financial service providers to develop and implement loan programs available for agricultural SMEs.	Direct Impacts are not anticipated. Indirect Impacts include water quality, habitat alteration, resource depletion, waste generation, and/or human health.	• Price volatility and price spikes due to increasing climate variability and extremes, including floods and droughts. • Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts • Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts.	Low	Promote insurance markets to protect farmers from loss due to extreme weather events.

3.3. Component 3: Better Policy and Enabling Environment for Small and Medium Agricultural Enterprises. The activity will partner with public and private sector stakeholders to develop more inclusive, transparent, and effective agricultural policies that are free of corruption opportunities. AGRO will be positioned to promote best practices and sustainable development goals at the policy level and push for their adoption at the local/community level. Implementation of a new irrigation strategy and opening of land markets has potential for adverse impacts at the local, regional, and national levels. Enhancing the local enabling environment for agricultural SME also has the potential for environmental impacts including water quality, habitat alteration, resource depletion, waste generation, and/or human health.

Defined/Illustrative Activities	**Potential Impacts**	**Potential Climate Risk**	**Climate Risk Rating**	**Opportunities for Climate Resiliency**
3.1 Assist GOU to implement the approved National Irrigation Strategy	• Direct Impacts are not anticipated from TA • Direct impacts of irrigation include reduced downstream river flow, increased evaporation in the irrigated area, increased level in the water table as groundwater recharge • Indirect impacts from improper irrigation application include: waterlogging, soil salination, ecological damage from input runoff. If water is drawn from wells there is potential for land subsidence and saltwater intrusion along the coast.	• Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts • Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts • Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts • Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts	Low	• Promote application of modern, energy efficient equipment, • Promote BAT for water conservation in irrigation • Promote drought tolerant plant varieties • Provide targeted TA for long term agricultural planning taking into consideration climate models and precipitation changes
3.2 Build capacity and provide training to new institutions that will be established at the local level and integrated into the decentralized management of existing and future irrigation systems (water users associations, regional irrigation and drainage organizations)			Low	
3.3 Grants for rehabilitation of existing systems, and small-scale projects to implement improvements in water management	• Direct impacts of irrigation include reduced downstream river flow, increased evaporation in the irrigated area, increased level in the water table as groundwater recharge • Indirect impacts from improper irrigation application include: waterlogging, soil salination, ecological damage from input runoff. If water is drawn from wells there is potential for land subsidence and saltwater intrusion along the coast.	• Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts • Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts	Moderate	• Promote application of modern, energy efficient equipment, • Promote BAT for water conservation in irrigation • Promote drought tolerant verities • Provide targeted TA for long term agricultural planning taking into consideration climate models and precipitation changes
3.4 Assist GOU to develop and implement reforms to improve land governance and establish agricultural land market (policy	• Direct Impacts are not anticipated from TA • Indirect Impacts include potential for further loss of critical habitat such as	• Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts • Decreased willingness of private sector to	Low	• Promote incentives for landowners to protect wetlands and riparian areas

Defined/Illustrative Activities	Potential Impacts	Potential Climate Risk	Climate Risk Rating	Opportunities for Climate Resiliency
level TA).	wetlands, remaining intact tracts of Steppe ecosystems	invest in agriculture development due to increased uncertainty and risk of loss from climate impacts • New or former fallow lands under agricultural schemes may lead to loss of wetlands and riparian areas		
3.5 Draft legislation and build capacity of selected agricultural associations to assume regulatory functions in the sector (policy level TA).	• Direct Impacts are not anticipated from TA	• Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts • Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts	Low	
3.6 Capacity building of sector associations	• Direct Impacts are not anticipated from TA	• Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts • Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts	Low	
3.7 Assist rural communities to develop rural development strategies through participatory approach.	• Direct Impacts are not anticipated from TA	• Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts • Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts	Moderate	
3.8 Conduct feasibility studies to support public-private partnerships for small scale investment in rural infrastructure (e.g. agricultural wholesale markets, development of cold storage facilities, logistics centers, processing and packing facilities).	• Direct Impacts are not anticipated from TA/feasibility studies • Indirect Impacts may result including land alteration and other impacts to land, water, air	• Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts • Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts	Moderate	• Ensure feasibility studies consider proper siting of potential infrastructure above potential severe flood events, site drainage, multiple access routes, in event of flood roads, etc.
3.9 Provide grants to support partnerships to small scale investment in rural infrastructure (e.g. local farm markets, collection	• Potential impacts to land, water, air	• Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts • Decreased willingness of private sector to	Moderate	• Ensure infrastructure investments consider severe flood events, site drainage, etc.

Defined/Illustrative Activities	Potential Impacts	Potential Climate Risk	Climate Risk Rating	Opportunities for Climate Resiliency
points, cold storages, waste management solutions).		invest in agriculture development due to increased uncertainty and risk of loss from climate impacts		

4. Recommended Environmental Actions

4.1. Recommended Mitigation Measures

Component 1 – Component 1: Agricultural SME Productivity and Market Access.

Defined/Illustrative Activities	Potential Impacts	Mitigation Measures	Recommended Threshold Determination
1.1 Provide grants to private sector partners in target value chains (fruit, vegetables, meat, dairy) to improve the supporting infrastructure for post-harvest handling and processing.	• Potential impacts to land, water, air	• USAID will ensure the implementing partner prepares and submits for USAID approval the attached ERC with appropriate EMMPs. The ERC/EMMP will be completed and approved within approval process, prior to activities beginning. • All procured materials and other equipment must be environmentally friendly and meet host government standards. • For any TA or training dealing with pesticides and fertilizer, AGRO will utilize the measures presented in the PERSUAP for Ukraine DCN: 2018-UKR-044 (or subsequent updates). NOTE: if new value chains are selected under AGRO that are not covered by the current PERSUAP for Ukraine, a new or updated PERSUAP will be required.	Negative Determination
1.2 Provide grants and expert advice to local private and public sector partners to implement projects that will increase access to reliable irrigation based on modern efficient technology.	• Direct impacts of irrigation include reduced downstream river flow, increased evaporation in the irrigated area, increased level in the water table as groundwater recharge • Indirect impacts from improper irrigation application include: waterlogging, soil salination, ecological damage from input runoff. If water is drawn from wells there is potential for land subsidence and saltwater intrusion along the coast.		
1.5 Provide technical assistance and grants to agricultural producer organizations (cooperatives) to increase productivity and comply with international standards (upgrade production and post-harvest handling technologies in cooling, sorting, packing, and/or processing of agricultural produce). * Technical assistance and training of agricultural producer organizations pertaining to pesticide and fertilizer may be included.	• Direct Impacts are not anticipated from TA unless TA pertains to pesticides. • Direct Impacts of grants of may result including impacts to land, water, air • Direct Impacts from any TA and training involving any aspect of pesticides and fertilizer application may result including impacts to land, water, air		

Component 3: Better Policy and Enabling Environment for Small and Medium Agricultural Enterprises.

Defined/Illustrative Activities	Potential Impacts	Mitigation Measures	Recommended Threshold Determination
3.1 Assist GOU to implement the approved National Irrigation Strategy	• Direct Impacts are not anticipated from TA • Direct impacts of irrigation include reduced downstream river flow, increased evaporation in the irrigated area, increased level in the water table as groundwater recharge • Indirect impacts from improper irrigation application include: waterlogging, soil salination, ecological damage from input runoff. If water is drawn from wells there is potential for land subsidence and saltwater intrusion along the coast.	As part of the TA and capacity building, USAID shall: • Promote application of modern, energy efficient equipment, • Promote BAT for water conservation in irrigation • Promote drought tolerant plant varieties • Provide targeted TA for long term agricultural planning taking into consideration climate models and precipitation changes.	Negative Determination
3.2 Build capacity and provide training to new institutions that will be established at the local level and integrated into the decentralized management of existing and future irrigation systems (water users associations, regional irrigation and drainage organizations)			Negative Determination
3.3 Grants for rehabilitation of existing systems, and small-scale projects to implement improvements in water management	• Direct impacts of irrigation include reduced downstream river flow, increased evaporation in the irrigated area, increased level in the water table as groundwater recharge • Indirect impacts from improper irrigation application include: waterlogging, soil salination, ecological damage from input runoff. If water is drawn from wells there is potential for land subsidence and saltwater intrusion along the coast.	• USAID will ensure the implementing partner prepares and submits for USAID approval the attached ERC with appropriate EMMPs. The ERC/EMMP will be completed and approved within approval process, prior to activities beginning. • All procured materials and other equipment must be environmentally friendly and meet host government standards.	Negative Determination
3.4 Assist GOU to develop and implement reforms to improve land governance and establish agricultural land market (policy level TA).	• Direct Impacts are not anticipated from TA • Indirect Impacts include potential for further loss of critical habitat such as wetlands, remaining intact tracts of Steppe ecosystems	As part of the TA, USAID shall: • Promote incentives for landowners to protect wetlands and riparian areas and Good Agricultural Practices.	Negative Determination
3.9 Provide grants to support partnerships to small scale investment in rural infrastructure (e.g. local farm markets, collection points, cold storages, waste management solutions).	• Potential impacts to land, water, air	• USAID will ensure the implementing partner prepares and submits for USAID approval the attached ERC with appropriate EMMPs. The ERC/EMMP will be completed and approved within approval process, prior to activities beginning. • All procured materials and other equipment must be environmentally friendly and meet host government standards.	Negative Determination

4.2. Recommended Environmental Determination:

Categorical Exclusions:

A categorical exclusion is recommended for the following identified activities under 22 CFR 216.2(c)(2):

- Activity 1.3, 1.4, 2.1, 3.5, 3.6, & 3.7 under §216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.);
- Activity 1.3 &1.4, under §216.2(c)(2) (iii)Analyses, studies, academic or research workshops and meetings.

Negative Determination with Conditions:

Under §216.3(a)(2)(iii), a negative determination with conditions is recommended for activities 1.1, 1.2, 1.5, 3.1,3.2, 3.3, 3.4, 3.9. Specific terms and conditions are presented below in Section 4.3.

4.3. Terms and Conditions:

4.3.1. For activities 3.1 and 3.2, the IP shall promote application of modern, energy efficient equipment, best available technologies (BAT) for water conservation in irrigation, promote drought tolerant plant varieties, and provide targeted TA for long term agricultural planning taking into consideration climate models and precipitation changes.

4.3.2. For activity 3.4, the IP shall promote incentives for landowners to protect wetlands and riparian areas and Good Agricultural Practices

4.3.3. For any TA or training dealing with pesticides and fertilizer, AGRO will utilize the measures presented in the PERSUAP for Ukraine DCN: 2018-UKR-044 (or subsequent updates). NOTE: if new value chains are selected under AGRO that are not covered by the current PERSUAP for Ukraine, a new or updated PERSUAP will be required.

4.3.4. For all grants and site-specific activities under components 1.1, 1.2, 1.5, 3.3, and 3.9, the Implementing Partner will screen for potential environmental impacts and design consideration taking into account existing background conditions such as siting, contamination or utility infrastructure needs etc. using the Environmental Review Checklist and Environmental Mitigation and Monitoring Plan (ERC/EMMP) (see Annex 2) Generally acceptable EMMP language is provided in Annex 3 as a resource, only. Each site specific EMMP shall be tailored to the work to be undertaken.

4.3.5. For each grant and site-specific activity, the *Certification of No Adverse or Significant Effects on the Environment* (Annex 1 of the ERC/EMMP) shall be signed by the implementing partner, AOR/COR, Mission Environmental Officer (MEO) and E&E Bureau Environmental Officer (BEO).

4.3.6. After the IP has finalized its activities at a specific site, the IP shall sign a *Record of Compliance* with the EMMP (see Annex 2 of the ERC/EMMP) certifying that the organization met all applicable EMMP conditions and submit it to the AOR/COR. The AOR/COR shall keep the original for the project files and provide a copy to the MEO and BEO.

4.3.7. The ERC/EMMP will be completed and approved within the stated approval process, prior to activities beginning.

4.3.8. The requirement for ERC/EMMPs shall be captured in annual work plans, and therefore budgeted for and reviewed for adequacy at least annually.

4.3.9. Changes in activities and their associated ERC/EMMPs shall necessitate amending the IEE or issuing a Memo to the File (depending on extent and potential impact of the changes).

4.4. USAID Monitoring and Reporting

4.4.1. The AOR/COR, with the support of the MEO, is responsible for monitoring compliance of activities by means of desktop reviews and site visits.

4.4.2. If at any time the project is found to be out of compliance with the IEE, the AOR/COR or MEO shall immediately notify the BEO.

4.4.3. A summary report of Mission's compliance relative to this IEE shall be sent to the BEO on an annual basis, normally in connection with preparation of the Mission's annual environmental compliance report required under ADS 203.3.8.5 and 204.3.3.

4.4.4. The BEO or his/her designated representative may conduct site visits or request additional information for compliance monitoring purposes to ensure compliance with this IEE, as necessary.

4.5. Implementing Partner (IP) Monitoring and reporting

4.5.1. If an individual activity is found to pose significant adverse environmental effects not identified and addressed through the ERC/EMMP process, they shall update the EMMP(s) to include environmental safeguards for such effects.

4.5.2. IPs shall report on environmental compliance requirements as part of their routine project reporting to USAID.

5. Mandatory Inclusion of Requirements in Solicitations, Awards, Budgets and Workplans

5.1. Appropriate environmental compliance language, including limitations defined in Section 6, shall be incorporated into solicitations and awards for this activity and projects budgets shall provide for adequate funding and human resources to comply with requirements of this IEE.

5.2. Solicitations shall include Statements of Work with task(s) for meeting environmental compliance requirements and appropriate evaluation criteria.

5.3. Environmental mitigation and monitoring requirements, when available, shall also be included in solicitations and awards.

5.4. The IP shall incorporate conditions set forth in this IEE into their annual work plans.

5.5. The IP shall ensure annual work plans do not prescribe activities that are defined as limitations, as defined in Section 6.

5.6. The USAID Mission will include an indicator for environmental compliance as part of the project's performance monitoring plan. [If an IEE has a threshold determination of negative determination with conditions, then a possible indictor would be the # of site specific ERC/EMMP completed.]

6. Limitations of the IEE: This IEE does not cover activities (and therefore should changes in scope implicate any of the issues/activities listed below, a BEO-approved amendment shall be required), that:

6.1. Normally have a significant effect on the environment under §216.2(d)(1) [See http://www.usaid.gov/our_work/environment/compliance/regulations.html]

6.2. Support project preparation, project feasibility studies, engineering design for activities listed in §216.2(d)(1);

6.3. Affect endangered species;

6.4. Result in wetland or biodiversity degradation or loss;

6.5. Support extractive industries (e.g. mining and quarrying);

6.6. Promote timber harvesting;

6.7. Provide support for regulatory permitting;

6.8. Result in privatization of industrial or infrastructure facilities;

6.9. Lead to new construction of buildings or other structures;

6.10. Assist the procurement (including payment in kind, donations, guarantees of credit) or use (including handling, transport, fuel for transport, storage, mixing, loading, application, cleanup of spray equipment, and disposal) of pesticides or activities involving procurement, transport, use, storage, or disposal of toxic materials and /or pesticides (cover all insecticides, fungicides, rodenticides, etc. covered under the Federal Insecticide, Fungicide, and Rodenticide Act); and

6.11. Procure or use genetically modified organisms.

7. Revisions

7.1. Under §216.3(a)(9), if new information becomes available that indicates that activities covered by the IEE might be considered major and their effect significant, or if additional activities are proposed that might be considered major and their adverse effect significant, this environmental threshold decision will be reviewed and, if necessary, revised by the Mission with concurrence by the BEO. It is the responsibility of the USAID COR/AOR to keep the MEO and BEO informed of any new information or changes in the activity that might require revision of this IEE.

8. Recommended Environmental Threshold Decision Clearances:

Approval :	Susan K. Fritz, Mission Director	Date 3/5/2019
Clearance:	John A. Pennell, Deputy Mission Director (John A. Pennell, Acting)	Date 3/5/19
Clearance:	David Rush, Regional Legal Advisor (Joel Sandefur, Acting)	Date 3/4/2019
Clearance:	David Hatch, Program Office Director	Date 3/4/2019
Clearance:	Larissa Piskunova, Deputy Mission Environmental Officer	Date 03/04/19
Clearance:	Anna Bogdanova, Activity Manager	Date 3/4/2019
Concurrence:	Mark Kamiya, E&E Bureau Environmental Officer	Date 03/06/2019

Distribution:
IEE File
MEO (to also provide a copy to AOR/COR)

Climate Risk Screening and Management Tool for Activity Design

1.1: Defined or Anticipated Tasks or Interventions*	1.2: Time-frame	1.3: Geo-graphy	2: Climate Risks*	3: Adaptive Capacity	4: Climate Risk Rating*	5: Opportunities*	6.1: Climate Risk Management Options	6.2: How Climate Risks Are Addressed in the Activity*	7: Next Steps for Activity Implementation	8: Accepted Climate Risks*
Component 1. Agricultural SME Productivity and Market Access.										
1.1 Provide grants to private sector partners in target value chains (fruit, vegetables, meat, dairy) to improve the supporting infrastructure for post-harvest handling and processing. 1.2 Provide grants and expert advice to local private and public sector partners to implement projects that will increase access to reliable irrigation based on modern efficient technology. 1.3 Conduct market assessment and feasibility studies to help agricultural SMEs penetrate new export and domestic markets. 1.4 Develop marketing strategies to facilitate access of agricultural SMEs to international markets. 1.5 Provide technical assistance and grants to agricultural producer organizations (cooperatives) to increase productivity and comply with international standards (upgrade production and post-harvest handling technologies in cooling, sorting, packing, and/or processing of agricultural produce).	0-10 years	Odeska, Mykolaivska, Khersonska, Zaporizka, Dnipropetrovska, Donetska, Luhanska and Kharkivska oblasts.	-Damage to crops and reduced productivity (including for livestock) due to: * heat stress * changes in rainfall patterns * reduced snow cover * late spring frost * increased droughts (particularly in the southern region) * increased dust storms due to drier conditions (particularly in the southern region) * decreased soil fertility from intensified humus composition -Decreased crop productivity due to increased moisture evaporation from the soil surface combined with reduced capacity of the soil to retain moisture as a result of erosion from extreme wind and water events -Price volatility and price spikes due to increasing climate variability and extremes, including floods and droughts. -Small agribusinesses discouraged from investing and limit operations due to climate concerns/impacts -Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts. -Surface water fed irrigation schemes coupled with decreased seasonal rainfall can have a compounding effect on	The activity is designed in part to build adaptive capacity and assist in implementation of the new irrigation strategy and improve access to irrigation using modern technology	Moderate	-consider irrigation and water storage schemes that minimize water loss/waste -consider informational campaigns and trainings to promote adaptive management	-Work with farmers and producer organizations on strategies and opportunities to mitigate potential impacts from extreme weather events and financial tools to weather occasion losses due to climatic events resulting in crop/ infrastructure loss -promote irrigation and water storage schemes that use BAT and are "climate-smart" to conserve water	The IP will seek opportunities: -to promote climate smart ag interventions (targeted irrigation, soil augmentation to promote water retention, drought/frost resident crops, etc) -introduce irrigation and water storage schemes that use BAT and are "climate-smart" to conserve water	Incorporate the need to consider climate adaptation into solicitation and work plans	*YES*

			downstream communities' water availably.							
Component 2: Access to Finance.										
Assist financial service providers to develop and implement loan programs available for agricultural SMEs.	0-10 years	Odeska, Mykolaivska, Khersonska, Zaporizka, Dnipropetrovska, Donetska, Luhanska and Kharkivska oblasts.	-Damage to crops and reduced productivity (including for livestock) due to: * heat stress * changes in seasonal rainfall patterns * reduced snow cover * early spring frost * increased droughts (particularly in the southern region) * increased dust storms due to increasing temperatures and drier conditions (particularly in the southern region) * decreased soil fertility from intensified humus decomposition -Decreased crop productivity due to increased moisture evaporation from the soil surface combined with reduced capacity of the soil to retain moisture as a result of erosion from extreme wind and water events -Price volatility and price spikes due to increasing climate variability and extremes, including floods and droughts. -Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts -Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts		Low	-consider strategies and financial tools to offset impacts from extreme weather events - consider credit guarantees to offset investment concern	-work with private sector investors, potentially through credit guarantees to offset investment concern	The IP will seek opportunities: -work with policy makers and financial institutions to offset investment concern	Seek to incorporate protections for borrowers from climate related losses	*N/A*

Component 3. Better Policy and Enabling Environment for Small and Medium Agricultural Enterprises.										
Assist GOU to implement the approved National Irrigation Strategy	0-10 years	Nationwide	-Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts -Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts		Low	-Consider working with policy makers to ensure long term planning includes climate adaption consideration	N/A	N/A	N/A	*N/A*
Build capacity and provide training to new institutions that will be established at the local level and integrated into the decentralized management of existing and future irrigation systems (water users associations, regional irrigation and drainage organizations)	0-10 years	Odeska, Mykolaivska, Khersonska, Zaporizka, Dnipropetrovska, Donetska, Luhanska and Kharkivska oblasts.		Limited, but this is the focus of the activity	Moderate	-consider irrigation and water storage schemes that minimize water loss/waste -consider informational campaigns and trainings to promote adaptive management	-Work with farmers and producer organizations to promote irrigation and water storage schemes that use BAT and are "climate-smart" to conserve water	The IP will seek opportunities: -introduce irrigation and water storage schemes that use BAT and are "climate-smart" to conserve water	Incorporate the need to consider climate adaptation into solicitation and work plans	*YES*
Grants for rehabilitation of existing systems, and small-scale projects to implement improvements in water management	0-10 years	Odeska, Mykolaivska, Khersonska, Zaporizka, Dnipropetrovska, Donetska, Luhanska and Kharkivska oblasts.			Low	Ensure designs consider potential impacts of extreme weather events and consider use of BAT and are "climate-smart" to conserve water	-Work with farmers and producer organizations to promote irrigation and water storage schemes that use BAT and are "climate-smart" to conserve water	The IP will seek opportunities: -introduce irrigation and water storage schemes that use BAT and are "climate-smart" to conserve water	Incorporate the need to consider climate adaptation as part of grant applications	*N/A*
Assist GOU to develop and implement reforms to improve land governance and establish agricultural land market.	0-10 years	Nationwide	-Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts -Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts -New or former fallow lands under agricultural schemes may lead to loss of wetlands and riparian areas		Low	N/A	N/A	N/A	N/A	*N/A*

Draft legislation and build capacity of selected agricultural associations to assume regulatory functions in the sector.	0-10 years	Nationwide	-Small agribusinesses discouraged from investing and limit operations due concerns over climate impacts -Decreased willingness of private sector to invest in agriculture development due to increased uncertainty and risk of loss from climate impacts		Low	-consider a mechanism so government Agencies and associations can transparently communicate to develop policies and programs that consider climate adaptation.	-Work with stakeholders to consider legislation that promotes climate adaptation practices	The IP will seek opportunities to inform stakeholders about the need for climate adaptation	Incorporate climate adaptation awareness	*N/A*
Capacity building of sector associations	0-10 years	Nationwide			Low	-consider linking the associations to experts so they can form a relationship and have a long-term training impact. -consider informational campaigns and trainings to promote adaptive management	N/A	N/A	N/A	*N/A*
Assist rural communities to develop rural development strategies through participatory approach.	0-10 years	Odeska, Mykolaivska, Khersonska, Zaporizka, Dnipropetrovska, Donetska, Luhanska and Kharkivska oblasts.			Moderate	-consider linking associations and Ministry experts so they can form a relationship and have a long-term training impact. -consider informational campaigns and trainings to promote adaptive management	-Work with communities and Ministry experts to incorporate climate adaptation into development strategies	The IP will seek opportunities to inform stakeholders and incorporate climate adaptation into development strategies	Incorporate climate adaptation considerations in development strategies	*YES*
Conduct feasibility studies to support public-private partnerships for small scale investment in rural infrastructure (e.g. agricultural wholesale markets, development of cold storage facilities, logistics centers, processing and packing facilities).	0-10 years	Odeska, Mykolaivska, Khersonska, Zaporizka, Dnipropetrovska, Donetska, Luhanska and Kharkivska oblasts.			Moderate	Ensure siting and plans consider extreme flooding events, use of renewable energy	-Work with farmers and producer organizations to improve siting chooses and design	The IP will seek opportunities to ensure grants use BAT and proper siting for facilities	Incorporate climate adaptation considerations as part of feasibility studies	*YES*

Provide grants to support partnerships to small scale investment in rural infrastructure	0-10 years	Odeska, Mykolaivska, Khersonska, Zaporizka, Dnipropetrovska, Donetska, Luhanska and Kharkivska oblasts.			Moderate	Ensure designs consider potential impacts of extreme weather events and consider use of BAT	-Work with farmers and producer organizations to improve siting chooses and design	The IP will seek opportunities to ensure grants use BAT and proper siting for facilities	Incorporate the need to consider climate adaptation as part of grant applications	*YES*

Annex 2

ENVIRONMENTAL REVIEW CHECKLIST (ERC) for Identifying Potential Environmental Impacts of Project Activities and Processes/ ENVIRONMENTAL MITIGATION AND MONITORING PLAN (EMMP)

ERC/EMMP

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for [Activity Name]

Implemented under: AGRO

DCN: [*of Parent IEE*]

Prepared by: [*Implementer*]

ENVIRONMENTAL REVIEW CHECKLIST FOR IDENTIFYING POTENTIAL ENVIRONMENTAL IMPACTS OF PROJECT ACTIVITIES AND PROCESSES

The Environmental Review Checklist for Identifying Potential Environmental Impacts of Project Activities and Processes (ERC) and Environmental Mitigation and Monitoring Plan (EMMP) is intended for use by implementing partners to: assess activity-specific baseline conditions, including applicable environmental requirements; identify potential adverse environmental effects associated with planned activity(s) and processes; and develop EMMPs that can effectively avoid or adequately minimize the identified effects. This ERC/EMMP may be substituted for other ERC/EMMP versions that may have been attached to previous initial environmental examinations (IEE). If implementing partners are in doubt about whether a planned activity requires preparation of an ERC, they should contact their Contracting Officer's Representative (COR)/Agreement Officer's Representative (AOR) for clarification. In turn, the COR/AOR should contact their Mission Environmental Officer (MEO) if they have any questions. In special circumstances and with approval of the BEO it is possible to have one very comprehensive ERC/EMMP for multiple projects if they are similar in scope. *(When preparing the ERC/EMMP, please indicate "not applicable" for items that have no bearing on the activity. The ERC/EMMP should be completed by an environmental specialist.* ***The ERC/EMMP must be completed and approved prior to the activity beginning.****)*

A. Activity and Site Information

Project Name: ***(as stated in the triggering IEE)***	
Mission/Country:	
DCN of Most Recent Triggering IEE or Amendment:	
Activity/Site Name:	
Type of Activity:	
Name of Reviewer and Summary of Professional Qualifications:	
Date of Review:	

B. Activity Description

1. Activity purpose and need
2. Amount of activity
3. Location of activity
4. Beneficiaries, e.g., size of community, number of school children, etc.
5. Number of employees and annual revenue, if this is a business
6. Implementation timeframe and schedule
7. Detailed description of activity, items that will be purchased (*This section should fully describe what funds are being used for.*)
8. Detailed description of site, e.g., size of the facility or hectares of land; steps that will be taken to accomplish the activity;
9. Existing or planned certifications, e.g., ISO 14001 EMS, ISO 9000, HCCP, SA 8000, Global Gap, Environmental Product Declarations, Eco Flower, EcoLogo, Cradle to Cradle, UL Environment, GREENGUARD, Fair Trade, Green Seal, LEED, or various Forest Certifications
10. Site map, e.g., provide an image from Google Earth of the location
11. Photos of site, items to be purchased, engineering construction plans *(when available)*

C. Activity-Specific Baseline Environmental Conditions

1. Population characteristics
2. Geography
3. Natural resources, e.g., nearby forest/protected areas, ground and surface water resources
4. Current land use and owner of land

5. Proximity to public facilities, e.g. schools, hospitals, etc.
6. Other relevant description of current environmental conditions in proximity to the activity

D. Legal, Regulatory, and Permitting Requirements

1. National environmental impact assessment requirements for this activity
2. Applicable National or local permits for this activity, responsible party, and schedule for obtaining them:

Permit Type	Responsible party	Schedule
Zoning		
Building/Construction		
Source Material Extraction		
Waste Disposal		
Wastewater		
Storm Water Management		
Air Quality		
Water Use		
Historical or Cultural Preservation		
Wetlands or Water bodies		
Threatened or Endangered Species		
Other		

3. Additional National, European Union, or other international environmental laws, conventions, standards with which the activity might be required to comply
   a. Air emission standards
   b. Water discharge standards
   c. Solid waste disposal or storage regulations
   d. Hazardous waste storage and disposal
   e. Historical or cultural preservation
   f. Other

E. Engineering Safety and Integrity *(for Sections E. and F., provide a discussion for any of the listed issues that are yes answers and likely to have a bearing on this activity)*

1. Will the activity be required to adhere to formal engineering designs/plans? Have these been or will they be developed by a qualified engineer? If yes, attach the plans to the ERC/EMMP.
2. Do designs/plans effectively and comprehensively address:
   a. Management of storm water runoff and its effects?
   b. Reuse, recycling, and disposal of construction debris and by-products?
   c. Energy efficiency and/or preference for renewable energy sources?
   d. Pollution prevention and cleaner production measures?
   e. Maximum reliance on green building or green land-use approaches?
   f. Emergency response planning?
   g. Mitigation or avoidance of occupational safety and health hazards?
   h. Environmental management of mobilization and de-mobilization?
   i. Capacity of the host country recipient organization to sustain the environmental management aspects of the activity after closure and handover?
3. Are there known geological hazards, e.g., faults, landslides, or unstable soil structure, which could affect the activity? If so, how will the project ensure structural integrity?
4. Will the site require grading, trenching, or excavation? Will the activity generate borrow pits? If so, how will these be managed during implementation and closure?
5. Will the activity cause interference with the current drainage systems or conditions? Will it increase the risk of flooding?
6. Will the activity interfere with above- or below-ground utility transmission lines, e.g., communications, water, sewer, or natural gas?
7. Will the activity potentially interfere with vehicle or pedestrian traffic?

8. Does the activity increase the risk of fire, explosion, or hazardous chemical releases?
9. Does the activity require disposal or retrofitting of polychlorinated biphenyl-containing equipment, e.g., transformers or florescent light ballasts?

F. Environment, Health, and Safety Consequences

1. Potential impacts to public health and well-being

a. Will the activity require temporary or permanent property land taking?
b. Will activities require temporary or permanent human resettlement?
c. Will area residents and/or workers be exposed to pesticides, fertilizer, or other toxic substances, e.g., as a result of farming or manufacturing? If yes, then there should be an approved, current PERSUAP on file and discuss how it will be used in this situation. If so, how will the project:
   i. Ensure that these chemicals do not contaminate ground or surface water?
   ii. Ensure that workers use protective clothing and equipment to prevent exposure?
   iii. Control releases of these substances to air, water, and land?
   iv. Restrict access to the site to reduce the potential for human exposure?
d. Will the activity generate pesticide, chemical, or industrial wastes? Could these wastes potentially contaminate soil, groundwater or surface water?
e. Will chemical containers be stored at the site?
f. Does the activity remove asbestos-containing materials or use of building materials that may contain asbestos, formaldehyde, or other toxic materials? Can the project certify that building materials are non-toxic? If so, how will these wastes be disposed of?
g. Will the activity generate other solid or hazardous wastes such as construction debris, dry or wet cell batteries, florescent tubes, aerosol cans, paint, solvents, etc.? If so, how will this waste be disposed of?
h. Will the activity generate nontoxic, nonhazardous solid wastes (subsequently requiring land resources for disposal)?
i. Will the activity pose the need to handle and dispose of medical wastes? If so, describe measures of ensuring occupational and public health and safety, both onsite and offsite.
j. Does the activity provide a new source of drinking water for a community? If so, how will the project monitor water quality in accordance with health standards?
k. Will the activity potentially disturb soil contaminated with toxic or hazardous materials?
l. Will activities, e.g., construction, refurbishment, demolition, or blasting, result in increased noise or light pollution, which could adversely affect the natural or human environment?

2. Atmospheric and air quality impacts

a. Will the activity result in increased emission of air pollutants from a vent or as fugitive releases, e.g., soot, sulfur dioxide, oxides of nitrogen, volatile organic compounds, methane.
b. Will the activity involve burning of wood or biomass?
c. Will the activity install, operate, maintain, or decommission systems containing ozone depleting substances, e.g., freon or other refrigerants?
d. Will the activity generate an increase in carbon emissions?
e. Will the activity increase odor and/or noise?

3. Water quality changes and impacts

a. How far is the site located from the nearest river, stream, or lake?(Non-yes/no question)
b. Will the activity disturb wetland, lacustrine, or riparian areas?
c. What is the depth to groundwater at the site? (Non-yes/no question)
d. Will the activity result in increased ground or surface water extraction? If so, what are the volumes? Permit requirements? (Non-yes/no question)
e. Will the activity discharge domestic or industrial sewage to surface, ground water, or publicly-owned treatment facility?
f. Does the activity result in increased volumes of storm water run-off and/or is there potential for discharges of potentially contaminated (including suspended solids) storm water?

g. Will the activity result in the runoff of pesticides, fertilizers, or toxic chemicals into surface water or groundwater?
h. Will the activity result in discharge of livestock wastes such as manure or blood into surface water?
i. Does the site require excavation, placing of fill, or substrate removal (e.g., gravel) from a river, stream or lake?

4. Land use changes and impacts

a. Will the activity convert fallow land to agricultural land?
b. Will the activity convert forest land to agricultural land?
c. Will the activity convert agricultural land to commercial, industrial, or residential uses?
d. Will the activity require onsite storage of liquid fuels or hazardous materials in bulk quantities?
e. Will the activity result in natural resource extraction, e.g., granite, limestone, coal, lignite, oil, or gas?
f. Will the activity alter the viewshed of area residents or others?

5. Impacts to forestry, biodiversity, protected areas and endangered species

a. Is the site located adjacent to a protected area, national park, nature preserve, or wildlife refuge?
b. Is the site located in or near threatened or endangered (T&E) species habitat? Is there a plan for identifying T&E species during activity implementation? If T&E species are identified during implementation, is there a formal process for halting work, avoiding impacts, and notifying authorities?
c. Is the site located in a migratory bird flight or other animal migratory pathway?
d. Will the activity involve harvesting of non-timber forest products, e.g., mushrooms, medicinal and aromatic plants (MAPs), herbs, or woody debris?
e. Will the activity involve tree removal or logging? If so, please describe.

6. Historic or cultural resources

a. Are there cultural or historic sites located at or near the site? If so, what is the distance from these? What is the plan for avoiding disturbance or notifying authorities?
b. Are there unique ethnic or traditional cultures or values present in the site? If so, what is the applicable preservation plan?

G. Further Analysis of Recommended Actions *(Most activities will have a threshold determinations of negative determination with conditions..*

☐ **1. Categorical Exclusion:** The activity is not likely to have an effect on the natural or physical environment. No further environmental review is required.* (This is rarely used in the ERC/EMMP.)

☐ **2. Negative Determination with Conditions:** The activity does not have potentially significant adverse environmental, health, or safety effects, but may contribute to minor impacts that can be eliminated or adequately minimized by appropriate mitigation measures. ERC/EMMPs shall be developed, approved by the Mission Environmental Officer (MEO) and the BEO **prior to beginning the activity**, incorporated into workplans, and then implemented. For activities related to the procurement, use, or training related to pesticides, a PERSUAP will be prepared for BEO approval, PERSUAPS are considered amendments to the IEE and usually Negative Determination with Conditions. See Sections H and I below.*

☐ **3. Positive Determination:** The activity has potentially significant adverse environmental effects and requires further analysis of alternatives, solicitation of stakeholder input, and incorporation of environmental considerations into activity design. A Scoping Statement (SS) must be prepared and be submitted to the BEO for approval. Following BEO approval of the SS an Environmental Assessment (EA) will be conducted. The activity may not be implemented until the BEO clears the final EA. If the Parent IEE does not have Positive Determination as one of the threshold determinations, the IEE needs to be amended.

☐ **4. Activity Cancellation:** The activity poses significant and unmitigable adverse environmental effects. Adequate ERC/EMMPs cannot be developed to eliminate these effects and alternatives are not feasible. The project is not recommended for funding.

Note regarding applicability related to Pesticides (**216.2(e): The exemptions of §216.2(b)(l) and the categorical exclusions of §216.2(c)(2) ***such as technical assistance, education, and training are not applicable to assistance for the procurement or use of pesticides.

H. EMMPs *(Using the format provided belowlist the processes that comprise the activity, then for each, identify impacts requiring further consideration, and for each impact describe the mitigation and monitoring measures that will be implemented to avoid or adequately minimize the impacts. All environment, health, and safety impacts requiring further consideration, which were identified in Section F., should be addressed)*

1. Activity-specific environmental mitigation plan (Upon request, the MEO may be able to provide your project with example EMMPs that are specific to your activity.)

Processes	Identified Environmental Impacts	Do the Impacts Require Further Consideration?	Mitigation Measures	Monitoring Indicators
List all the processes that comprise the activity(s) (e.g. asbestos roof removal, installation of toilets, remove and replace flooring) A line should be included for each process.	*A single process may have several potential impacts—provide a separate line for each.*	*For each impact, indícate **Yes** or **No**; if **No**, provide justification, e.g.,: (1) There are no applicable legal requirements including permits or reporting and (2) There is no relevant community concern and (3) Pollution prevention is not feasible or practical and (4) Does not pose a risk because of low severity, frequency, or duration*	*For each impact requiring further consideration, describe the mitigation measures that will avoid or adequately minimize the impact. (If mitigation measures are well-specified in the IEE, quote directly from IEE.)*	*Specify indicators to (1) determine if mitigation is in place and (2) successful.* *For example, visual inspections for seepage around pit latrine; sedimentation at stream crossings, etc.)*

2. Activity-specific monitoring plan

Monitoring Indicators	Monitoring and Reporting Frequency	Responsible Parties	Records Generated
Specify indicators to (1) determine if mitigation is in place and (2) successful (for example, visual inspections for seepage around pit latrine; sedimentation at stream crossings, etc.)(Taken from column 5 of the environmental mitigation plan above.)	*For example: "Monitor weekly, and report in quarterly reports. If XXX occurs, immediately inform USAID COR/AOR."*	*Separate parties responsible for mitigation from those responsible for reporting, whenever appropriate,*	*If appropriate, describe types of records generated by the mitigation, monitoring, and reporting process.*

ERC/EMMP ANNEX 1

Certification of No Adverse or Significant Effects on the Environment

I, the undersigned, certify that activity-specific baseline conditions and applicable environmental requirements have been properly assessed; environment, health, and safety impacts requiring further consideration have been comprehensively identified; and that adverse impacts will be effectively avoided or sufficiently minimized by proper implementation of the EMMP(s) in Section H. If new impacts requiring further consideration are identified or new mitigation measures are needed, I will be responsible for notifying the USAID COR/AOR, as soon as practicable. Upon completion of activities, I will submit a ***Record of Compliance with Activity-Specific EMMPs*** using the format provided in ERC Annex 2.

_____ _____

Implementer Project Director/COP *Name* Date

Approvals:

_____ _____

USAID COR/AOR *Name* Date

_____ _____

Mission Environmental Officer *Name* Date

Concurrence:

_____ _____

Mark Kamiya, Bureau Environmental Officer Date

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ERC/EMMP ANNEX 2
RECORD OF COMPLIANCE WITH ACTIVITY-SPECIFIC
ENVIRONMENTAL MITIGATION AND MONITORING PLANS (EMMPs)

Subject:	*Site or Activity Name/Primary Project*
IEE DCN:	
To:	*COR/AOR/Activity Manager Name*
Copy:	*Mission Environmental Officer Name*
Date:	

The [name of the implementing organization] has finalized its activities at the [site name] to [describe activities and processes that were undertaken]. This memorandum is to certify that our organization has met all conditions of the EMMPs for this activity. A summary and photo evidence of the how mitigation and monitoring requirements were met is provided below.

1. Mobilization and Site Preparation
2. Activity Implementation Phase
3. Site Closure Phase
4. Activity Handover

Sincerely,

_____ _____

Implementer Project Director/COP *Name* Date

Approved:

_____ _____

USAID/COR/AOR/Activity Manager *Name* Date

Distribution:

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- MEO
- Bureau Environmental Officer

Annex 3: EMMP. Generally acceptable Environmental Mitigation and Monitoring Plan language for potential AGRO activities t

(Select appropriate activity type)

Activity	Identified Environmental Impacts	Mitigation Measure(s)	Monitoring Indicator(s)	Monitoring and Reporting Frequency	Responsible Party(ies)
1.1 Equipment procurement	Equipment can have potential impacts on land, water, air and human health, such as: - High energy consumption - Sewer Discharge effluent - Polluted drain water - Fryer --exhaust air pollutants, etc. - Noise, Odor & Visual Quality Impacts Resource Depletion & Indirect Impacts From Energy & Water Use	Equipment procurement plans include environmental considerations. Proper equipment and appropriate technology should be used to minimize the environmental impact such as: - Energy/Water/thermal efficient and cost effective food processing equipment including homogenizers, evaporators, heat exchangers, stainless steel tanks and refrigerators with less Global Warming Potential (GWP) and Ozone Depletion Potential (ODP) etc. - Sound enclosures & noise barriers, equipment with low noise ratings - Pollution Control Applications: Heat Exchanger, Oil Mist Eliminator, Drain Water Cleanup and Starch Recovery Systems, Heat Recovery, Oil/Water Separator etc. - Develop plans & specifications that address resource depletion reduction for retrofits and document why selected equipment chosen over reasonable alternatives in context of efficiency - Installation of procured equipment to be conducted by an authorized company	Documented procurement plan as part of application and grant agreement (if awarded). Equipment selection criteria include the environmental aspects Resource depletion reduction plans & specifications to justify why selected equipment chosen over reasonable alternatives in context of efficiency.	During the application review and full proposal design process, before the grant awarding	IP is responsible for monitoring and reporting. Grant applicant is responsible for implementation of mitigation measures
1.2 Identification of equipment suppliers	Supplied equipment can have potential impacts on land, water, air and human health	- Select the suppliers with proven experiences to provide high-quality environmentally sound service - Select the equipment with minimal impact on environment	- Evaluate the experience/reputation of suppliers; - Review the technical characteristics of suggested by suppliers equipment - Documented procurement plan	Before equipment suppliers are chosen by grant applicant	IP Financial manager, environmental specialist, IP technical evaluation committee. Grant applicant is responsible for implementation of mitigation measures
1.3 Selection of site	Inadequately selected site can cause negative impacts: - Ground water quality - Surface water quality - Geological structural instability	Avoid siting in areas with shallow groundwater table or porous soils. - Avoid siting outside of an area that has known flooding potential. Locate more than 30 meters from a water body to minimize risk of contaminated storm water. - Avoid areas prone to landslide or in known fault areas	Documented site visit memo of Initial Environmental screening / Environmental Due Diligence Report documenting any potential environmental concerns: - Visual inspection of site and its	During the application eligibility revision process (Initial Environmental	IP Environmental Specialist, field coordinators, M&E specialist, IP technical evaluation

Activity	Identified Environmental Impacts	Mitigation Measure(s)	Monitoring Indicator(s)	Monitoring and Reporting Frequency	Responsible Party(ies)
	- Habitat and wetland alteration - Tree cutting and habitat degradation. - Disturbance of contaminated soil - Disturbance of residential areas, schools, hospitals - Disturbance of cultural resources - Fuel consumption associated with transit time between facility and farm sites. - Disruption of gas or electric utilities	- Avoid siting in critical habitat areas or wetlands. - Location of buildings where least disturbance of resources required. - Avoid that have known hazardous waste contamination or ensure plan for remediating waste. - Avoid siting within 100 meters of occupied residential areas and within 1 km of operating schools and hospitals. - Area with buildings should be located at least 9 m from overhead power lines. - Avoid disturbing or damaging cultural resources. Obtain appropriate permit. - Minimize transit distance between refueling, maintenance and washing facilities - Identify underground and overhead utility structures and avoid interference with them.	surroundings to identify soil structure, and potential of landslides, erosion or flooding. - In case of any sign of flooding or geological instability found during the visual inspection: *a)additional hydro geological expertise is required b)gathering some statistics by interviewing the local population and/or obtaining official, reliable information, when available* - Visual inspection of site and its surroundings to identify critical points - Revision and inspection of planning documents, construction or any other permits.	Screening). Before the applications are chosen for further consideration	committee. Grant applicant is responsible for implementation of mitigation measures
1.4 Site cleaning and preparation	- Site clearance waste - Dust emissions - Temporary drainage - impairment - Noise and traffic nuisance - Soil compaction and - contamination - Vegetation loss	Design and Implement mobilization plans that optimize avoidance of environmental impact - Use designated landfill site for material disposal - Implement measures to minimize drainage impacts - Clearly delineate boundaries and minimize staging area footprints - Minimize disturbance of native flora during construction. - Minimize the amount of clearing. Clear small areas for active work one at a time - Where possible, remove large plants and turf without destroying them, and preserve them for replanting in temporary nurseries - Move earth and remove vegetation only during dry periods. Store topsoil for re-spreading. If vegetation must be removed during wet periods, disturb ground only just before actual construction - Install temporary erosion control features when permanent ones will be delayed. Use erosion control measures such as hay bales, berms, straw or fabric barriers - Re-vegetate with recovered plants and other appropriate local flora immediately	- Conformance with mobilization plan - Shipping manifests, landfill - Receipts, photo logs - Number of documented actions - Placement of signs and perimeter markings - Vegetation surveys - Visual inspection of site	At the start of the activity and at least monthly thereafter	IP Environmental Specialist, field coordinators, M&E specialist Grant applicant is responsible for implementation of mitigation measures

Activity	Identified Environmental Impacts	Mitigation Measure(s)	Monitoring Indicator(s)	Monitoring and Reporting Frequency	Responsible Party(ies)
1.5 Design and planning of construction/rehabilitation	Construction/rehabilitation can have potential impacts on land, water, air and human health	Construction and/or rehabilitation plans include environmental considerations including: - Develop a documented waste management plan - Develop a documented safety plan and apply only environmentally safe construction materials (no asbestos). - Design building includes installation of water, heating, ventilation, sewage system, and restrooms - Separate machinery from spare parts room and install steel doors, shelves, iron tables - Post appropriate warning signage - Develop worker safety training manual - Best management practices (BMP) for controlling erosion and storm water impacts should be respected; In case of any sign of risk of erosion and storm water impacts the respective BPM should be designed into the project - Plan to construct water diversions, concrete laneways to prevent runoff from entering both surface and groundwater and to minimize the volume of effluent - Plan for installing rainwater collection system around the farm store building	Documented design plan reflected in ERC (Environmental Review Checklist) and enclosed to Grant agreement, including: waste management plan, safety plan storm water BMPs etc.	During the full proposal development process, before grant approval	IP Environmental Specialist, field coordinators, M&E specialist, IP technical evaluation committee. Grant applicant is responsible for implementation of mitigation measures
1,6 Small-scale on farm production efficiency improvements (e.g. hail net, mulch, farm equipment)	On-farm equipment and new production methods may have a potential impacts on land, water, and human health	- Apply, as relevant, mitigation measures related to equipment procurement - Promote, as relevant, good agricultural practices including climate-resilient agriculture in primary production such as soil testing to determine appropriate fertilization needs; good fertilizer application practices to avoid surface and ground water pollution; avoid working wet soil to avoid soil compaction; apply soil conservation measures (such as crop rotation, cover crops, conservation tillage, planted windbreaks) to prevent soil loss from erosion or reduced fertility due to over usage or salinization; - Apply environmental mitigation and monitoring measures for safe use of pesticides described in the approved PERSUAP - Any wastes generated on site shall be transferred to an authorized landfill - Apply health and safety measures, as relevant, including staff training on safe use of materials/equipment/method; presence of first aid kit etc.	-		

Activity	Identified Environmental Impacts	Mitigation Measure(s)	Monitoring Indicator(s)	Monitoring and Reporting Frequency	Responsible Party(ies)
1.7 Small -scale processing and production efficiency improvements in processing and packing facilities (e.g. sorting line, packing line, drying kiln)	Operation and Maintenance of equipment in food processing/packing facilities may have potential impacts on land, water, air and human health a. Soil, Surface and Ground Water b. Air Pollution Impacts c. Noise, Odor & Visual Quality Impacts d. Non efficient Use of Energy and Water Resources e. Impacts to Sensitive Ecologies or Habitat Degradation f. Impact on Human Health Food processing creates substantial amounts of organic and inorganic wastes. Harmful wastes disposed of in pits or waterways can leach into groundwater and affect water quality for workers and the community. Contamination of water sources may not occur immediately, but can increase or accumulate over time, eventually damaging to product quality and affecting workers' health. Broken jars unless disposed in special containers may present health and safety risks and pollute the soil.	- Day- to- day maintenance and repair activities to keep equipment safe and reliable - Establish and maintain and effective waste management, disposal, and waste reduction system. **a) Soil and water pollution prevention** - Ensure adequate storage of damaged fruits and their safe reutilization or transportation - Ensure existence of wastewater treatment as needed: - Septic Tanks: Use for wastewater with low BOD loading & domestic sewage Include maintenance/cleaning & install drain fields - Select appropriate storage tank or water treatment based on anticipated operations and resultant run-off varieties. - Ensure that wash waster does not flow into area surface water - For higher strength BOD wastewaters (e.g., peppers, potatoes, dairies), install treatment for BOD - Install equalization for periodic cleanup waste, oil removal for greases & edible oils, & treatment for special wastes - Ensure existence of drainage area with non-porous surface, at slight gradient toward drain to minimize risk of run-off and soil/groundwater contamination - Ensure onsite storage tank to store rinse water until such time the municipal collectors can remove 'skim' and/or apply necessary treatment and water is OK for discharge into local sewage system or area surface water bodies - Implement water conservation & re-use measures whenever appropriate - When refueling and/or equipment maintenance will be conducted on-site, ensure that any on-site repairs are conducted in designated area with non-porous surface from which rinse water and spilled fuels/oils can access drainage area described above- **b)Air pollution prevention** - Use environmentally acceptable fuels for dryers & heating equipment Replace fuels with high greenhouse gas emissions (e.g., coal) with clean fuels like natural gas if possible - Use efficient low emission production equipment with high energy efficient ratings & use low emission burners in boilers - Limit use of hot water, reduce energy demand of lighting &	- Documented waste management plan - Visual inspections of sites/operation and storage areas. - Quality of wastewater (Oil & Grease, - Chemical and biological parameters). - Review of types of waste (solid, liquid) and waste quantity - Existence of separate containers for solid, liquid and hazardous waste - Availability of waste disposal service company and/or recyclers; - Complaints from nearby residents - On-site energy and water use documented measures taken to minimize noise, water, air, land pollution - Concentration of relevant pollutants in waste water (mg/m3) - Quantity of wastewater (m3) - Water meter installed; - Documented plans & specifications that address resource depletion reduction for retrofits - Inspection of collected natural agricultural products - Number of public meetings - Permits - Certifications	At project initiation, at least quarterly during operation.	IP Environmental Specialist, field coordinators, M&E specialist. Grant applicant is responsible for implementation of mitigation measures

Activity	Identified Environmental Impacts	Mitigation Measure(s)	Monitoring Indicator(s)	Monitoring and Reporting Frequency	Responsible Party(ies)
		production equipment **c) Noise, Odor prevention.** - Use sound enclosures & noise barriers, equipment with low noise ratings - Provide ventilation to reduce smoke, vapor & odor in the workplace **d) Ensure resource efficiency** - Perform regular maintenance to optimize performance on heating, cooling, & lighting systems to maximize efficiency - Limit water use when washing food product and rinsing equipment; utilize dry cleaning of equipment whenever possible - Limit water use when washing food product and rinsing equipment; utilize dry cleaning of equipment whenever possible - Optimize process line operations to avoid spills of raw materials and water, reducing the need to wastewater treatment and associated energy consumption **e) Minimize impact to sensitive ecologies** - Trainings on protection of endangered species, native plants & wildlife (i.e. during collection of Medicinal or Aromatic Products (MAPs), berries & mushrooms) - Seek organic certifications for production of agricultural products where possible - Training on organic certification standards and/or Global GAP certification standards for agriculture production and processing **f) Impact on human health** - (REFER TO STANDARD MEASURES UNDER WORKER HEALTH AND SAFETY)			
1.8 Procurement and upgrading of cold storages and/or equipment related to cold storage	Cold storages may have potential impacts on land, water, air and human health a. Soil, Surface and ground Water b. Air Pollution Impacts c. Noise, Odor & Visual Quality Impacts d. Non efficient Use of Energy and Water	- Day- to- day maintenance and repair activities to keep equipment safe and reliable - Establish and maintain and effective waste management, disposal, and waste reduction system. **a) Soil and water pollution prevention** - Proper application of cold storage technologies, implement good management practices - Ensure adequate storage of damaged fruits and their safe reutilization or transportation **b)Air pollution prevention**	- Visual inspections of sites/operation and storage areas. - Review of types of waste (solid, liquid) and waste quantity - Existence of separate containers for solid, liquid and hazardous waste - Availability of waste disposal	At project initiation, at least quarterly during operation.	IP Environmental Specialist, field coordinators, M&E specialist. Grant applicant is responsible for implementation of mitigation measures

Activity	Identified Environmental Impacts	Mitigation Measure(s)	Monitoring Indicator(s)	Monitoring and Reporting Frequency	Responsible Party(ies)
	Resources e. Impacts on Human Health	- Use environmentally acceptable fuels for dryers & heating equipment. Replace fuels with high greenhouse gas emissions (e.g., coal) with clean fuels like natural gas if possible - Use Freon R404A as refrigerant or other environment friendly and freon-free options - Use efficient low emission production equipment with high energy efficient ratings - Limit use of hot water, reduce energy demand of lighting & production equipment **c) Noise, Odor prevention.** - During operations, the engine covers of generators, air compressors and other powered mechanical equipment should be closed, and equipment placed as far away from residential areas as possible - Use sound enclosures & noise barriers, equipment with low noise ratings - Provide ventilation to reduce smoke, vapor & odor in the workplace - Tightly close doors of the facility **d) Ensure resource efficiency** - Perform regular maintenance to optimize performance on heating, cooling, & lighting systems to maximize efficiency - Limit water use when washing food product and rinsing equipment; utilize dry cleaning of equipment whenever possible - Limit water use when washing food product and rinsing equipment; utilize dry cleaning of equipment whenever possible - Optimize process line operations to avoid spills of raw materials and water, reducing the need to wastewater treatment and associated energy consumption - Select appropriate insulation panels and doors in order to decrease heat penetration in the cold room. **e) Worker Safety Measures** - Conduct regular instructing of personnel on health and occupational safety requirements - An Emergency Preparedness Plan (EPP) for Refrigerant/Freon Management should be displayed in a proper place and the staff must be trained in handling of refrigerants leakage should it occur - Installation of the forced air cooling equipment is conducted	service company and/or recyclers; - Complaints from nearby residents - On-site energy and water use documented measures taken to minimize noise, water, air, land pollution - Inspection of collected natural agricultural products - Permits - Certifications		

Activity	Identified Environmental Impacts	Mitigation Measure(s)	Monitoring Indicator(s)	Monitoring and Reporting Frequency	Responsible Party(ies)
		by an authorized company in accordance with producer's installation and operation manual. Access restricted to authorized personnel only. - Avoid air pollution and worker poisoning, special indicators of the potential refrigerant/Freon spillage should be installed near the freezing equipment - Ensure gas masks and protective gear to comply with safety rules for ammonia/Freon refrigerating systems - IN ADDITION REFER TO STANDARD WORKER HEALTH AND SAFETY MEASURES AS RELEVANT			
1.9 Procurement and use of equipment for a laboratory for agriculture	Use of laboratory equipment may have potential impacts on land, water, air and human health a. Soil, Surface and ground Water b. Air Pollution Impacts c. Noise, Odor & Visual Quality Impacts d. Non efficient Use of Energy and Water Resources e. Impacts on Human Health	- Implementation of Good Laboratory Practices (GLP), including biosafety and biosecurity practices - Day- to- day maintenance and repair activities to keep equipment safe and reliable - Establish and maintain and effective waste management, disposal system **a) Soil and water pollution prevention** - Temporarily store on site all hazardous or toxic substances in safe containers labeled with details of composition, properties and handling information - The containers of hazardous substances should be placed in an leak-proof container to prevent spillage and leaching - The wastes are to be transported by specially licensed carriers and disposed in a licensed facility, on authorized special toxic wastes disposal sites - Use alternatives to reagents with harmful ingredients where it is feasible - Avoid larger test kits with more packaging as such kits use more refrigerator and storage space, and therefore have greater energy requirements. **b)Air pollution prevention** - Use efficient low emission production equipment with high energy efficient ratings - Limit use of hot water, reduce energy demand of lighting & production equipment **c) Noise, Odor prevention.** - Provide ventilation to reduce smoke, vapor & odor in the workplace **d) Ensure resource efficiency** - Perform regular maintenance to optimize performance on heating, cooling, & lighting systems to maximize efficiency - Conduct daily " end of day " laboratory and office	- Documentation of laboratory procedures and staff training on safe handling of materials, as well as their storage, treatment and disposal, good hygiene, use of proper protective clothing, proper packaging and labeling, and appropriate courses of action for spills, injury and exposure. - Certifications e.g. ISO 9000 and ISO17025	At project initiation, at least quarterly during operation.	IP Environmental Specialist, field coordinators, M&E specialist. Grant applicant is responsible for implementation of mitigation measures

Activity	Identified Environmental Impacts	Mitigation Measure(s)	Monitoring Indicator(s)	Monitoring and Reporting Frequency	Responsible Party(ies)
		walkthroughs and manually close fume hoods, switch off lights, instruments, computers and office equipment. - Identify analytical equipment and processes which can be shut down when not in use and/or batch processed when constant operation is not necessary. **e) Worker Safety Measures** - Conduct regular instructing of personnel on health and occupational safety requirements including biosafety and biosecurity, as relevant IN ADDITION REFER TO STANDARD WORKER HEALTH AND SAFETY			
1.10 Worker Health and Safety	Potential impacts on human health, environment and natural resources; Certain working conditions – excessive heat caused by operating machinery, lack of ventilation, skin-irritating acids from fruits – can damage workers' health. An unhealthy workforce may be unproductive, miss work too often and make costly mistakes.	**Worker Safety Measures** - Installation of procured equipment to be conducted by an authorized company - Ensure workers have access to all necessary PPE for working with on-site equipment and/or handling products - Ensure workers are complying with training procedures - Ensure workers are complying with guidance of training on proper use of on-site equipment - Establish and maintain documented safety procedures and ensure workers/equipment users understand and follow safety instructions supplied on equipment labels and or described in appropriate guidelines/protocols - Establish and maintain worker safety training programs, - All users of the machinery/equipment/operation system been given adequate training in safe operation, correct use, risks and precautions - Design the Equipment Safety checklist for high hazard apparatus to be completed regularly by responsible parties/users - Schedule regular machine maintenance checks and repairs - Make available where necessary medical and chemical protection and first aid kits. - Establish and maintain a fire control system and fire-fighting equipment. - Control access to Operational and maintenance areas and clearly display signs to enhance avoidance of hazards. - Ensure properly storage and handle of chemicals used for preservation, depending on the methodology for its application in the processing. - Design facilities to ensure adequate ventilation for the potential heating and other smoke, vapor or odor sources	- Number of trained workers, - Knowledge/skills of workers, - Documented safety regulations and operational guidelines - Documented Equipment Safety checklist - Documented waste management plan - Number of conducted trainings - Inspection of protective equipment available, - Inspection of medical, chemical protection and first aid kits - Inspection of fire protection equipment. - Inspection of ventilation system - Number of accidents and injuries (workers, visitors) - Existence of precaution signs and control system to access equipment./operation maintenance and storage area - Interviewing of workers	At project initiation, at least quarterly during operation. Periodic site visits for verification	IP Environmental Specialist, field coordinators, M&E specialist. Grant applicant is responsible for implementation of mitigation measures

		- during operation. - -Properly maintain ventilation systems to control vapors, reduce smoke in the workplace.	-		