European Bank
for Reconstruction and Development

Sub-sectoral Environmental and Social Guideline: Agricultural Production - Crops

Introduction

This guideline is designed to be used by EBRD Financial Intermediaries (FIs) to understand the nature of environmental and social (E&S) risks associated with existing operations in this sector and suggested actions for businesses to manage these E&S risks. It also provides guidance for FIs on potential due diligence questions to discuss with management to understand how their business is managing these E&S risks. This guideline focuses on material E&S risks; it is not an exhaustive list of E&S risks. In managing E&S risks, all businesses should be compliant with relevant E&S laws and regulations.[1] Where applicable, this includes European Union legislation, which may also be taken as a benchmark for good practice

This guideline covers the ground preparation, sowing, planting, growing, harvesting and transportation of crops, including vegetables, fruit, tobacco, horticulture crops and biofuels.

Reference NACE codes:

- 1.1 Growing of non-perennial crops
- 1.2 Growing of perennial crops

Material risks

Below is an overview of the material risks present in the production of crops:

[1]This guideline outlines some relevant legislation but does not provide an exhaustive list of applicable laws and regulations.

European Bank
for Reconstruction and Development

Sub-sectoral Environmental and Social Guideline: Agricultural Production - Crops

E&S Risk Category Key E&S Risks[2]	Environment  Affect the natural environment	Health and Safety  Affect the health or safety of employees	Labour  Affect workplace conditions and the treatment of employees	Community  Affect the health and safety, livelihoods, and environment of the community and wider public	Page no.
Water Use	√			√	5
Contamination of Soil, Surface Water and Groundwater	√			√	6
Pesticide Resistance and Bioaccumulation	√			√	7
Soil Erosion and Degradation	√			√	8
Biodiversity	√			√	8
Hazardous Materials	√	√	√		9
Waste	√			√	9
Release of GMOs to the Environment	√				10
Strike Injuries from		√	√		10

[2] Note: this table provides an indicative list of the EHS risks associated with the sub-sector; it is not meant to be an exhaustive list and EHS risks will depend on the specific setting and scale of the operation or facility.

Moving Objects					
Lone Working		√	√		11
Manual Handling		√	√		11
Slips, Trips and Falls		√	√		11
Air Emissions	√	√		√	11
Noise	√	√	√	√	12
Asbestos		√	√	√	12
Fires and Explosions		√	√	√	12
Crop Contamination				√	13
Traffic Management		√	√	√	13
Archaeology				√	13
Community Relations				√	14
Labour and Working Conditions			√		14
Child Labour			√	√	14
Worker Accommodation			√		15

European Bank
for Reconstruction and Development

Sub-sectoral Environmental and Social Guideline: Agricultural Production - Crops

Contents

Section **Page No.**

European Bank
for Reconstruction and Development

Sub-sectoral Environmental and Social Guideline: Agricultural Production - Crops

1. Process description

This guideline covers the ground preparation, sowing, planting, growing, harvesting and transportation of crops, including vegetables, fruit, tobacco, horticulture crops or biofuels.

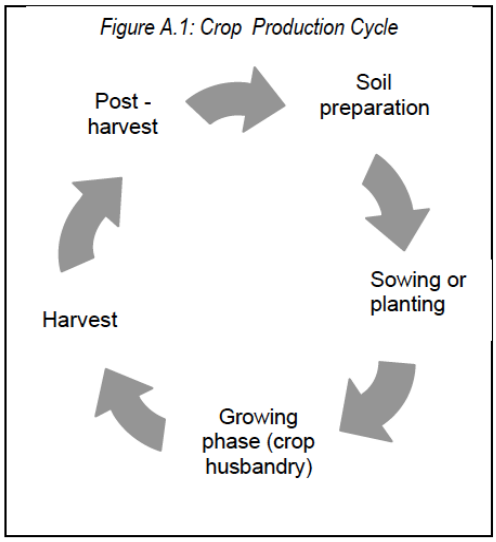
Crops may be grown in open fields or under cover.

Agricultural crops are usually grown as monocultures (cultivation of single crops), and modern farming techniques often involve the application of fertilisers and pesticides, irrigation systems and large-scale machinery for ground preparation, planting and harvesting.

A typical crop production cycle includes:

- Ground preparation, including the removal of weeds, tillage of the soil, and application of pesticides;
- Sowing and planting, often including mechanised methods to deliver the seeds;
- Crop cultivation, including the application of water, supply of nutrients and management of pests;
- Harvesting, which may be through manual or mechanised methods;
- Storage and processing, including the disposal of unwanted plant products.

Figure A.1: Crop Production Cycle



2. Key E&S Risks

Below are the material E&S risks associated with this sector and key measures to manage them. Where gaps are found in the management of key E&S risks, the E&S risk management measures may form part of a corrective E&S action plan agreed with your customer.

Water Use

A sufficient supply of good quality water is essential to all major crop production, and water may be taken from surface water or groundwater resources. Depending on the crops and the climate, agricultural water needs may be high, and may lead to depletion of surrounding groundwater resources, or drawdown of surface water flows.

Where large-scale irrigation schemes are required, formal authorisation from the authorities may be needed, and groundwater abstraction for agricultural purposes is likely to require a license.

Indirect effects may also be caused through the drawdown of local water wells through the abstraction of groundwater for crop irrigation.

Agricultural water consumption is often in competition with community and industrial water requirements, and during periods of water shortage this may cause local/regional disputes.

How can a business manage this risk?

- Evaluate water supply options and water efficiency measures (recycling, reuse, run-off reduction, storage, irrigation efficiency measures, etc.) to reduce impacts on surrounding resources and supplies;
- Obtain abstraction or water use permits which detail the allowable volumes of water abstraction/use. Where changes take place in product volumes, this should be reflected in the permit;
- Undertake regular testing of water quality, whether municipal or from groundwater abstraction.

Contamination of Soil, Surface Water and Groundwater

Chemical and organic fertilisers and pesticides are applied to fields to enhance production capability and restore soils following nutrient depletion.

Excessive application of fertilisers and pesticides can lead to a build-up of salts in the soil, and the contamination of water supplies through leaching and run off.

Pesticides to protect plants and crops are regulated in the EU by Regulation (EC) No. 1107/2009[3].

The application of agrochemicals (e.g. fertilizers and pesticides) poses potential nuisance risks, health and safety hazards, and third party liability issues. The misapplication of pesticides can result in damage to neighbouring crops, habitats and residential areas by spray drift.

Where the application of pesticides is not managed appropriately spray drift may occur to land, crops and other land uses outside the area to be treated. A combination of factors may affect spray drift including weather conditions, poor spraying techniques and equipment choice, setting and maintenance. Spray drift may contaminate soils and water resources. It can result in damage to wildlife and be a potential source of complaints from neighbours.

Fertilizer run off contains compounds of nitrogen and phosphorus which can cause nutrient enrichment of surface waters, resulting in excess growth of algae, which

[3] Regulation (EC) No.1107/2009 of the European Parliament and of 21 October 2009 concerning the placing of plant protection products on the market

may in turn lead to eutrophication and adverse impacts on watercourses.

Where large-scale irrigation is not managed correctly, soils may be impacted by rising salt levels in the irrigation water. Salts are essential to healthy plant growth but excess salt can degrade the soil and result in poor crop growth. Poor irrigation management can also result in soil compaction detrimentally impacting crop growth.

Disposal of empty drums and packaging of agrochemicals may also pose a contamination risk to soil and groundwater.

If pesticides or nutrients in the farm run-off infiltrate the drinking water supplies used by nearby communities, there could be significant adverse effects on the health of the local communities using the contaminated water supplies.

How can a business manage this risk?

- Monitor nutrient and pesticide needs and delivery to reduce over-application;
- Implement Integrated Pesticide Management (IPM) and Integrated Nutrient Management (INM) techniques to reduce over-application;
- Upgrade existing pesticide and hazardous material storage to allow for appropriate containment to prevent accidental release;
- Implement precautions to prevent spray drift including using the right spraying techniques and equipment, taking account of weather conditions and the need to protect neighbours' interests and other members of the public, wildlife and the environment. When spraying near watercourses leave a buffer zone of crop at the margin which is not sprayed to prevent spray drifting out of the treated area. Product labels contain details of buffer zones which must be used.

Pesticide Resistance and Bioaccumulation

Over-application of pesticides, herbicides and insecticides may lead to a build up of pest resistance. This can lead to a greater reliance on pesticides, which leads to even greater pest resistance in the insect and plant communities.

Toxic pesticides, which biodegrade slowly, can accumulate in body tissues and be harmful to ecosystems and potentially to human health.

Pesticides can end up in agricultural crop produce, groundwater and surface water and the human body through ingestion of crop products and/or consumption of contaminated water.

How can a business manage this risk?

- Implement Integrated Pesticide Management (IPM) and Integrated Nutrient Management (INM) techniques to reduce over-application.

Soil Erosion and Degradation

Agricultural production can cause long-term soil degradation through erosion, over-compaction, salinization, and a reduction of organic matter through intensive farming.

Soil erosion by natural water and wind processes is exacerbated by habitat clearance for the expansion of agricultural growing areas.

Regular movements of heavy machinery across crop growing areas (e.g. for tillage, sowing, application of fertilisers or pesticides, or harvesting) can lead to the compaction of soils. This reduces the free movement of water and inhibits the spread of roots and other activities essential to maintain healthy crops. The type of damage that occurs depends to a great extent on the crop being grown. For example, soil compaction is a problem for crops such as cotton and tobacco where heavy machinery is used on highly irrigated soils.

Build-up of salts in the soil can arise through over-application of fertiliser and over-irrigation using lower quality water.

Inadequate restoration of the soil following intensive crop growth can lead to a loss in organic matter.

How can a business manage this risk?

- Monitor soil condition and productivity and use soil improvement techniques (erosion protection measures, addition of organic matter, pH stabilisation, etc.);
- Dredge watercourses, regularly, to mitigate sedimentation and reduce flood risk impact of operations.

Biodiversity

Large-scale agricultural production can reduce biodiversity area through the clearance of natural habitats to plant crops, a traditional focus on single crop monocultures, the use of pesticides, the degradation of soil quality through intensive farming practices, and disturbance to surrounding areas when planting or harvesting crops (e.g. through the operation of heavy machinery).

Land clearance may cause damage to sensitive areas or areas protected by legislation such as areas of high ecological value, or archaeological or historic interest.

How can a business manage this risk?

- Protect areas of high ecological value or areas protected by state/local authorities through avoidance, demarcation, offset etc.;
- Establish buffer zones to sensitive habitat areas and surface water bodies where certain activities are avoided, such as pesticide spraying.

Hazardous Materials

The use and storage of hazardous materials (e.g. chemicals, fuels and oils) can lead to spillages from poor handling practices and leakages from above or below ground storage tanks. This may lead to the localised contamination of soils, or more widespread contamination of groundwater.

Accidental exposure to hazardous materials (e.g. fertilizers) can include dermal contact (e.g. from container handling or from spills and leaks), and inhalation (e.g. during preparation and handling). Contact can lead to burns or inflammation of skin from irritation or allergy. Inhalation can lead to respiratory difficulties.

How can a business manage this risk?

- Maintain storage areas to ensure that they are organised, secure, clean and dry. Storage arrangements should be reviewed on a regular basis to ensure that leaks do not occur;
- Record all hazardous materials held on site in an inventory with Materials Safety Data Sheets (MSDSs) available in the appropriate language; procedures should be prepared for their handling and treatment in the event of spillage;
- Conduct regular inspection of all bulk containment facilities and effluent holding tanks to ensure integrity of storage;
- Provide personal protective equipment (PPE) that is fit for the task to prevent injury and maintain hygiene standards;
- Train staff in the correct selection, use and maintenance of PPE. Inspect PPE regularly and maintain or replace as necessary;
- Ensure security of chemical and product storage areas to prevent misuse by third parties or damage to property.

Waste

Farm wastes include:

- unwanted crop residues;
- expired chemicals such as pesticides;
- expired containers including pesticide drums, oil drums;
- scrap vehicles, machinery and materials.

Some farms operate on-site waste dumps. These are often located along the edge of fields or along the farm boundary, and may be on land that is difficult to farm. On-farm waste dumps may cause localised pollution through the entry of chemicals, fuels and oils to the soil or water environment. Where farms have operated waste schemes on a commercial basis for a number of years, more widespread contamination may result. On site storage and/or disposal of wastes may require licensing.

Inappropriate disposal of empty drums and packaging of agrochemicals/hazardous materials may also pose a community health and safety risk.

How can a business manage this risk?

- Where possible and safe to do so, recycle or re-use benign waste products; maintain an inventory of waste volumes and minimise generation where possible;
- Wastes should be stored in adequate containers and segregated where possible to encourage recycling;
- Implement appropriate containment, storage and disposal procedures for hazardous materials and waste;
- Ensure that wastes going off-site go to appropriately licensed contractors;
- Prohibit all fly-tipping of wastes.

Release of Genetically Modified Organisms (GMO) to the Environment

A genetically modified organism (GMO) is an organism whose genetic material has been altered artificially (i.e. by genetic engineering). GMOs used in agriculture may include seeds, feed, fertilisers and pesticides. Crops, food or feed which contain GMOs, or are produced from GMOs, are called genetically modified (GM).

One risk from the use of GMOs in crop production is that individual plants or seeds may accidentally migrate to land outside of the area being set aside for GMO crop production. This may result in contamination of neighbouring non-GMO crops. Such contamination may initially be undetected.

GMOs are highly regulated in the EU, and may not be used or released into the environment without approval by the competent authorities. In areas which have been declared as GMO free, GMOs may not be used.

Where the use of GMOs is proposed, a risk assessment must be conducted in line with the EU's substantive requirements. Where crops are to be supplied into the EU, it is essential that there is traceability on the source of the crop and methods of farming.

How can a business manage this risk?

- Adhere to all regulations regarding GMOs;
- Minimise risk of off-site impacts through careful handling and field boundary management;
- Restrict GMO activities to authorised areas only.

Strike Injuries from Moving Objects

Moving vehicles, plant and equipment are core to the operation of most farms. Accidents involving vehicles and farm machinery are a common occurrence and a key risk to farm workers. Accidents can occur within the agricultural areas or indoor processing areas, or on roads within and outside the farm.

How can a business manage this risk?

- Separate people from vehicle movement to ensure the safety of workers, the community and the public;
- Train drivers to properly operate the machinery and equipment;

- Fit vehicles with rollover protective structures and guarding of dangerous plant.

Manual Handling

Many injuries from farming are associated with handling, lifting and carrying of heavy or unconventionally-shaped objects.

How can a business manage this risk?

- Install mechanical lifting aids where possible and rotate work tasks to reduce repetitive activities;
- Appropriate training is required.

Lone Working

Farm workers may undertake lone working activities, which increase the H&S hazards.

How can a business manage this risk?

- Implement OHS management procedures including risk assessments for lone working and first aid provisions;
- Conduct relevant training of workers in lone working;
- Implement frequent communications procedures (e.g. call-ins to another designated person who undertakes checks if lone worker misses call in) and provide necessary communications equipment;
- Provide and use Personal Protective Equipment, as appropriate and identified in risk assessments, to protect employees from identified health & safety risks.

Slips, Trips and Falls

Slips, trips and falls are regular occurrences in farming environments and result in different types of injuries. Uneven ground and poor housekeeping are common causes.

How can a business manage this risk?

- Maintain high standards of general housekeeping;
- Keep walking and working surfaces clean and dry.

Air Emissions

Some farm practices may give rise to dust or other air emissions. For example, the burning of organic matter such as crop stubble or crop wastes will cause particulate emissions.

Harvesting, threshing, handling and storage of grain, can generate high concentrations of dust that can be hazardous to health when inhaled. Exposure to dust can cause irritation to the respiratory tract. Occupational lung disease can occur from exposure to grain

dust and is common in the farming industry.

How can a business manage this risk?

- Avoid on-site burning (e.g. crop stubble) that may give rise to greenhouse gases, odour or air quality nuisance complaints or could present fire risks;
- Install appropriate equipment to prevent odour nuisance to communities;
- Use effective filters in vehicle cabs to keep air free of dust and fumes from spraying activities;
- Improve ventilation within buildings;
- Avoid the build-up of explosive atmospheres through the application of filters and dust control.

Noise

Some farm operations generate noise (e.g. tractors, other farm machinery, grain silos and driers etc.) and can result in hearing damage to workers exposed to the noise and to nearby communities.

How can a business manage this risk?

- Enclose noisy machines to reduce noise emissions;
- Rotate tasks to minimise worker's time spent in noisy areas over an eight hour period;
- Provide personal protective equipment (PPE) where workers and visitors have to enter noisy areas;
- Avoid nuisance complaints by operating during the day (where possible), maintaining equipment regularly, and considering the use of sound proofing.

Asbestos

Asbestos has been used on a large scale for many years as fire proofing and insulation material and may be encountered in a wide range of forms including asbestos cement boards, fire retardant gaskets in pipe work and as fire retardant insulation around boilers and furnaces.

How can a business manage this risk?

- Particular attention should be paid to farm buildings constructed prior to the 1990s;
- Conduct/commission an asbestos survey (by qualified personnel).
- If asbestos exists, establish an asbestos management plan.

Fires and Explosions

Grain storage presents a particular risk of explosion. Storage of other materials, (e.g. compost, chemicals) may also create a fire hazard.

How can a business manage this risk?

- Implement accident, fire and explosion precautions and emergency procedures;
- Maintain working areas, implement dust control systems and limit the amount of dust build up in the air;
- Maintain grain silos and storage tanks; control pressure and filling mechanisms to avoid overspill and the risk of explosion as a result of a build-up in pressure.

Crop Contamination

Contamination of agricultural crops can occur during growing, harvesting, transportation and storage. Contaminants may include heavy metals (from past industrial land use), fertilisers and pesticides (from residual levels in the soil and on crops), or may arise from pollution in the air, water and soil caused by neighbouring industrial activities.

How can a business manage this risk?

- Soils and produce should be tested to ensure that any contamination present is below acceptable limits in the country for import and/or export and, therefore, does not constitute a hazard to health.

Traffic Management

The use of public highways by farm vehicles and transport vehicles can cause congestion.

Deposition of mud on public roads can increase the risk of accidents.

How can a business manage this risk?

- Install wheel wash facilities at farm gate;
- Develop and implement Traffic Management Plan.

Archaeology

Land clearance for new agricultural areas can cause damage to areas of archaeological or historic interest to local communities.

How can a business manage this risk?

- Conduct archaeological survey as appropriate;
- Implement Chance Finds Procedure during land clearance.

Community Relations

Having good relationships with neighbouring communities reduces the risk of local opposition to the farming activities.

Agricultural production can result in impacts on local communities including from spray drift, surface water contamination, odour (e.g. from spreading of slurry and manure), traffic issues and noise.

How can a business manage this risk?

- Assess opportunities for the involvement of the local community in direct employment or in the provision of goods and services;
- Engage with the local community and other interested and/or affected stakeholders, on a regular basis, to maintain good social relations;
- In areas of high population density or high community interest, it is recommended that a Stakeholder Engagement Plan (SEP) be prepared and implemented by the company.

Labour and Working Conditions

Agricultural production may use casual and contract labour. In some settings and situations, casual labourers are not given the same treatment or working conditions as permanent employees.

How can a business manage this risk?

- Ensure that labour standards, contracting and remuneration are in line with national law and are consistent with the average for the sector and apply to permanent employees and casual and contract labour;
- Undertake checks on workers right to work (including work permits, age etc.);
- Undertake checks on treatment of subcontractor labour.

Child Labour

Child labour is a prevalent risk in agricultural operations, including in agricultural production of crops in certain countries. Sometimes family related domestic chores are carried out by children, which may not necessarily be classed as Child Labour on the smaller family run operations.

Children are particularly vulnerable to on-farm hazards due to lack of experience and knowledge, especially in relation to farm vehicles and machinery.

How can a business manage this risk?

- Undertake checks on worker's age and prohibit any employment under the minimum age as stipulated by the International Labour organization (ILO) or national legislation (whichever is more stringent);
- Adopt clear policies for recruitment consistent with international good practice

for the prevention of child labour in agricultural (e.g. from the ILO);
- Where children are on-farm health and safety provisions need particular attention to protect them from hazards.

Worker Accommodation

Worker accommodation on agricultural production farming operations may be provided.

How can a business manage this risk?

- Provide worker accommodation which meets, at a minimum, basic needs of workers, national legislation and industry good practice (e.g. see guidance note from IFC & EBRD[4]).

3 Financial implications

Potential financial implications from the risks and liabilities identified in the previous section are wide ranging and may include:

- Compensation for depletion and/or contamination of water resources;
- Potential clean-up costs for soil and water contamination arising from the use, storage and application of agrochemicals, other chemicals (e.g. fuel, oil) or resulting from dumping of waste or site contamination;
- The resistance/pesticide cycle can have significant financial implications in terms of yield and the quantity of agrochemicals that need to be applied to a crop;
- Fines for the contamination of watercourses or groundwater from runoff containing pollutants or effluent discharges to surface water without license;
- Capital expenditure for installing or upgrading irrigation systems, water storage provisions and water conservation/recycling systems;
- Pesticide resistance may require the use of more expensive pesticides;
- Spread of plant-borne diseases may affect production capabilities;
- Capital measures may be needed to reduce soil erosion or improve soil productivity;
- Waste clean-up costs or fines;
- Crop contamination (e.g. with heavy metals, pesticides, or non-authorised GMOs), may result in restrictions on price and demand, and on export markets (e.g. EU);

[4] http://www.ebrd.com/downloads/about/history/workers.pdf

- Inadequate safety provisions for workers may lead to absenteeism, health care costs or health and safety claims from affected employees;
- Loss of productivity of soil from erosion/compaction may result in lower yields;
- Spray drift and other nuisances may lead to compensation claims from neighbouring properties.

4. Suggested due diligence questions

When assessing E&S risks, it is important to engage the customer on how these risks are managed. Below are suggested questions to discuss with management, and issues to look out for, as relevant to the activities.

Perform a complete tour of the farm, accompanied by someone knowledgeable about farming operations. Make sure that all high-risk areas of the farm are visited, including waste dumps, pesticide storage, pesticide mixing, plant and vehicle maintenance areas etc.

General Housekeeping and Farm Management

- Check wastewater sumps and discharge points and check the condition of receiving waters;
- Check for signs of pollution in watercourses (e.g. algal growth) and note the colour of water;
- Look for signs of bad housekeeping e.g. open fertiliser/pesticide stocks near to drains, unsecure chemical storage areas, no secondary containment to chemical drums, untidy and unmanaged waste dumping, no segregation of waste etc..

Spills Management

- Check if the farm is in an area where groundwater is protected;
- Look for localised spills, leaking pipes etc; check whether storage tanks are tested regularly for leakages;
- Check vehicle maintenance and storage areas for signs of oil staining or accidental spillage history;
- Assess emergency procedures to respond to fires, pollutant spillages etc.;

Biodiversity

- Review any nature conservation designations on or in close proximity to the site (both land and water designations); note condition assessments.

Inspections, Permitting and Regulations

- Note/enquire about communications from/with the relevant local regulators regarding non compliance/fines and/or warning letters;
- Note any fines/fees against the site;
- Find out whether there have been any fatalities/significant environmental

health and safety incidents in the past 3 years;

- Check waste discharges and water abstraction permits;
- Check whether the facility is next to any industries which may pollute ground water used in the process;
- Is the facility subject to any audits by customers? What was the outcome of these audits?
- Check use of GMOs and whether appropriate licenses, permits, segregation and traceability systems are in place.

Health and Safety

- Check health and safety training and PPE for workers (permanent, contract and casual), visitors and residents on-farm (including children);
- Check the procedure for mixing and applying pesticides, including use of PPE, warning signs, record keeping;
- Note any excessive noise or emissions that may cause a nuisance;
- Assess the level of health and safety awareness at the farm, for example the presence of safety notices and the general appearance of the site, accident and incidents reporting logs;
- Find out what insurances are in place (health, hygiene, fire etc.);

Community Complaints/Grievances

- Note any complaints made by customers, general public and/or employees directly to the site and/or to the relevant local regulators;

Labour Management

- Check that labour standards, contracting and remuneration are in line with national law and are consistent with the average for the sector;
- Check that hours worked, including overtime, are recorded and staff should receive written details of hours worked and payment received;
- Ask particularly about the working hours, pay and conditions regarding casual labour, and check what health and safety provisions (e.g. PPE) are provided for them; are these comparable with employees? This is a particular issue in the agribusiness sector;
- Check worker accommodation;
- Has the Company received inspections from the local labour, H&S or environmental inspectorate in the previous three years? Have these resulted in any penalties, fines, major recommendations or corrective action plans? What is the status of these?
- Has the company undertaken a systematic, documented review of operations against national legal requirements relevant to Environmental, Health, Safety and Social performance and the extent of compliance with that legislation?

- Does the organisation have a grievance mechanism which allows employees to raise workplace concerns?

- Is a grievance mechanism in place to allow the community to raise concerns regarding farming operations?

- Are employees free to form, or join, a worker's organisation of their choosing?

Investment

- Does the business plan have line items for Environment, Health and Safety improvements? Are there any high value improvements noted in the business plan for E,H and S issues in the coming months/years?

Management Plans

Review the operational procedures and management plans available to control risks. As a minimum, any business should be required to have the following in place:

- Environmental, Health & Safety management systems which include operational procedures that are communicated, implemented and regularly reviewed (i.e. "live" systems that are used in practice, not just kept as an office manual);

- Monitoring (and where necessary, testing) programmes (water, air, noise, etc.);

- Improvement objectives, targets and project plans;

- Training programmes for personnel;

- Regular inspections, checks and audits against records to demonstrate achievement of the required level of performance against legal requirements and improvement action;

- Emergency plans for environment, health and safety incidents and site security;

- Demonstrable involvement of senior management in environment, health & safety management and leadership.

5. References and additional sources

European Bank for Reconstruction and Development (EBRD). Environmental and Social Policy May 2008. http://www.ebrd.com/enviro/tools/index.htm

International Finance Corporation, 2007. Environmental, Health and Safety Guidelines, Annual Crop Production. http://www.ifc.org/wps/wcm/connect/077b7f004885533bae2cfe6a6515bb18/Final+-+Annual+Crop+Production.pdf?MOD=AJPERES

Industrial Emissions Directive: Council Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control);), http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32010L0075

Environmental Liability Directive: Council Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage; http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32004L0035

European Commission, 2006. Integrated Pollution Prevention and Control, Reference Document on the Best Available Techniques in the Food, Drink and Milk Industries. http://eippcb.jrc.ec.europa.eu/reference/BREF/fdm_bref_0806.pdf

European Commission Regulation No 543/2011 on laying down detailed rules for the application of Council Regulation EC No 1234/2007 in respect of the fruit and vegetables and processed fruit and vegetables sectors http://ec.europa.eu/agriculture/cap-post-2013/implementation/pdf/1451/c-2014-1451_en.pdf

Regulation (EC) No.1107/2009 of the European Parliament and of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:309:0001:0050:EN:PDF

European Commission, Food Safety, from the Farm to the Fork; ISBN: 92-894-7772-5

International Labour Organization (ILO), Child Labour in Agriculture; http://www.ilo.org/ipec/areas/Agriculture/lang--en/index.htm

ISO22000:2005: Food Safety Management System – Requirements for any organisation in the food chain.

ISO14001:2004: Environmental Management Systems – Requirements with Guidance for use

Protecting our Water, Soil and Air: A Code of Good Agricultural Practice for farmers, growers and land managers; Department for Environment, Food and Rural Affairs (DEFRA); https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/268691/pb13558-cogap-131223.pdf

United Kingdom (UK) Government Department for Environment, Food and Rural Affairs (Defra), 2006. Code of practice for using plant protection products.

United Kingdom Health and Safety Executive - Farmwise: Your essential guide to health and safety in agriculture; (HSG270, published 07/13) ISBN:978 0 7176 6579 2, http://www.hse.gov.uk/pubns/priced/hsg270.pdf

Workers' accommodation: processes and standards (IFC & EBRD): http://www.ifc.org/wps/wcm/connect/9839db00488557d1bdfcff6a6515bb18/workers_accomodation.pdf?MOD=AJPERES