

## 1. Environmental classification

This is a category III project according to the IIC's environmental classification system because specific impacts may result that can be avoided or mitigated by adhering to generally recognized performance standards, guidelines, and design criteria. The environmental and labor considerations related to the project include (1) risk of river pollution due to spillage of fossil fuels or other hazardous materials; (2) liquid effluent management; (3) air emissions; (4) solid waste management; and (5) personal safety and emergency response.

## 2. Regulatory Framework

In accordance with the law on environmental impact, Ley 294/93 de Impacto Ambiental, the company is required to obtain an environmental license for its operations. To this end it submitted an Environmental Impact Statement to the Secretaría del Ambiente, which has not yet responded. It also has to comply with the technical regulations on workplace safety, medicine, and health laid out in Decreto Ley 14.390/92.

Ocean and river navigation is regulated by the "Reglamentación de Acuerdo de Transporte Fluvial por la Hidrovía Paraguay - Paraná" (governing river transport along the waterway, which runs from Puerto de Cáceres to Puerto Nueva Palmira), known as the Acuerdo de Santa Cruz de la Sierra, which was approved by the Comité Intergubernamental de la Hidrovía. Paraguay's naval command, Prefectura General Naval del Paraguay (PGN), has adopted the conventions of the International Maritime Organization (IMO). The company is certified by the IMO's International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM). It also is certified under the Ship and Port Facilities Security Code (ISPS Code).

## 3. Principal Environmental Impacts

### River Pollution Hazard

Water and shore pollution risk is linked to accidental or intentional spillage of fossil fuels or other hazardous substances in waterways. Discharge of any such pollutants is strictly regulated by the international and domestic standards mentioned above. For example, ballast water must contain less than 15 ppm of fossil fuels in order to be discharged into the river. Bilge water and any other discharge containing hydrocarbon waste is discharged in ports serviced by authorized treatment companies.

Bowfluvial has developed a Safety Management System (SMS) based on the international recommendations set forth in the ISM Code and national recommendations providing directions and procedures to ensure safe operation of vessels and protection of the environment.

### Liquid Effluents

Sewage is treated in plants on board the vessels prior to discharge to the river. Some of the company's tugboats are not yet equipped with a treatment system, so they must discharge wastewater in ports serviced by authorized treatment companies.

### Air Emissions

All of the engines, including tugboat traction motors and generators, run on diesel fuel. The company carries out adequate engine maintenance to ensure the most complete combustion possible, leading to lower fuel consumption and less air pollution.

### Solid Waste

Solid waste from the vessels is composed primarily of food waste, garbage, used paint and lubricant

containers, and metallic waste. It is sorted and collected by authorized companies only at ports able to provide this service. All movements must be entered in the trash registry book, the Libro Registro de Basuras.

### **Personal Safety and Emergency Response.**

In addition to the above, the SMS contains measures and procedures that are applicable to the company's operations, including navigation safety, handling of fuel and flammable substances, contingency and emergency management procedures, and necessary personal protection measures for the workplace.

The tugboats are equipped with firefighting systems with hydrants that have 15-meter hoses and fire hose nozzles. They also have chemical powder and carbon dioxide extinguishers. There is also a fixed carbon dioxide system installed in the bow storerooms covering the engine room, shaft line, tiller room, and bow storerooms.

Crews receive safety training on fire fighting; abandonment, evacuation, and survival; first aid; handling of cargo and hazardous goods; occupational accident prevention, etc.

### **Labor Practices**

Bowfluvial complies with national labor laws. These include social security benefits (Instituto de Previsión Social - IPS), freedom of association, freedom to form labor unions, prohibition of forced labor, elimination of exploitative and abusive child labor, prohibition of job discrimination, and the provision of health care and workplace accident insurance. Bowfluvial's employees are not union members. The company does not hire minors under the age of eighteen. Crewmembers are required to undergo an annual medical examination at the Paraguayan Navy's Policlínica Naval. In addition to specific training related to their regular duties and safety issues, workers also receive presentations on social, civil, and health issues.

### **Control and Follow-Up**

Bowfluvial will be required to submit proof of updated certifications for its entire fleet of vessels. In addition, the company shall provide regular reports on events of nonconformity and noncompliance and on any incident or accident involving personal injury or environmental damage, along with the appropriate corrective action plan.