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Role of Government Environment Policies in  
Water Resources Management

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Water management is not a new problem for decision makers. At any period, local or central governments have dealt with specific uses of water, usually water supply, irrigation, navigation, fishing, etc. But nowadays, the modern challenge has become much more difficult, for different basic reasons:

- economic and social activities are more complex, sophisticated and inter-related;
- urbanization and industrialization have spread on a large scale; even in France which used to have a sound and diversified agricultural tradition;
- old and new technologies can provide as well pollution or clean processes.

Even if geography and climate gifted France with enough surface and ground water, it may happen, sometimes, in some regions, that we meet some problems:

- whether on quantity, with flooding or, on the contrary,

shortage of water;

- whether on quality, with pollution, including accidental ones.

As in every country, one major characteristic of water management in France is that it involves:

- many kinds of uses, activities and operators, coming from the public, semi-public or private sectors;
- several levels of public structures and bodies, acting for cities, local, regional and central governments and administrations.

The situation may be even more complicated in my country, because it is an old one where French people are quite individualist: for example, at the first but the key level of local governments and cities which is in charge of water supply and sewage we still have more than 36,000 local governments, most of them being very, very small. And all governments so far have always failed to reduce this number!

In fact, almost all human activities: economic, social, cultural, and even religious activities have concern about water.

So that water resources management cannot be only the responsibility of the central government, even with the help of local governments. But it is obviously the responsibility of governments to find out and implement the best organization adapted to each specific context, and cleverly balanced to meet contradictory objectives: it must be as simple as possible to be understood by everybody and effectively implemented; it must be stable to be reliable and last enough to be efficient. It must also have flexibility to be adapted in space and time: because, as you all know, water problems may be quite different from one place to another nearby area specially in France where we enjoy diversified geographical and climatic features. Water problems may also change a lot within a short period of time according to the rapid evolution of economic and social uses nowadays.

Anyway, it is the responsibility of the central government to provide the general framework and to impulse the environmental policies which are necessary in three main fields:

- 1) legislation and institutions to organize dialogue and concertation which allow coherent operational actions;
- 2) definition of economic mechanisms in order not only to provide finances, but also to regulate the environmental policies with some kind of self-control, introducing in the system the external costs so that the money cycle be

linked with the water cycle, to achieve step-by-step social and environmental objectives through a quite pragmatic approach;

- 3) technology and research development in the wide field of environment: clean processes, new technologies and, last but not least, human skills improvement.

Our central government gives guidelines and keeps the system and procedures at work under control, like a referee rather than a player. In the other hand, it represents the country in bilateral, European, or multilateral negotiations and agreements which are more and more important in all environmental concerns.

Let me speak now of legislative aspects which are quite important in environmental and water management where everybody's behavior and rights are involved, because water use regulations are closely related to private property rights, specifically those related to land ownership, free enterprise, liberal economic and social activities.

In such a matter, it's necessary to keep in mind that good laws as well as good studies are just pieces of paper whose effectiveness depends on the ways they can be implemented on the spot: we must be modest enough to accept sometimes imperfect but realistic solutions that work and may be more useful than a too

perfect theory.

In France the environmental policies are implemented through four main legislations closely linked between each other, from conception to application and control at local levels, mainly by the central State administration:

- 1) the law on industrial activities related to their environment, which takes care of any kind of pollution: air, water, solid waste, noise, technological risks, etc... through multipurpose authorizations or declarations;
- 2) the laws on nature conservation, concerning land, landscape, forestry, mountains,.... and the quite important tool and procedure of "impact assessment studies";
- 3) the law on solid waste: household urban wastes as well as industrial solid wastes (prevention and recycling, collection, transportation, treatment and recuperation, as often as possible);
- 4) the laws on water; several were passed before 1964, of course, but this last one is the most important for our subject. A new water law (on which I worked a lot

myself) is just going to be discussed in the French Parliament this summer: it should confirm and reinforce the basic framework of 1964's water law....

All these have a few key principles in common, such as:

- 1) prevention is better than punishing or fining or cure;
- 2) polluters must pay;
- 3) pollution must be taken into account as early as possible;
- 4) efficiency required to use in a parallel and coherent manner:
  - reglementation, norms and standards;
  - financial penalties and incentives in order to use the best technologies available;
- 5) in case of mistake or failure, sanctions are unavoidable.

#### The Basic Framework of 1964's Water Law

For the first time in France, this very important law introduced the modern concept of water resources management which

is the subject of our meeting this week.

According to the better knowledge of the water and energy cycle all over the world, water resources were considered as an inter-related whole system within the limits of hydrological river basins, including:

- rainfall water;
- all continental surface waters; all waterways, rivers, canals, springs, lakes, ponds and marshes;
- ground water, renewable or not renewable;
- sea water along the coasts of the country.

Since this time, all the water resources are ruled in France by the same law which takes care at the same time of quantity and quality aspects, considering they are impossible to be separated inside the hydrological basin. This was some kind of a revolution in our old country where people are use to a lack of discipline!

The challenge for the lawmakers in water resources management legislation is to build a core composed of a few simple

but key principles that can be referred to, step by step, in each specific and detailed regulation on main water uses: irrigation, hydro-electric power, etc....

According to this law of 1964, France has been divided into six large hydrographic basins according to our main rivers. At the top of each basin, we created two new specific bodies:

I. First, the Basin Committee which is some kind of a water Parliament in its own area. It is the concertation and dialogue body and the decision-maker in most of the water management problems. Each Basin Committee studies and approves a master plan for water resources management on a long-term period, with intermediate phases, goals and priorities.

Every five years, the Basin Committee votes on a program of coordinated actions, aiming to improve water resources both on quantity or quality aspects.

Its key function is to vote every year two kinds of fees, or charges, collected on any water user of the basin:

- one kind, based on the quantity of water intake during the year;
- the other kind, according to the amount of pollution



which is rejected during the year.

The rates of these two kinds of fees are calculated not only to provide the money to achieve the five years program, but also to put economic operators under a modulated pression. The money collected is afterwards redistributed among the water users themselves according to the specific actions they realize to improve water resources management in the same basin, with quite incentive modulations: subsidies, soft loans..... whether for investments or for operation and maintenance.

II. The second basin institution is the Basin Agency which is the financial and technical tool of the Basin Committee. This basin agency is a public structure and executive body where the private sector as well as the local authorities and the central State administrations are working closely together.

After twenty-five years of experience, these two river basin institutions have given our country pretty good results, even though all problems haven't been solved, of course!

The main reason of this efficiency lies probably in the fact that all water users of any activity accept to pay - sometimes a lot of money - because they have been consulted before, because they can see what it is for and because they get back the money for themselves, a little bit later, inside the river basin itself.

### Conclusion

If our basin institutions are quite involved and efficient in the economic as well as in the technical fields, I want to point out: that all the reglementation and enforcement responsibilities remains in the hands of the central State administration, through its local representatives mainly (the Prefects) who deliver and control, the licenses or declarations which are necessary for water uses with the assistance of competent public technical services.

Our water basin agencies neither realize nor operate nor maintain any equipment related with water uses. The Water Basin Committees and water basin agencies do not assume any activity that was previously assumed by somebody else, neither in the public nor in the private sector: their specific missions are completely new and quite useful!

We consider that in our specific context, these river basin arrangements provide a fair deal and a quite balanced solution: different skilled bodies assume different jobs which have to be closely coordinated at every level.

## **LAWS OF 1964**

### **3 Principles :**

**- Hydrographic Basin**

**- Concertation among Water Users**

**- Financial Solidarity :**

**. Environmental Charges → Agencies**

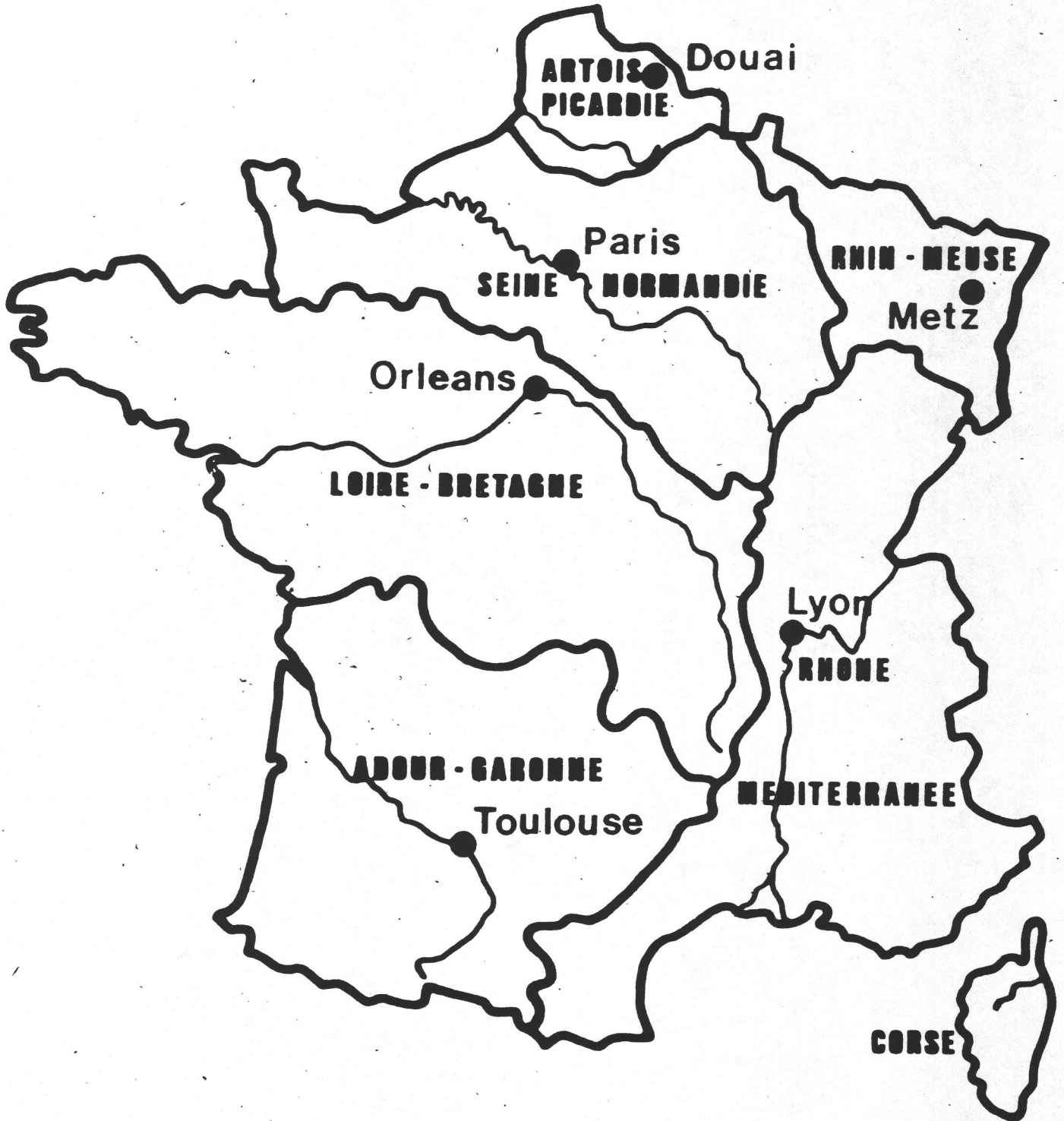
**. Subsidies, Loans → Reducing Pollution**

**POLLUTER-PAYS PRINCIPLE**

## BASIN COMMITTEES

<b>BASIN AGENCIES</b>	<b>ELECTED OFFICIALS</b>	<b>WATER USERS</b>	<b>EXPERTS</b>	<b>CIVIL SERVANTS</b>	<b>TOTAL</b>
<b>ADOUR-GARONNE</b>	<b>30</b>	<b>30</b>	<b>6</b>	<b>18</b>	<b>84</b>
<b>ARTOIS-PICARDIE</b>	<b>25</b>	<b>25</b>	<b>2</b>	<b>14</b>	<b>66</b>
<b>LOIRE-BRETAGNE</b>	<b>42</b>	<b>42</b>	<b>8</b>	<b>22</b>	<b>114</b>
<b>RHIN-MEUSE</b>	<b>22</b>	<b>22</b>	<b>3</b>	<b>14</b>	<b>61</b>
<b>RHONE-MEDITERRANEE - CORSE</b>	<b>40</b>	<b>40</b>	<b>6</b>	<b>21</b>	<b>107</b>
<b>SEINE-NORMANDIE</b>	<b>38</b>	<b>38</b>	<b>7</b>	<b>20</b>	<b>103</b>

# 6 BASIN AGENCIES



## **OBJECTIVES OF AGENCIES**

- Research Actions of Common Interest for the Basin**
- Financing for the Improvement and Increase of Water Resources**
- Collecting Effluent Charges and Water Intake Charges**

## **WHAT DO WE DO FOR QUANTITY ?**

**- Development Schemes insuring efficient Planning**

**- Studies and Works :**

**- Dams**

**- Water Treatment Plants**

**- Network Link-ups**

**- Groundwater Tapping**

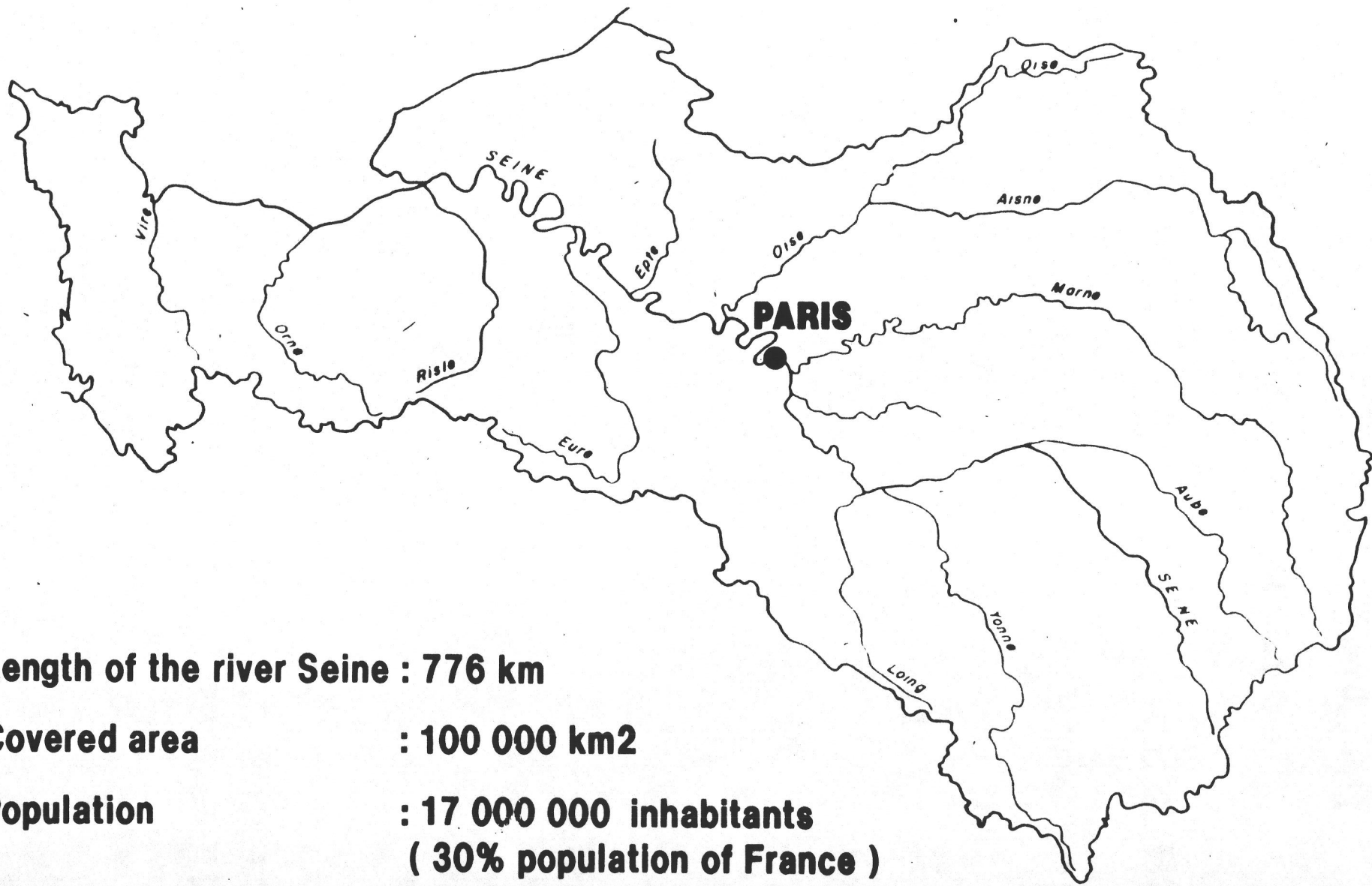
**- Drinking Water Reservoirs**

## **WHAT DO WE DO FOR QUALITY ?**

- Methods for Planning and Programming Water Management  
( Quality Objectives Maps )**
  
- Studies and Works**
  - Wastewater Treatment Plants**
  - Sewage Networks**
  - Independent Draining System**
  - Elimination of Industrial Waste**
  - Prevention of Accidental Pollution**
  - Protection of Wells**
  
- Technical Aid for Wastewater Treatment Plants**



540 km



340 km

17

**Length of the river Seine : 776 km**

**Covered area : 100 000 km<sup>2</sup>**

**Population : 17 000 000 inhabitants  
( 30% population of France )**

**Number of districts : 8692**

# BALANCE SHEET 1990

(MILLION FRANCS)

## RESOURCES :

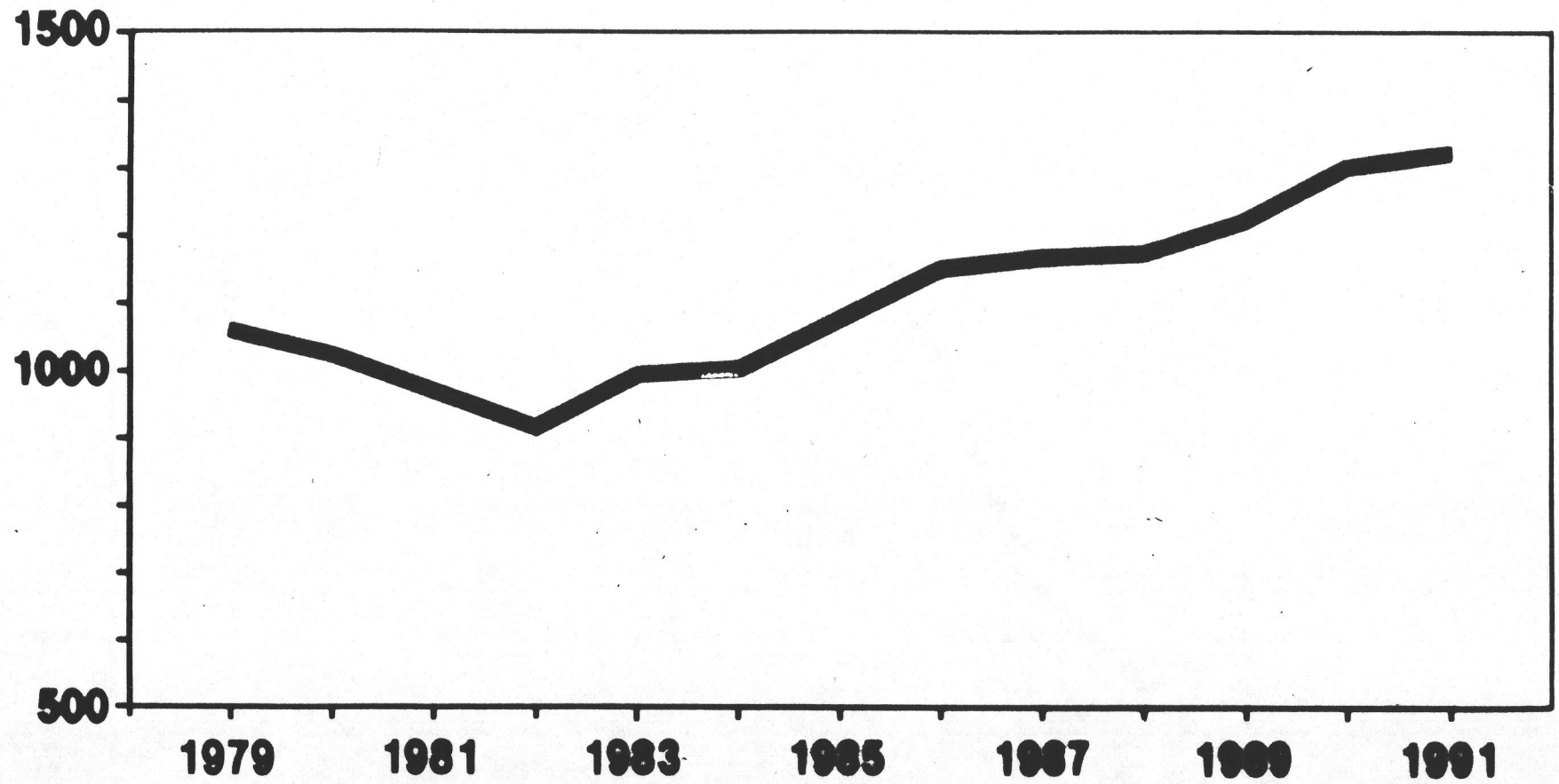
	SEINE-NORMANDIE 1990	FRANCE 1990
EFFLUENT CHARGES	1000	2600
WATER INTAKE CHARGES	260	700
LOAN REPAYMENT	340	900
TOTAL	1600	4200

## EXPENSES :

	SEINE-NORMANDIE 1990
QUALITY	990
QUANTITY	410
BONUS	200
OPERATING COSTS, STUDIES, MEASURES, ...	140
TOTAL	1740

# TOTAL PROCEEDS OF CHARGES

million Francs 1991



# WASTE WATER TREATMENT PLANTS

