State Government of Rio Grande de Sul
Secretariat of Coordination and Planning
Pro-Mar de Dentro / JICA

4 Water

Water is a natural resource that is limited in the area and therefore of great economic value. The development of this natural resource should be carried out for multiple use, with the active participation of the government, the users, and the people as a whole.

Federal Law No. 9433, January 8, 1997,
National Policy for Water Resources

Water Resources in the Planet

Seawater	97%
Glaciers	2,2%
Sweet water	0,8%
Total	100%
Sweet water	
Groundwater	9,7%
Surface waters	0,3%

Water Quality, Land Use and Land Conditions in the Hydrographic Basin

The quality of water is not only dependent on Natural processes but on land use and land conditions in the hydrographic basin.

The water quality of existing water bodies (river, stream, lake, and sea) is affected by land use and land conditions (livestock, agriculture, subdivisions, etc.) in the hydrographic basin.

The desired water quality for the water bodies (river, stream, lake, and sea) is estimated in view of the foreseen use of water by people.

In the last 50 years, 62% of the sweet water of the planet was polluted by various economic activities, reaching an index of 73% in South America.

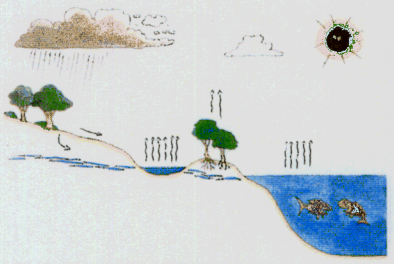
Annually nearly 10 million people die from water-borne diseases such as poliomyelitis, cholera, infectious hepatitis, typhoid fever, schistosomiasis, yellow fever, malaria, leptospirosis and dengue.

More than 1/3 of the earth's population lives in regions where water disputes are rife.

Hydrological Cycle

The water cycle is distinguished by the following mechanisms:

- Precipitation
- Surface drainage
- Infiltration
- Evaporation
- Transpiration



Water and the People

Water Use:

- Domestic use
- Industrial use
- Irrigation
- As drinking water for animals
- Preservation of flora and fauna
- Recreation and leisure
- Landscaping harmony
- Electric power
- Navigation
- Dilution of residual water

Groundwater

The use of wells in littoral regions without planning and environmental control measures facilitates the intrusion of salt water into groundwater resources.

The water supply of approximately 140 million people in Latin America and the Caribbean is derived from groundwater resources.

Once contaminated, groundwater is difficult to treat for reuse.

Edited by JICA