CHAPTER IV REGULATORY PROCEDURES RELATED TO THE PROJECT

4.1 Authorization of Water Management

The authorization of water management is made through the issuance of the water management permit and the water management licence. By applying the permitting/licensing process, the various activities relating to water might be regulated so as to effectuate the goals of the quantitative and qualitative water management.

The Water Law provides for:

"The water management permit is required for the water users to carry out the works built on or related to water, for the investment documentation. To set into motion or to put into operation the works shall be made only on the basis of the water management licence."

In the part relating to the regulation of water use, the Water Law previously stipulates:

"The right to use the surface or ground waters, including the artesian wells, is established by the water management licence... Such right also includes the discharge into water resources, of waste water, drainage water, meteoric water, mine or deposit water, after being used."

These are the legal basis of the issuance of the water management permit and the water management licence. The MWFEP Order 148/1997 gives the more detailed classification. According to the Order, the water management permit represents a technical-juridical regulation which conditions:

(1) Financing and achieving the new investment objective that are to be built on waters or are related to surface and ground waters, including the constructions and installations.

(2) Developing, modernizing or updating the technological process of the existing installations of water users, in such situations as the provisions of the previous water management permit are to be modified.

(3) Achieving works with the public interest which are built on waters or related to waters, and may lead to the restriction or cessation of the existing activities.

In contrast, the water management licence represents a technical-juridical regulation which conditions the putting into motion or operation of new and existing investment objective that are built on waters or are related to waters, including the constructions and the installations, and authorizes the applying water user, depending upon the cases, of the following:

(1) The right to use surface waters for drinking or industrial water supply, irrigation, hydro-power generation, navigation, fisheries, floating, recreation, or as receiver of the water discharged by other water users of the locality, as well as for other purposes not excluded by the Water Law, and the right to use ground waters, including the artesian wells, for water supply.

(2) The right to discharge into natural receivers -- watercourses, lakes, the Black Sea -- after being used, under the conditions stipulated in the Water Law, or to inject into the underground of waste water, drainage water, mines or deposit water.

(3) The right of functioning or operating of works, constructions and installations that are built on or related to water, the establishment of which is authorized by a water management permit.

(4) The right to use the minor river beds, the beach and the sea shore for the purpose other than walking or recreation.

(5) The right to extract mineral aggregates from the beds of watercourses, lakes, ponds and sea shore, through organized operations, with the care of not affecting the works in the locality influenced by the water flow.

(6) The right to extract mineral aggregates required for the individual households or for the local public interest, up to the maximum limit of 5,000 m3 per year, at the request of the local public administration authorities.

The works and category of activities performed on waters or related to waters requiring the issuance of the water management permit and the water management licence are:

(1) Works, constructions and installations to ensure the complex water management, such as: dams, permanent/temporary reservoirs, flow diverting work

(2) Works for water use, with their related structures and installations: drinking, industrial and irrigation water supply works, fisheries, power plants, hydrochemical utilities, navigation channels, rafting and floating, floating bridges, balneary, tourist or recreational works, other such works

(3) Works, structures and installations for the water quality protection or which may influence the water quality: sewerage networks and waste water discharging works, water quality treatment plants and installations, underground water injections, other such works

(4) Works for the prevention and control of the destructive actions of water: embankments, river banks and beds consolidations, bed reshapings and rectifications, water directioning works, soil erosion prevention, versant runoff regularization works, torrents rectification works, draining and reclamation works and other such protection works

(5) Crossings over water courses and the related works: bridges, pipes, power lines, etc

(6) Constructions and installations for extracting mineral aggregates out of the water courses banks and beds, lake sides and sea shores: ballast-pits, quarries, etc

(7) Solid wastes deposits located in the major river beds of the water courses: tailing deposits, scoriate and ashes, sludge, mud, and others of the same sort

(8) Afforestation and deforestation of the wooden vegetation, filtering and counter-erosional forest belts located in the protected zones or in the major river beds

(9) Works, constructions and installations built up on the beach, on the bottom of the inland marine waters and of territorial sea, on the continental plateau, or shore protection constructions

(10) Terrestrial or maritime prospecting and exploring/exploiting drilling works, hydrometric installations, topohydrographic works and any others in such water-related studies

(11) Works and installations for hydrological parameters surveillance or the automatic water quality surveillance

Water supply for the use to meet the private household needs, under the conditions of no installation or the installations with capacity of less than 0.2 l/s being used, do not require the issuance of the water management permit nor the water management licence. Other works exempted for water management permit/licence issuance are: (1) dredging works on navigation channels for maintaining the navigation depth, and (2) works requiring prior notification to the "Romanian Waters" on their commencement.

The water management permit and the water management licence are issued by the "Romanian Waters" and its river basin branches. To obtain the water management permit, the technical documentation with a copy of letter to inform the public of the intentions, etc. shall be sent in a prescribed manner to "Romanian Waters". In issuing the water management licence, an elaborated technical documentation is required, following the normative contents. In case the water use of the locality, industrial units or of areas has their own water supply and sewerage systems, the water management licence shall be applied by the owner of such systems. For the water use inside the locality or industrial units which is supplied from communal water supply network but discharge waste water into natural receivers, as well as for the water use which has own surface/ground water sources but discharge waste water into communal sewerage system or those in the area, the beneficiary shall apply the water management licence with the acceptance of the owner of such systems. To obtain the water management licence, required are the filled-in application form, water management permit in possession, the phased programme, if required; general description of works/constructions/installations including the division of water use category, the regulations for operation and maintenance, and the acceptance from the owner of water supply/sewerage systems.

The water management licence does not exclude the obligation of applying and obtaining of the environmental licence.

The water management permit and the water management licence contain almost the same items relating to water use, but the items for wastewater discharge are not included in the water management permit. Shown below are both the titles, and the items included in the water management licence.

"Water Management Permit No. xxx (Date/Month/Year)
(description of application purpose)"

"Water Management Licence No. xxx From (Date/Month/Year)
For Water Supply and Waste Water Discharge"

Items included in the water management licence:

(1) Validity

(2) Cadastral Parameters for Identification, Cadastral Object Code, County Code, Registration No. in County, Users Intake/Discharge Registration No.

(3) Water Intake according to Utilization Purpose

(a) Water Source and Intake Flow Rate (daily maximum, daily mean, hourly max)
(b) Total Authorized Intake Volume (daily maximum, daily mean, annual)
(c) Water Intake Facilities – connection pipe, etc.
(d) Treatment Facilities
(e) Distribution and Storing Facilities

(4) Water Use Instructions

(a) Total Water Consumption Volume (maximum, mean)
(b) Total Water Intake Volume (maximum, mean)
(c) Level of Recycle Water Use (%)

(5) Standard Water Use Rate in the Activity

(6) Waste Water Discharge: Water Category, Authorized Receiver, Total Discharge Volume (daily max, daily mean, hourly max, annual)

(7) Waste Water Treatment

(8) Waste Water Quality: Water Category, Parameter, Permitted Value (mg/l, kg/day)

(9) Measurement of Quality Parameters: Frequency and Person in Charge

The water management licence thus stipulates the authorized volume of water intake, water source and waste water discharge (authorized volume and water quality – effluent limits of pollutants – such as suspended solids (SS), BOD and some metal ions and organic compound). In order to monitor the compliance of the stipulations, "Romanian Waters" conducts the inspection works, mainly on waste water discharge to the surface water bodies. The inspection consists of a visual examination of the discharge outlets, taking a sample for laboratory analysis, and the completion of the inspection report. The samples are usually taken in duplicate or triplicate in the presence of the water user. One of the duplicate samples is analyzed by the water user, and another by the "Romanian Waters" laboratory. When the analytical results differ by 20% or less, the average of the two values is considered as the correct results. If the difference is greater than 20%, the "Romanian Waters" value is considered to be correct one.

4.2 Unitary Payment System for Water Management Products and Services

The unitary payment system was first established by the Government Decision HG 1001/1990, which states:

"In order to stimulate water users to reduce water demand and to improve water quality, this Decision provides for, for application in water management field, prices and tariffs for water management products and services, as well as penalties for infringement of legal provisions regarding quantitative and qualitative use of water."

And, the delivery price of water management products and tariff of services specific to the water management units ("Romanian Waters") were provided in two Annexes. The third Annex provided the water management services classification, to each category of which the tariff would have to be fixed by the respective services providing units (such as the municipalities). In the next, HG 1001/1990 also states:

"Only the water management units ("Romanian Waters") are the suppliers of water directly

drawn from the surface sources, natural or artificial, regardless of owner of the source, as well as from underground sources. The units have the right to directly manage waters; therefore, exclusively entitled to receive the payment for water."

The supply of water management products and provision of water management services shall be done under the commercial contracts. The last Annex provided for the penalties to be applied for the infringement of the legal provisions of the standards.

The Water Law (Law 107/1996) has wholly taken HG 1001/1990 concepts into its provisions; accordingly, it states:

"The specific economic mechanism for the quantitative and qualitative water management shall include the payment system, allowances and penalties as part of the financing practice of the water management system development and of ensuring the functioning of "Romanian Waters" based on economic principles. "

The "Romanian Waters" is the only entitled to implement the payment system, specific to water management activity, even under the Water Law.

The Water Law additionally provides for:

(1) Allowances shall be granted to those water users that shall demonstrate a permanent concern for the rational use and for the protection of water quality.

(2) Penalties shall be applied to those water users, for exceeding both quantities of drawn-off water, the concentrations and quantities of discharged pollutants.

The unitary payment system first established by HG 1001/1990 is still effective for this background. Although the Water Law provides for the allowances to be granted to the specific water users, these have not been realized yet.

Shown below are the Annexes of HG 1001/1990.

Price of Raw Water Provided by Water Management Units (Annex 1)

1. Internal River Water
   - 1.1 Industry: construction, manufacturing, transportation, town management, large-scale stock-breeding, power plants within the prescribed water volume, others
   - 1.2 Irrigation, fishing industry
   - 1.3 Power plants, exceeding the prescribed water volume

2. Danube River Water
   - 2.1 Industry: construction, manufacturing, transportation, town management, large-scale stock-breeding, power plants within the prescribed water volume, others
   - 2.2 Irrigation, fishing industry

3. Underground Water
   - 3.1 Industry: construction, manufacturing, transportation, town management (for industry), and any others who may need underground water
   - 3.2 Town management companies (for population, public institutions, churches, etc.)
   - 3.3 Irrigation, fishing industry

Tariff for Water Management Services Provided by Water Management Units (Annex 2)

1. Receiving Substances Discharged in Surface Waters within the Stipulated Limits
   - 1.1 Suspensions and solutions (SS)
   - 1.2 Oxygen-demanding substances (BOD)

2. Hydro-power Generation
   - 2.1 Medium fall provided dam
     hydro-power plant with installed capacity 4MW, 4-8MW, 8MW
   - 2.2 Used water volume
     hydro-power plant with installed capacity 4MW, 4-8MW, 8MW

Water Management Services for Processing and Using Water (Annex 3)

1. Water intake, treatment, pumping and transport services
2. Services for distributing water through the public network
3. Services for distributing water on industrial units
4. Services for distributing raw water through the irrigation network
5. Services for distributing water through networks of other units
6. Waste water sewerage, treatment and pumping services
7. Services for ensuring the use of natural and artificial lakes potential for tourism and recreation
8. Services for ensuring the use of natural and artificial lakes potential for pisciculture
9. Other services regarding water processing and using

Penalties for the Infringements; Water Intake from the Source and Wastewater Discharge (Annex 4)

1. Exceeding the flow rate or the intake volume stipulated in the regulation* or in the contract
2. Exceeding during the restriction period of the flow rate or the intake volume stipulated in the Law
3. Underground intake exceeding the volume stipulated in the regulation*
4. (a) Using products and services without the necessary papers*
   (b) Using products and services without a contract
5. Using the water for the purpose other than those stipulated in the regulation*
6. Exceeding the daily mean value of the quality parameters stipulated in the regulation*
7. Highly toxic substances discharge into water sources, which is forbidden by the Law

Remark: * : means the water management licence

The unitary payment system has furnished "Romanian Waters" with its financial basis for autonomous operation. On the basis of the water management licence issued, "Romanian Waters" concludes a commercial contract with the water user, and collects the revenue from the sales of water management products and from rendering water management services.

The price of raw water, tariff of water management services and the penalties shall first be approved by the Competition Bureau, Ministry of Finance, on the proposal of the "Romanian Waters", exclusive of VAT. From 1991 onward, there have been 16 times of official price/tariff increase. Based on the approved price and tariff, "Romanian Waters" Headquarters establish the standard price/tariff applicable nationwide.

The "Romanian Waters" Basin Branches establish the price of delivered water within the respective areas of authority, by adding the cost of water intake, transport cost, treatment cost, if necessary; and a 10% of profits to the basic price of raw water. If the Basin Branch price is higher than the standard price announced by the Headquarters, the excessive portion of revenue shall be offered to the Headquarters for redistribution: it is an internal financial rule of the "Romanian Waters". Each Basin Branch of "Romanian Waters" is autonomous in terms of financial operation.

The "Romanian Waters" – Prahova Office currently has the following price list, as of August 31, 1998, which is uniform nationwide under the unitary payment system:

Category Number	Type of Water/Source	Price/Tariff
I. Raw Water at Source (lei/1000m^3)		
1.1	Surface Water for Industry	67,721
1.2	Surface Water for Irrigation, Fishery	901
1.4	Surface water for the Population	67,721
3.1	Underground Water for Industry	83,358
3.2	Underground Water for Population	19,015
3.3	Underground Water for Irrigation , Fishery	3,280
3.4	Underground Water for Stock-breeding	25,243
II. Receiving Substances Discharged into Surface Waters (lei/ton)		
1.1	Suspensions and Substances in Solution (SS)	24,395
1.2	Oxygen Demanding Substances(BOD)	98,658
II' Concentration through "Romanian Waters" Dams of the Hydro-power		
2.1	Mean Fall (lei/m·fall)	
	Power Plants with installed capacity below 4MW	442,028
	Power Plants with installed capacity over 4MW	732,414
2.2	Water through Turbines (lei/10,000m^3)	
	Power Plants with installed capacity below 4MW	900
	Power Plants with installed capacity over 4MW	1,988

The Prahova Office has, at this occasion, approximately 120 contracts concluded for selling untreated water, based on the issued water management licences and under the unitary payment system. These contracts contain, in their conditions, the following

I. Water Supply	(1)	Type of Water (Surface/Underground Water. Treated/Untreated Water)
	(2)	Water Source
	(3)	Quantity of Water to be supplied annually
	(4)	Quantity of Water to be supplied quarterly
	(5)	Price of Water
	(6)	Amount to be paid, annually and quarterly
II. Effluent Discharge	(1)	Kind of Parameters allowed to be discharged within the limits (SS and BOD)
	(2)	Quantity of Contracted Discharge, annually and quarterly
	(3)	Tariff of Effluent Discharge
	(4)	Amount to be paid, annually and quarterly
III. Effluent Limits		By substance, Concentration(mg/l) and load (kg/day)

Usually, the contents of a contract coincide with the stipulations in the water management licence issued to the same water user who is, at the same time, a client of the "Romanian

Waters". When the client needs water more than the authorized volume, the water management licence shall be modified by adding the additional clause for such water use. The effluent limits of polluting substances are not different between the contract and the water management licence.

The penalties under the unitary payment system, stipulated in the Water Law, shall be assessed by the inspection of "Romanian Waters" personnel. In the assessment, two independent samples of discharged water are taken to determine their average value. It is multiplied by the total monthly volume of waste water discharge for obtaining the effluent load supposedly reaching the surface water or the local sewerage system. Permitted effluent load is subtracted from the total loading, then the difference is multiplied by the unit value of the penalties. Penalties for the excessive water use are rarely monitored in the inspection work of "Romanian Waters" personnel.

In 1997, the Prahova Office staff carried out inspections 320 times resulting in assessing the total penalty amount of 2.8 million lei in 4 cases, and the fines of 11 million lei, also in 4 cases. The fines are imposed to the infringement of the Water Law provisions, different from the penalties under the unitary payment system. Due to non-payment of the water users, only 5 million lei was collected out of the total assessment value of fines.

4.3 Environmental Regulations over the Economic and Social Activities

The Agency for Environmental Protection regulates and controls the economic and social activities having environmental impacts, through issuing environmental permits/licences. The environmental permit is required for new investments and for modification of the existing ones, towards the activities enumerated in the list (as shown later). The environmental licence is required for putting into operation the objectives which have an environmental permit and for the existing activities. The activities not involving construction and erection works do not require the environmental permit but the environmental licence.

The procedures for issuing the environmental permit and the environmental licence are:

(1) Environmental Permit

The applicant shall first apply the local public administration authority of a town planning certificate; thereafter, he becomes a title holder. The title holder shall then submit the following:

- environmental permit application;
- project or activity description, including the major information regarding the impact upon the environment;
- note regarding the stage the existing complying programme was achieved;
- proof of payment of the permit fee;
- proof of the request of public notification.

The information of the project or activity shall include the health/hygiene conditions, water use, wastewater discharge, etc.

The Agency analyzes the submitted documents and categorizes the proposed activity into the types of objectives/activities that determine the requirement of an environmental impact study. The environment impact study shall be carried out, in case the classified type of objectives/activities calls for. Thereafter, the Agency settles the competence of permit

issuance.

The environmental permit shall then be sent to the local public administration authority that has issued the town planning certificate to the title holder. After the appraisal, the construction licence would be issued to the title holder.

(2) Environmental Licence

The title holder has to submit the following in application of the environmental licence:

- environmental licence application;
- technical description sheet;
- proof of payment of the licence fee;
- proof of the request of public notification;
- note regarding the stage the existing complying programme was achieved;
- other documents for supporting the request.

Other supporting documents include the contracts with the local public services company for sewerage and for water supply. Also, the analysis bulletin in terms of air and water quality, solid waste disposal, etc. is required.

In appraising the submitted documents, the Agency determines if either further information or supplementary documentation is necessary. Later on, when the technical analysis staff of the Agency considers it necessary, an environmental impact assessment (EIA) would have to be made. The EIA is undertaken by the specialty group of persons who are registered by the Agency as qualified to conduct such an assessment. The title holder shall submit an EIA report to the Agency with its conclusion. The EIA report will be forwarded to the public debate among the local population, which is obligated to the title holder under the Environmental Protection Law. Only after the public debate the Agency issues the environmental licence.

Hereafter enumerated are the activities requiring the issuance of the environmental permit and the environmental licence.

2 Energy	2.1	Energy Production	a)	Nuclear energy production installations (nuclear-power plants), self-sustained nuclear reaction installations (research reactors), installations for nuclear fuels extraction and production, and other installations generating ionizing radiation
			b)	Thermal installations for the production of an energy of more than 10 MW
			c)	Hydroelectric plants with a power of more than 1 MW
			d)	Geothermal installations, including those which exploit the underground water heat
			e)	Gs plants, coke plants, coal liquefaction installations
			f)	Prospection, exploration and exploitation of oil, natural gas or coal, and of other mineral resources, including those from the sea
	2 2	Energy transport and storage	a)	Installations of transport via pipes of liquid or gaseous fuels and combustibles
			b)	Air wires and buried cables of high voltages, designed for 220 kV or more
			c)	Tanks for gas, fuel, and combustible storage
			d)	Coal and other mineral resources warehouses
			e)	Building of transport means for hydrocarbons, dangerous substances, and hazardous waste
3.Hydrotechnical Construction			a)	Works for level regularization or for water drainage from natural lakes
			b)	Hydrotechnical works, such as: embanking, corrections, installations for retention of dragged alluvial deposits or for protection against floods
			c)	Sedimentary materials discharging into lakes
			d)	Exploitation of gravel, sand, therapeutic mud, or other materials from lakes, water courses, or from underground water (with the exception of punctual extractions motivated by flood prevention)
			e)	Works of collection of underground and on-ground waters
			f)	Works of coast area planning and related natural resources exploitation
			g)	Water supply wells deeper than 50 m
4.Waste and Package Removal			a)	Warehouses for temporary or permanent storage of hazardous and radioactive waste
			b)	Radioactive waste processing and treatment installations
			c)	Cemeteries
			d)	Inert materials discharging and/or depositing
			e)	Controlled, bioactive discharging
			f)	Controlled discharging for stabilized waste
			g)	Installations for waste sorting, treatment, recycling, or incineration
			h)	Temporary storage for liquid, solid, or muddy waste
			i)	Waste water treatment installations
5.National Defense			a)	Batteries, shooting and exercise grounds for the army
			b)	Military airdromes
			c)	Other installations belonging to the army, which can be integrated within one of the types of installations mentioned herein
6.Spors, Tourism, Recreation			a)	Cable railways and ski lifts (for turning to good account the new skiing slopes or new areas within the already existing skiing slopes, or for the connection between them of different skiing slopes)
			b)	Running tracks for motor vehicles, for different sport activities
			c)	Snow cannons
			d)	Stadiums with fixed stands able to accommodate more than 20,000 spectators
			e)	Amusement parks

6 Spors, Tourism, Recreation	f)	Green areas
7 Industry	a)	Aluminum plants
	b)	Steel plants
	c)	Nonferrous metal plants
	d)	Installations for old metals pre-treatment and melting
	e)	Installations for the synthesis of chemical products, including of heavy water
	f)	Installations for chemical product transformation
	g)	Warehouses for chemical product storage
	h)	Explosive matters and ammunition plants
	i)	Slaughter-houses and butcher's shops with an output of more than 5,000 t per year
	j)	Cement plants
	k)	Glass plants with an output of more than 20,000 t per year
	l)	Pulp and paper plant
	m)	Plants for extraction and transformation of binders and materials which contain binders
	n)	Plants producing particle panels
	o)	Wood processing installations
	P)	Textile and leather products installations
	q)	Dangerous substances and pesticides manufacture, trading, and using
	r)	Oil, petrochemical, and chemical products depositing installations
	s)	Industrial units for food and agrotechnical products manufacture
	t)	log squaring units
8.Other Works or Installation	a)	Land improvement made though works of art, as well as interventions on areas bigger than 200 ha, and/or accompanied by technical measures for agricultural purposes, such as agricultural land irrigations or draining on areas bigger than 20 ha, as well as general projects of land removing from agricultural use
	b)	Gravel and sand pits and other works of extraction of materials not used with the view of energy production
	c)	Constructions and installations for raising farm animals, with the capacity bigger than: - 100 heads for beef cattle; - 500 heads for meat pigs; - 6,000 heads for egg-laying hens; - 6,000 heads of chicken for poultry; - 1,500 heads of turkeys
	d)	Commercial centres
	e)	Places of merchandise transshipment and distribution centres
	f)	Fixed equipment for electrical or radioelectrical transmission of signals, images, or sound (only transmission equipment), with a power bigger than 500 kW
	g)	Deforestation of forest vegetation outside the forest stock
	h)	Piscicultural works
	i)	Import and export of plants and animals from spontaneous flora and fauna
	j)	Urban and territorial planning

CHAPTER V SALIENT FEATURES IN FINANCING

5.1 Fund Distribution for Infrastructure Projects

Pursuant to the National Land Improvement Plan Law, the works related to water such as water supply projects and sewerage systems, might be extended or diversified at the proposal of the local public administration authorities; i.e. County Council and the Local Councils, through the annual state budget. The financing possibility is dependent upon the requirements in the project proposals and availability of funding resources. These funds are allocated to the account of the Ministry of Public Works and Land Development, in the annual state budget, by the Ministry of Finance.

At the County level, the annual state budget funds for infrastructure development are administered by the County Council. The funds allocated to infrastructure development projects, in the accounts of the Ministry of Public Works and Land Development, are distributed through the County Council to each Local Council which is a proponent of the project allocated with such funds.

The County Council oversees the requirements in infrastructure development over the County. The project proposals on infrastructure provision shall be forwarded to the County Council by the Local Councils needing such projects. From the viewpoint of County interest, the County Council appraises and prioritizes the project proposals to deliberate directly with the Ministry of Finance. In such occasions, the County Council consults with the field office or representatives of the governmental departments in the area, according to their respective competent fields of activity. The infrastructure projects to which the County Council has a leading role in project appraisal might include:

- County roads project
- Bridge project
- Water supply project
- Sewer and treatment plant project

At the ministerial level in Bucharest, the funding arrangement is undertaken through ordinary budgeting procedures. The Ministry of Finance, for the fund allocation, confers with the related ministries. In the case of infrastructure projects, the funds are allocated according to the priority list of the projects determined in consultation with the Ministry of Public Works and Land Development. For the improvement of water supply system or sewerage projects, enumerated in the National Land Improvement Plan, the priorities concerning water shall be settled by the MWFEP in correlation with the programmes of national interest.

5.2 Water Fund

The Water Fund was first established by the HG 1001/1990; Article 14 of which states:

"In order to finance works for improving water quality, for regularizing the water flow, for protection against destructive effects of water, as well as for recovering the additional expenditure required by the water management units during extremely humid periods or droughts when the receiving amount is reduced, the Water Fund shall be constituted. The Fund shall be constituted from a 5% quota of the prices and tariffs raised by the water management

units, as well as from the penalties as provided by this Decision."

At that time, the Ministry of Environment was entitled with the administration and distribution of the Water Fund. The Water Fund was thus institutionalized at the beginning of 1991, when HG 1001/1990 came into force and settled the unitary payment system for water management products and services.

The provisions of HG 1001/1990 were completed by the operational regulations of "Romanian Waters" approved by HG 196/1991, in which stipulated are:

"the company shall administer the Water Fund and use the Water Fund according to the approval of the Ministry of Environment for financing water management works necessary for ensuring and protecting water sources, for protecting against destructive water effects, as well as for covering the expenditure difference of water management units during the periods of high humidity or drought when the actual income is reduced, and for elaborating water management and hydrometeorological studies and operations research."

After the institutionalization, the achievement of the Water Fund administered by "Romanian Waters" has had an insignificant weight if compared to the investment through budget allocation or the income of "Romanian Waters", as shown below.

(unit: thousand lei)

Item	1991	1992	1993	1994	1995
Water Fund	142,988	330,916	790,529	2,612,596	4,335,656
Total Use, of which:	80,473	226,540	428,114	1,729,449	3,307,897
Expenditure for covering Branch deficit, during the flood/drought	80,473	226,540	128,114	1,065,549	1,592,040
Financing of Investments for Water Use, Quality Protection & Improvement	-	-	300,000	653,900	1,715,857
Total Revenue of "Romanian Waters"	3,202,418	7,838,373	22,597,428	59,811,900	93,225,844
Investment through Budget Allocation	3,787,834	6,350,131	31,491,313	73,446,538	89,162,562

In September 1996, the Water Law was promulgated, and came into force in December. The Water Law revised and upgraded the functions of the Water Fund, by providing for Art. 84 –

(1) For the purpose of participating in the financing of investments for works and measures with a significant contribution to the improvement of the ensurance of the water supply sources, to the water quality protection, as well as to the expenditures required for studies and applicative researches in the water field, a special fund, not included in the state budget, called the Water Fund, shall be constituted.

(2) The Water fund comprises the taxes and tariffs for the permitting and licensing services, established according to the law, as well as penalties stipulated in Art. 82, paragraph (2).

(3) The Water Fund is managed by a separate budget, developed by the Self-Managed Public Company "Romanian Waters", and approved by the Ministry of Waters, Forests and Environment Protection, which establishes also the methodology for the forming of this budget, with the agreement of the Ministry of Finance.

(4) The Water Fund, together with other sources, shall be used for the financial support of:

(a) the accomplishment of the National System for Quantitative and Qualitative Water Resources Surveillance;

(b) the endowment of laboratories, transmissions and informational networks related to the National System for Quantitative and Qualitative Water Resources Surveillance;

(c) the participation for the realization and modernization of the waste water treatment plants and installations in order to improve the quality of the water resources;

(d) the accomplishment of public works of local interest with a significant social effect and for which the local authorities do not have sufficient financial resources;

(e) the accomplishment of public works regarding the prevention and control of floods, works of intervention, prevention and control of natural calamities caused by the excess or lack of water;

(f) the provision of the hydrological informational operative decision-making system in the water management field;

(g) the elimination of destructions or the safety of the hydraulic structures of national or local interest, such as dams, embankments, etc.;

(h) the accomplishment of protection works of the river basins against clogging;

(i) the accomplishment of studies for the purpose of identifying the evolution and administration of the water resources;

(j) the granting of allowances to those with significant results in the protection against the depletion and degradation of the water resources;

(k) Basin Committee activities."

The administration of the Water Fund is the responsibility of "Romanian Waters" Headquarters. The achievement of the Water Fund after the promulgation of the Water Law, for the year 1997, is not available at the moment.

The following should be taken note of:

(1) Fund sources are stipulated in the Water Law as:

(a) fees collected in water management permit and licence issuance, inclusive of VAT;

(b) penalties under the unitary payment system.

These are quite different from the previous sources of the Fund before the Water Law. The sources in the previous system were: (1) 5% of the prices/tariffs revenue, and (2) penalties, both under the unitary payment system. In the present system, because of the difficulty in collecting the assessed penalty amount, major accrues from the permit/licence fees, leading to not so sufficient revenue being ensured.

(2) Several utilization purposes enumerated in the Water Law have not been realized, due to the lack of sufficient funds on the basis of the above-mentioned fixation of fund sources. Only the provision of surveillance system improvement has been, so far, financed from the Water Fund, after the revision.

The comparatively poor performance of the Water Fund has been derived from the insufficient

fund retained. It is imperative to increase the collection of the penalty amount under the unitary payment system, either by the increase in unit amount of penalties or by the more strict enforcement in collecting the assessed penalty amount based on the strengthened inspection works by the "Romanian Waters" personnel.

5.3 Environmental Fund

Recently, the Environmental Protection Department of the MWFEP has prepared a Draft Environmental Fund Law, which is now under the deliberations in the Chamber of Deputies of the Romanian Parliament. According to the Draft Law, the Environmental Fund has, as an economic and financial instrument, the objectives to facilitate the process of environmental factors quality protection and improvement by encouraging the investments for technologies and activities, which:

- replace the polluting substances in the manufacturing process;
- reduce the impact and risk of negative effects upon the environment;
- imply special measures for the protection, preservation of biodiversity and ecological restoration, and for developing scientific, educational and informational field regarding the environmental protection.

The Environmental Fund represents a special non-budget fund, involving to complete the budget allocation, for the purpose of achieving the targets of the national environmental protection strategy.

The proposed sources of the Environmental Fund are:

(1) taxes and tariffs for activities using environmental resources;

(2) environmental penalties;

(3) interest/tax-free bonds;

(4) others.

The calculation methodologies and the amount in the item (1) above shall be settled by: (a) direct taxes and tariffs for the use of either the natural resources or the natural capacity of emissions and waste assimilation, and (b) indirect taxes and tariffs for the products, in commercial use, having an impact upon the environment.

The proposed utilization purposes of the Environmental Fund are:

(1) Public investments for environmental protection:

- promoting the ecological restoration project;
- supporting the measures for natural patrimony protection and sustainable use;
- supporting the management of protected areas and natural monuments.

(2) Granting credits for environmental protection investments;

(3) Subsidizing certain credit interests granted for environmental protection activities;

(4) Subsidizing the promotion of activities for waste recycling and treatment;

(5) Guarantees for credits granted for environmental protection;

(6) Contributions in compensation for the income difference of the private owners using the properties in the protected areas;

(7) Supporting the transfer of clean technologies for environmental protection and restoration;

(8) Supporting the activities for information, publicity, training and ecological education;

(9) Supporting operations research activities;

(10) Financing certain courses with awards in the environmental protection field;

(11) Achieving the targets of the national environmental protection strategy and the National Environmental Action Programme.

The projects specified in (2) to (5) above shall not be considered to be eligible if the beneficiaries do not take part in financing with at least 30% of the project cost.

The Environmental Protection Department considers that the priority use of the Environmental Fund shall cover the 117 priority projects set forth in the NEAP mentioned in (11) above.

CHAPTER VI RECOMMENDATIONS

6.1 Revision of NTPA-001

NTPA-001 stipulates the allowable quality limit of wastewater discharge into the river. It further prescribes that:

(1) The maximum allowable limits of wastewater quality parameters are applicable for surface water of which designated standard river flow rate (minimum yearly mean monthly flow with a probability of 95 %) is at least three (3) times bigger than the flow rate of wastewater discharge into the river.

(2) For the surface water with a dilution degree below three (3), the maximum allowable limits of wastewater quality parameters shall be proportionally reduced.

As discussed in the Main Report: Chapter III 3.5.3, the application of this standard river flow rate is not practical. The minimum yearly mean monthly flow with a probability of 95% should be replaced by the more reasonable standard flow rate.

6.2 Increase of Inspection Personnel and Laboratory Analysts in the "Romanian Waters"–Prahova Office

In view of a satisfactory water quality management in the Basin, the monitoring location, frequency and the covered quality parameters for rivers and wastewater effluents should be much increased.

For such the strengthening of monitoring operations, "Romanian Waters" - Prahova Office will have to man, additionally to the existing personnel, the following:

- Inspection Personnel: 5 (to attain the total number of 15)
- Laboratory Analysts: 10 (to attain the total number of 25)

According to the internal distribution of duties/responsibilities, the laboratory analysts shall conduct the periodical sampling at the river water quality monitoring stations, besides their original laboratory works. The inspection personnel have the obligations for licensing procedures, inspection on wastewater discharge, water quality assessment and penalty assessment, as well as the accident preparedness. In order to cope with the current problems of water pollution, these personnel should be more active with the increased manpower.

6.3 Establishment of New Laboratory

The Water Law provides for the obligations of a title-holder of wastewater treatment plants for operation and maintenance by monitoring their functioning through laboratory analysis. The local public services companies, now in charge of the municipal sewerage systems shall, therefore, be provided with necessary laboratory equipment. However, every local public services company has not sufficient equipment at present, due to lack of manpower and financial resources.

Owing to the high-level requirements in water quality analysis such as for oil, a large cost and

advanced expertise will be necessary in each municipality. The municipalities will not be able to afford the laboratory establishment as required.

On the other hand, the Project proposes a new laboratory to accommodate the increasing requirements of laboratory analysis of "Romanian Waters".

It is advisable to avoid unnecessary overlapping of the investment. The new laboratory shall serve not only "Romanian Waters" but also the municipalities in the Basin, under the joint-operation. If required, the laboratory analysis for the industrial units might be entrusted on payment basis to the new laboratory.

6.4 Financing Arrangements for the Improvement

Fund allocation to meet the proposals of the Project shall follow the ordinary procedures, from the viewpoint of smooth implementation in the present administration system.

6.4.1 Improvement of Sewerage Systems

In usual cases, these shall be done with the annual state budget in the accounts of the Ministry of Public Works and Land Development. The County Council administers the funds allocated to each municipality, through appraisal and prioritization.

6.4.2 Improvement of Industrial Wastewater Treatment

The industrial unit itself undertakes this and, sometimes, improvement funds are subsidized from the Ecological Direction, Ministry of Industry and Commerce, after the appraisal and prioritization based on the improvement proposals.

6.5 Expansion of Sources and Role of the Water Fund

The performance of the existing Water Fund is very poor, because of the limitation of constituting sources of permit/licence fees and penalties. Majority of the Fund accrues from the water management permit/licence fees. The penalties under the unitary payment system are difficult to be collected.

The sources other than those stipulated in the Water Law should be added to expand the Fund. The constituting sources shall include the credits and subsidies for the specific technological development. The foreign loans or domestic bonds shall be guaranteed by the MWFEP with the consent of the Ministry of Finance. The beneficiaries are obligated for the amortization of these credits: for instance; the "Romanian Waters" with its revenue from the water sales, and the municipalities with those from water supply/sewerage services.

Afterwards, the Water Fund might be used for the following:

(1) Study and development of advanced monitoring equipment such as oil detector and toxic substance detector

(2) Study and development of energy-saving wastewater treatment technology and recycle use of the wastewater; if required, installation of model-plants or implementation of demonstration projects

TABLES

Table G.2.1 List of Legislations Related to the Project

No.	(Classification)	Title or Subject Matter	Date Issued	Date Published
	Laws			
1.	Law 137/1995	Environmental Protection Law	Dec.29,1995	Dec.30,1995
2.	Law 107/1996	Water Law	Sep.25,1996	Oct.8,1996
	Government Decisions			
3.	HG 1001/1990	Unitary Payment System for Water Management Products and Services	Sep.4,1990	(comes into force: Jan.1,1991)
4.	HG 196/1991	Establishment of the Self-managed Public Company "Romanian Waters"		Apr.13,1991
5.	HG 861/1992	Modification of HG 1001/1990	Dec.31,1992	Jan.18,1993
6.	HG 53/1993	Modification and Completion of HG 196/1991	Feb.3,1993	Feb.19,1993
7.	HG 127/1994	Settlement and Approval of Standards for Environmental Protection	Mar.30,1994	Apr.12,1994
8.	HG 254/1995	Modification of HG 127/1994	Apr.25,1995	May 9,1995
9.	HG 568/1997	Organization and Functions of the Ministry of Waters, Forests and Environmental Protection	Sep.20,1997	Oct.6,1997
10.	HG 730/1997	Romanian Standard NTPA-001 on Concentration Limits of Pollutants in Wastewater Discharge into Water Bodies	Nov.10,1997	Nov.25,1997
	MWFEP Orders			
11.	Order 242/1990	Technical Instructions to Apply HG 1001/1990	Dec.14,1990	(Not Published)
12.	Order 383/1993	Organization and Functions of Agency for Environment Protection	Jun.2, 1993	(Not Published)
13.	Order 125/1996*)	Regulatory Procedures for the Economic and Social Activities Having Environmental Impacts	Mar.19,1996	Apr.11,1996
14.	Order 148/1997	Procedures and Competence to Issue Water Management Permits and Licences	Feb.27,1997	May 26,1997
15.	Order 277/1997	Technical Documentation Required for Obtaining Water Management Permits and Licences	Apr.11,1997	May 26,1997
16.	Order 645/1997**)	Approval of Standards on Conditions of Wastewater Discharge into the Sewerage System (NTPA 002)	Oct.30,1997 Sep.22,1997 Sep.16,1997	Nov.6,1997

Remarks: *) Annex 10 was extended and improved in the MWFEP Order 184/1997.
**) MWFEP Order, jointly signed by the Minister of Health and Minister of Public Works and Land Improvement.

Table G.2.2 Stipulations in the Water Law (1/4)

Chapter I : General Provisions		
Art.1	-	Nature of water; Coverage of the Law
Art.2	-	Objectives of the Law
Art.3	-	Public ownership, in general, of waters, their banks and beds
Art.4	-	Exclusive right of the Government to establish water use regime; MWFEP and "Romanian Waters", etc.
Art.5	-	Regulations on sanitary protected zones, etc; Drinking water quality
Art.6	-	Water management activities
Art.7	-	Responsible bodies for water management; MWFEP and "Romanian Waters", etc.
Art.8	-	Technical terms (Annex No. 1)

Chapter II : Waters and River Bed Use Regime		
Section 1 : Water Use Regime		
Art.9	-	Water management licence
Art.10	-	Priority on drinking water use to the population, etc; Measures to be taken to maintain ground water reserve, etc.
Art.11	-	Pisciculture to be allowed under conditions
Art.12	-	Water users' obligations to meet water consumption standards and to save water
Art.13	-	Temporary restriction and suspension of water use in emergency cases
Art.14	-	Restrictions plans by "Romanian Waters"
Art.15	-	Pollution prohibition; Water quality standards; Drinking water quality standards; Effluent limits of pollutants in waste water
Art.16	-	Forbidden activities to protect water resources; Forbidden activities in the protected zones
Art.17	-	Water users' duties for rational use and protection of water resources
Art.18	-	Water users discharging waste water into public sewerage system and industrial sewerage system, under conditions
Art.19	-	Local public administration authorities obliged for water supply, sewerage, waste water treatment, etc; Centralized water supply for villages/communes; Obligations in operations of waste water treatment plants and installations
Art.20	-	Conditions for mining/industrial waste water discharge
Art.21	-	Conditions in soaking operations and skin tanning
Art.22	-	Treatment of waste water discharge by ships and floating installations
Atr.23	-	Prevention of accidental pollution and damage-eliminating measures to be taken by "Romanian Waters" and water users
Art.24	-	Indemnification in case of the accidental water pollution

Section 2 : River Bed Use Regime		
Art.25	-	Free access to river banks in the public domain, for recreation purpose; Other uses to be complying with water management licence
Art.26	-	Prohibition of obstruction or blocking of natural water flow
Art.27	-	Any activity on banks, beds, etc. to be performed not to produce adverse effects; Prohibition of deteriorating water quality

Section 3 : Servitudes and Expropriation Regime		
Art.28	-	Riverside residents obliged to allow the right of servitude with "Romanian Waters" personnel ; Indemnification

Table G.2.2 Stipulations in the Water Law (2/4)

Art.29	-	Expropriation of lands/buildings for hydraulic structures or other public utility hydraulic works; Indemnification
Art.30	-	Water management permit required for planting/cutting down trees/shrubs, and for works on waters or related to waters
Art.31	-	Forest-related protection measures
Art.32	-	Wastes/dangerous substances to be used, transported, handled not to cause water pollution; Water management permit required for the storage near the water course; Others
Art.33	-	MWFEP to grant/rent part of the public domain water use for certain activities; Mineral extraction to obtain water management licence; Exemption to drainage works on navigable water course; Others
Art.34	-	Maintenance obligations of protection work administrators/users; Sharing contribution obligations of protection-dam beneficiaries; Others

Chapter III : Water Management		
Section 1 : Knowledge of the Water Resources		
Art.35	-	Water management activity to be based on knowledge of water resources; National Water Management Data Base and Water Cadastre under "Romanian Waters"
Art.36	-	National network of meteorological/ hydrological observations, charged to INMH
Art.37	-	Protected zones around the meteorological units; Location permit to be obtained
Art.38	-	Research/valuation/homologation of reserve to ensure rational use of ground water resources

Section 2 : Protection of Minor River Beds, Banks and Water Management Works		
Art.39	-	Delimitation of minor river beds, by "Romanian Waters" and Land Cadastre
Art.40	-	Protected zones for the protection of river beds, banks, hydraulic structures, etc; Size shown in Annex No. 2
Art. 41	-	Measures/works for protection of minor river beds; Sanitary and servitude flows
Art.42	-	Actions to be taken in case of water course alteration

Section 3 : Structures of the River Basins		
Art.43	-	Water management frame schemes and short-term development programmes
Art.44	-	Information required for water management frame schemes and development programmes
Art.45	-	Local (water management) schemes
Art.46	-	Correlations with the frame/local schemes
Art.47	-	Basin Committee to be organized

Section 4 : Regime of the Works that are Built on Waters or Related to Waters		
Art.48	-	Enumeration of the works built on or related to waters; Documentation requirements
Art. 49	-	Location permit required for the new economic/social units in the flooded areas
Art.50	-	The works requiring the water management permits; Operations to be based on water management licences
Art.51	-	Conformity of the water management permit and the location permit
Art. 52	-	Documentation in water management permit application to be based on studies
Art.53	-	Provisions related to water management permits
Art.54	-	Activities/works requiring prior notification to "Romanian Waters" before the commencement, without water management permits; Putting into operation not requiring water management licences as well
Art.55	-	Issuance of water management licences through field verification, etc.
Art. 56	-	Modification/withdrawal of water management licences

Table G.2.2 Stipulations in the Water Law (3/4)

Art.57	-	Withdrawal of the water management licence leading to cease of activity and loss of the right
Art.58	-	Suspention of water management licences; Institution of special supervision regime on non-compliance
Art.59	-	Measurement devices to be provided in the works/installations under the licensing/notification; Licence holders' obligations; Data to be kept inside "Romanian Waters"
Art.60	-	Contests towards water management licences/permits and their refusal
Art.61	-	Procedures and standard technical documentation in water management licences/permits application, to be framed by MWFEP
Art.62	-	Design and construction of multi-purpose dams and reservoirs
Art.63	-	Dam/reservoir holders' obligations to prepare operating rules; Coordinative role of "Romanian Waters" in reservoir operation by river basin; Emergency measures
Art.64	-	Hydraulic works holders' obligations to accord to the dispatch graphs; Monitoring devices and surveillance system to be realized for the expertise
Art.65	-	Approval of competencies of operating code regulation in the river basin
Art.66	-	Approval and ordering of discharge and performance of manoeuvres, not specified in the rules

Section 5 : Prevention and Control of Floods, Hazardous Meteorological Phenomena and Hydraulic Structures Accidents		
Art.67	-	Significance; Interpretations; Strategy and conceptions being incumbent on MWFEP
Art.68	-	Hydraulic structure holders' obligations in monitoring and surveillance; National Commission for the Safety of Dams and Hydraulic Structures
Art.69	-	The Central Commission for the Prevention and Control of Floods, Hazardous Meteorological Phenomena and Hydraulic Structures Accidents; Disaster Control Committee
Art.70	-	Central Commission to be established under organizational/operating code regulation
Art.71	-	Operative actions to be organized by county commissions, and by the local disaster control commissions, of cities, towns and communes
Art.72	-	O/M of prevention/control works obliged to unit owners or users, as well as restoring/repairing works after the destruction and damage occurrence
Art.73	-	Operation-incurred expenses to be provided and financed from state/local budgets, etc; Intervention Fund
Art.74	-	Rules for prevention and control and frame-norms to be elaborated; Operative actions to be taken in an unified manner; Coordination to be ensured by "Romanian Waters"
Art.75	-	Controlled flooding by temporary operation of reservoirs to avoid the calamity; Indemnification from the insurance fund
Art.76	-	Forbidden activities to ensure stability/integrity of embankments, dams, and other prevention/control works; Permitted activities with the approval of "Romanian Waters"

Section 6 : Participation of the Public		
Art.77	-	Consultation with water users, river-side residents or the public, prior to the MWFEP measures to be taken; Notification of the proposed measures through local newspapers and the public access at water management units; Comments/observations/suggestions on the proposed measures to be sent; Public debate and final decision; Participation procedures of the public to be established

Chapter IV : Inspection of the Water Management Activity		
Art.78	-	Specialized inspection on water management and compliance with the provisions of the Law; State Inspectorate of Water, MWFEP; Water management personnel; Others
Art.79	-	Central/local public administration authorities to assist MWFEP and "Romanian Waters" personnel

Table G.2.2 Stipulations in the Water Law (4/4)

Chapter V : Water Economic Mechanism		
Art.80	-	Water being a natural resource of economic value; Economic mechanism for water management to include payment system; Beneficiary pays principle; Others
Art.81	-	Payment system to cover all water users; "Romanian Waters" being only one entitled to implement the payment system; Others
Art.82	-	Allowance to be granted to water users with concern for rational water use/water quality protection; Penalties to be applied to water users for violations of water management licence stipulations; "Romanian Waters" being the only authority to identify the cases for allowances and penalties
Art.83	-	Government decision to establish the payment system
Art.84	-	Water Fund
Art.85	-	Financing of investments to water management works, structures and installations

Chapter VI : Penalties		
Art.86	-	Violation of Law provisions generating liabilities
Art.87	-	Actions leading to infringements in water management field, enumerated in 53 items
Art.88	-	Punishment of contraventions to Art.87, divided into 3 categories of fines; Amount of fines to be updated
Art.89	-	Payment of fines in lei
Art.90	-	Authorized personnel to ascertain the contraventions and to apply fines under Art.88
Art.91	-	Law 32/1968 to be applied for the infringements (punishment of contraventions)
Art.92	-	Infringement by discharge/throwing/injection of materials modifying water characteristics
Art.93	-	Infringement by execution/modification/extension of water or water-related works, etc. contrary to or without having water management permits/licences
Art.94	-	Infringement by water resources use without water management licence
Art.95	-	Infringement by O/M of works , soaking operation, etc. without water management licence
Art.96	-	Infringement by extraction of mineral aggregates without water management licence
Art.97	-	Infringement by the use of minor river beds, etc. without water management licence
Art.98	-	Infringement by the continuation of the activity after having lost the rights obtained under the Law
Art.99	-	Infringement caused by restriction of drinking water supply for the interest of other activities
Art.100	-	Infringement caused by pollution of water resources
Art.101	-	Infringement by the storage/use of fertilizers, pesticides, or other dangerous substances in the protected zones
Art.102	-	Infringement by the storage of nuclear fuel/waste in minor river beds
Art.103	-	Infringement by the destruction/deterioration/handling of dams and other hydraulic structures
Art.104	-	Infringement by the affection towards dams, embankments or their protected zones without water management licence
Art.105	-	Punishment of an act committed against the community by water poisoning/contamination, under the Penal Code
Art.106	-	Authorized bodies/personnel to ascertain infringements

Chapter VII : Transitory and Final Provisions		
Art.107	-	Water management licence required for unlicensed works/ water users; Phased programmes; Water treatment plants and installations
Art.108	-	Reconfirmation of water management licences issued previously to the Law
Art.109	-	MWFEP and "Romanian Waters" personnel to wear a uniform
Art.110	-	Norms/standards/orders of MWFEP
Art.111	-	A special law to regulate mineral and geothermal water regime
Art.112	-	Coming into force of the Law; Abrogations

Table G.2.3 Contents of the Environmental Protection Law

Chapter I : General Principles and Provisions

- Art.1 - Objective of the Law
- Art.2 - Terminology (defined in Appendix No.I)
- Art.3 - Principles and Strategic Elements
- Art.4 - The Ways to Implement Principles and Strategic Elements
- Art.5 - The Rights Guaranteed in a Healthy Environment
- Art.6 - Environmental Protection Obligated
- Art.7 - Responsible Authority for Environmental Protection

Chapter II : Regulation of Economic and Social Activities Having an Environmental Impact

Section 1 : Licensing Procedure
Art.8 to Art.14

Section 2 : Regime of Dangerous Substances, Hazardous Waste, as well as of Other Wastes
Art.15 to Art.24

Section 3 : Regime of Chemical Fertilizers and Pesticides
Art.25 to Art.28

Section 4 : Regime for Assuring the Protection against Ionizing Radiation and Safety of Radiation Sources
Art.29 to Art.33

Chapter III : Protection of Natural Resources and Conservation of Biodiversity

Art.34 - Technical Regulations on Protection Measures;
Compulsory Impact Assessment;
Areas Subjected to Conservation Regime;
Setting-up of Protected Areas

Section 1 : Protection of Waters and of Aquatic Ecosystems
Art.35 to Art.39

Section 2 : Protection of Atmosphere
Art.40 to Art.46

Section 3 : Protection of Soil, Subsoil and of Terrestrial Ecosystems
Art.47 to Art.53

Section 4 : Regime of Protected Areas and of Natural Monuments
Art.54 to Art.59

Section 5 : Protection of Human Settlements
Art.60 to Art.63

Chapter IV : Prerogatives and Responsibilities

Section 1 : Prerogatives and Responsibilities of the Environmental Protection Authorities
Art.64 to Art. 67

Section 2 : Prerogatives and Responsibilities of Other Central and Local Authorities
Art.68 to Art.78

Section 3 : Obligations of Natural and Legal Persons
Art.79 to Art.80

Chapter V : Penalties

Art.81 to Art.86

Chapter VI : Final and Transitory Provisions

- Art.87 - "The central environmental protection authority shall be the MWFEP"
- Art.88 - Domains to be Regulated through Special, Revised or New Laws
- Art.89 - Coming into Force of the Law; Abrogations

Appendix No. I : The Meaning of Some Terms to the Interpretation of the Law

Appendix No. II : List with Activities which are Subjected to the Procedure for Environmental Impact Assessment for the Issuing of Environmental Permit/Licence

Table G.2.4 Water Quality Standards for Surface Water (1/2)

Parameter	Unit	Admissible Value			Method of Analysis
		Quality Category			
		I	II	III	
Color		Colorless			
Odor		Odorless			
pH		6.5 - 8.5			STAS 6323-75
Ammonium(ionised NH_4^+)	mg/l	1	3	10	STAS 8683-70
Ammonia (non-ionised NH_3)	mg/l	0.1	0.3	0.5	STAS 8683-70
Nitrate(NO_3^-)	mg/l	10	30	-	STAS 8900/1-71
Nitrite (NO_2^-)	mg/l	1	3	-	STAS 9800/2-71
Calcium (Ca^{2+})	mg/l	150	200	300	STAS 3662-62
Chlorine (free residual Cl_2)	mg/l	0.005			STAS 6364-78
Chloride (Cl^-)	mg/l	250	300	300	STAS 8663-70
Carbon Dioxide (free)	mg/l	50			STAS 3263-61
Phenol (steem extraction, C_6H_5OH)	mg/l	0.001	0.02	0.05	STAS 7167-65
Toal Iron (Fe^{2+} + Fe^{3+})	mg/l	0.3	1	1	STAS 8634-70
Total Phosphorus (P)	mg/l	0.1			STAS 10064-75
Sulfide and Hydrogen Sulfide (H_2S)	mg/l	N.D.	N.D.	0.1	STAS 7510-66
Magnesium (Mg^{2+})	mg/l	50	100	200	STAS 6674-77
Manganese (Mn^{2+})	mg/l	0.1	0.3	0.8	STAS 8662-70
Dissolved Oxygen (DO)	mg/l	6	5	4	STAS 6536-88
Petroleum Products	mg/l	0.1			STAS 7877-87
Total Dissolved Solids (TDS)	mg/l	750	1,000	1,200	STAS 9187-84
Sodium (Na^+)	mg/l	100	200	200	STAS 8295-69
BOD_5	mg/l	5	7	12	STAS 6560-82
COD(Mn)	mg/l	10	15	25	STAS 9887-74
COD(Cr)	mg/l	10	20	30	STAS 6954-82
Sulfate (SO_4^{2-})	mg/l	200	400	400	STAS 8601-70
Silver (Ag^+)	mg/l	0.01			STAS 8190-68
Arsenic (As)	mg/l	0.01			STAS 7885-67
Barium (Ba^{2+})	mg/l	1			STAS 10258-75
Cadmium (Cd^{2+})	mg/l	0.003			STAS 7852-80

Source : STAS 4706/88

Table G.2.4 Water Quality Standards for Surface Water (2/2)

Parameter	Unit	Admissible Value			Method of Analysis
		Quality Category			
		I	II	III	
Cyanide (CN^-)	mg/l	0.01			STAS 7685-79
Cobalt (CO^{2+})	mg/l	1			STAS 8288-69
Trivalent Chrome (Cr^{3+})	mg/l	0.5			STAS 6323-75
Hexavalent Chrome (Cr^{6+})	mg/l	0.05			STAS 6323-75
Copper (Cu^{2+})	mg/l	0.05			STAS 7844-67
Anionic Detergents	mg/l	0.5			STAS 7795-80
Fluorides (F^-)	mg/l	0.5*			STAS 8910-71
Polycyclic Aromatic Hydrocarbons	mg/l	0.0002			**
Mercury (Hg)	mg/l	0.001			STAS 8045-79
Molybdenum (Mo^{2+})	mg/l	0.05			STAS 11422-84
Nickel (Ni^{2+})	mg/l	0.1			STAS 7987-67
Pesticides	mg/l				
Herbicides	mg/l				
triazine	mg/l	0.001			**
trizinone	mg/l	0.001			**
toluidine	mg/l	0.001			**
Insecticides	mg/l				
organochorine	mg/l	0.0001			STAS 12650-88
organophosphorus	mg/l	N.D.			**
organometallic	mg/l	N.D.			**
Nitro-derivatives	mg/l	N.D.			**
Lead (Pb^{2+})	mg/l	0.05			STAS 8637-79
Selenium (Se^{2+})	mg/l	0.01			STAS 12663-88
Zinc (Zn^{2+})	mg/l	0.03			STAS 8314-87
Total Coliforms	nr./100 ml	100,000			STAS 3001-83

*: For surface waters in category I used for centralised portable water supply, the admissible maximum is 1.2 mg/l

**: Method of analysis conforms with instruction of the National Water Council.

Source: STAS 4706/88

Table G.2.5 Comparison of Romanian and EU Standards for Drinking Water

Parameter	Unit	EU	Romania		
		Admissible Limit	Admissible Limit	Exceptionally Admissible Limit	Method of Analysis
Microbiological Parameter					
Escherichia Coli (E. Coli)	nr./100 ml	0	-		
Enterococci	nr./100 ml	0	-		
Chemical Parameter					
Acrylamide	µg/l	0.1	-		
Antimony	µg/l	5.0	-		
Arsenic	µg/l	10	50		STAS 7885-67
Benzene	µg/l	1.0	-		
Benzo(a)pyrene	µg/l	0.01	-		
Boron	mg/l	1.0	-		
Bromate	µg/l	10	-		
Cadmium	µg/l	5.0	5.0		STAS 11184-74
Chromium	µg/l	50	50		STAS 7884-67
Copper	mg/l	2.0	0.05	0.1	STAS 3224-69
Cyanide	µg/l	50	10		STAS 10847-77
1,2-dichloroethane	µg/l	3.0	-		
Epichlorohydrin	µg/l	0.1	-		
Fluoride	mg/l	1.5	1.2		STAS 6673-62
Lead	µg/l	10	50		STAS 6362-85
Mercury	µg/l	1.0	1.0		STAS 10267-89
Nickel	µg/l	20	100		***
Nitrate	mg/l	50	45		STAS 3048/1-77
Nitrite	mg/l	0.5	0	0.3	STAS 3048/2-90
Pesticides	µg/l	0.1	0.1		STAS 12650-88
Pesticides-Total	µg/l	0.5	0.5		STAS 12650-88
Polycyclic Aromatic Hydrocarbons	µg/l	0.1	0.01		***
Selenium	µg/l	10	10		STAS 12663-88
Tetrachlorothene and Trichlorothene	µg/l	10	-		
Trihalometans-Total	µg/l	100	100		***
Vinyl Chloride	µg/l	0.5	-		
Indicator Parameters					
Aluminium	µg/l	200	50	200	STAS 6326-90
Ammonium	mg/l	0.5	0	0.5	STAS 6328-85
Chloride	mg/l	250	250	400	STAS 3049-88
Clostridium Perfringens	nr./100 ml	0	-		
Colour		*	-		
Conductivity	µS cm^{-1}	2,500	1,000	3,000	STAS 7722-84
Hydrogen Ion Concentration	pH	6.5-9.5	6.5-7.4	8.5	STAS 6325-75
Iron	µg/l	200	100	300	STAS 3086-68
Manganese	µg/l	50	50	300	STAS 3264-81
Odour		*	-		
Oxidisability	mg/l O_2	5.0	-		
Sulphate	mg/l	250	200	400	STAS 3069-87
Sodium	mg/l	200	-		
Taste		*	-		
Colony Count 22 C		**	-		
Coliform Bacteria	nr./100 ml	0	0		STAS 3001-91
Total Organic Carbon (TOC)		**	-		
Turbidity		*	-		

Note: 1) * : Acceptable to consumers and no abnormal change
2) **: No abnormal change
3) *** : Analytical methods recommended by Ministry of Health

Source: STAS 1342-91

Table G.2.6 Effluent Limits of Wastewater Discharge into Surface Water and Sewerage System

Quality Parameter	Unit	Surface Water	Sewerage System	Method of Analysis
Temperature	C	30.0	40.0	-
pH pH for Danube River		6.5 -8.5 6.5 -9.0	6.5 -8.5	STAS 8619/3-90
Total Suspended Solids (SS)	mg/l	60.0	300.0	STAS 6953-81
BOD_5	mg/l	20.0	300.0	STAS 6560-82
COD-Mn	mg/l	40.0	-	STAS 9887-74
COD-Cr	mg/l	70.0	500.0	STAS 6954-82 SRISO 6060/96*
Ammonium Nitrate (NH_4^+)	mg/l	2.0	30.0	STAS 8683-70
Total Nitrate (N)	mg/l	10.0	-	STAS 7312-83
Nitrates (NO_3^-)	mg/l	25.0	-	STAS 8900/1-71
Nitrates (NO_2^-)	mg/l	1.0	-	STAS 8900/2-71
Sulfides and Hydrogen Sulfide(H_2S)	mg/l	0.1	0.5	STAS 7510-66
Sulfides (SO_3^{2-})	mg/l	1.0	10.0	STAS 7661-89
Sulfates (SO_4^{2-})	mg/l	-	400.0	STAS 8601-70
Phenol (steam extraction) (C_6H_5OH)	mg/l	0.1	30.0	STAS 7167-92
Substance extracted by Petroleum Ether	mg/l	5.0	20.0	STAS 7587-66
Oil Products	mg/l	1.0	-	STAS 7877-87
Phosphates (PO_4^{3-})	mg/l	4.0	-	STAS 10064-75
Total Phosphorus (P)	mg/l	1.0	5.0	STAS 10064-75
Detergents	mg/l	0.5	30.0	STAS 7576-66 SRISO 7875/96*
Arsenic (As)	mg/l	0.05	-	STAS 7885-67
Aluminium (Al^{3+})	mg/l	8.0	-	STAS 9411-83
Calcium (Ca^{2+})	mg/l	300.0	-	STAS 3662-90
Lead (Pb^{2+})	mg/l	0.2	0.5	STAS 8637-79
Cadmium (Cd^{2+})	mg/l	0.1	0.1	STAS 7852-80 SRISO 5961/93*
Trivalent Chrome (Cr^{3+})	mg/l	1.0	1.0	STAS 7884-91
Hexavalent Chrom (Cr^{6+})	mg/l	0.1	0.1	STAS 7884-91
Total Iron ($Fe^{2+} + Fe^{3+}$)	mg/l	5.0	-	STAS 8634-70
Copper (Cu^{2+})	mg/l	0.1	0.1	STAS 7795-80
Nickel (Ni^{2+})	mg/l	0.1	1.0	STAS 7987-67
Zinc (Zn^{2+})	mg/l	0.5	1.0	STAS 8314-87
Mercury (Hg^{2+})	mg/l	0.005	-	STAS 8014-79
Siver (Ag^+)	mg/l	0.1	-	STAS 8190-68
Florides (F^-)	mg/l	0.5	-	STAS 8910-71
Molybdenum (Mo^{2+})	mg/l	0.1	-	STAS 11422-84
Selenium (Se^{2+})	mg/l	0.1	-	STAS 12663-88
Manganese (Mn^{2+})	mg/l	1.0	1.0	STAS 8662-70
Magunesium (Mg^{2+})	mg/l	100.0	-	STAS 6674-77
Cobalt (CO^{2+})	mg/l	1.0	-	STAS 8288-69
Cyanide (CN^-)	mg/l	0.05	0.5	STAS 7685-79
Free Chlorine (Cl_2)	mg/l	0.05	1.0	STAS 6364-78
Chlorides (Cl^-)	mg/l	500.0	-	STAS 8663-70
Residue	mg/l	2000.0	-	STAS 9187-84
Total Coliform	nr./100 ml	1 million	-	STAS 3001-91
Faecal Coliform	nr./100 ml	10000.0	-	STAS 3001-91
Faecal Streptococci	nr./100 ml	5000.0	-	STAS 3001-91
Salmonella	nr./100 ml	N.D.	-	STAS 3001-91

Note: 1) * Analytical method for wastewater discharging to sewerage system.
2) The above quality limits were established in November 1997, by the HG 730/1997 and MWFEP Order 645/1997.

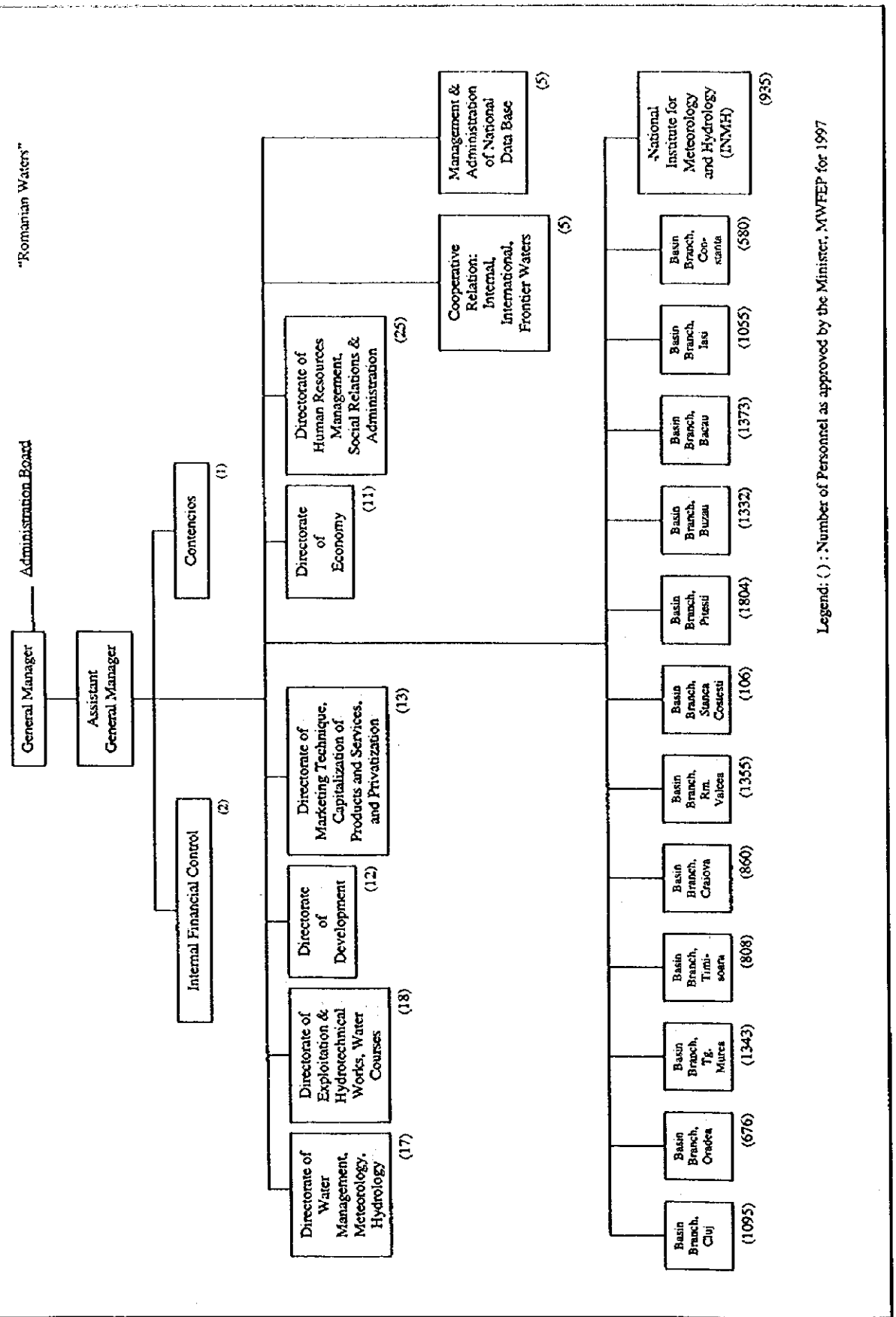
Source: NTPA-001 and NTPA-002

FIGURES

STUDY ON THE MASTER PLAN FOR WATER ENVIRONMENT MANAGEMENT ON THE PRAHOVA RIVER BASIN

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig.G.3.1 Organizational Structure of the Ministry of Waters, Forests and Environmental Protection



STUDY ON THE MASTER PLAN FOR WATER ENVIRONMENT MANAGEMENT ON THE PRAHOVA RIVER BASIN

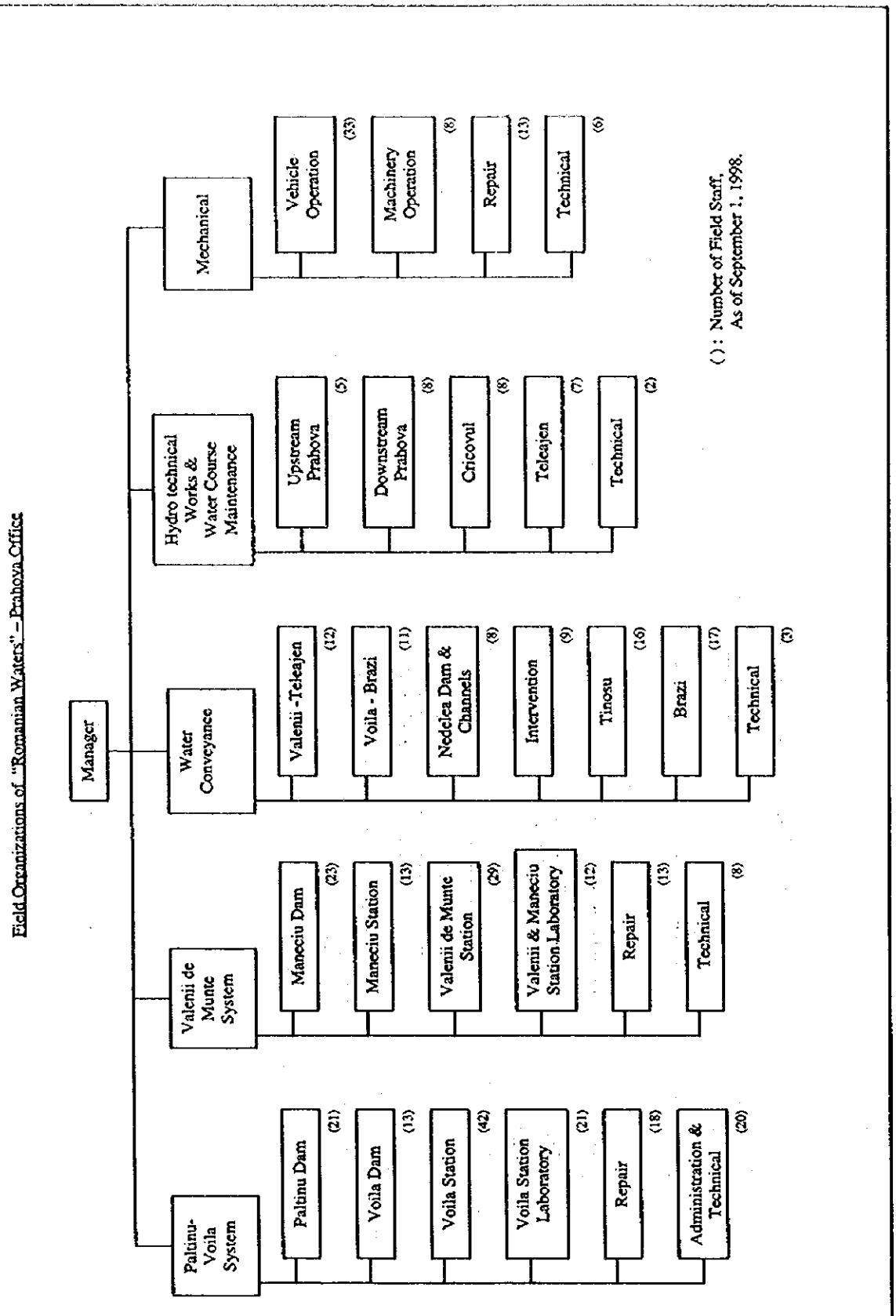
JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. G.3.2 Organizational Structure of "Romanian Waters"

STUDY ON THE MASTER PLAN FOR WATER ENVIRONMENT MANAGEMENT ON THE PRAHOVA RIVER BASIN

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. G.3.3 Set-up of "Romanian Waters" - Prahova Office (1/2)



STUDY ON THE MASTER PLAN FOR WATER ENVIRONMENT MANAGEMENT ON THE PRAHOVA RIVER BASIN	**Fig. G.3.3 Set-up of "Romanian Waters" - Prahova Office (2/2)**
JAPAN INTERNATIONAL COOPERATION AGENCY	

STUDY ON THE MASTER PLAN FOR WATER ENVIRONMENT MANAGEMENT ON THE PRAHOVA RIVER BASIN	**Fig. G.3.4** **Set-up of the Agency for Environmental Protection, Ploiesti**
JAPAN INTERNATIONAL COOPERATION AGENCY	

STUDY ON THE MASTER PLAN FOR WATER ENVIRONMENT MANAGEMENT ON THE PRAHOVA RIVER BASIN	**Fig. G.3.5 Local Public Administration Authorities in Prahova County**
JAPAN INTERNATIONAL COOPERATION AGENCY	

APPENDIX H

ENVIRONMETNAL EDUCATION

APPENDIX II

ENVIRONMENTAL EDUCATION

Table of Contents

List of Tables

List of Figures

Attachment

CHAPTER I CURRENT EFFORTS IN ENVIRONMETNAL EDUCATION, PUBLIC AWARENESS AND TRAINING

1.1 Introduction

The Chapter 36 of the Agenda 21 (the Rio Declaration on Environment and Development) at the United Nations Conference on Environment and Development (1992) calls for environmental education, public awareness and training, all of which are required to build environmental constituencies in support of policies and actions for sustainable development. Environmental education is the most common word that also represents the other two since all three overlaps considerably. The Appendix H refers to environmental education, public awareness and training as a whole.

Chapter I reviews the current efforts in environmental education, public awareness and training at the both national and local (Prahova County) level, and assesses the present level of environmental awareness of the public on the Prahova River. Chapter II identifies measures and actions in order to promote public participation in water management, and proposes a necessary plan to increase communication with the public.

1.2 Initiative at the National Level

1.2.1 General

At the governmental level, the Ministry of Waters, Forests and Environmental Protection (environmental protection in general) and the Ministry of National Education (environmental education in general) are the main actors on the subject. But, other ministries (notably, the Ministry of Health, the Ministry of Industries and Commerce, and the Ministry of Agriculture and Food) have a special office dealing with the environment, so that information on the state of environment can be available to them.

There are active environmental NGOs (Non Governmental Organizations) in Romania. Some NGOs have a longer history than the MWFEP. Regarding environmental education, environmental NGOs in Romania have been a leader, and have accumulated considerable experiences in such a short time through international network and exchange. It appears that the government realizes NGO's advantages in the filed of environmental education.

1.2.2 MWFEP (Ministry of Waters, Forests and Environmental Protection)

The new organizational structure of the MWFEP started in January 1998. The Directorate for International Relations under the Minister is responsible for disseminating information. The responsibilities include preparation of an annual environmental report and of educational material on environmental protection, and consultation with NGOs as well as other civil society. The Directorate for International Relations has three staff, and is expected to add one more staff. Regarding the formal environmental education at school, the MWFEP foresees that a joint effort between the MNE and the MWFEP will be made in the near future.

The Ministry's journal, "Jurnalul Naturii" is published monthly and distributed to the Council of Europe (300 copies), schools, universities, NGOs (1000 copies with free of charge), and other subscribers such as oil companies, etc. (800 copies).

An information database on environment has been under development on the Internet, and it will be made available to stakeholders.

The relationship between the MWFEP and NGOs has greatly improved for the past four years. The MWFEP currently has a financial difficulty in supporting NGOs. The creation of the Environmental Fund (a special fund set for environmental causes) has been under consideration to satisfy such financial needs.

The World Bank's "Pollution Abatement Project" (on going) in Romania has the public awareness component whose aim is to raise environmental awareness through the design of a public awareness program. The MWFEP, as the counterpart, is responsible for undertaking the study on public awareness in Romania.

1.2.3 MNE (Ministry of National Education)

The Environmental Protection Law #137/95, Article 72 reads that the Ministry of Education shall ensure the adaptation of education plans and syllabi at all levels, for the purpose of acquiring knowledge on ecology and environmental protection notions and principles, to assure the awareness, education, and training in this field.

The Institute of Educational Sciences, an independent institution under the MNE, is responsible for developing school curriculum as well as textbooks including sub textbooks. The institute has two main researchers for this task. One researcher is associated with the "European Youth Exchange Romania," an international NGO. The institute collaborates with the NGO on sub textbook development. The institute also has a special tie with the Federal Environmental Agency in Austria for policy guidance.

Currently, 3rd and 4th grades in primary school have a couple of hours of inter-disciplinary science program per week. In secondary school, environmental education is generally incorporated into biology, chemistry, geography or physics classes. The new subject "Geoecology" is about to be introduced at high school. Certain high schools have optional courses on environment (e.g., "Environmental Pollution" in chemistry class). From September 1998, the two-semester system will be introduced for all the schools. At the end of each semester, three weeks will be reserved specially for environmental education. Environmental education can be laboratory experiments or field visits such as a clean up trip to the mountain or the river. It is teacher's discretion on how the environmental education is taught. At university level, there are 8 state institutions in Romania which have at least one environment related (physics, chemistry, engineer, biology, geography, environmental economy, and law) faculty. Private institutions offer faculties of geoecology, of tourism, and of mountains. There is also the Ecology University.

The Institute occasionally offers training courses for teachers and seminars for students on environmental issues. The Institute had a textbook contest that was bid by both public and private publishers (The contest was a component of the World Bank's Education Reform Project in 1994). Other initiatives have been taken by NGOs in a form of environmental book project in which NGOs developed environmental books for adult and children, and distributed them to the relevant organizations. Some NGOs have asked the MNE to adopt the books as part of official textbooks at school (this has not been succeeded). NGO developed materials, however, can be used as a sub textbook since teachers are free to choose any sub textbooks.

1.2.4 Romanian Waters Bucharest Headquarters

The main responsibilities of the Romanian Waters are stated in Appendix G. The International

Relations Department of the Romanian Waters Bucharest Headquarters is responsible for public relations, and has three staff.

In 1995, the headquarters organized the national Clean Waters Campaign. The headquarters printed 20,000 copies of color fliers and posters, and distributed them to the public through the regional branches. The flier was double-sided, and contained a color photo, the advice on how to reduce pollutants and how to detect polluted water, and the telephone numbers of the Romanian Waters in the area where the public can directly contact. The flier also encouraged the public to inform the Romanian Waters of any change in water conditions through city government, police department, medical unit, school, church, etc. The Romanian Waters self financed the campaign cost of 29,000,000 lei. The Romanian Waters and the Romanian Association for Hydrological Science are jointly preparing for a new campaign. 20,000 color brochure were made. The printing cost of US $3,000 was financed by the Civil Society Development Foundation (FDSC).

1.2.5 NCSD (National Center for Sustainable Development)

The NCSD, a UNDP project, was launched in June 1997 under the initiative of UNDP Romania, Romanian Government, Romanian Academy, and Black Sea University Foundation (NGO). The NCSD functions as a think tank to advise Romanian Government and other bodies on sustainable development issues. It also acts as a neutral body in the processes of negotiations, mediation and consensus building.

The NCSD started its preparation for Romanian "Agenda 21" (National Strategy for Sustainable Development) in April 1998. The official launching of "Agenda 21" is expected in June 1999 (see Figure H.1.1).

Section III, "Sustainable Development in Romania," of the Draft Proposal for National Strategy for Sustainable Development includes "Education and promoting the sustainable development." Section IV, "Sustainable Development – National Action Plan," includes "Civil society" and "Awareness, initiative, and individual actions." The NCSD plans to have 7 working groups, one of which is on human resources in the Sustainable Development context, including Education, training and public awareness.

1.2.6 Non-Governmental Organizations (NGOs)

In the aftermath of the events of 1990, environmental NGOs in Romania enjoyed a rapid expansion. Many environmental NGOs in Romania are mostly involved with local environmental issues. Since then, NGOs have been the social promoter of public participation.

There are 243 REC (Regional Environmental Center: an international organization whose headquarter is in Budapest, Hungary) registered environmental NGOs in Romania (1996 official data by REC, Romania office). However, in the REC's knowledge, about 300 environmental NGOs currently exist in Romania. According to the REC's 1996 data, 88 percent of Romanian environmental NGOs focuses on environmental education and training. NGOs in Romania has taken a leading role in environmental education and training.

As an example of inter-regional NGO cooperation, there is a book project in 1994. Led by ECOSENS (a NGO in Bucharest), 15 NGOs in different regions were involved in the creation of the "Ecological Guide for Romanian Consumer." The project was financed by the REC. About 2,000 copies were made: 500 copies were for sale (1,000 lei per copy) and 1,500 copies were distributed to the NGO members, companies, local authorities, local children's club, and Boys and Girls Scout members.

1.3 Activities in Prahova County

1.3.1 EPA (Environmental Protection Agency) Ploiesti Office

(1) Responsibilities

There are 42 Regional EPAs in Romania. The EPA Ploiesti Office acts as a territorial (Prahova County) coordinator among businesses, and central and local organizations regarding environmental protection, specifically on soil and air quality protection (The Romanian Waters Ploiesti Office is responsible for water quality protection, and the "Romsilva" for forest and protected area).

Some of EPA's responsibilities are to carry out public consultation on permit applications, to initiate educational activities, and to support NGOs. At the EPA Ploiesti Office, the Director, chief inspector, and inspector undertake these responsibilities in addition to other responsibilities.

(2) Activities

At the EPA Ploiesti Office, 4-5 staff is engaged in public awareness activities. Although the EPAs are encouraged by the MWFEP to organize public awareness activities on various environmental issues, the lack of funds, human resources, and experiences limit their activities. Table H.1.1 shows the activities in which the EPA Ploiesti Office has been engaged. The staff thinks that the current public awareness activities are insufficient but already beyond the EPA's execution capacity.

(3) Relationship with other organizations

The EPA Ploiesti Office has a cooperative relationship with the Romanian Waters Ploiesti Office through consultation and common program sharing, and with the Public Health Inspectorate through information sharing.

The EPA Ploiesti Office often collaborates local NGOs, namely "People and Environment," "TIMCED," and "ECO-VALAHIA" (a good example of this collaboration is the Earth Day Celebration, see Table H.1.1). The Director of the EPA Ploiesti Office is a frequent speaker for the environmental workshops organized by the NGO. Furthermore, the EPA staff took training courses offered by the NGO.

1.3.2 Inter-Organizational Initiative

(1) Local Agenda 21 Prahova

The Rio Declaration on Environment and Development (Agenda 21) of the Untied Nations Conference on Environment and Development (1992) includes Chapter 28 Local authorities' initiatives in support of Agenda 21 and Chapter 36 Promoting education, public awareness and training. Based on these Chapters, the planning on how to implement the Local Agenda 21 Prahova (Agenda Locala 21 Prahova) has just begun. The Seminar on "Local Implementation of Agenda 21" was held during July 9-10, 1998 in Ploiesti organized by the NCSD (UNDP Project, see 1.2.5), Environmental Know How Fund (United Kingdom), and the local NGO, "TIMCED." The purpose of the seminar was to initiate a dialogue among the main actors (local decision-makers and various components of the civil society) involved in the local implementation of Local

Agenda 21. Table H.1.2 shows the list of participants. The main theme of the seminar was community participation.

(2) International Council for Local Environmental Initiative (ICLEI)

Also, at the seminar on "Local Implementation of Agenda 21," the Romanian version of the International Council for Local Environmental Initiative (ICLEI)'s "Guide to Environmental Management for Local Authorities in Central and Eastern Europe" was officially launched under the auspices of the Mayor of Ploiesti. The Guide is divided into 18 volume. Volume 8, "Communicative Instruments and Public Participation in Environmental Management," deals with techniques for communicating about environmental issues with other sectors of the community. It includes public awareness raising and information, environmental education, eco-counseling, public participation and conflict mediation. Volume 13, "Environmental Management of Water," explains that the supply of fresh water to households and businesses and the removal and treatment of wastewater are two activities that have a great impact on the health of a community. Volume 18, "Environmental Management of Household Waste," covers household waste management and introduces concepts of environmental management directed at minimizing waste production and the environmental impacts of waste disposal.

(3) Pilot-Project for the City of Ploiesti and Prahova County

On July 29, 1998, the EPA Ploiesti Office, Prahova County, INCERP-Ploiesti (Research Institute for Petroleum Processing and Petrochemistry), and the local NGO, "People and the Environment" officially proposed that Prahova County become a pilot-center for projects whose objectives are to improve the used oil management in Romania, and to ease the environmental degradation, including the reduction of surface water pollution of the Prahova River Basin. The project duration is from September 1998 to December 1999. The theme of the pilot project is building a "community partnership" among local authorities (Prahova County, EPA, Romanian Waters, Parliament member of Prahova), research institute, and business (Table H.1.3 shows the list of participants). Some elements of the pilot project are development of public education materials, public promotion and information campaign.

1.3.3 Civil Society

There are 13 environmental NGOs in Prahova County - 6 in Ploiesti, 3 in Campina, 2 in Busteni, and 1 of each in Sinaia and Azuga. Table H.1.4 illustrates the names and main activities of the local NGOs. Generally, the membership is diverse from pupils at secondary school to specialists like biochemist, biologist, etc. Some local NGOs are part of international networks. For example, TIMCED (see 1.3.3. (1) (c)) is part of the Environmental Management and Training Center Network (EMTC) which consists of eleven environmental training institutions in Central and Eastern Europe.

(1) Local Environmental NGOs

(a) "Green Shield" Ecological Group-Saturn Federation, Ploiesti

"Ecological March" (June 1994 and 1995) in association with International Environment Day – Over 1,000 young people participated in this march.

"Ecological - Cultural Camps" (July 1998) – a camp in Stefanesti-Prahova was organized by Prahova School Board. The camp offered English and French classes, educative games on ecology, and lectures on main pollutants.

(b) "Green Shield" Ecological Group, Ploiesti

"Demonstrative Practice of Salubrity Ecological Education in the Bucegi Mountains" (August 1992 - October 1993) – about 250 volunteers spent 1760 days by removing about 150 tons of wastes from the mountains (Sinaia and Busteni). To increase the educational impact, panels and clipboards were made, the film and booklet were produced, and field discussion was organized. The film was broadcasted on different TV stations (e.g., National TV Channel TVR1).

(c) TIMCED (Training, Information and Meditation Center for Eco-Development)

TIMCED in Ploiesti has been organizing training and workshop activities since October, 1993. As of May 1998, more than 2000 people from industry, central and local governmental bodies, university, local environmental protection agencies, media, civil society and individuals attended the TIMCED's activities. The following workshops represent some of its activities.

"Reflection of European Environmental Legislation in the Environmental Strategy within the Oil Production, Processing and Petrochemistry Sectors in Romania" (April 12, 1995)

"Environmental Education" (October 27-29, 1995)

"Environmental EU Policy, Regulations and Standards for Municipal Water Authorities in the Danube Basin Countries" (October 15-16, 1996) and "Management Training for Municipal Water Authorities in the Danube River Basin" (November 5-7, 1996) - specialists and managers from the Romanian Waters Authority and municipal water authorities in major Romanian cities participated.

"Practical Methods for Environmental Auditing" (December 3-5, 1996) in cooperation with the EPA of Prahova District. Specialists from the EPA, research and university institutes in Ploiesti attended.

"Municipal Solid Waste Management and Recycling in Romania" (May 16-18, 1997) – discussed recycling and possible strategies for raising public awareness.

"Local Implementation of Agenda 21" (July 9-10, 1998) – facilitated a dialogue among the main actors in Prahova County: local decision-makers and the various components of the civil society. See also 1.3.2 (1).

(d) People and Environment, Ploiesti

"Earth Day Celebration (International Environment Day)" (every year since 1992)

acted as one of the organizers with mayor of Ploiesiti and other local groups. The activities include the plantation of 1000 trees, special school lectures on local

pollution problems, book exhibition, environmental film and video projection and chalk drawing asphalt contest for children. More than 1000 adults and children participated.

"Pollution Sources Map of the Prahova and Teleajen Rivers Basin" (1992) – The map was included to the priority areas list in the "ROMANIA: Environment Strategy Paper (World Bank Report No. 10613-RO)," Appendix 4.

"European Conference for Environmental Education in Netherlands" (1992) – participated by invitation.

"Catalogue of books, reports and periodicals in the field of eco-development" (April, 1995) – investigated availability of main documentary sources in Prahova District.

"Book Project" (1996) – produced and distributed 100 copies of the catalogue on the existing environmental books in Prahova County to NGOs, teachers and other key local professionals.

"Environmental Manual (the ICLEI's Guide to Environmental Management) for Local

Authorities" (1998) – in cooperation with two other NGOs in Bucharest. See also 1.3.2 (2).

(e) Eco – VALAHIA, Ploiesti

"The Training Course for Youth to become Environmental Volunteers"(February-March and March-June 1998) – organized in cooperation with the EPA Ploiesti. This is the first project of this kind in Romania. The graduates of this course will receive a certificate for the completion and an identification card as an environmental volunteer whose duty is to identify polluted areas and to inform the EPA. 54 young people have already attended the courses. See also Table II.1.1 Public Awareness Activities by EPA Ploiesti.

(f) "SILVA" Tourism Club, Campina

"Cleaning Campaign for Ecologically Affected Area" (1996 and 1998) – organized to clean the Paltinu storage reservoir which supplies water for a large part of Prahova county

(g) Romanian Environmental Center, Busteni

"Summer School" (July-August 1997) – 386 pupils participated for 6 weeks of summer school whose curriculum includes geography, biology, zoology, and ecology.

"Monitoring of Natural Resources in Jepilor Valley" (August-September 1997)

"Children and Environment Festival" (October 1997) – Pupils from Busteni, Azuga, Sinaia, Bucuresti, Braila, and Cluj-Napoca performed artistic programs with ecological theme. In June 1998, the Festival was organized in association with the International Environment Day.

(h) "Queen's Flower" Environmental Club, Sinaia

"Citizen's Participation" – organized a meeting between citizens and local authority (1997) and founded the Relation Center between local authorities and NGOs (1998).

(i) Romanian Ecologists and Radio Amateurs, Azuga

"Book Project" (1994) – See 1.2.6 for more detail.

(2) Others

(a) Children's Club - Ploiesti

Children's club - Ploiesti (about 3,000 children members) have acquired about 65 fish tanks in order to teach children ecology and water pollution, and obtained more than 100 books and journals on ecology for children. 75 children member are actively involved with ecological activities.

(b) Boys and Girls Scout Association - Sinaia

Boys and Girls Scout Association have been very active and have organized many outdoor activities for children such as summer camp. The member is a frequent buyer of ecology books developed by local NGOs.

(c) Prahova Women's Association

It was founded in 1993 with 21 membership. There are 3,000 volunteer members. The activity includes information dissemination on consumer products, sports, tourism, etc. The environment is the issue that the association would like to involve more in the future. The association cooperated in distribution of the survey questionnaires (see 1.4.1).

(d) PTA (Parents & Teachers Association)

Parents have been passive in terms of school curriculum and other school activities.

Teachers have more autonomy in environmental education at school (see 1.2.3).

1.3.4 Media

There are 7 local radio stations, 4 local TV stations, and 7 local newspapers in Prahova County. The 1996 county data shows that about one out of five in Prahova county is a TV receiver, and about one out six is a radio receiver (Table H.1.5). Both local governments and NGOs use the media for disseminating information. Thus, their success in public awareness activities greatly depends upon the media attention. National television has one program (up to two hours) on environmental information on every Sunday at 11:00 A.M. on TVR2.

1.4 Present Level of Public Awareness on the Prahova River

1.4.1 Survey

In order to assess the present level of public awareness on the Prahova River, a simple questionnaire (17 questions including background questions to the respondents) was prepared. 337 questionnaires were distributed to the general public through the Romanian Waters Ploiesti Office and Prahova Women's Association in mid-July, 1998. 291 questionnaires were responded, representing a 86% response rate. The questions and responses are presented in the Attachment H.

1.4.2 Summary of the Survey Results

Half the respondents live in Ploiesti (Q4). All the respondents have enjoyed at least one activity in or near the Prahova River. The most popular activity was sun bathing (Q6). 20% of the respondents did not know where their tap water comes from, and 2% answered that their tap water comes from down stream of the Prahova River (Q7). 79% answered that fish live in the Prahova River (Q8). 90% of the respondents have heard about the water pollution problems of the Prahova River (Q9). Their knowledge on Q9 came from media (90%), and 7% answered that they personally observed the problem (Q10). 52% of the respondents attributed the cause of the water pollution in the Prahova River to factories, and 29% to animal farms (Q11). 83% of the respondents recognized the legal responsibility of factory (Q12). 73% of the respondents who recognized the legal responsibility of factory believed that factories are not abiding law (Q13). 55% of the respondents was not satisfied with the current conditions of the Prahova River (Q14). They want to see the improvement (41% answered that the river should be visibly clean) in the future (Q15). 97% of the respondents answered that they would act in order to improve the water quality of the Prahova River (Q16). 82% of the respondents answered that they have already been involved in such an activity (Q17).

1.4.3 Analysis of the Survey Results

The reader of the survey should be aware that because of the distribution method of the questionnaires, the survey sample might not be randomly selected. Despite this fact, the survey was still successful in assessing the present level of public awareness on the Prahova River by presenting the responses from different age groups with diverse occupation and with different educational background. Furthermore, the survey results presented the important information that can be looked at from the policy standpoint.

The Survey made it clear that the Prahova River is part of people's life. People enjoy easy access to the river for leisure. People are familiar with the Prahova River (Q7 and Q8). People are also aware of the water pollution problems in some area of the Prahova River (Q9), the cause of the pollution (Q11), and the regulations (Q12). 73% of the respondents who have knowledge of legal permit on factory discharge thinks that factories are not complying with the legal permit (Q12 and Q13). In fact, of the major factories in the Prahova River Basin, about 80% discharges BOD, and about 90% discharges Oil into the Prahova River beyond legal limit or without a legal permit (sources: Romanian Waters and JICA). The media, especially radio and TV, were acknowledged as great information sources for the public (Q10). On Q16 (willingness to participate in the efforts for the improvement of the Prahova River) and Q17 (current involvement in such activities), the survey showed that people are willing to act more. The survey also showed that people are willing to involve actively rather than passively (an increase in b. and d. on Q16 as compared with those on Q17).

The survey responses on Q16 and Q17 were further analyzed by age group (Q1) and by educational attainment (Q5) (the correlation is not statistically tested). With regard to Q16, about 84% of the age group between 18-29 chose answers: a., b., c., or d. (or their combination), while 75% of the age group between 30-49 answered in the same way. With regard to Q17, about 45% of the age group between 18-29 chose answers: a., b., c., or d (or their combination), while 68% of the age group between 30-49 chose the same. It indicates that though the young's (age 18-29) involvement in these activities is currently limited, the young are more likely to participate in the activities when they have a right information and opportunity. With respect to Q17, about 54% of the respondents with maximum of high school level of education (a. b. and c. on Q5) answered that they have already involved in the activities asked, while about 77% of the respondents with university degree demonstrated their involvement in such activities. With respect to Q16, about 87% of the respondents with maximum of high school level of education showed their willingness to participate in such activities, while about 95% of the respondents with university degree showed their willingness. This can be interpreted that public awareness programs, which specifically target the population without higher education (university level), would effectively make this targeted population become more aware and active on environmental issues. Moreover, when public awareness programs for general public are designed, the level of programs can be matched with the level of this population in terms of language used and knowledge based on.

CHAPTER II PROMOTION OF PUBLIC PARTICIPATION THROUGH ENVIRONMENTAL EDUCATION, PUBLIC AWARENESS AND TRAINING

2.1 General

The public, in the public participation context, can mean not only the general public but also civil society such as NGOs, universities, schools, church, union, etc. Environmental problems are locally oriented. Even global environmental problems such as ozone depletion cannot be solved without the local initiative. Through education, public awareness activities, and training, local residents will become more aware of their living environment and more responsible for the consequences of their own action toward the environment. Therefore, the public needs to be informed, to acquire environmental knowledge, and to learn how to act. Having the public as a watch dog in environmental protection is crucial to the success of an environmental regulatory system.

2.2 Right-to-Know of the Public

The public should be informed. At the same time, the public should exercise its constitutional right of "right to know" (article 31). The Environmental Protection Law #137/95 states that the State recognizes the right of all persons to a healthy environment, and to this end it guarantees: the access to information regarding environmental quality (article 5, a). The Water Law #107/96 reads that the natural and juristic persons have access to the information of the Water Management Database* National Fund, according to the procedure established by the Ministry of Waters, Forests and Environmental Protection (article 35, 6).

* The hydrometeorological, hydrogeological, and water management-related information constitute the Water Management Database.

2.3 Frameworks for Public Participation in Prahova County

2.3.1 Legal Framework

Public Participation is part of legal requirements in Romania. The following laws and order require public participation in environmental decision-making and implementation.

(1) Environmental Protection Law #137/95

"Setting up of a framework for the participation of NGOs and of the population in the decision-making and implementation (Article 3, i)" is one of strategic elements to assure sustainable development – general principles and provisions

The ways of implementing the principles and strategic elements include "training and education of the population as well as the participation of the NGOs in the decision-making and implementation (Article 4, h) – general principles and provisions

The local public administration authorities shall have the following prerogatives and responsibilities "to promote an appropriate behavior of the communities with respect to the importance of the environmental protection" (Article 76, e)

(2) Water Law #107/96

The water management shall be based on the principle of human solidarity and common interest through the close, all-level collaboration and cooperation of the public administration, water users, representatives of the local communities and population, in order to obtain the maximum social benefit (Article 6 (2)).

Water Law #107/96 has a section 6 "Participation of the Public." The Law requires public consultation of water users, riverside residents, and the public before decisions-making (Article 77). Other provisions also require public consultation (Article 42).

The information necessary to establish the water management frame schemes and the development programs shall be mandatorily provided for the MWFEP and Romanian Waters by .....(with omission) and the main water users, as well as by other NGOs interested in the river basins development (Article 44).

A Basin Committee shall be organized including one representative elected by NGOs and three water users representatives (Article 47).

(3) MWFEP Order #194/96

The Ministry Order #194/96 is summarized as follows. The EPAs approve the activities of NGO members on environmental protection, of students in ecology and environment sciences, and of the people retired from the governmental bodies such as MWFEP, MNE, Ministry of Culture and Youth, Ministry of Health, Ministry of National Security, Ministry of Internal Affairs, and public administration. The EPAs shall initiate the cooperation and organize the training and activities for the people who can become an authorized agent. The environmental violation detected by the authorized agents shall be penalized in accordance with Environmental Protection Law #137/95.

2.3.2 Administrative Framework

The "Local Agenda 21 Prahova" is a vehicle to implement the concept of Sustainable Development at the local level. The purposes of the Local Agenda 21 Prahova are: 1) to make suggestions on a series of actions for sustainable development; and 2) to establish the cooperative relationship between local institutions and organizations or groups that are interested in taking necessary actions.

The "Local Agenda 21" does not simply mean drawing a plan but means talking to people through public consultation, letting people speak through public participation, and identifying local needs (problems and solution). Some of local administrations in Prahova County appear that they are fully aware of the benefits of public participation, and try to include public participation as much as possible in their decision-making process.

The "Local Agenda 21 Prahova" identified the following sectors for which an action should be planned to systematize their voices: local administrations; youth; labor unions; scientists; businesses; women; and agriculturists. Under the Agenda 21 Prahova, local NGOs are anticipated to act as an intermediary for local administrations and local communities, and help building trust between them. Therefore, local government's tie with local NGOs should be further strengthened. Local governments can form a partnership with 3-4 active local NGOs based on their needs and the strengths of local NGOs. There is a plan that each county council will appoint a NGO coordinator in order to facilitate this process. Thus, Prahova County council will have

one in the near future. At the national level, there is a NGO coordinator at the MWFEP (see 1.2.2).

2.3.3 Educational Framework

The gross primary enrollment (% of school-age population) in Romania is 94% (1997). Although there is no data on illiteracy, the illiteracy rate seems to be very low among the population except Gypsy population (1.8% of the total population) in Romania. The survey results also demonstrated that TV and radio are more popular information sources than newspapers. Table H.2.1 shows the number of educational institutions (schools), pupils and teachers in Prahova County. In 1996-1997, there are 17 kindergartners per teacher and 16 students per teacher in Prahova County. It appears that the class room size is compact enough for teachers to manage effectively the outdoor environmental activities like an excursion to the river or the mountain.

2.4 Public Participation in Water Management in Prahova County

2.4.1 Current Conditions at the Romanian Waters Ploiesti Office

The Romanian Waters' task includes public consultation which is required by the Water Law #107/96 (Article 42. 3 and 77). At the Romanian Waters Ploiesti Office, no specific staff is in charge of this task. In reality, public consultation is carried out on an ad hoc basis. When public consultation is carried out, it takes a form of governmental notice (flier) posted at the mayor's office. According to staff of the Romanian Waters, the public is generally passive, or seems to have no concern about water quality. However, there were some occasions in the past that riverside residents noticed the odor of water, and informed the Romanian Waters of it.

In addition to other responsibilities, the Director undertakes the responsibility of media specialist when media contacts the Romanian Waters. The Romanian Waters Ploiesti Office, as an institution, however, has more to do in media relations, and in NGO or other civil society coordination.

The Romanian Waters Ploiesti Office organized an information workshop, "Each household – a step against pollution" in July 1998 assisted by JICA study team. The workshop intended to convey the message that an each household can make a difference in the reduction of water pollution. The Director made a presentation on how wastewater is treated showing the pictures of treatment facilities and how household wastewater adversely affects the water quality. The Director emphasized that household wastewater (especially, used oil from kitchen) consists of 50% of water pollution load in the Prahova River, and consequently pointed out that the efforts at home is indispensable to improve the water quality of the Prahova River. The practical household efforts in prevention were introduced and actually demonstrated at the workshop. There were 59 participants, and 12 different media were present. The article on the workshop appeared in 4 local newspapers. 1 local TV station and 3 radio stations had news on the workshop. Table H.2.2 shows the list of participants to the workshop. This was the first workshop organized by the Romanian Waters Ploiest Office.

Staff of the Romanian Waters Ploiesti Office has attended a few training courses organized by the local NGO.

Due to the recent restructuring, the Romanian Waters Ploiesti Office is facing the lack of human resources as well as financial constraints.

2.4.2 Benefits of Public Participation

As the Romanian Waters Ploiesti Office has occasionally experienced, an information from the public on water conditions helps the Romanian Waters perform its responsibility more effectively. The information voluntarily provided by the public can complement the information regularly collected by the Romanian Waters.

200 point sources exist in the Prahova River. In addition to the point sources, there are non-point sources that consist of 40-50 % of the pollution load in the Prahova River. There were also 17 water pollution accidents in the past (from 1989 to date). 200 point sources are quite a number for the Romanian Waters to keep their eyes on, especially after the restructuring. Also, despite the large pollution load from non-point sources, non-point sources are generally out of reach of the Romanian Waters' regular monitoring activities. Furthermore, riverside residents can notice water pollution accidents earlier than anyone else. Therefore, the systemized public participation in water management can supplement scarce governmental resources on monitoring, inspection and enforcement, which will eventually save governmental costs. This would be especially true when the Romanian Waters continues to carry out the same task with a smaller number of staff. Therefore, the communication between the public and the Romanian Waters should be extended and strengthened in both directions.

Some people may concern about the public's level of understanding the issues. This concern is quite right. Without educating and training the public, the public might neither be a good informant due to their ignorance nor have interests in their own environment. The communication gap between experts and the lay public can only be bridged by a concerted effort of communication. With an increase in the level of environmental awareness through communication, the public may change its own behavior and take preventive measures, and become more responsive in a public consultation process, all of which will produce social benefits. Therefore, the systematic public awareness activities are needed to make the public environmentally literate in addition to environmental education for students at school.

2.5 Proposal for Water Management in Prahova County

2.5.1 General

How can the Romanian Waters reach the public more effectively? What can the Romanian Waters do in order to raise public awareness and to facilitate public participation in water management under the institutional (lack of human resources) and financial constraints? As Section 1.3 "Activities in Prahova County" demonstrates, there have been many initiatives and activities in Prahova County for recent years, most of which were initiated or organized by local NGOs or were the joint efforts between local NGOs and local government. Therefore, local NGOs will be able to contribute more to environmental awareness of the public on water management. Moreover, there are legal bases of NGO participation as an information provider (article 44) or authorized representative (article 79) in the Water Law #107/96. In order to maximize these existing opportunities and to establish a partnership between local NGOs and the Romanian Waters, a constructive approach is recommended. The recommendation is future oriented (the year of 2015) taking account of the possible constraints on staff and financial resources.

2.5.2 Communication Officer

A position of "communication officer" should be created in each office of the Romanian Waters

(except Bucharest headquarters). A communication officer can assist Director in media relations as a media specialist, and can also act as a NGO coordinator to form a stronger relationship with local NGOs. Since all the ministries including the MWFEP now have a NGO coordinator, the position of communication officer at the Romanian Waters reflects the increasing need for NGO coordination. The communication officers at local offices should be systemized and coordinated under the International Relations Department of the Romanian Waters Bucharest Headquarters. It would be ideal that the tasks of a media specialist and an NGO coordinator could be carried out by two staff respectively as both tasks would increase in the future. One communication officer at each local office, however, would be sufficient for the time being considering the fact that Director is generally sharing the task of media specialist and that the Romanian Waters have scarce human resources. Communication officer should be internally appointed, and he or she should have the knowledge of local NGO and media, and a broad understanding of water quality issues.

The responsibility of communication officer is to develop and maintain contact with target groups. Her or his task includes identification of the project that consists of strategies of an annual communication plan, development of a database of key contact, and development of educational kits.

2.5.3 Target Groups of Communication

A good example of the inter-organizational initiatives already exists in Prahova County (see 1.3.2). The target groups of communication should include such social actors.

Communication officers at the Romanian Waters regional offices should strengthen the communication line with the regional EPA, Soil Survey and Agrochemical Office (under the Ministry of Agriculture and Food), Health Directorate (under the Ministry of Health), Culture and Education Department (under the Ministry of National Education), and local public authorities. These target groups can share the information and coordinate public relations to the possible extent.

Communication officer should develop and maintain contact with the external target groups: local NGOs, schools, children's clubs, universities, research institutes, and other civil societies, businesses, and the media. These contacts should be coordinated for public awareness activities.

2.5.4 Methods of Communication

The methods of communication vary depending upon the target groups and the nature of information delivered. For example, the media can reach more people than public meetings. But, public meetings can target more specified population, and has a different touch. The following methods and their combination are frequently used communicative tools at different organizations.

(1) Newsletter, Bulletin, and Journals

(2) Reports, Leaflets, Posters and Fliers

(3) Educational kits (for teachers, general public, etc.)

(4) Database and Internet

(5) Public meetings

(6) Questionnaires

(7) Media (TV, radio, and newspapers)

(8) Video or Photo Exhibitions

(9) Hot Lines (i.e., Blue Hot Lines for water monitoring)

(10) Workshops and Training

2.5.5 How to Reach the General Public

Some information should be addressed on a regular basis rather than an ad hoc basis. The public can be reached indirectly through organized groups such as civil society. The public can also be reached directly through the media. In the water management context of Prahova County, the following methods of communication and their combination would be highly recommended in order to reach the general public.

(1) Reports

Currently, the key data and information on water quality are not provided to the public on a regular basis. For the sake of transparency of information as well as dissemination of information, the "Water Report" on the Prahova River Basin should be prepared on a regular basis (i.e., annually). The Water Report should contain the data on river water quality, underground water quality, pollutant, water usage, and the record of water pollution accidents. The report should be distributed to the general public through local government and civil society.

(2) Exhibitions

The place where people have easy access for free (i.e., main train station, school facility) can be used for the "Water Exhibition." If it is available, museum, gallery, etc. could be used, too. The permanent exhibition is ideal, but exhibitions for a certain period would be also effective. Photos and maps can be used to appeal to the public visually.

(3) Workshops and Training

The strength of the civil society in Prahova County is the existence of 13 environmental NGOs that have considerable experiences on public awareness activities. Some local NGOs have a strong institutional capacity, national and international network, and access to external funding (successful bid in various sources for their projects). Thus, the task of communication officer are to identify the appropriate NGOs for a different level of partnership, and to jointly organize workshops and training courses with the NGOs or to send a lecturer from the Romanian Waters. Because of NGO's ability to obtain an external funding, the Romanian Waters can contract out with local NGOs for the implementation of workshops and training.

Training could be organized for specific target groups: youth, women, environmental journalists, NGOs, civic leaders, community leaders, etc. On this matter, the joint initiative taken by the EAP Ploiesti and the local NGO, Eco-Valahia can be a good example. Under the MWFEP Order #194/96, the EPA Ploiesti, in cooperation with Eco-Valahia, approves authorized agents who took a special training course offered by

Eco-Valahia.

(4) Media

The media has a wide dissemination capacity in a cost-effective manner. The survey results show (see 1.4.3) that the media is the major information sources (90%) for people on the water pollution in Prahova County, and that people need more information for their knowledge and action. Currently, the communication gap between the experts and journalists who cover the environmental issues seems to be very large in Prahova County. This is because the level of environmental knowledge of local journalists is comparable with the layman. The point that the Romanian Waters wanted to convey through the press was frequently missed in the past articles. Therefore, a media specialist can be a sound investment for the Romanian Waters. His or her work would improve the relationship with the media over time, so that it will eventually help to increase environmental knowledge of local journalists. Local environmental journalists would become more comfortable to ask any basic questions to the media specialist.

Among the media, radio is relatively inexpensive comparing with TV and newspapers when putting a public campaign advertisement. Furthermore, although people tend to watch more national and international TV programs than local ones, they listen to local radios. In Prahova County, about one out of six is a radio receiver (see 1.3.4). Therefore, the local radio is the best media option for Prahova County. A radio announcement (30 seconds) on water quality along with the hot line number for further information would be an effective media use. Educational kits (see the next section) can be also requested through the hot line. It would also be beneficial to arrange a newspaper column on water issues on a regular basis in local papers.

(5) Educational Kits

The information through the media appeals to the public's curiosity or concerns, but the information could be transient and may not be substantive. Because the media information is the first effective step to reach the general public, this effort should be fortified with more substantive information for the interested public. Thus, educational materials should be developed for the follow up. The survey results showed that people in Prahova County are willing to act more. Such people may need more comprehensive information on where to contact in different public authorities, on local NGOs that are active on the matter, and on various environmental activities in which the public can voluntarily participate.

Educational kits can also be targeted for specific groups like the youth and teachers. The survey results showed that the youth are more likely to participate in such activities if they are given opportunities. Teachers are very influential upon child behavior and thinking, and they have 3 weeks of environmental education in each semester. Teachers can be very creative in environmental education, and they may need more educational materials for this purpose. In the educational kits, the cause of water pollution, regulations on legal permits, and social responsibility of industries should be explained in a simple language. Furthermore, educational kits can include a map that contains the information on point and non-point sources in the Prahova River where teachers can take students for a site visit. Staff of the Romanian Waters may occasionally visit school classrooms to talk with children about water and the task of the Romanian Waters. Educational kits can be donated for schools, libraries, etc.

(6) Water Month Campaign

The above-mentioned methods will be more effective if combined for a public awareness campaign. For example, the "Water Month" can be organized in a certain month. In the Water Month, there should be exhibitions, radio and/or newspaper advertisement, and workshops as well as posters, fliers, and stickers. Local bus can be used for posters (in the interior of the bus) and message board (in the exterior of the bus) for a mobile advertisement.

2.5.6 Budget

Table II.2.3 outlines the budget for the communication methods identified in 2.5.4. The estimated minimum budget* for electric office equipment per item is presented below.

(1) Copier: $1,200

(2) Computer and printer (except software): $1,500

(3) Video camera: $1,000

(4) VCR: $300

(5) Tape recorder: $150

(6) Slide projector: $2,400

(7) Scanner: $200

* Sources: METRO SUPER MARKET

Not all the above electric items need to be purchased. It depends on the priority of the office. Some items can be rented.

2.5.7 Funding Sources

It is ideal that the Romanian Waters has an annual budget specifically earmarked for public awareness activities. It is important for the Romanian Waters to have a certain budget for this purpose regardless of the budgetary category (general or special budget). As a funding source, the Water Fund should be considered. Article 84 (1) of the Water Law #107/96 reads that for the purpose of participating in the financing of investments for works and measures with a significant contribution to the improvement of the assurance of the water supply sources, to the water quality protection, as well as to the expenditures required for studies and applicable researches in the water field, a special fund, not included in the state budget, called the Water Fund, shall be constituted (see Appendix G for further reference). Therefore, it would be legitimate that the Romanian Waters can utilize the Water Fund for public awareness since the ultimate goal of public awareness is to make the general public to naturally participate in an environmental regulatory system. It will consequently improve and protect water quality.