



**European Bank**  
for Reconstruction and Development

## **Sub-sectoral Environmental and Social Guideline: Fish Processing**

### **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 raise 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. In managing E&S risks, all businesses should be compliant with relevant E&S laws and regulations.<sup>1</sup> Where applicable, this includes European Union legislation, which may also be taken as a benchmark for good practice.

This Guideline focuses on fish processing including the processing of either fish or shellfish into a variety of fish products. The Guideline does not cover the subsequent canning or packaging of these products.

Reference NACE codes:

10.20: Processing and preserving of fish, crustaceans and molluscs

### **Material risks**

Below is an overview of the environmental and social (E&S) material risks present in fish processing:

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<sup>1</sup> This guideline outlines some relevant legislation but does not provide an exhaustive list of applicable laws and regulations.



<b>E&amp;S Risk Category</b>	<b>Environment</b>  Affect the natural environment	<b>Health and Safety</b>  Affect the health or safety of employees	<b>Labour</b>  Affect workplace conditions and the treatment of employees	<b>Community</b>  Affect the health and safety, livelihoods, and environment of the community and wider public	<b>Page no.</b>
<b>Key E&amp;S Risks<sup>2</sup></b>					
Odours	√		√	√	5
Product Contamination and Food Hygiene	√	√	√	√	6
Wastewater	√			√	7
Waste	√			√	8
Contamination of Soil, Surface Water & Groundwater	√			√	9
Water Supply	√			√	10
Air Emissions	√	√		√	10
Energy Use	√			√	11
Refrigerants	√			√	11
Labelling of Organic Products	√			√	12
Machine and Electrical Safety		√	√	√	13
Infections and Allergic Reactions		√	√	√	13
Manual Handling, Slips,		√			13

<sup>2</sup> 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.



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Trips and Falls					
Working at Height or in Confined Spaces		√			13
Noise	√	√	√	√	14
Temperature		√	√		14
Polychlorinated Biphenyls (PCBs) & Asbestos	√	√			14
Labour and Working Conditions			√		15
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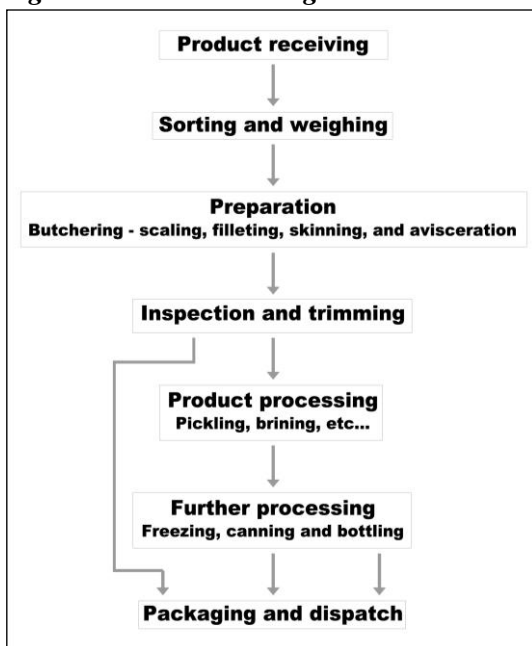
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## 1. Process Description

The fish processing process is shown in Figure 1 below.

*Figure 1: Fish Processing Activities*



Core processes include fish dressing, freezing, glazing, roe processing, milt processing, salting and smoking. Additional secondary process may include sorting, fish meal production, extraction of oils and packaging. Fish processing plants typically include the following:

- Docks and receiving area;
- Washing area;
- Dressing area;
- Smoking rooms;
- Salting rooms;
- Refrigeration units;

- Packaging units;
- Product dispatch area.

Similar processes are used for freshwater and marine processing. However, the potential receptors for emissions often differ substantially between these two industry sectors. In marine fisheries, primary processing is often conducted on ships with wastes typically being disposed of directly into the sea, in contrast with freshwater fish facilities which are typically land based.

Processed products are usually distributed from the processing facility or docks by road to consumers, wholesalers and commercial food products manufacturers.

## 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.

### Odours



Fish processing plants typically generate strong odours and, depending on the location of the facility, odour can be a significant nuisance issue for neighbouring facilities and residential areas.

Ammonia gas (NH<sub>3</sub>) generated from fish processing waste can cause acidification of



soils and water. Ammonia has a sharp and pungent odour and in higher concentrations can irritate the eyes, throat and mucous membranes.

### *How can a business manage this risk?*

- Process organic matter as soon as possible to reduce offensive smell problems;
- Upgrade storage of processed and unprocessed fish waste to an enclosed store with ventilation with suitable air filtration equipment if necessary. Provide ventilation equipment to maintain an adequate negative pressure within processing and cleaning areas to minimise the possibility of odours escaping to atmosphere without treatment;
- Improve ventilation in buildings;
- Adopt odour management measures to prevent and minimise odour nuisance to communities;
- Control temperature and humidity to reduce odour emissions.

### Product Contamination & Food Hygiene



Fish products can become contaminated through:

- Contaminated fish received from suppliers and from contamination of other raw ingredients e.g. dioxins and other fat soluble pesticides;
- Poor food hygiene standards within the processing operations, e.g. unclean machines, unhygienic handling;

- Failure in the processing operation, e.g. failure to maintain chilled conditions, sterilisation failure, and poor seals on vacuum packs etc.

The Company's operations should be designed to internationally-recognized food safety standards (e.g. ISO22000:2005) and consistent with the principles and practice of Hazard Analysis Critical Control Points (HACCP)<sup>3</sup> and Codex Alimentarius<sup>4</sup>.

### *How can a business manage this risk?*

- Consider food hygiene under the requirements of EU food safety directives and legislation (e.g. Regulation No 178/2002, Regulation on general principles and requirements of food law, No 882/2004 on general food safety, Directive 2002/99/EC on products of animal origin for human consumption, EU Regulation No. 2073/2005 on microbiological criteria for foods and Directive 2006/88/EC on animal health requirements for aquaculture animals and products thereof, and on the prevention and control of certain diseases in aquatic animals), also local/national food safety regulations;
- Train staff in food safety issues and follow established procedures for hand washing, working attire (clothes, shoes, gloves and hair coverage), and how to handle injuries and diseases;
- Establish plant such that products move from dirty to clean areas, to avoid recontamination. Staff movement to be opposite to the manufacturing flow direction of products (i.e. from “clean” towards “dirty” areas);
- Apply process hygiene standards to prevent the

<sup>3</sup> ISO 2005

<sup>4</sup>FAO and WHO (1962–2009).



spread of diseases such as salmonella, Escherichia coli (E. coli) and Legionnaires' disease beyond the factory boundaries, for example to the local surrounding community and/or consumers;

- Consider implementing product traceability systems that facilitate tracing of products once released for sale;
- Implement regular, rigorous hygiene monitoring programmes. Clean all surfaces and equipment regularly to prevent build-up of oil and fat and to reduce risk of health hazards;
- Ensure that appropriate PPE is provided to all facility visitors, hygiene requirements are adhered to and external contact with the fish is avoided

### Wastewater



Large quantities of wastewater are generated through activities such as fish unloading, equipment sprays, offal transportation and facility cleaning. The water is often subject to minimal treatment with the exception of primary screening/ filtering to remove solids. Pollutant issues typically relate to:

- High levels of solids in water content and high organic levels;
- Elevated levels of salts;
- Oil and grease;
- Ammonia;

- Cleaning agents (including chlorine bleaches and surfactants).

Wastewater is typically discharged into local water bodies (freshwater or marine) or into municipal sewers. Fish processing effluents can be toxic to fish and other aquatic organisms.

Fish processing activities are subject to monitoring and possible enforcement action to ensure that they meet emission standards fixed under EU Directive 76/464/EEC and the urban wastewater treatment Directive 91/271/EEC. The EU Water Framework Directive 2000/60/EC requires that fish processing facilities meet the environmental objectives for good ecological and chemical status of surface waters by 2015.

### How can a business manage this risk?

- Comply with national and international regulations for fish processing; large fish processing facilities in the EU, (with finished product capacity of greater than 75 Tonnes per day), are subject to national regulations under the Industrial Emissions Directive (IED) 2010/75/EU. Other smaller facilities within the EU and operations outside the EU will still be subject to local regulation but this will generally set less stringent requirements on the techniques to be adopted;
- Re-use process wastewater to minimise final wastewater volumes;
- Install/improve wastewater/effluent monitoring and treatment plants;
- Install grids to reduce or avoid the introduction of solid materials into the wastewater drainage system;
- Improve or replace drainage systems to improve



effluent management;

- Install diversion drains to direct surface water runoff away from waste areas.

### Waste



Fish processing can generate varying quantities of solid waste. Many of the waste products of fish dressing can be used as a by-product (e.g. supplements for animal feed or silage).

Wastes generated from fish processing include:

- **Solid Waste:** will include by-products from fish processing, and will be largely putrescible in nature. This waste can either be reprocessed for use in animal feed products, or disposed of to landfill;
- **Packaging Waste:** except in small operations, packaging is almost universally used to protect and preserve fish products. This may be plastic, tin-plate cans, aluminium cans, cardboard, shrink wrap, glass or polystyrene. This material becomes part of the waste stream.

Fish processing wastes often contain nitrogen, phosphorous and other substances which may result in emissions of ammonia and other gases and may pose a potential risk of contamination to surface and ground water through leaching and run-off.

Fish processing wastes may also contain bacteria, pathogens, viruses, parasites etc. which may potentially affect soil, water and plant resources for human, livestock or wildlife consumption.

### How can a business manage this risk?

- Comply with national and EU regulations (as applicable) for the safe disposal of waste;
- Where possible and safe to do so, recycle or re-use waste products; maintain an inventory of wastes generated and minimise where possible;
- For wastes that cannot be recycled due to biosecurity issues, undertake disposal according to the requirements of local health authorities;
- Institute a management programme to ensure that any diseased products are properly and quickly managed;
- Companies operating within the European Union (either as a manufacturer or as a supplier into European Union countries) will be subject to the European Union Packaging and Packaging Waste Directive (94/62/EC), which aims to reduce the amount of packaging that is being introduced into the waste streams;
- Where possible, companies should attempt to recover packaging or should ensure that the packaging is easy to recycle;
- Implement a waste minimisation and management system; for residual wastes, the possibility of re-using wastes for animal feed or silage should be investigated.





### Contamination of Soil, Surface Water & Groundwater



Fish processing produces a large volume of waste, including putrescible by-product waste. There is a risk of chemical and organic wastes entering and polluting soil and water resources including from:

- Direct run-off;
- Insufficient treatment of waste before discharge/disposal;
- Infiltration from unlined waste storage areas;
- Spillages and accidental releases;
- Fuel storage - fish processing is a heat-intensive process and can use hydrocarbon fuels (oil, diesel, coal) for heating processes. Underground storage tanks are a common source of groundwater pollution unless contained, managed and tested regularly;
- Drain corrosion – fish processing processes commonly use caustic/corrosive chemicals for cleaning processes. If discharged to drainage systems, this can lead to corrosion of pipework and creation of new contaminant pathways;
- Disposal of empty drums and packaging of chemicals may also pose a contamination risk.

#### How can a business manage this risk?

- Operations where pollution has occurred or there is a threat of it occurring to water resources, land and protected species and habitats may be liable under national legislation and EU legislation for preventing and remedying environmental damage. In the EU the Environmental Liability Directive (ELD) (2004/35/EC) established a framework of environmental liability, based on the "polluter-pays" principle, to prevent and remedy environmental damage;
- Compliance with BREF<sup>5</sup> (08.2006) for Food, Drink and Milk Industries is required for 'intensive' facilities falling under the ELD. Where facilities do not fall under the 'intensive' definition, it is recommended that they follow guidance from this guideline and the BREF;
- Maintain storage, transport and systems in good condition;
- Protect fish processing operations from rain and wind to prevent contaminated run-off and to minimise wastage;
- Install secondary containment of containers and tanks (bunds, for example) to prevent spills reaching the wider environment;
- Inspect secondary containment facilities

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<sup>5</sup> Best Available Techniques Reference Document (BREFs).



regularly and fit alarms where necessary.

### Water Supply



Fish processing is a water-intensive industry. Process water is used for washing fish, cleaning process areas, cooling and production purposes. These processes typically require the provision of high quality water and can therefore represent considerable costs to the facility.

Water may be taken from surface or ground water resources. Permits and charges may be required for abstraction and discharges to water resources.

#### *How can a business manage this risk?*

- Consider discharges and abstraction from water resources under the requirements within the EU Water Framework Directive (2000/60/EC) and local environmental regulations and permitting requirements;
- Evaluate water supply and water efficiency measures (e.g. recycling, reuse, run-off reduction, storage etc. ) to reduce impacts on surrounding resources and community supplies;
- Minimise water use in cleaning, and keep solid waste as dry as possible;
- Reduce cleaning water needs by ensuring that solid waste is removed before rinsing and washing, e.g. using scrapers, brooms and

vacuum cleaners;

- Use taps with automatic shutoff valves;
- Use high pressure hoses and optimised nozzles to minimise water usage;
- Use hot water or steam as this can reduce water requirements;
- Adopt equipment cleaning-in-place (CIP)<sup>6</sup> methodologies to reduce chemical, water and energy consumption.

### Air Emissions



Attention should be paid to the operation and monitoring of smoking units, boilers and engines. Such units may have the potential for creation of atmospheric emission problems relating to organic compounds and particulates.

Within processing areas, respiratory illnesses have been known to occur in workers.

Many countries are signatories to the Kyoto Protocol and have adopted targets

<sup>6</sup> CIP is a method of cleaning the interior surfaces of pipes, vessels, process equipment, and associated fittings, without disassembly using approved chemicals and/or detergents with minimal environmental impact and compatible with subsequent wastewater treatment processes.



for the reduction of CO<sub>2</sub> emissions. Where governments have set up carbon emission reduction programmes, industrial processes like fish processing are required to reduce their CO<sub>2</sub> emissions through the setting of targets. This can result in a need for substantial investment in new/clean technologies to achieve the emission targets set. These targets can be reflected in environmental permits.

### *How can a business manage this risk?*

- Consider air emissions under the requirements of EU air quality and emissions directives (e.g. Directive 2008/50/EC on ambient air quality also Industrial Emissions Directive (IED) 2010/75/EU) and local environmental regulations and permitting requirements;
- Ensure that regular maintenance and monitoring of fuel-burning equipment is undertaken;
- Improve ventilation in buildings;
- Inventory all GHG emissions associated with the fish processing process and its value chain, as well as the GHG emissions associated with life cycles of its products; this information can be used in the reporting processes where necessary, and to set effective reduction targets/initiatives.

### Energy Use



Fish processing operations may be energy intensive. Where equipment is being used for heating and cooling purposes it will

increase the amount of energy (gas, electric, or diesel). In a particular territory, Governments may apply taxes and levies to reduce energy use and associated emissions. Investment in new technology may be required to reduce energy use.

### *How can a business manage this risk?*

- Examine options for increasing energy efficiency through modifying work practices and installation of energy-efficient devices/equipment.
- Examine options for heat recovery and insulation, to reduce/supplement energy usage.

### Refrigerants



Fish processing facilities typically chill or freeze the product at various stages in the process. The refrigerants used may be ozone-depleting substances (ODSs), such as:

- Chlorofluorocarbons (CFC's);
- Hydrochlorofluorocarbons (HCFC's).

The production of these refrigerants, is being phased out under the Montreal Protocol. Releases of these types of refrigerant gases should be avoided. Ammonia is a commonly used alternative refrigerant, which has no such restriction. There are significant health and safety risks associated with the storage (and accidental release) of ammonia.



### How can a business manage this risk?

- Investigate options for replacement and substitution of refrigerants with non-ozone-depleting substances, or change of refrigeration plant to ammonia refrigeration systems;
- Measure ammonia levels in the workplace; ensure compliance with regulations.

### Labelling of Organic Products



In the event that the fish processing activity involves processing and production of organic fish products that are sold and labelled as organic, a number of requirements apply under Council Regulation (EC) No. 834/2007 of 28 June 2007 on organic production and labelling of organic products.

### How can a business manage this risk?

- Follow EU guidelines (834/2007/EC) which introduce requirements for production and labelling of relevant organic products.

### Machine and Electrical Safety



In a busy fish processing environment, it is common to have injuries where people interact with machinery or equipment.

Equipment such as conveyors, deboning/deskinning machines, handling

knives, packaging machines and palletisers or operating fork lift trucks and delivery vehicles/trucks are commonly used in fish processing.

The use of electrical devices during fish processing (pumping facilities and lighting operations) means that the risk of electrical shock is present during a variety of operations.

Over a quarter of all manufacturing injuries occur in the food processing industries<sup>7</sup>.

### How can a business manage this risk?

- Within the EU, machinery purchased after 1 January 1995 must comply with the Machinery Directive 98/37/EC;
- Assess machine safety in consultation with machine operators, reduce hazards according to the hierarchy of controls and undertake modifications/install guards and interlocks as required;
- Assess electrical installations and ensure that appropriate insulation, earthing and residual current devices (RCDs) are in place;
- Separate people from vehicle movement to ensure the safety of workers, the community and the public;
- Train vehicle and forklift drivers to properly operate the machinery and equipment.

<sup>7</sup> United Kingdom Health and Safety Executive 2014  
<http://www.hse.gov.uk/food/hse.htm>.



### Infections and Allergic Reactions



The workforce involved in the handling of fish and shellfish may develop infections and or allergies resulting from the direct exposure to fish. Additionally, within contained facilities, water-spraying techniques may result in the inhalation of or exposure to associated bacteria and other disease vectors.

#### *How can a business manage this risk?*

- Implement a risk control process and consider use of respiratory protective equipment where necessary;
- Provide staff with appropriate protective aprons, overalls, headwear, gloves and footwear;
- Control movements of personnel from one operational area to another.

lead to musculoskeletal injuries and work-related upper limb disorders (WRULDs).

Slips trips and falls are regular occurrences in food processing environments and typically occur because of uneven ground, wet/greasy floors and poor housekeeping.

#### *How can a business manage this risk?*

- Assess tasks throughout the process, with particular focus on heavy/repetitive tasks;
- Redesign manual processes to avoid lifting/repetitive activities;
- Install mechanical lifting aids where possible and rotate work tasks to reduce repetitive activities;
- Keep walking and working surfaces clean and dry and provide workers with anti-slip footwear;
- Restrict access to areas being cleaned or where spillages have occurred, and schedule floor cleaning for a time when work is not in progress.

### Manual Handling, Slips, Trips and Falls



Lifting, repetitive work and posture injuries can occur as a result of working in the fish processing industry (e.g. lifting boxes of fishes and repetitive cutting operations).

Repetitive tasks, such as filleting, deboning, slicing, cutting and cleaning, can

### Working at Height or in Confined Spaces



Fish processing operations may involve working at height to access roofing or lighting areas and/or equipment.



Fish processing operations contain vessels such as tanks and pits which may require entry by staff during maintenance and cleaning. Entry to confined spaces without effective management and control can result in engulfment and asphyxiation.

### *How can a business manage this risk?*

- Conduct a job risk assessment;
- Restrict access to working at height;
- Install correct fall arrest systems where necessary (guarding and harnesses etc.).
- Implement confined space procedures, training, equipment and control systems if confined space entry is necessary.

## Noise



Some activities associated with fish processing generate noise and can result in hearing impacts on workers and nuisance to local residents.

Noise-induced hearing loss can occur from noisy areas, e.g. conveyors, blast-freezers/chillers, cutting equipment, packing machinery.

### *How can a business manage this risk?*

- Locate and design facilities to avoid sensitive receptors to noise;
- Enclose noisy machinery to isolate people from noise where practicable Enclose noisy machinery to isolate people from noise where practicable and eliminate noise exposure

through the hierarchy of controls;

- Provide hearing protection as required.

## Temperature



Refrigeration systems will result in very cold temperatures which can result in frost bite and contact burns.

### *How can a business manage this risk?*

- Minimise time needed for staff to access refrigerated / frozen areas, issue protective clothing for use in low temperature areas.

## Polychlorinated Biphenyls (PCBs) & Asbestos



PCBs may be present in electrical switchgear, transformers and fluorescent light starters.

Asbestos may be present in fire proofing and insulation material, including as asbestos cement boards, as fire retardant gaskets in pipe work and as fire retardant insulation around boilers and furnaces, particularly in older buildings.

Both materials give rise to risks to the environment and health and safety.



### *How can a business manage this risk?*

- Where the presence of asbestos or PCBs is known or suspected, seek professional advice.

## Labour and Working Conditions



Fish processing operations may use casual and contract labour. Poor working conditions for casual labourers in the food processing sector are a key labour risk.

Child labour is a prevalent risk particularly in relation to smaller-scale family run operations.

Worker accommodation standards, particularly for temporary/casual labourers may not reach the standard required for permanent employees.

### *How can a business manage this risk?*

- Comply with International Labour Organisation (ILO) requirements on working hours, pay, overtime, etc.;
- Include all ILO prohibitions on child labour into contracting agreements;
- Provide appropriate worker accommodation which meets, at a minimum, the basic needs of

workers, national legislation and international good practice<sup>8</sup>.

## Relations with Local Communities



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

Many new or extended fish processing sites will require an Environment Impact Assessment (EIA) under local/national requirements.

### *How can a business manage this risk?*

- Review local and national planning legislation to identify whether an EIA is required prior to expansion or development;
- Review socio-economic baseline conditions to identify local, community-based agricultural enterprises and/or use of water resources and to assess any impacts on these;
- 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 to

<sup>8</sup> Workers' accommodation: processes and standards: A guidance note by IFC and the EBRD; August 2009



maintain good social relations. For large-scale intensive fish processing or 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.

the penalties imposed by regulators rather than invest in new systems. More stringent environmental legislation may make this approach less viable and companies may need to spend considerable sums in order to achieve acceptable effluent discharge quality;

### 3. Financial Implications

Outlined below are key financial implications of ineffective management of E&S risks related to fish processing.

- The principal financial issues associated with water supply are the direct costs of supply (payment to water suppliers, costs of abstraction from groundwater or surface water bodies, sampling and analytical costs). The use of water leads to the generation of effluent and unnecessary consumption therefore can have knock-on implications for effluent discharge;
- In most areas effluent discharge has direct financial implications for the processing plant through:
  - Fees for discharge licences and permits;
  - Monitoring costs;
  - Fines and penalties for negative environmental impacts or breaches of permit limits.
- In many instances, the costs associated with upgrading facilities to meet the industry best practice standards are considered to be prohibitive and many processors have been prepared to pay
  - the penalties imposed by regulators rather than invest in new systems. More stringent environmental legislation may make this approach less viable and companies may need to spend considerable sums in order to achieve acceptable effluent discharge quality;
- Fish and fish products can be contaminated at source or during processing. In either case, the potential exists for substantial liabilities to be incurred by the processing and packaging company. Typically, the liabilities take the following forms:
  - Civil liabilities resulting in compensation claims from injured parties;
  - Criminal liabilities, usually resulting from some form of negligence, resulting in fines and prohibitions;
  - Diminished reputation and sales as a result of damage to public perception of the company and/or the industry as a whole;
  - Product contamination issues may result in restrictions on price and demand, and export markets (e.g. EU).
- Depending on the location of the facility and the surrounding land use, financial liabilities relating to odour may be a significant factor for fish processing facilities. Odour control equipment can prove costly and improvements to waste management and storage procedures may provide substantial improvements to odour emissions for relatively limited costs;





- Capital and operational investments to prevent and minimise the risk of contamination of soil, surface water and groundwater resources from fish processing waste;
- Injuries may lead to increased payroll costs to replace workers;
- Fines, penalties and third party claims may be incurred for non-compliance with environment, health and safety regulations;
- Capital expenditure for installing or upgrading storage facilities for chemicals, fuels and oils;
- Inadequate health and safety provisions (including risk assessments, training, infection control and provision of Personal Protective Equipment (PPE) etc.) for workers (permanent, temporary and/or casual) may lead to absenteeism, health care costs or health and safety incidents and claims;
- Nuisances from fish processing operations, including from the re-use or processing of fish processing waste, may lead to compensation claims from neighbouring properties;
- Community health and safety impacts from fish processing (e.g. exposure to contaminated drinking water and/or living in proximity to infectious diseases) may lead to reputation damage, legal challenges/prosecutions and/or compensation claims.

### 4. Suggested Due Diligence Questions

When assessing E&S risks, it is important to engage the customer on how these risks are managed.

Perform a complete tour of the facility, accompanied by someone knowledgeable about all the activities at the site.

Confirm organisational responsibilities and systems for environment, health, safety and social matters and that these systems cover both employees employed directly and sub-contractors.

During the initial site visit, the issues will vary according to the type of fish processing and the level of environment, health and safety and hygiene management already introduced. While visiting the site it is important to discuss and review the following:

#### *General Housekeeping*

- Check the condition and containment arrangements of fish processing storage facilities;
- What is the standard of general house-keeping on site? Do areas look clean and tidy? Look for localised spills, leaking pipes etc.;
- Check the age and condition of buildings and equipment.



### *Health and Safety*

- Check whether Health and Safety risks have been systematically assessed, documented and addressed;
- Check whether efforts have been made to reduce hazards through application of the hierarchy of controls i.e. eliminate, substitute, engineer, administer then issue personal protective equipment PPE as a last resort (e.g. install noise reduction equipment before resorting to issuing hearing protection);
- If PPE is required, check that it is being supplied by the employer, is used effectively and maintained/checked regularly. PPE may include chainmail protective gloves (typically required for those involved in cutting activities), protective aprons, overalls, headwear, gloves and footwear;
- Check for suitable staff welfare facilities for staff to shower and change before and after working in processing areas;
- Provide appropriate facilities for the washing, sanitation and drying/ironing of personal protective equipment.
- Note the signage around the site, does it convey what health & safety risks might exist in areas?
- Check whether an asbestos survey has been undertaken at the facility, have the costs for management/removal been assessed, and if asbestos exists, is an asbestos management plan in place?
- Check whether fire-fighting and first aid equipment is available, and is it checked/maintained regularly?
- Have the premises been inspected recently (within the past 2 years) by the regulatory authorities for health, hygiene and environment? What were their findings?

### *Fish Processing Management Practices*

- Check the source of raw materials. Are the levels of pesticides and other contaminants quantified and within guidelines?
- Are there management control plans for fish processing?
- Does the organisation have insurance in place to cover the outbreak of disease or product contamination? Have there been any recent incidents? Has the company any other insurances and have there been any claims against these policies?
- Is the facility subject to any audits by customers? What was the outcome of these audits?

### *Waste Management*

- Check that waste disposal takes place on a regular basis;
- Check that waste storage areas are clear of debris and that skips are covered to prevent waste escaping; for example;



- Check that waste containers have lids or are stored in an area with a roof.

### ***Wastewater and Surface water Management***

- Check whether drainage systems lead to wastewater treatment systems or discharge directly to surface waters.
- Check whether the routing of wastewater drainage systems within the facility are well understood, has the facility undertaken dye tracing and/or video surveying of drain systems?
- Check that the routing of surface water drainage systems from the facility are well understood (and are separate to the wastewater drainage system); has the facility been the subject of surface water pollution incidents; is any system in place to capture surface water in the event of a release, or a first flush system to capture an initial washdown?
- Check the extent of treatment/capture systems for the different types of wastewater, including process water, surface water runoff and cleaning water.
- Check if monitoring and testing is undertaken as a requirement of operating licences and the extent of compliance in recent years.
- Note the colour and appearance of adjacent water courses.

### ***Pollution Control***

- Is the facility next to any vulnerable water bodies, sited in a floodplain, or

close to groundwater sources which may be contaminated by activities?

- Check the location and condition of oil and chemical storage areas. Are these well controlled, appropriately constructed and is containment / spill clean-up equipment provided?

### ***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.
- Has the Company received inspections from the local labour inspectorate in the previous three years? Have these resulted in any penalties, fines, major recommendations or corrective action plans?
- Does the organisation have a grievance mechanism which allows employees to raise workplace concerns?
- Are employees free to form, or join, a workers' organisation of their choosing?
- Check worker accommodation conditions (for casual and permanent labour).

### ***Incident Management***

- Check if any recent incidents have taken place on site involving serious



injuries, fatalities, fires/explosions, spills or gas releases of Ammonia.

- Note whether these incidents were investigated and staff trained.

### ***Community Complaints/Grievances***

- Is a grievance mechanism in place to allow the community to raise concerns regarding farming operations?
- Note any history of public complaints relating to the facilities operation.

### ***Investment***

- Check if the business has budgeted line items for environment, health and safety improvements - check whether there are any high value improvements in the business plan for Environment, Health & Safety issues in the coming months/years.

### ***Regulatory Compliance***

- Check if the Company has received inspections from the local labour, H&S or Environmental inspectorate in the previous three years and whether these have resulted in any penalties, fines, major recommendations or corrective action plans;
- Establish whether the company has 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.

### ***Management Plans***

Review the operational procedures and management plans available regarding the control of risks.

As a minimum any business should 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 programmes to monitor environmental, health & safety, and hygiene risks (and where necessary, testing of water, air, noise, waste emissions etc.);
- Improvement objectives, targets and project plans;
- A training plan for personnel to include environmental and health and safety issues;
- Emergency plans for environment, occupation & community health & safety, and food safety incidents and site security;
- Food safety management plans;
- Environmental, Health, Safety and Food Safety audits of its operations conducted via a third party;
- Demonstrable involvement of senior management in environment, health &



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safety, and hygiene management and leadership.



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EU Regulation (EC) No 882/2004 (on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules).

European Directive 2002/99/EC (laying down animal health rules governing the production, processing, distribution and introduction of products of animal origin for human consumption).



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