

EBRD COVID-19 Resilience Framework - Environmental and Social Assessment Training Programme

Module 11 – Typical environmental and social risks for the agribusiness sector

Introduction

The purpose of Module 11 is to provide a summary of typical environmental and social risks that may need to be assessed for a Project within the agribusiness sector. It should be noted that these are just examples of potential risks and the consultants will need to use their professional judgement and knowledge of the sector to identify specific risks on each given Project.

General crop production

- The physical degradation of soils and increased soil erosion arising from poor land preparation, or a lack of soil conservation structures on planted, sloping land.
- The chemical degradation of soils resulting from the insufficient or inappropriate use of mineral fertilisers, a lack of recycling nutrients contained in crop residues, and imbalances in soil pH linked to the use of nitrogen fertilisers, poor quality water, and increased salt concentrations.
- The abstraction of water from surface or groundwater bodies, leading to the reduced availability and water quality to other users, as well as potential impacts on aquatic receptors and livelihoods.
- The abstraction of water from surface or groundwater bodies leading to conflicts between different people or groups, associated with who has the 'rights' to the water and whom may be eligible for compensation and Project benefits.
- The potential for soil and groundwater contamination, and the degradation of aquatic habitats to occur from the inappropriate storage, handling, and application of pesticides and fertilisers.
- The potential for workers to be exposed to hazardous substances including pesticides and fertilisers during their storage, handling and application using spraying or other types of equipment.
- The potential for soil and groundwater contamination to occur from the inappropriate disposal of empty pesticides and fertiliser containers that contain residual quantities of hazardous substances.
- Increased risk to community health and safety arising from the transportation of large and heavy loads using heavy goods vehicles on the public road network.

Livestock production

- The potential for violations of European Union animal welfare guidelines.
- Inadequate conditions of keeping livestock, leading to the spread of animal infections and diseases.
- The potential for soil and groundwater contamination from the generation of large quantities of solid waste including animal feed, animal waste and carcasses, used ventilation filters, animal medications, and sludges from wastewater treatment facilities. Some of the waste may contain residual concentrations of growth enhancers and antibiotics if these substances are being used in livestock production.
- The potential for surface and groundwater contamination to occur from the generation of industrial process wastewater containing a high biochemical oxygen demand and chemical oxygen demand, ammonia, total suspended solids and nutrients.
- The generation of odours to the atmosphere (typically associated with the application of manure on open fields), leading to a deterioration in local air quality, as a nuisance to nearby communities.
- The generation of greenhouse gasses from deforestation and land use change, releases from animals during their routine enteric fermentation, and from nitrous oxide emissions produced by manure. Livestock production is a significant, global source of methane generation.
- The potential for soil or groundwater contamination, or exposure to workers to occur, from the application of pesticides to livestock using dipping vats, sprayers and other types of equipment.
- The spread of animal diseases amongst livestock caused by the movement of animals and mixing between different animal groups, leading to a loss in livelihood and market price of the animals due to their health condition.

NOTE: for additional guidance on assessing animal welfare issues refer to the following:

European Commission, Animal Welfare in Practice:
https://ec.europa.eu/food/animals/welfare/practice_en

Food processing and beverages industry

- The abstraction of water from surface or groundwater bodies, leading to the reduced availability of water and reduced water quality.
- The abstraction of water leading to conflicts between different people or groups, associated with who has the 'rights' to the water, and whom may be eligible for compensation and other benefits from the Project.
- The generation of significant volumes of organic, putrescible solid waste in the form of inedible materials and rejected products from sorting, grading and other production processes. For the processing of meat products, the solid waste generated may include organic materials that have the potential to significantly impact food safety due to the proliferation of pathogenic microorganisms.
- The generation of large quantities of effluent containing a high biochemical and chemical oxygen demand (BOD and COD) resulting from organic wastes entering into the wastewater stream, and from the use of chemicals and detergents.
- The consumption of large quantities of electricity from heating, cooling, and refrigeration.
- Potential risk of fires and explosions from the self-ignition of grain, flour, sugar, malt and other substances, due to a lack of adequate storage facilities controlling humidity, temperature and ventilation conditions.
- Pest and rodent infestation during the transportation, storage and processing of raw materials, leading to impacts on human health.
- The inappropriate use or storage of solvents for edible oil extraction.
- The use and maintenance of pressure vessels generating a risk to the safety of maintenance workers.
- The inadequate cleaning of vats, food and drink sorting, bottling and packaging equipment, leading to the contamination of food products.
- The lack of medical screening for all staff handling food products resulting in the spread of disease through food products.
- Lack of adequate quality control protocols or laboratory equipment, resulting in contaminated food products entering the food chain.
- The generation of particulate matter and odour arising from the handling of solids, solid reduction and drying, steam peeling, blanching and dehydrating. Odour may also be generated from cooking and smoking activities.
- The potential for a food product recall to be issued due to contaminated or poisoned food products, impacting the health of consumers and generating economic losses to other businesses who use the component within their own products.

NOTE: for additional guidance on assessing impacts of food processing and the beverages industry refer to the following:

European Commission, Sustainable Food:

<https://ec.europa.eu/environment/archives/eussd/food.htm>

Confederation of the food and drink industries of the EU, Managing Environmental Sustainability in the European Food and Drink Industries:

https://www.fooddrinkeurope.eu/documents/brochures/brochure_CIAA_envi.pdf

European Commission, Product Safety in Europe: A Guide to corrective action including recalls:

https://ec.europa.eu/consumers/archive/cons_safe/action_guide_en.pdf