

This is a category III project according to the IIC's environmental and review procedure because specific impacts may result that can be avoided or mitigated by adhering to generally recognized performance standards, guidelines, and design criteria. The project analysis included the assessment of the technical and environmental information provided by the sponsor, as well as an on-site appraisal mission. The assessment of the potential environmental, social, health and labor impact of the project includes the following:

Resource consumption, water use, treatment of wastewater generated by the production and processing activities, treatment and disposal of solid waste, food safety, workplace health and safety issues, and labor issues.

### **Main environmental issues**

#### *1. Resource consumption. Water use and sources.*

**The farm** is supplied, by gravity, from an open channel that carries the flow released by the state-owned Rio Lindo hydroelectric plant, located barely 800 meters from the farm's main water intake. The hydroelectric plant is part of the Cañaveral-Rio Lindo generation complex fed by waters from the Yojoa Lake, located some 600 meters above sea level. This complex generates electric energy in two hydroelectric plants: Cañaveral, located some 300 meters above sea level, and Rio Lindo, 80 meters above sea level. The lake water is carried in pipes more than 2 meters in diameter, capable of carrying up to 24 cubic meters per second.

The farm takes up to 15 cubic meters per second from the channel in order to feed the existing ponds.

In addition, the property has another intake of water from Rio Lindo, which runs parallel to the farm boundaries. Any overflow from the Rio Lindo hydroelectric plant that is not used by Aqua Corporación de Honduras is returned to the river. This additional intake, which is entirely gravity-fed thanks to the topography of the area, supplies the property with water in those rare occasions when the hydroelectric plant reduces its flow following a decrease in electrical demand or during regular maintenance work. After being used by the farm, the water is returned to the Rio Lindo. Aqua Corporación Honduras can obtain up to 6 cubic meters per second from this intake, if required. It has the infrastructure it needs to do so. **The processing plant** has been supplied by a deep well (62 meters) since it entered service (1998); the well has been evaluated thoroughly. The plant's daily consumption is 20,000 gallons.

#### *2. Liquid Effluents:* Liquid waste comes chiefly from the fillet processing plant. It carries a substantial organic load because its main components are fish blood (the fish are usually slaughtered by bleeding them) and water used to wash the floors and the equipment.

There is an effluent treatment system that consists of two oxidation ponds: one of them is anaerobic type and is serially connected to a facultative pond. The liquid effluents discharged into Rio Lindo are regularly analyzed after they pass through the oxidation ponds. The values obtained comply with the technical specifications established by the Honduran Ministry of Health for wastewater disposal in receiving bodies and in the sewage system, and also with the pertinent World Bank recommendations.

#### *3. Solid waste disposal:* The farm's organic waste is typically composed of dead fish. The current daily mortality rate is 0.14%, which means some 7,150 dead fish per day. This constitutes a considerable amount of organic waste requiring appropriate disposal. A composting system is currently being implemented. This involves a number of procedures that transform useless or waste organic matter into a product that can be used again - in this case, as fertilizer for ornamental plants.

All organic solid waste from the processing plant, such as fish scraps, heads, entrails, etc., which account for some 60%-70% of each fish's total weight, is brought to a poultry feed processing plant, where it is used to obtain balanced feed, mainly for chickens. Other solid waste is incinerated. Solid

waste such as metals from the repairs of equipment and mechanical infrastructure are stored and regularly sent to local metal recycling companies. This is also done with the oil used in the tractors.

4. *Cold storage:* The company's cold storage units are mainly ammonia-based. Consequently, no chlorofluorocarbons are used.

5. *Quality Control / Food Safety:* The company is preparing to implement the food quality control system called Hazard Analysis and Critical Control Point (HACCP), which is compulsory for all imports into the U.S.

6. *General Health and Safety:* The farm and processing plant workers alike are given appropriate protective equipment, as well as health insurance as required by law. Regarding sanitary conditions inside the processing plant, the IIC will require that waste bins be installed in all restrooms, because some restrooms were observed as not having appropriate waste containers.

7. *Labor issues:* The company respects the minimum working age of 18. The workers of the existing plant and farm do not belong to any trade union, but they are entirely free to do so if they wish.

8. *Monitoring:* Aqua Corporación Honduras must prepare an Environmental Management Plan (EMP) and an environmental project execution schedule, as well as a monitoring and reporting program to ensure that the new infrastructure complies with national laws and IIC's environmental guidelines. The EMP will state the name of the person responsible for supervising the implementation of all environmental measures. The sponsors will provide a yearly report with supervision data on health and safety issues, accident reports, wastewater discharge, solid waste disposal, hygiene and quality control, food safety, and labor issues.