

"FINANCING BASIN ORGANIZATIONS"

INTRODUCTION TO THE PROBLEM

As it is already the case in regions of the world with an arid climate, sound management of inland freshwater resources will become a real challenge at the beginning of the next century for economic and social development in most countries on our planet.

Integrated solutions must be found to these problems that already occur or are going to occur fast, to be able to ensure, at the same time:

- * protection against natural flood, drought and erosion hazards,
- * the meeting of sound and rightful requirements of the various categories of users, while remaining consistent with appropriate land use planning,
- * the conservation of resources and natural aquatic media.

This will require **large institutional reforms** that will be useful in settling conflicts of utilization which are bound to arise, and **efforts** for administrative and professional **training**, as well as for a **raising** of the users' and populations' **awareness**.

The setting up of truly **modern information systems** that are indispensable for elaborating water policies and for controlling their efficiency, as recommended by INBO's General Assembly in Morelia (Mexico) in March 1996, implies an appropriate and sustainable organization, investments in monitoring equipment, laboratories, transmission networks, data banks and systems for their processing, interpretation and dissemination, as well as sufficient operational means that will last in the long term.

I) CONSIDERABLE FINANCIAL MEANS MUST BE MOBILIZED

But above all, to make investments in equipment and to ensure their operation and maintenance, huge financial means must be quickly found or created to:

- mobilize, manage and preserve the resources,
- reduce losses and wastage,
- reduce pollution and ensure wastewater treatment and the necessary recycling and reuse,
- make the resources available to meet requirements where they are rightfully expressed in quantity and quality for potable water supply and irrigation of food crops, but also for industrial development, tourism and fish farming production, etc...

The requirements are expressed all over in billions of \$ US and the time limit for implementation is very short : one generation (2025) at the most and important issues will arise more and more often.

II) TRADITIONAL SOLUTIONS ARE LIMITED

In the final analysis, it is clear that, except in some particular cases, the funds required greatly exceed the conventional financing possibilities on **national or territorial public budgets** whose revenue relies on global tax systems.

The **bi or multilateral development aid financing**, is usually composed of loans, mainly soft loans, which will nevertheless have to be reimbursed. It only represents a part which is important, but will be insufficient and it is not realistic to expect a significant increase in the short-term at least, due to the difficult economic situation of many industrialized countries.

Therefore, it is necessary to progressively move towards new ways of meeting the needs.

III) DIFFERENT TYPES OF SPECIFIC FINANCING HAVE ALREADY BEEN SET UP

Water, as "**raw material**", is "**res nullius**" and/or has been considered as a "**common national heritage**" in almost all countries.

Specific financing systems have however been progressively set up in various countries according to these principles :

III.1) PARAFISCAL TAXES, linked to administrative procedures for the authorization of withdrawals, waterfalls exploitation or materials/granules extraction, etc... which depend, in a generic manner, on tax principles of "registration fees" (billing the cost of an administrative deed) or of "Concessions for the use of State property".

These taxes are paid into the general budget of the States or Local Communities.

III.2) FINES, linked to non compliance with a standard or an administrative proviso for a permit or to penal liability in case of accident or exceptional or deliberate pollution. These fines are imposed either by the Administration or, most often, by law courts upon the request of the administration: they are then paid into the General Budget.

In some countries, especially in Central and Eastern Europe, these can be automatic and permanent "fines" inflicted mostly on industries when their polluting discharges exceed maximum thresholds.

They are specifically paid to "National or Regional Environment Funds", which finance activities for improving the standard of living that are not particularly related to water use.

Some analysts consider that this approach creates, in fact, some sort of legal right to pollute and therefore has no incentive effect for improvement, especially when the pollution thresholds are low.

III.3) WATER CHARGES are earmarked parafiscal taxes.

They are specifically levied on water utilization such as raw water withdrawals hydro-electric production, thermal power-stations cooling systems or industry or irrigation, on potable water use and/or wastewater discharges, and their product is entirely reused for investments or for aiding the sound operation of installations aiming at improving the water resource or services.

This may concern :

III.3.a) Either national systems, which transit by "**Special Treasury Accounts** ", whose funds are reallocated, either directly to large projects or programmes defined at central level, or, more often, indirectly by way of decentralized budgets for local administrations or communities.

III.3.b) Or local systems, organized on the **scale of the river basin** in particular. In that case all funds collected for water use and pollution in the basin are reallocated to projects for improving the resource or the uses in the basin itself.

In "operational" systems that exist, the "**Basin Committees**" generally set or propose rates for these water charges, the levy and reallocation of which transiting by "**Financial Basin Agencies** ", whose statute is that of Public Administrative Establishments under State supervision.

The purpose of these water charges is to finance "**Priority Action Programmes** " (**PAP**) that are defined by the Basin Committee - generally for a five-year period - and aim at achieving the objectives of **Masterplans for Water Development and Management** which also rely on other measures, particularly legal or administrative, etc ...

III.4) THE BILLING OF THE COST OF COLLECTIVE SERVICES PROVIDED TO THE USERS. While water as a "raw material" is free, its use implies, in most cases, costs for its availability and development either in investment or in operation and maintenance as indeed in direct costs :

- * intakes, bore holes, extraction from rivers, ...
- * storage, reservoir,
- * transport, pumping, delivery pressure,
- * clarification-purification of potable water or process water,
- * wastewater collection and treatment,
- * maintenance of canals, crossing structures (navigation locks for river transportation, ...)

as well as indirect costs, linked to the overall improvement of the resource which, incidentally, are still, frequently financed out of public funds

either the users have easy access to the resource and individually make the corresponding investment and bear the costs,

or the users have no direct access to the resource and must use "**collective service providers**" - either public or private - that bill the price of their services - according to industrial and commercial practices.

The most frequent cases are:

- collective irrigation of large irrigated areas where the supply of raw water is organized by groups/syndicates/cooperatives of irrigation users or by public or private concession enterprises.

- potable water supply, sanitation and domestic and industrial wastewater treatment, which depend on "water services", that are usually public, very rarely private but that are more and more entrusted by communities to specialized private enterprises by way of delegated management or subcontracting ("affermage", concession, leasing, ...).

- Transportation on waterways and canals for which bed dredging, lock clearance, lock crossing, etc... are generally billed to the carriers in proportion to the tonnage of goods carried or passenger traffic .

These "collective services" recover, more and more, all their investment, rehabilitation, operation and maintenance costs, using most often a billing basis that is proportional to the service provided (consumed m³ for instance), although **subsidy** systems do exist to limit the cost of overall investment or **equalization** between the various categories of users.

What is billed is not the water as such, but the service that makes it available where the user needs it with the required pressure, quantity and quality.

In a general manner, specific financing principles are quite complex and an analysis must be made to understand their specificity and often their complementarity in order to define modern and generally efficient policies for the funding of water.

IV) INCENTIVE OR LAISSER-FAIRE POLICY ?

Sustainable management of freshwater resources is today facing the following main problems:

insufficient solidarity among the users located upstream or downstream of the river basin or for the use of the same aquifer,

wastage, which is undoubtedly the first cause of the difficulties encountered,

pollution, which prevents multi-purpose reuse of the resource.

It is obvious that it is first and foremost irresponsible behaviour, caused mainly by non-awareness of the problems, that must be changed:

Information, awareness campaigns, education and training are obviously necessary but have not been used for a long time and are often under-estimated and thus must be strengthened as a priority,

But, a **financial incentive is also a very efficient means: this is the "user-polluter-pays principle"**. Should you pay more the more you waste and pollute, you will soon take the necessary measures to improve your practices, especially if the community will grant you a "bonus", in the form of a subsidy for good behaviour.

The tariffing of services when proportional to utilization and pollution has also a quick educational effect.

In all cases, there is always somebody who pays somewhere, either:

The taxpayer, who pays his income tax into the general budget,

The offender, who must pay a fine when negligent or when the law, standards and regulations are not complied with,

the user, who buys the services provided, knowing that these services can either be:

direct : the conveyance of potable water to the tap, of raw water to the plant or to the irrigation plot, the connection to the collective sewerage network; etc.

The user pays the price of the water service just as he pays for electricity, telephone, fuel, transport or cleaning...

indirect : the reforestation of the upper river basins, protection against floods, upstream pollution control or the building of a dam-reservoir ... that are necessary and sometimes directly linked to the service provided, the cost of which was often assumed in the past by the community but nowadays, the users are being called upon more and more to bear the cost as a principle of :

- "common cause for basins and aquifers",
- "internalization of external costs" which transit by the charges systems described above (III.3).

V) BEYOND THE PRINCIPLES LAID DOWN, WE ARE FACING REAL PROBLEMS

V.1) THE IMPORTANCE OF REGULATIONS AND STANDARDS

There is a clear need for defining, in each country or even at international level, objectives and rules for everyone to comply with, with realistic and progressive ambitions and delays and the corresponding means for control and enforcement.

This is the case of international agreements or European regulations, for example.

It is indispensable to:

- **direct the efforts** requested to the users,
- **to have equity**, so that all the actors concerned know that what is expected from them is also requested of the others in an equivalent situation: equality of the citizens with regards to the law or public services - competition equality between enterprises or producers (irrigation users, fish farmers...).

Thus the financial approach must be carried out within a clear and equitable legal framework that is strictly enforced.

V.2) THE TRANSPARENCY CONSTRAINT. It is also indispensable to define "a regulation for obtaining information" on :

- > the state of the resource in terms of quantity and quality,
- > the utilization and pollution of each actor,
- > the black spots and difficulties,

- > the objectives to be achieved (regulations, standards, masterplans ...),
- > costs and funding, etc...
- > service prices and the operations they cover.

A Basin Committee in particular, can only play its role with full responsibility if it has permanent access to understandable information, necessary for real negotiation with partners and objective decision-making.

Everyone must know what he is paying for and what is being done with his money : that is the meaning of " transparency ".

V.3) PAYMENT OF A SERVICE, SOLIDARITY OR PENALTY ?

These are, as shown above, the three concepts which widely prevail nowadays, although a regulation approach within the framework of an ultra-liberal economy using the private water market is put forward by some circles as a secondary consideration.

***V.3.1) Payment of services provided.* The industrial and commercial management of collective water services** seems today to be unavoidable to meet the needs. **It consists in having the user/consumer bear all the direct costs of the service provided** (investment and operation), using various **tariffing** methods (agreed price, proportionality, quantitative, geographic or social equalization, etc...), with or without external **equalizing devices** (subsidies or public communities bearing the costs of infrastructures, administrative costs, etc...).

It does not seem that other alternatives can be found to meet the sector requirements and the rightful expectations of the consumers, especially as regards the improvement of the service provided from a quality/reliability viewpoint.

Experience has shown that modern services can be provided at low or reasonable cost: for instance, the price of a cubic meter of potable water, including sanitation and treatment, water charges and taxes, corresponds in Western Europe to the price of 2.5 liters of super-petrol, a pack of cigarettes or of a "soft drink" in a bar...

In fact, integrated equalization exists in some countries, especially for municipal services (potable water + sanitation + electricity + town heating + transportation ...) through the intervening of polyvalent service providers

The main traditional objection is that some low-income categories of the population in underprivileged urban districts or in isolated villages are insolvent to have access to potable water, or generally speaking small farmers to have collective access to irrigation water.

It must be remembered that:

- **on one hand**, the practice of systematically paying water services was only introduced in the industrialized countries twenty years ago and that it has been slow to be implemented: a progressive implementation should be the rule everywhere,

- **on the other hand**, other public services are already paid such as electricity and telephone and that, besides the noticeable improvement in their standard of living and health (water-borne diseases), the time gained by having water at home or nearby, and gains in agricultural productivity with irrigation, these categories have either already

resorted to costly individual or semi-collective substitute means or buy water, at a high price, proportionally speaking, from suppliers/carriers who deliver it in the districts, under hygienic conditions that are often at the limit of acceptability.

Water free of charge is not in reality the most current occurrence, it is even exceptional, if all elements of the analysis are examined.

V.3.2) Solidarity

Who must pay the **indirect costs**, investment costs for priority equipment or infrastructures, administrative costs, monitoring networks, studies and research, etc...when they are not covered by governmental services out of tax yields?

We know today that a small levy (# 15 %) as compared to the direct cost of water services, can mobilize huge amounts to implement such actions by means of allocated water charges (see above definition) which in addition, help in reducing investments.

Apart from exceptional cases where an organization entrusted with global development would exist which could pay all operations of water sale, such systems as "**Financial Basin or Water Agencies, real mutual-aid funds**" on a national or basin scale, should be set up to levy taxes, negotiated and even accepted by the users concerned, and whose rate would be calculated to cover the expenses required for multiannual Priority Action Programmes (PAP).

In this case, there is a fair return, or in any case a benefit for the parties paying water charges: for instance funds are levied in the basin to help build works in the basin or even at the users-payers' homes..., therefore there is a direct cause and effect relationship between payment and the improvement it provides.

V.3.3) Financial penalties

Further to the payment of the direct and indirect costs of water management and the legal prosecution of infringement because of non compliance with regulations or accidents, can a tax on use or pollution be levied, in addition to the price of the services provided to the users, applicable by virtue of protection of the "water heritage" but this time, without any direct technical purpose even though the users comply with standards and efficiently use the best available techniques?

For it is true that those taxes do not lead to zero pollution which, in fact, does not exist as such, as there is always a residual degradation of the natural environment linked to the fact that the installations yield is never 100 %.

To whom should such a tax be paid, as it would be indeed a patrimony-intended "tax on use and pollution" and for which social use?

This is the limit of the application of the "user-polluter-pays principle" with its consequences: must new Priority Action Programmes continue indefinitely, and with what purpose when their initial objectives have been reached?

Although such a problem does not yet occur in the countries that are just starting a new water policy, it must be the subject of reflection in more advanced countries where such policies have been implemented for more than a generation, when the main necessary work has been carried out!

It is true that there will always be a heritage to protect, to reconstitute and develop and that progress in know-how and technologies draws progressively back the limits for possible improvements.

V.4) A MEDIUM-TERM VISION

Indeed, the setting up of necessary means and compulsory infrastructures always takes time, due to the delays necessary for:

- * raising awareness of the public and users,
- * implementing administrative reforms to set up a useful legal framework,
- * studying projects and implementing them on-site.

Finally, the obvious limitation of the funds that can be mobilized requires long-term and multi-annual planning.

Water policy is highly capitalistic and can only be designed for a 10 to 30-year period depending on the situation at the origin and on acceptable efforts.

Then, the following must be carried out:

- + choice of accessible objectives and definition of priorities according to available means,
- + design of a progressive and realistic "strengthening", of financial instruments in particular:
 - that will at first only deal with parameters that cause the most serious disorders for which technical solutions, easy to implement, do exist,
 - by selecting the "black spots" that can be easily identified,
 - that will firstly involve the biggest users and main polluters (Electricity companies, large developers, large industries, towns), rather than spreading its action to involve too soon villages and small irrigation users for instance, with many difficulties and low financial yield.

V.5) THE ACTION LIMITS

A certain logic of the search for "social peace", of limiting administrative costs and tax efficiency can be linked with that of technical usefulness.

Since it is impossible to achieve everything at the same time, would it not be better to identify the most "profitable" actions to be carried out to obtain quick results and start with those that involve the biggest consumers and the main point sources of pollution, as the people responsible for the latter can quickly raise the necessary technical and financial means?

These instruments would then only be used when minimum thresholds, that can be progressively lowered, are reached.

But this "realistic" approach, if not clearly presented as temporary at the start of the reform process, creates problems regarding:

- the disparity of citizens with regard to regulations (Why us and not all the others?),
- the financing of projects for those who cannot contribute to the funding or whose contribution is lower than the requirements in return (equity between categories of users and "fair return" of the funding brought?),
- the amount represented by "small" consumption and pollution and "non point source pollution" as compared to the "big consumers/polluters" .., which in some cases, can lead to uncontrollable situations that could become catastrophic.

In addition, the notion of thresholds under which there would be neither financial contribution nor priority action would confirm the idea that wastage or pollution can be acceptable "within limits", which could be disastrous in the long term.

V.6) STANDARD ESTIMATE OR REAL COST

The setting up of a financing system broaches the question of the basis upon which the contribution of the people assessed for payment is calculated and the available means for estimating and calculating it the most fairly.

This is the problem of measurement and analysis systems, of their organization, of their cost and reliability.

In the first phase, a system of standard estimation per industrial sector or population equivalent may be very efficient and limit the necessary administrative means.

The transit to a real cost estimate can be then progressively envisaged, starting with the cases for which a standard estimate is problematic or those for which the measure would be of interest.

V.7) CENTRALIZED OR LOCAL MANAGEMENT

The principle of local management decentralized at the basin level is attractive and systems of this kind operate efficiently when set up.

In this case, the funds mobilized in the basin, based on the rates retained by the Basin Committee (with the consent of the users), remain in the basin to implement actions and investments for the benefit of the "basin community".

There is transparency and direct correlation between a real programme and the funds brought in. This approach, which is based on a system of consensus, is making people highly responsible and is educational.

"Should you want more results, you must pay more and if you pay less you will have fewer results... it is your decision! "

Centralized management can be imposed by constitutional rule, especially when it is necessary to have parafiscal taxes defined by National Parliaments: it enables the funding of inter-basin actions and of a possible equalization between "rich" and "poor" basins.

There can be "on-line losses" for the users who would be left unsure that all the amounts they would pay come back to them completely, which can lead to strong reticence.

VI) CONCLUSION

The financing issue is obviously essential.

Solutions have been efficiently applied and have proven themselves for several years or are being implemented in some countries and have diverse possibilities.

It is important to know and analyze their adaptability to each particular field situation.

INBO would benefit from gathering information on these solutions and discussing all their aspects in order to help the countries that wish to start the necessary reforms.