

Annex ENV

ENV-T-1

Educational Booklet

ENV-T-1 Educational Booklet “Changing for a Better Environment”

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The Patos Lagoon and Mirim Lakes

The Patos Lagoon and Mirim Lake are located south of Rio Grande do Sul. About 1.1 million people reside in the 50 municipalities in the basins of these lakes. The Patos Lagoon covers more than 10 thousand square kilometers and is very important to the environment of the region. Along with the Mirim Lake and the sea, the lagoon is an important source of revenue to the majority of the residents and therefore a significant factor in the socio-economy in the region. Unfortunately, however, this source of livelihood is in jeopardy as the environment has deteriorated, thereby debasing the standard of living in the area.

This rich ecological system which constitutes one of the largest reservations of sweet water in the planet needs to be preserved. Uncontrolled urbanization and industrialization measures taken without due concern of possible adverse ecological impacts and the environmental legislation, threaten the region's environment and the population's own survival.

***Illustration:** Location map of the hydrographic basins of the Patos Lagoon and Mirim Lake, including an important river, main cities, regional activities, flora, fauna, ships, trees, etc.*

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How is the Environment?

Pollution due to several factors and environmental degradation were observed in the basins of the Patos Lagoon and Mirim Lake.

Pollution from Domestic Wastewater and Industrial Effluents

Household and industrial wastewaters are discharged directly into the rivers, lakes, and the sea without appropriate treatment.

***Illustration:** Panoramic view from the lake of the cities and open areas, townhouses, and the industrial area; highly polluted environment, polluted canals, and slums; households throwing waste and polluting the surroundings, and industries discharging all types of pollutants (in the air, the lake, etc.)*

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Contamination by Solid Waste

Food leftovers, bulky materials, most of them profitable and recyclable, are illegally disposed of in wetlands, rivers, lakes and the sea, thereby polluting the environment and adversely affecting the quality of life in urban and rural areas.

Illustration: A canal that drains wastewater into the lake; dirty environment infested with rats, cockroaches and insects, overflowing with waste, and bubbling and foaming water area due to waste; poor children playing and people throwing garbage into the watercourses.

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Industrial Effluent

Some industries do not adopt appropriate waste treatment measures to protect the environment, mainly due to avariciousness. Industrial effluents are very noxious and generate socio-environmental catastrophes.

Illustration: View showing a high degree of industrial pollution; upfront is a man smiling smugly with tobacco in the mouth and a sackful of money in hand.

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Sedimentation in Water Bodies

Inadequate agricultural management results in water quality contamination and consequently sedimentation, which in turn reduces the water table.

Erosion

Agricultural practices without consideration of ecological conditions and deforestation result in erosion that heightens the possibility of desertification and sedimentation.

Deforestation

Deforestation can cause the desertification of large areas, threatens the existence of various species indigenous to the area, thereby destroying ecological equilibrium.

Pollution by Agricultural Chemicals

Agricultural chemicals endanger biological diversity and their application exposes the workers and food consumers to health hazards.

Illustration: An airplane spraying agricultural chemical on an agricultural land; men spray the product without any protection; barrels and cans along the riverside emit toxic pollutants into the lake where dead fish can be seen.

Illustration: *A man with a pump draining a wetland area; deforested and eroded areas as a result of the construction of trenches; new urbanization without appropriate control; scarce and fragile vegetation; stray animals outside the fences and near the water.*

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What Causes the Present Environmental Condition?

Several factors contribute to the degradation of the ecosystem in the Patos Lake.

Illustration: *An image of a family in the region full of questions about the current state of their surrounding environment.*

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Negligence of Public Authorities

Federal, state and municipal governments have successively executed environmental policies without due consideration of their social impacts.

The lack of punitive actions and the ineffective enforcement of the environmental legislation result in impunity. These allow polluters to increase their lucre gain at the expense of environmental degradation and the impoverished population.

Illustration: *People in authority; a fat politician smiling smugly in front of an environment that is fictitiously prosperous; the background shows an environment characterized by poverty and pollution.*

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Production System

Agricultural and manufacturing industries (especially rice production) oftentimes disregard environmental stipulations, causing damage to the ecological system. This lack of regard is evidenced in the inappropriate use of soil and water, the improper use of agricultural chemicals, and inappropriate drainage of wetlands for agricultural or other use.

The predatory nature of the fishing activities affects fish reproduction causing the decline in fish catch and extinction of some species, and consequently impoverishment to the fishing communities.

Illustration: *Fishermen catching fish; the fishnet also contains garbage.*

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Lack of Sewerage System and Treatment

Marginal populations lacking basic sanitation are exposed to diseases. Wastewater is discharged directly into the rivers, lakes and sea, thereby contaminating essential natural resources.

Illustration: Open canals and pipelines discharging wastewater; mosquitoes, a rat, a pig, a horse, etc.; people with sick faces; a woman on her way to the canal to collect water.

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Inappropriate Solid Waste Management

The disregard for the reuse and recycling of solid waste will contribute to environmental degradation and social chaos.

Illustration: Piles of garbage; tires; scavengers, pigs, and hovering vultures; dump trucks and men with pushcarts discharging garbage.

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Who Benefits from Environmental Degradation?

The predatory exploitation of the natural resources affects the whole population and future generations, but only benefits a minority. Man shapes its environment, which in turn contributes to the improvement of his existence. This interrelatedness underscores the importance of preserving environmental conditions, as a better environment would greatly benefit the whole population in terms of health, employment, and other relevant economic issues. Accordingly, public participation, environmental education programs, and the formulation and enforcement of environmental laws are extremely important for the effective management of the environment.

It is necessary that authorities ensure that the constitutional law is adhered to stringently for the protection and preservation of the environment and the implementation of ecologically sustainable development activities.

Illustration: Indignant people demonstrating with banners: "Lets take care of our waters!" "Fight pollution!" "Let's preserve the environment!" and holding copies of the Constitution.

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What can we do?

It is very important for the citizens to know their environment and implement environmental laws and policies, which take into consideration public participation in environmental preservation through civic education programs.

Illustration: Group of people realizing the importance of the following: “joint planning and environmental management”, “application of relevant laws”, “sewerage treatment”, “regular monitoring of the ecosystem”, “continuous monitoring of environmental quality”, “recycling”, “environmental education”, “elimination of agricultural chemicals”.

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What Activities are carrying out?

“Pro-Mar de Dentro”, is an initiative of the State Government of Rio Grande do Sul, and is being executed by the Secretariat of Coordination and Planning. It is a program that aims for an ecologically sustainable development and the preservation and management of the environment of the Hydrographic Littoral Region (São Gonçalo, Mirim, Camaquã basins and Litoral Médio), in consideration of employment generation and income distribution, and the enhancement of ecological awareness to establish conditions that would encourage environmental management by region.

This program is the result of the mobilization of the public in the southern region in cooperation with the State Government. For the implementation of this program, the State government promoted a series of measures to acquire international cooperation. In response to these measures, JICA offered technical assistance to the State of Rio Grande do Sul for the implementation of an environmental study.

Illustration: People representing the community, authorities, banner, educational panel exhibitions, and distribution of educational booklets; people with brooms, fish jumping, and tail wagging puppies; picture of a cheerful community!

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What Improves the Quality of Life?

The new proposal for environmental management under the Pro-Mar de Dentro program expects the complete participation of communities involved – a departure from the previous concept that excludes public participation. This change in attitude is forecast to result in the full exploitation of the potential use of the environment, the recovery and preservation of the ecosystem, and spur the adoption of environmental public policies to prevent ecological damage.

Therefore, the philosophy above was adopted and emphasis was placed on the improvement of social conditions, the development of ecologically friendly techniques for industrial, agricultural, cattle, and forest production – fundamental to the realization of an ecologically sustainable development – and income distribution, employment generation, and enforcement of legislation to exercise social justice.

Illustration: The environment is initially the same, although the current environment is more ideal.