Public Participation in River Basin Management Planning in Italy

An unconventional marriage of top-down planning and corporative politics

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1 Introduction to Italy and general history

1.1 Country profile

Italy is located in southern Europe. It is bound by Tyrrhenian and Ligurian Seas to the west, France to the northwest, Switzerland and Austria to the north, Slovenia to the northeast, the Adriatic Sea to the east as well as the Ionian and Mediterranean Seas to the south. The territory includes the mainland and the islands of Sardinia and Sicily as well as some other smaller islands. The country is predominantly mountainous with plains accounting for less than 33% of the land area.

Table 1 - Altitude distribution of Italian territory

Mountain	35.2%
Hill	41.6%
Plain	23.2%

Fig. 1 – Political map of Italy

1.2 Geography, climate and hydrology

1.2.1 Geography

The two principal mountain ranges are:

- the Alps which are divided into the three ranges of the Western Alps, the Central Alps and the Eastern Alps
- the Apennines which is divided into the Northern or Ligurian Apennines and the Tuscan-Emilian Apennines. Except for the Po Plain, the plains of Italy are small in land area and numbers.

For its lengthened shape and the disposition of the reliefs, Italy has generally short rivers. Largest rivers are all flowing in the north and are tributary of the Adriatic sea: Po, (652 km), and his principal tributary, Adda, Oglio, Tanaro, Ticino; Adige (410 km); the Venetian rivers, Brenta. In the Tyrrhenian versant the most important watercourses are Tiber (405 km), Arno (241 km), and many smaller ones: Volturno, Ombrone, Liri-Garigliano among others. Rivers flowing to the Ionic sea and those of the islands are much smaller.
The hydrographical regimen of the alpine rivers feeds from glaciers or from an extended snowy presence, it is characterized from summery floods and winter low flows. Regimen of the prealpine rivers and the northern Appenninno it depends instead on rains, therefore it introduces spring and autumnal floods and low flows in the other seasons.
All rivers along the peninsula are as well characterized by winter floods, in concomitance with rains, and for extended sand banks in the others periods. Only the greater rivers are in minimal part, usable which waterways and almost absent are the ship canals.
The picture should be completed, particularly in the North, by a vast network of artificial rivers and canals, resulting from drainage and irrigation works realized from the Middle Age.
The biggest lakes are all located in the pre-alpine zone and have morainic origin: Garda, Maggiore, Como, Iseo, Lugano, Orta, Idro. Some smaller ones, mainly of volcanic origin, can be found in Central and Southern Regions.

1.2.2 Climate

Italy has a temperate climate with a variety of regional characteristics. The Alps region has harsh winters and moderately warm summers with abundant rainfall. The Po Plain has harsh winters with long periods of subfreezing temperatures and warm sultry summers, with rainfall more common in winter. The Alpennine region has extremely mild winters and hot summers. Italy is also subject to fierce seasonal winds. Average temperature ranges in Rome are from 4 to 11 °C in January to 20 to 30 °C in July.

1.2.4 Water Balance

Water in Italy is relatively abundant, since yearly net average rainfall per head is around 5.200 m^3, corresponding to a mean per-capita availability of 2.700 m^3.
Given the irregular outflow paths and the technical and natural constraints, true availability is far

lower: 2.000 m^3 if we consider potentially usable resources; and only 928 m^3 if we consider just the amount of water that can actually be used, given the available infrastructure and storage capacity. The mountainous nature of the largest part of the Italian territory reduces the scope and technical feasibility of internal water transfers, forcing thereby many Regions to rely on their own resources only, unless very high costs are incurred into.
Table 1 provides most recent estimates concerning available resources. There are important differences throughout the Country. Northern Italy, thanks to the Alps and to the natural storage capacity provided by glaciers and lakes, enjoys regular and abundant per-capita endowment. In central and Southern Italy and in the islands available resources are much lower, seasonal variability of runoffs is at the highest. This is shown in table 2.

Table 2 - Available water resources in Italy (km^3)

	Estimate 1970	Estimate 1989
Rainfall (A)	296	296
Evaporation (B)	132	132
Losses (C)	9	9
Total outflow (A-(B+C))	155	155
Potentially usable surface resources (D)	110	110
Underground resources (E)	13	12
Existing reservoirs	7,7	8,4
Reservoirs in construction	2	2
Other potential reservoirs	6,5	6,5
Usable surface resources (F)	42	40
Total available resources (E+F)	55	52

Source: Irsa-CNR (1999)

Table 3 - Regional variations of water resources availability in Italy (m^3/year per-capita)

Hydrologic area	Rainfall	Available resources			Storage capacity
		Surface	Underground	Total	
Po Basin	4.654	1.045	290	1.334	142
North East	6.693	1.707	268	1.975	167
Liguria	3.557	207	171	377	16
Romagna-Marche	6.126	294	183	478	63
Toscana	5.853	152	123	275	39
Lazio-Umbria	4.173	242	195	437	78
Abruzzo-Molise	7.728	1.594	161	1.755	392
Puglia	3.429	136	84	220	103
Campania	4.290	229	172	400	14
Calabria-Lucania	9.110	954	226	1.180	429
Sicilia	3.865	152	237	388	148
Sardegna	11.854	1.161	137	1.298	885
Italy	5.273	705	216	921	150

Source: Irsa-CNR (1999)

While the outflow from the Alpine rivers is well distributed during the year (9%, 24%, 41% and 26% respectively for winter, spring, summer and autumn), in the rest of the Country a share between 60 and 90% of total outflow is concentrated in winter and spring. The National Hydrographic Service has issued maps showing that a large part of the South suffers from consecutive periods without rain of 100-150 days.
While these patterns of distribution heavily impact on water resources availability, they also pose dramatic problems of flood control.

Thus the relative abundancy of water resources is more apparent than real, since the Italian water system is capable of using just a small fraction of potential outflow. This is in part a result of natural patterns of seasonal and regional water distribution, but in part depends on the size and the efficiency of water facilities and the inefficiency of water use patterns.
In this picture, a decisive importance is held by underground resources, that account for 25% of usable resources on average, and nearly 50% in some Regions. Nonetheless, knowledge on this crucial resource is far from accurate, either from the quantitative or the qualitative point of view.
From the qualitative point of view, the situation is again very differentiated throughout the country. Surface water quality is almost never terrible, but also almost never exceptionally good.
The largest rivers are normally in fair conditions, leaving apart some definite reaches. However, their quality worsens notably during the dry season.
A great number of "black spots", nonetheless, contributes to the general deterioration of river quality. These situations arise in particular when medium or small streams drain areas with high urban and industrial concentration. Among the most critical cases we can mention the river Lambro – draining the area of Milano, still now very poorly equipped with sewage treatment capacity – the lagoon of Venice, the reaches of Po, Arno and Tevere downstream the cities of Torino, Firenze and Roma. The presence of industrial districts with heavy environmental impact – e.g. tanning and textile industry in the North, food industry in the South – are also an important cause of severe pollution.
Given the geographic structure of the country, many areas are vulnerable to nutrient pollution, in particular large lakes and the upper Adriatic Sea, to which flow the rivers draining the most densely populated and industrialized part of the Country.
From 1976 on, a massive effort has been made in order to provide sewage treatment equipment and address water pollution; this effort, though considerable, is largely incomplete. While an estimated 1/3 of the pollution load is still not treated, water policy so far has been able to block, but always never to reverse, the trends of worsening river quality. Some remarkable results have been obtained with respect to lakes and even to the Adriatic Sea. In this last case, for example, end-of-pipe treatment and pollution prevention measures have reduced the nutrient load discharged into the Sea by 90%.
Nonetheless, biological and chemical quality of largest rivers does not show signs of improvement; while the number of "unpolluted" sites has been dramatically decreasing, thus showing that water pollution cannot be considered as regarding only highly urbanized areas.
Water tables used to be of excellent quality until the recent past; this is also one of the reasons why the largest part of the public supply systems rely on the underground, with a very local management of the water service. Nonetheless, in the last 20 years, the quality of underground resources has been rapidly deteriorating in many parts of the country.
Clear signs of overexploitation have been repeatedly noticed in the lower reaches of the Po plains and in the surroundings of Venice: excess abstractions – especially for industrial uses – together with the extraction of gas and oil are the most likely causes. In other regions – and especially in the Southern part of Puglia, or in the coastal plains of Campania, Calabria and Sardegna – the problem is basically salt intrusion. In these cases, the overabstraction can be attributed to private abstractions for agriculture and, in a more localized way, to public water supplies, even if these are gradually

being re-oriented on surface resources.
From the qualitative point of view, in the lack of a complete and general report, we must rely on spot observations. According to this data, the situation of the largest part of the Italian plain lands is now very alarming. Nitrate concentrations above 50 mg/l (the limit for the destination to public supply according to the European Directives) are now commonly recorded in a large number of cases, with particular frequency in the coastal plains, along the basin of the Tevere and above all in the Po basin: in this last area, which is one of the most populated and intensely developed of the Country, the most vulnerable water tables are located unfortunately in the upper reaches of the plain, where recharge occurs.
Around the areas where intensive cultivation is practiced, heavy concentration of pesticides have also repeatedly been detected, with peaks around the beginning of the 90s. Still now, some million people in Lombardia and Veneto receive a water supply that deviates from the legislative standards.
The water table also suffers from bacteric and heavy metals pollution, mainly due to landfills and abandoned industrial sites, but also to direct discharge – now abandoned and forbidden almost everywhere – and to the use of polluted fertilizers, like compost and sewage sludge.

1.2.5 Water use

The relatively high endowment in terms of water resources is corresponded by a relatively high per-capita water use. Table 4 provides a general picture of all off stream uses, broken down by territorial areas and use.

Table 4 – Water abstractions in Italy (hm^3/year)

Area	Civil	Industrial	Irrigation	Energy	Total
NorthWest	2.268	3.520	8.193	1.863	15.884
NorthEast	1.453	1.648	5.277	2.538	10.915
Center	1.618	1.482	970	72	4.142
South	1.803	879	3.506	36	6.223
Islands	798	457	2.191	-	3.447
Italy	7.940	7.986	20.136	4.509	40.571

Note: Energy column includes only the use of freshwater for thermoelectric plant cooling, and NOT hydropower; the largest number of thermo-power plants uses sea water.

Source: Irsa-CNR, 1999

Northern Italy alone accounts for nearly 70% of total water consumption. Irrigation represents a half of the total; yet this figure is much higher in Southern Italy (56%) and especially in the islands (64%).
Despite the high degree of uncertainty, these figures represent quite well the basic issues of Italian water policy.
First of all, it is apparent that irrigarion represents by large the most important water use, accointing alone for nearly 60% of the total. Most of this water comes from direct abstractions from surface waters and reservoirs, with only 10% (estimated) coming from underground water.
Second, there is also an evident correlation between regional patterns of water use and availability. The North consumes most of the water, but it is also much richer in terms of available resources.
Civil uses imply a per-capita consumption of around 200 l/inh/day: quite high compared to European average, yet still insufficient to meet demand. According to the last available survey on a

national base made in 1987, apparently 70% of population suffered from supply restrictions in Southern Italy.
Industrial uses are estimated according to average consumption indexes calculated in the 70s for each sectoral branch, and never updated since then. Demand for cooling is derived from the updated news released by Enel with respect to the total thermo-power capacity located in the interior and still not using closed-cycle cooling techniques. It seems likely that these figures are overestimated, particularly because many water-intensive industries have developed reuse techniques either for cooling or for process water; this last evolution is mainly linked to the rapid growth of environmental requirements for effluents.
Civil uses are basically relying on underground water. This is particularly true in the North, where underground and springs account for roughly 90% of household supply – even if important cities like Genova, Torino and Bologna, and the whole Romagna, are supplied with surface water. On the other side in Southern Italy and especially in the Islands water supplies are obtained for 15-25% from surface resources, reservoirs and transfers. Whole provinces rely on upstream reservoirs for the entire supply.
The water table also represents the main source of supply for industrial uses, especially in the North, in general with direct private abstractions. Industrial use of surface waters occurs only for cooling purposes.
Surface waters in the North are thus used essentially for irrigation, in general after a massive development in the mountain reaches of river basins for hydropower generation. It is believed that every available site has been exploited now, and virtually no possibilities have remained left for a further expansion of hydropower, leaving apart some potential for microhydro through small fluent-water plants.
The hydropower network – made out of some hundreds of reservoirs, interbasin transfers and by-passes, downstream transfers the water to downstream reservoirs intensely used for supplying the irrigation system.
Patterns of generation of pollution loads are, once again, highly differentiated throughout the Country. The Italian population is far less urbanized than in other Countries. There are almost 8,000 municipalities, for an average size of approximately 6,000 inhabitants. Many municipalities, especially in rural areas, are further composed by a number of centers and dispersed dwellings: this helps to explain the high fragmentation of sewage collection, as well as water supply networks (there are nearly 13,000 separate networks, 10,000 of which are equipped with sewage treatment installations..
This data perhaps over-estimates the degree of fragmentation, since 25% of population lives in the 46 Comuni with more than 100,000 inhabitants and nearly 70% in the 2,100 centres or more than 10,000 inhabitants.
The relevant information to be retained is, in any case, the relatively low concentration of population in great metropolitan areas and the great number of small and medium towns, with a tradition of autonomy and self-government that dates back to the Middle Age (Italian unification as a nation dates just from 1861 to 1918).
Around urban areas, the process of rapid industrialization and economic growth undergone in the past 50 years has left an inheritance of almost chaotic and poorly planned urban development. Especially in the last 30 years, this process has been characterized by very limited centralization and polarization.
The model of “industrial districts”, very typical of Italian industrial pattern of development, is widely diffused in the North as well as in Central and increasingly Southern Italy. It is characterized by high concentrations of quite specialized industrial activities, located in particular areas, often independently from “central” urban poles and networks.
This pattern of development explains the very dispersed model of urban settlement and the low level of polarization of industrial activities (urban sprawl), causing evident difficulties to infrastructural network planning, and sewerage networks among others. In fact the whole Po

lowlands and all the most important side valleys can be considered as a single, large semi-urbanized area. Much the same happens along rivers such as Arno, Tevere and along the coast.
In the South, the largest towns are usually located around the coast, and their pollution load is generally discharged into the sea. This has obvious repercussions on bathing water quality; even the primary sector can be nonetheless affected, especially for what concerns fish farming and shellfisheries
Livestock farming, though diffused in the whole country, is as well very concentrated. Lombardia has 24% of cattle and 38% of pigs, concentrated in 2-3 provinces. Veneto and Emilia Romagna have the largest share of poultry.
On the other side, a relevant amount of diffused pollution should be accounted for. This is not related only to agriculture. Small urban centers and isolated fractions – often constrained by orography – discharging into small watercourses; high quantity of small industrial activities, sprawled around in the territory and relying on household wastewater collection network or discharging directly; soil contamination due to landfills and abandoned industrial sites; and finally rainwater contamination are among the main sources of diffused pollution, that the characters of urban development in Italy make more severe than elsewhere.

1.3 Socio-economic-political context

The principal ethnic majority are the Italians who account for 99% of the population and are an ethnic amalgamation of Lombard and Goths from the north, Greeks, Spaniards and Saracens from Sicily, Latins in and around Rome, Etruscans and others from Central Italy. Other ethnic minorities include the German speaking population of Bolzano, Tyroleans, Greeks, Albanians, Slovenes and a small number of French speakers.
Mostly Christians with 83% of the population Roman Catholic while there are also Protestant minorities. Other religious minorities include Jews and Muslims.
The official language is Italian which is spoken by 94% of the population. Each region has its own dialect and other minority languages include Sardinian, Rhaetian, German and French.

Tab.5 – Some background figures from Italy (2001)

Population	57.844.017
Female	29.749.160
Male	28.094.857
Density (ab./km^2)	189,1
Gross National Product	1.216.694 (10^6 euro)
Public Debt	109,8 % of GNP
Imports	324.478 (10^6 euro)
Exports	343.975 (10^6 euro)
Economically Active Population	21.514.000 or 41.5% of total population
Unemployed	9.5%

1.4 River Basin Management in Italy

1.4.1 History of River Basin Management: overview

River basin management has been characterized by a fragmentary evolution in the last century, that only in recent times (1989) has reached a comprehensive and integrated approach. Until the 70s, Italian water policy has been characterized by a piecemeal and case-by-case approach; as far as new issues of general interest broke out, these created the occasion for public powers to intervene (mostly State until the institution of Regions in the 70s). The legislative evolution has provided frameworks for dealing with emerging issues, usually in a sectoral way, very often pushed by emergencies.

Thus the earliest developments concern:

- the appropriation of soil in the river domain and public works starting from late XIX century
- the development of "large water uses" for hydropower generation and irrigation and the need to define a framework for settling disputes "in the general interest" ('20s – '30s)
- protection of soil with particular reference to uphill forestry management ('20s – '30s)
- organization of public works and their coordination at the basin level for issues concerning flood protection ('50s)
- meeting water demand after the postwar economic boom and the related massive development of urban centers ('60s)

The creation of Regions in the '70s coincide with the appearance of water quality as a major issue for water policy. At the same time, water uses reach a threshold that makes traditional "extensive" models of water administration less and less practicable. "Water plans", either intended as policy documents for governing water allocation, public works in the water domain or coordination of actions aimed at improving water quality, gain importance. On the other hand, planning efforts have to face the dramatic force of emergencies, above all concerning soil protection and flood defense, but also all other aspects of water management. This means that most "concrete" water policy decisions (including the allocation of resources and money) are still captured for the greatest part by the necessity to cope with emergencies, and these of course subtract resources to the more coordinated actions that result from plans.

In both of the previous phases, water policies represent a very close domain, with a substantial involvement of public powers and a systematic capture in favour of large and concentrated interests (Isenburg, 1986). The framework for water policymaking is hierarchical, with a strong dominance of administrative decision, supply-side approach and public spending, and a comparatively low importance of users and stakeholders, not only in the dcisionmaking, but also for what concerns responsibility and financial liability.

This innovation in both institutional actors and policy instruments, on the other hand, was perceived as insufficient in order to face with the increasing challenges arising both on the legislative side (especially due to the input from European directives) and on the growing complexity and conflictualiy of the water policy arena.

The comprehensive reform started in 1989, and still in implementation, aims at a more comprehensive way to deal with water-related issues. Its pillars are represented by:

- a systematic and integrated approach to water policy based on the concept of IRBM
- creation of dedicated agencies for pollution control, environmental policy administration and enforcement
- more responsibility on users for what concerns financial costs of water policies
- privatisation and liberalization of water services

The reform is clearly coherent and anticipatory with many basic statements that would be later on generalized by the WFD. On the other hand, this is only partially true: first because the reform is still in the implementation phase and many years will be required for transferring it from paper into real things; second, because some important aspects are still missing: the most important one, for the sake of the present study, is in fact public participation. As a matter of fact, water policy continues still now to be described in legal as well as planning document as a top-down administrative exercise, with little or no explicit requirement for public participation and involvement of stakeholders in the policy process.

1.4.2 River Basin Management in Italy: legal and institutional background

The first technical structures of Public Works are builded in the post-unification period (1870-1920) and the water right founds a new structure. In this period the Italian territory is signed by the construction of the first hydraulic works for irrigation and hydroelectic systems and by the first industrial evolution.
Between the years 1920 and 1940, Italy has acquired the institutional framework for water rights that is fundamentally still in use, nowadays. The key piece of legislation of that period is **T.U. 1775/1933** (Water licenses and hydropower), defining the requirements for water use licenses and the administrative procedures to be followed for issuing and enforcing them.

Innovations in the post Second World War (1945 – 1970) can be basically understood as an attempt to develop an approach to sectoral planning (waterworks, flood protection) aimed at providing a response to the dramatic changes occurring in economic, urban and social structure of the Country triggered by the post war economic boom. The main developments can be summarized as follows

- Creation of agencies for the management of specific issues (e.g. *Magistrato alle Acque*)
- Institution of Hydraulic Works National Plans (e.g. *PRGA*) aimed at guaranteeing water supplies to
- Progressive institutionalization of several social interests
  → Water Suppliers increasingly organized as publicly-owned municipal or intermunicipal companies
  → Electric power generation and distribution nationalized through the creation of Enel (National Energy Company)
  → Irrigation and drainage of soil continue to be provided by landuser associations, that acquire public status and are increasingly financed by public transfers.

In the seventies, with the institution of *Regioni* (Regional Administrations), many competences in the water sector have been transferred to the new level of government, while most important ones remained with the Central Government. Table 7 shows the allocation of main functions during that period; as a result, water management suffered from poor coordination and overlap of responsibilities.

Tab. 7 – Competences in RBM of different territorial layers in the seventies.

Institutional level	RBM competencies
National	• Framework legislation • Large water derivation authorization (>100 l/s) • National Restoration Plan: instrument for financing the water systems
Regional	• Small water derivation authorization • Waterworks planning (except large water transportation systems and hydraulic works in South Italy) • Integral drainage and Irrigation Boards control • Water Quality planning (L. 319/76, Merli law)

The most important achievement is nonetheless the introduction of the first comprehensive legislation aiming at improving water quality and regulating pollution. Law 319/76 started a massive development of sewage collection and treatment works, under the direction of Water quality plans issued and financed by Regions.

The process of development of public rights on water resources has witnessed a substantial acceleration in the last 2 decades, in particular due to the increased role of the EU as a driver of environmental policy. In fact, the largest part of environmental legislation in Italy can be regarded as a consequence of the implementation of European Directives.

A comprehensive reform of the whole water management system has been occurring in the last decade of 20th century. Its most important elements can be summarized as follows:

- Water Resources and Soil Conservation Act (L. 183/1989), aimed at the creation of a system of planning in the water domain inspired to the concept of IRBM. According to the law, each watershed should have been provided a "basin plan" intended as a superior-ranking system of guidelines for urban development, land use, water resources use and water quality.
- Water Services Management Act (L. 36/1994, Galli Act), aimed at a comprehensive restructuring of the water supply and sanitation sectors. The main keywords: concentration (from 13,000 to 90 management units); full-cost recovery; integration of water services operation with asset management and development
- Water Quality Management Framework Act (D.Lgs. 152/1999), implementing the Wastewater and Nitrates Directives and anticipating most of the requirements of the WFD.
- A more general innovation concerns the completion of the process of decentralization starting in the 70s. Constitutional reforms passed in the last 90s empower fully Regions in a wide number of matters, including water policy, with the definitive retirement of Central State; the latter will only maintain general supervisory powers and frame legislation.

L. 183/89 (Water Resources and Soil Conservation Act) is designed to secure coordination of the different sectoral policies for the water cycle, soil conservation, water pollution abatement and protection operations, use and management of water resources for the purposes of rational economic and social development, and protection of the associated environmental aspects. To achieve these objectives, the law assigns duties to all the competent authorities dealing with land use and water management, namely central government, the regional, provincial and municipal administrations, the mountain community administration, the reclamation and irrigation consortia, including the

mountain watershed consortia. The real institutional innovation is represented by the formation of the watershed authorities, which have as their geographical reference framework the river basin or watershed, a division that supersedes the earlier regional and sub-regional administration boundaries. The authorities can be separated into three different levels of representation: watershed of national, interregional and regional concern. The operative instrument for attaining the objectives identified by the law is the watershed plan, which serves as an area plan for the sector. It represents the means of collecting information, and defining the legislative and technical-operational aspects to be used in the preparation of the programmes and regulations for the conservation, protection and improvement of the soil and for correct water use, according to the physical and environmental features of the geographical area concerned.
Under the new laws on soil conservation Italy has been divided into:

- 6 watersheds of national significance;
- 18 watersheds of interregional significance;
- watersheds of regional significance;
- experimental watershed of the River Serchio.

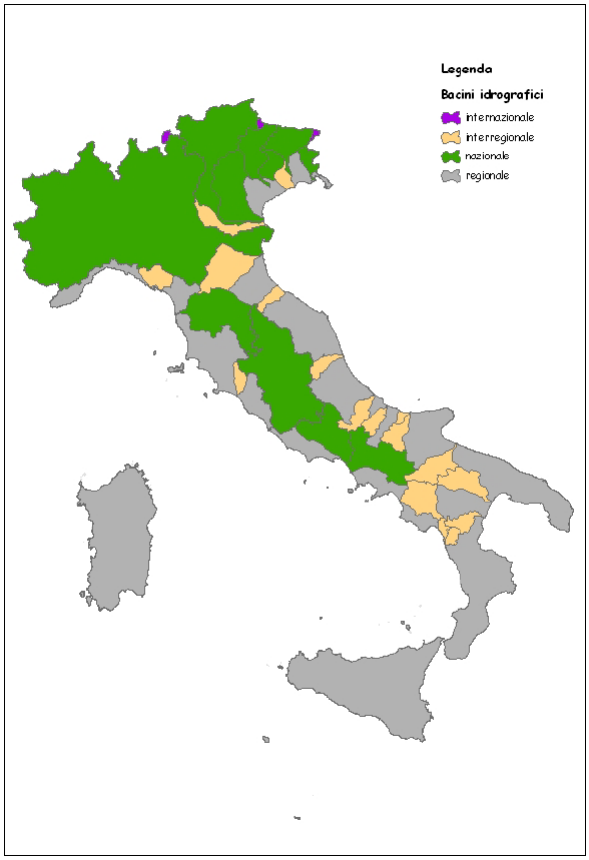


Fig. 8 – International (magenta), national (green), interregional (yellow) and regional (grey) watershed, as defined by the Water Resources and Soil Conservation Act.

With the **L. 36/1994,** is principally aimed at restructuring the water industry, but introduces also important innovation concerning the system of water rights. Before 1994, the public property of water resources needed to be explicitly declared by the public authority, on a case-by-case basis. In practice, this meant that all surface waters of some importance were considered as public, and therefore required a use license from the competent authority. The use of underground resources, on the contrary, was free and considered as a part of the rights of landowners.

Only in 1994 this dual regime has ended: the law 36/1994 states that all water uses, including abstractions from the underground, need to be licensed. The implementation of this measure is not easy: some tens of thousands of private abstractions need to be individuated and monitored.

Yet the most important object of l.36/94 is the restructuring of water industry, previously organized at the municipal scale, but on the other hand strongly centralised through regional planning and financing of infrastructure. The reform can be sketched in the following items:

- The central role of municipalities as responsible authorities remains; however, their responsibility has to be discharged collectlvely, through the setting up of intermunicipal agencies at the territorial scale defined by Regions as "optimal management units" (ATO). ATOs thus become the counterparts of the water industry on the demand side, issue and manage contracts with water operators and provide the plans according to which water services have to be developed. The ATO also become the relevant territorial units for setting water charges, from now on intended on a full-cost recovery base.
- The "integrated water service" intended as the whole industrial cycle of water supply and sewerage will then be entrusted to specialized business-oriented companies, either in public or private property, in the latter case through competitive bidding procedures.
- Regions (within the framework provided by European and national legislation and Basin plans) provide environmental regulation and maintain responsibility over abstraction and discharge licensing. While in the past these tasks were integrated with the provision of infrastructure, the new systems assigns this latter responsibility to ATOs with the aim of favouring an entrepreneurial approach to investment decisions

D. Lgs. 152/1999 defines the new Italian water quality framework. This act received the indications of the last EU directives (91/271/CEE and 91/676/CEE) examining the effects produced by the accumulation and interaction of all drains presents in a water course (overturning the approach of L. 319/76) based on the single drain control and anticipated some concepts of the Water Framework Directive. The new approach of water quality is based both on the "end-of-pipe" standards both on the quality of the watwer body that receives the pollutant effluents.
Three are the bases of this law:

1) new conception of water body protection and defence in qualitatives or quantitatives terms, for preservation of environmental and functional quality objectives to preserve the water bodies conditions nearest to natural sistem when it maintain his self-defence capacity;
2) integration of supply-side and demand-side policy instruments for achieving good ecological status of water bodies.
3) Protection of underground water

These basic principles are evidently anticipating the basic targets of the WFD. What is still lacking is an explicit recognition of the role of PP; PP is in fact foreseen, but in a very generic way.

In the following table, the development of Italian legislation on water management and EU directives is summarized.

Table 8 – Historical evolution of water-related legislation in Italy

Water Resources Use	Flood Defence	Pollution Control	EU Directives
- **TU 1775/1933** Water licenses and hydropower - **TU 215/1933** Integrated land reclamation	- **L. 184/1952** River		

- **L. 129/1963** Drinking water supply Master plan *D.P.R 8/1972 Transfer to Regions of competences in water fields* **L. 382/1975 Transfer to Regions of competence in water fields** *D.P.R. 616/1977 Transfer to Region of competence in water fields* *Del.C.I. 4/2/1977 General criteria for rational water use and aqueducts operation*	regulation plan	- **L. 319/1976 (Merli Act) Water pollution control** *Del.C.I. 4/2/1977 Guidelines for sewage, wastewater treatments and discharge* - **L. 650/1979 Revision of L. 319/1976 procedures** - **L. 153/1981 Charges for sewage and wastewater treatments** *D.P.R. 470/1982* *D.P.R. 515/1982* *D.P.R. 236/1982* *Acknowledgement European Directives on water quality* - **L. 349/1986 Institution of Environmental Ministry and Environmental Impact Assessment** *D.P.R. 236/1998 Quality of water for domestic use*	- Dir. 75/440 Drinking water - Dir. 76/160 Bathing waters - Dir. 76/464 Measures for eliminating water pollution - Dir. 80/68 Measures for protecting groundwater from pollution - Dir. 85/337 Environmental Impact Assessment for waterworks - Dir. 86/280 Enlargement of Dir. 76/494
- **L.183/1989 Conservation Act**			**Soil and Water**
- **L. 142/1990 Local authorities autonomy regulation** - D.P.C.M. 23/3/1990 Criteria for implementing L. 183/1989 - D.P.R. 85/1991 National			

Technical Services reform - **L. 225/1992 Civil Protection Service** - **L. 498/1992 Urgent actions on pubblic finance** *D.L. 96/1993 Management of water works* *D.L. 275/1993 Modification in water licence rules* **L. 36/1994 (Galli) Municipal water supply reform** *D.P.C.M. 4/3/1996 Directives on water resources* *M. Finanze 20/1997 Regolation on pubblic water licences charges* *D. LL.PP. 99/1997 Criteria for losses evaluation in aqueducts and sewers* - **L. 290/1999 Deadline extension for wells declaration** *D.P.R. 238/1999 Declaration of all water as pubblic* - *D.P.C.M. 29/4/1999 Chart for water supply service* D.L.12 June 2003, n.° 185 Water water reuse	*D.P.R. 7/1/1992 Information acquisition criteria for River Basin Plan* *D.P.R. 18/7/1995 Approval of address act for the definition of the Basin Plan* *D.LL.PP. 14/2/1997 Directives for the identification of areas subject to hydrogeological risk* - **L. 267/1998 Action to cope with hydrogeological risk** - *D.P.C.M. 29/9/1999 Criteria for areas under hydrogeological risk*	- **L. 37/1994 Environmental protection of state property close to public water** - **L. 61/1994 Institution of Environmental Protection Agency** - **L. 172/1995 Revision of. L. 319/1976 procedures** - *D.L. 152/1999 Directives on pollution control* - *D.L. 258/2000 Integration to D.L. 152/1999*	- Dir. 91/676 Vulnerable zones - Dir. 91/271 Sensitive areas - Dir. 92/43 Habitat or species protection - Dir. 96/61 Measures for pollution prevention and reduction - Dir. 2000/60/CE Water Framework Directive

The actual Water Resources Management Institution Framework is described in the following table.

Tab. 9 – Water resources management institutional framework in Italy

National	Environmental Minister, Public Works Minister, others ministers	Framework legislation
	National Environmental Agency (*APAT*)	Monitoring on water quality and quantity
Interregional	River Basin Authority	Basin plans (for the 6 major rivers)
Regional	Regional Administration	Legislation Organization of water policy Basin plans (for all other rivers) Water use and water quality plans
	Regional Environmental Agency	Water Quality Monitoring Enforcement of environmental legislation Technical support to policy design Monitoring and reporting on environmental issues
Local	Drainage and Irrigation Boards Provincial Administration	Management of irrigation systems Abstraction and discharge licensing Other authorizations (when required)
	Omtimal management units	Responsibility for delivering water services Asset management planning for water services Enforcement of contracts with water service operators
	Municipalities	Authorisations to discharge in public sewage collection network

This picture exhibits some degrees of variation across the Coutry. In particular, Regions have some autonomy in deciding what powers and competences retain to themselves, and what others delegate to local authorities.

Concerning administrative issues, for example, some Regions (eg Emilia-Romagna) delegate most operational aspects to Provinces, including some degree of autonomy concerning implementation of Regional plans; some others (eg Friuli-Venezia Giulia) concentrate most powers at the Regional level with much smaller autonomy.

Concerning planning decisions, some Regions (eg Lombardia) continue to maintain at the Regional level important competences concerning asset management planning (eg the Regional plans enter in great detail with respect to what sewage collection networks and treatment technologies). Other Regions (eg Emilia-Romagna) maintain the link between water resources planning and asset management planning, but delegate the related competences to Provinces. Other regions (eg Veneto) devote a comparatively higher autonomy to water services undertakings for asset management planning, concentrating the Regional plans in the definition of quality requirements.

1.4.3 The evolution of Italian Water Planning instruments

According to the historical evolution analysed in previous paragraphs, the Italian water management system is now structured in a complex hierarchy of planning instruments.

The River Basin Plan (*RBP*), introduced by the L. 183/1989, is the institutional instrument to coordinate the different sectoral policies for the water cycle, soil conservation, water pollution abatement and protection operations, use and management of water resources for the purposes of rational economic and social development, and protection of the associated environmental aspects.

All other plans have a lower institutional ranking and mostly depend on the general guidelines set in the Basin Plan.
Thus the Risk exposure plans (Piani di assetto idrogeologico, PAI) are aimed at mapping the territory for the sake of individuating the relevant zones for programming flood protection and hydraulic risk management actions.
The Regional Water Plan (*RWP*), introduced by the D.Lgs. 152/1999, defines the actions to attein the water quality objectives. It deals both with requirements for discharges and with water balance.
The Water Infrastructures Plan (*WIP*) is a industrial plan, developed in order to plan the needed infrastructures with a full recovery of costs, in order to furnish an optimal service to the population and respect the issues definited by the Regional Water Plan.

Tab. 10 – Structure of RBM and water resources planning

Plan	**Water Issues**			**Area of interest**
	Water and soil protection	Water quality	Water Budget	
River Basin Plan	**X**	**X**	**X**	Interregional
Risk management plan	**X**			Interregional / Regional
Regional Water Plan		**X**	**X**	Regional
Water Infrastructure Plan		**X**		Sub regional

All of these plans are described in the legislation as top-down documents elaborated by competent authorities (Basin authorities, Regions, ATOs). In principle, there are no requirements for an extended public participation at none of these levels, and the only truly participatory instruments that are explicitly provided in the legislation are those already introduced by 1933 legislation on water licences. According to this, the administrative procedure for releasing water use licenses should undergo a consultation process that resemble quite a lot the mechanism of Environmental Impact Assessment; the state had the power to decide with great discretional powers (according to the concept of "national interest"); yet in case more than one user could claim to represent a publicly relevant scope, the license could also require the creation of a joint syndicate between users, whose decision rules and relative powers were set up at the same time with the release of the license.

In fact, as we are going to see in the next section, this impression is only partially correct. In fact, the planning procedure usually involves at some point an important role for stakeholders, though this is made almost in an informal (i.e. not explicitly regulated) and voluntaristic manner.

2. Public participation in Italy

2.1 Public participation in Italy: general background

In general, the Italian context does not seem very open to participatory institutions, if we intend with this term explicit and formalized requirements for the involvement of stakeholders in the policy process. The Italian public administration has been evolving very clearly according to an idea of "state" derived from the French Revolution, as something that is in principle opposed to particular interests.

On the other hand, this evolution has tried to replace, but never managed to cancel completely – and in some way had to live together –styles of policymaking and political, institutional and social structures of completely different origin, namely the corporative one (whose origins can be traced back to the Middle Age) and the "familistic" one based on "patronage", whose roots can be found even in the Ancient Roman empire.

In a certain sense, stakeholders' participation in the policy process has been traditionally looked at with suspicion and distrust, at least officially. As a demonstration of this, institutions based on participation are almost never cited in the formal legislation, nor given an important role when existing. The few ones that survived after the introduction of the new Constitution in 1946 (eg the "National Council of Economy and Labour", a consulting body representing the main forces of civil society) have been left a marginal and almost invisible role, at least at the national level.

On the other hand, this disregard is compensated by the actual and effective power that stakeholders are able to exert in the policy process; as one might expect, the way this power is exerted follows informal channels (eg lobbying; more or less explicit participation of organized stakeholders – eg Trade Unions, Industrial Associations, Environmental Associations – to policy design and implementation) or, just to the opposite, extreme and violent manifestation of disagreement (eg campaigning, social opposition to a water project or to water price increase).

Consulting bodies are foreseen and required in most administrative processes – including territorial and environmental planning, and of course RBM; yet this cannot be usually intended as participation of the general public, nor as the participation of stakeholders; rather, it is usually structured basing on technical and professional expertise. On the other hand, it is usual that technicians and professionals composing consulting bodies are appointed by different bodies (eg different layers of public administration, but also representants of organized stakeholders). This does not mean that they are requested to represent particular views (at least not officially), but at least that they enjoy the trust and the liking of specific stakeholders or interests.

Parallel to this, another important feature of the Italian administrative system is the complex, evolving and never – so far – resolved tension between centralism and localism, and the strenuous autonomy that local authorities – especially municipalities – continue to enjoy, even in a context in which most policy and financial resources have been controlled by the central state. Thus in the typical language of Italian policy, "participation" is often foreseen and well present, but its meaning is mostly and simply the need to involve different layers of public administration, to create institutions in which local authorities can have at least some voice.

At the local level, the importance of institutions open to stakeholders increases. For example, the Chambers of Commerce, representing economic forces; Savings Banks, traditionally owned by Local Foundations; or, to remain in the water domain, Irrigation and Drainage Boards, Municipal companies not only continue to exert important public roles and have a decisive voice in local policies, but also participate – in a deeply entrenched system of relations with public administration, publicly-owned companies and other public bodies – to a great number of policy initiatives.

These elements again cannot be properly defined as "public participation" in the meaning that the Aarhus convention has made popular and the HarmoniCOP project has assumed. Yet these are the roots on which PP can evolve, and should be well understood.

The changing relations between these components have in fact driven the evolution of public participation in the Italian system. Three main lines can be identified:

1. The growing integration between territorial urban development planning and environmental planning. The transfer to Regions of nearly the totality of the competence in urban and territorial matter coincided with the start of the season of the new environmental plans. In a first phase, Regions have concentrated either powers delegated from the State, or functions that derived from the need to coordinate and concentrate the action of local actors. In a later stage, with the completion of devolution of regulatory powers, Regions have gradually transferred back to local authorities responsibilities for implementation, though through innovative solutions for concentrating them (e.g. the ATOs mentioned before) and a more or less substantial privatisation.
2. The second phase of this process of integration of territorial policies. Regional planning starts as a sectoral policy aimed at regulating some specific aspects of territorial development; increasingly – and most of all, after the introduction of the keyword "sustainable development" in the policy domain – sectoral policies look for cross-linkages and coordination. Once again, the evolutionary path shows a stronger concentration of sectoral aspects at the implementation level, while Regional planning becomes more and more concentrated on coordination and guidelines.
3. A third line of development can be identified in environmental policies themselves and in the nature of instruments used: starting from a pieacemeal approach basically dominated by emergencies, they evolve during time first to a comprehensive approach to supply-side end-of-pipe infrastructural development, and finally to a more innovative approach integrating preventive measures and demand-side instruments.

2.2 History of public participation

It can be asserted that the PP in the Italian context has been evolved following three different periods.

The earliest phases in which planning emerge, during the first half of the last century, show evident traces of corporatist approaches, in which organized stakeholders represent the true backbone of the state. Institutions like the "Landowners' associations" first disciplined in 1933, as well as the approach to consultation set up for the release of water use licenses, are the best examples.

These institutions fell in disgrace after WW2, even because of their strong linkages in the fascist regime; in the new Constitution of 1946, the idea of State was completely different and rooted in the

illuministic tradition of the French Revolution and in the principles of liberalism. Thus the state is regarded as a super-partes actor representing "the public good", and the main – and possibly only – linkage with stakeholders' interests were political parties, intended as institutions able to "filter" private interests and stakes in a superior concept of general interest.

In fact, this very model revealed its weaknesses very soon. Capture of public decision by lobbies' interests becomes very soon the other side of the medal of a public administrative system that was officially conceived as transparent, abstract and general. The policy process, as a result, has become much more a matter of bargaining and negotiating (almost hidden and "informal") than the imposition of a superior interest.

Thus the emerging of planning in the 70s, seen as an application of "science" and "rationality" to the policy process, could never be left free from this "original guilt". In fact most of the plans conceived in this period failed to attain their objectives, either because of their level of abstractness or because they finished to encounter the main difficulties in the implementation – rather than in the elaboration – phase. Stakeholders, excluded from the formal elaboration of policies, could get their revenge in the implementation phase, in which they were most able to condition and to exert power. With no surprise, most of the plans developed in the 70s-80s remained for the greatest part pieces of paper.

The 90s represent an inversion of route. Increasingly, the early involvement of stakeholders in the political process gain importance, until being nearly institutionalised in a number of policy fields, including economic policy. Just to provide an example, the unexpected achievement of meeting the parameters for catching the Maastricht parameters in time for being accepted in the Euro owe very much to the strategy of "concertation" of economic policy targets through official agreements between Government, Trade Unions and Business representants. This is also the time in which voluntary agreements in environmental policy experience an extraordinary development, and instruments for easing public-private cooperation in many fields start being created.

These developments appeared rather late in the domain of water policies. Probably this delay can be put in relation with the weak structure of the water policy community, dominated until very recently by a fierce and unescapable localism, on one side, and a technocratic approach to planning, on the other side. The "political" nature of water policy decisions is still now not fully recognized.

Trade-offs in the past were dealt with essentially through the provision of public subsidies for the creation of new waterworks and on a substantial *laissez faire* favouring large users (hydropower, irrigation among others) with respect to more diffused demands for environmental quality.

On the other hand, the newest developments occurring during the 90s are increasingly showing the unsustainability of this approach in the long term. As long as water policies start to be based on demand-side regulation instead than infrastructure; as long as water policies are transferred to the local and regional level; as long as users are made responsible for costs generated by their use of water, the allocation of social costs and benefits is suddenly perceived as a matter of high political relevance. The Italian water policy system as a whole appears somewhat unprepared to face this unexpected outcome; on the other hand, the most advanced experiences show very clearly an attempt to learn from other parallel policy fields and introduce – experimentally and informally so far – the involvement of stakeholders and the construction of consensus through more open decisionmaking processes.

As Vettoretto (1993) points out, PP can be described as a spontaneous and very often unforeseen response to the clash of traditional policymaking, and especially of the implementation failures of plans elaborated in a rational top-down attitude. It can be said that experiments of PP owe more to the search of effectiveness of consensus raising than to a more radical transformation of policy styles in the search for a new model of citizenship. In fact, this attitude of policymakers is corresponded by a weak (at best) interest of the "general public" for direct involvement in

policymaking. PP as an opening of policies to the general public has never been a hot political issue; people's attitudes with this respect still are – in the majority of cases – sceptic and half-hearted, leaving alone perhaps some "single cases" that are perceived as important enough, yet again preferring violent and "external" forms of opposition rather than true involvement in the policy. Policy is readily delegated to "experts", until it happens to touch one's own backyard.

Until now, there is much more of improvisation and extemporariness than conscious design, and it is not easy to find out "a model" of any kind. For sure, these experiments of participation, although their cultural and ideological debt to the newly elaborated concept of PP coming from Aarhus convention and from the sustainability debate, continue to be utmost rooted in the traditional "corporative" and "familistic" political structures that are typical of Italy. Despite some attempts to intend participation in a more open manner, answer to macroscopic requirements or interests and do not widen to the real final receivers of policies as inhabitants or social actors.

This outcome has been analysed very deeply in some policy fields suche as territorial and urban planning or regional development (see for example the works of authors like Regonini, 2001; Dente, 1985; 1990; Vettoretto, 1993).Comparatively lower, though with quite similar outcomes, are studies dedicated to environmental policies (Lewanski, 1997; Amadei et al., 1998) and water policy itself (Belligni and Robutti, 1993; Massarutto and Pesaro, 1996)

PP in Italy is therefore mostly informal (i.e. not explicitly organized nor officially prescribed), not systematic, often improvised; actors that take part to the process are chosen on a case by case approach, basically following their own capacity to make their stake visible and relevant, for the most part it takes place at the implementation stage and non at the deliberative one.

Involvement of stakeholders also means that public authorities start to reinterpret their own role as a "facilitator" rather than that of decisionmaker; on the other hand, resources needed for policy implementation are increasingly out of control of public actors and require an autonomous mobilization. The recognition of this has been recent, though fraught with many important consequences for policy formulation and functioning. In particular, environmental policies – in which field water policies are more and more included – have experienced in the last 15 years an extraordinary development of "voluntary agreements" (Amadei et al., 1998). What might be still surprising, is the fact that this development has occurred mostly "outside" the official policy framework, through autonomous actions of policymakers that were not explicitly foreseen nor codified, and therefore might result "invisible" for those who would limit the analysis.

Therefore, in a gradual and somewhat hidden way, PP gains importance due to at least four reasons:

1. crisis of the welfare State and search for new, and more transparent, ways to redistribute costs and benefits among social actors, with substantial responsibilization of users
2. privatisation of water service operators and business-oriented approach to the provision of water services
3. limits to the expansion of the "Regulatory State" and increasing difficulty to legitimate command and control policy actions
4. growing autonomy of the local institutions

In the Italian context it is possible to identify four levels of participation:

1. accessibility and transparency of public decision
2. structured and organized stakeholders consultation
3. stakeholders responsibleness in the policy implementation process
4. full empowerment of stakeholders and retirement of the public administration (privatisation)

However, as we have noted, this might happen in two different ways

- Formal participation (vertical administrative process, hierarchical coordination): this means that the role of stakeholders is formally described and foreseen in the legislation, and might mean that specific institutions are created (eg consulting boards)
- Informal participation (horizontal): this means that policy actors, though not "officially" and not following a codified procedure, in fact have some interaction with stakeholders, even because the final political legitimation of the policy requires not only political consensus, but also the "factual" consensus of social actors that are requested to actively contribute to the policy outcome.

The vertical integration prescribes the participation of many administrative level to the elaboration process of a planning action concerning other institutional levels. This hierarchical policy scheme might be helped through the introduction of institutional coordination mechanisms (eg inter-authority panels). Sometimes, stakeholders have a voice in the process through explicit consultation panels and/or through the right to appoint members in the scientific and technical advisory committees. This practice has been yet in action before the Aarhus convention and the WFD.

For example, urban planning foresee Consultation, Meetings and Hearings since 1985. Public inquiries have been foreseen for releasing water use licenses already in 1933. Consultory boards in which stakeholders have an explicitly recognized role are foreseen in the case of Natural Parks since 1991 (Quattrone, 2003). Public involvement in the approval of environmentally relevant projects follows the implementation of the European directive on EIA, transposed in Italy in 1986. Local Agenda 21 have represented for many local authorities an experiment for establishing a permanent and structured consultation on local development and environmental policies, although its outcomes in the "real" policy has been at best a "moral suasion" rather than having any prescriptive value (Doria, 2001).

Direct responsibility of stakeholders for implementing policies dates back to the 30s for some issues concerning water management (eg the creation of irrigation and drainage boards, intended as compulsory landowners' associations having public status and entitled to receive public contribution), and has gained new popularity in the 90s in other fields of environmental policy (eg CONAI, the compulsory association of packaging producers and users aimed at implementing the recycling targets imposed by European waste management policies), regional development policies (eg the "Territorial Agreements", intended as contracts between the state, other layers of public administration and local stakeholders for the sake of achieving development targets).

On the other hand, the scope for these forms of participation have been quite limited until recent times.

The "horizontal" model of PP is much more meaningful and long-lasting. It can range from the voluntary adoption of more open "government styles" to the informal consultation of stakeholders during the policy formulation and implementation; from the search for arrangements for public-private partnerships to the opening of managing boards of publicly owned companies, agencies and foundations to representatives of organized stakeholders.

Here and then, in recent years, some innovative institutions have been created for the sake of fostering and organizing PP and stakeholders' involvement (eg, the Local Agenda 21, but also the many legal instruments that have been introduced in the last 15 years to foster public-private partnerships); although the concrete use of these instruments and the definition of their contents is very much left to voluntaristic and self-governed approaches.

Despite the lively evolution of PP, along the lines sketched above, its relevance for RBM is so far not very great. For these reasons, we find it meaningful to analyse approaches to public participation emerging in other parallel policy fields in some detail, since this lesson is gradually being transferred to water policies.

Examples of this conception can be the Strategic Environmental Assessment, the Environmental Impact Assessment, the General Governor Plan (*Piano Regolatore Generale*), that will be analized in the next sub-sections.

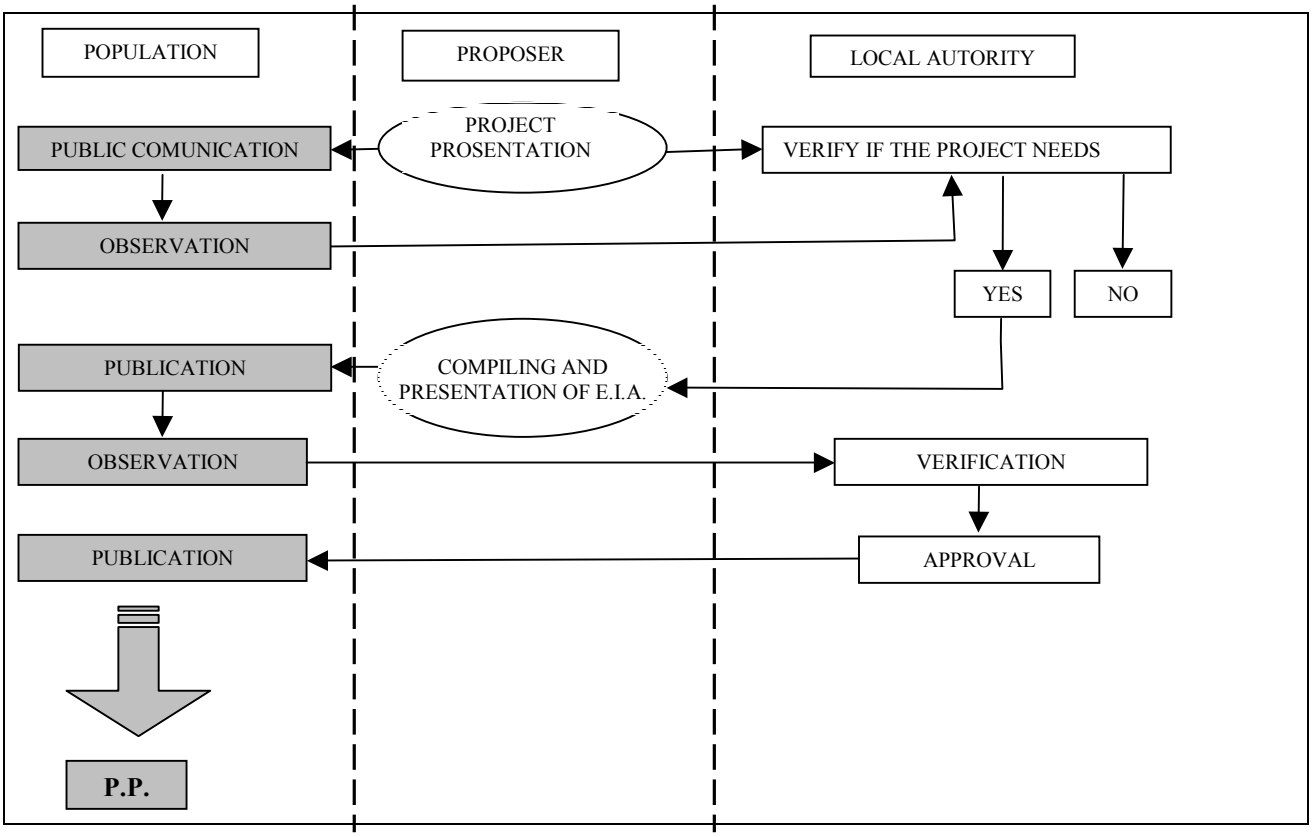
2.2.1 Enrironmental Impact Accessment: form EIA to SEA

The *Enrironmental Impact Accessment* (EIA) is a national/regional policy aimed at evaluating the effects on the environment of projects and policy actions.
The national transposition of the European directive divides the objects of EIA in two lists; the first one, corresponding to annex 1 of the directive, is held at the national level and has the Ministry of the Environment as the competent authority. Other projects corresponding to annex 2 are delegated to Regions, with substantial organizational autonomy.

In both cases, the "impact assessement" is the set of consederables effects directs and indirects, permanents and temporaries, singles and cumulatives, positives and negatives, in the short and long time, about a project.

In the following figure policy Italian procedures is schematized to identify the public involvement.

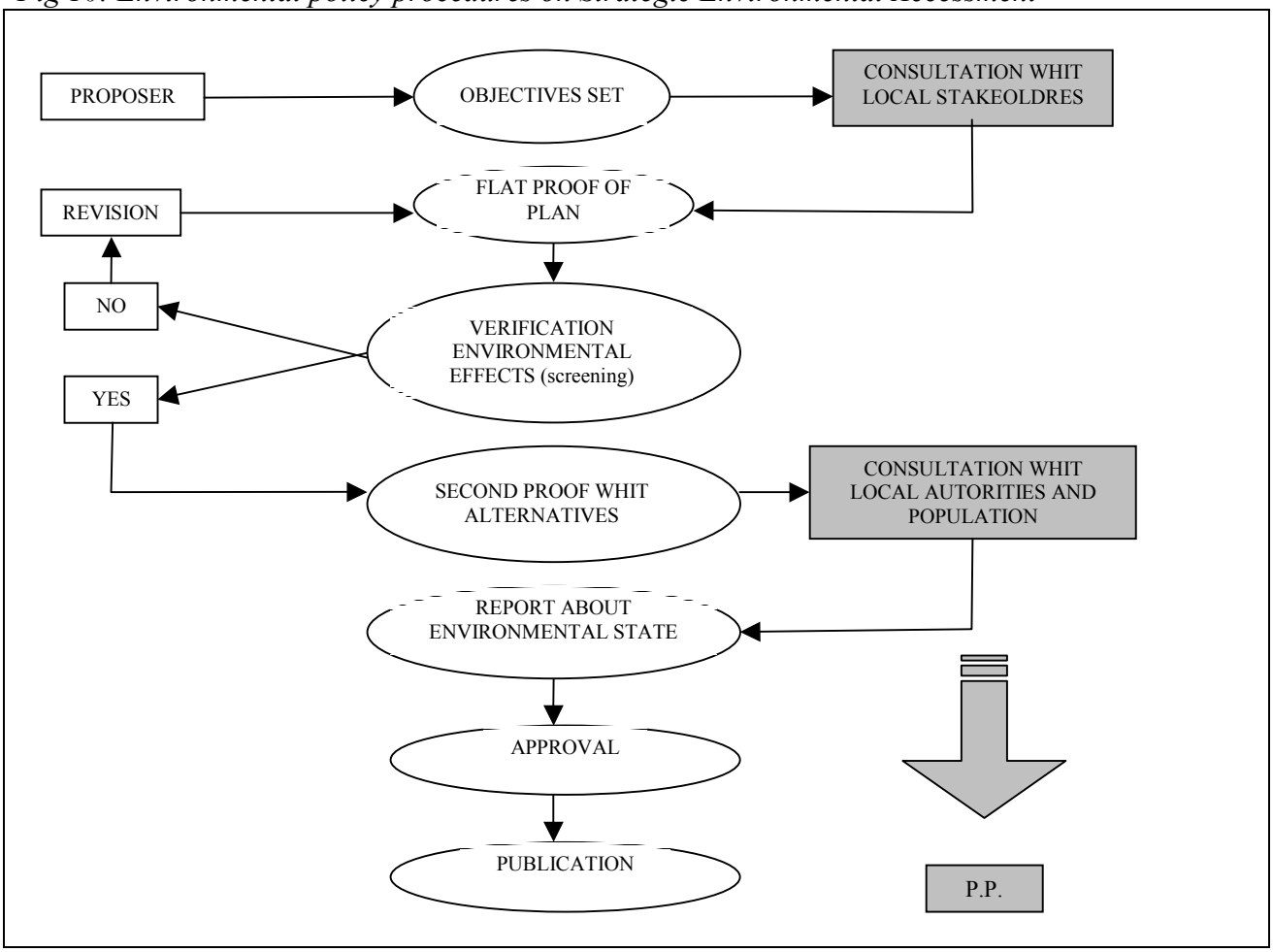
Fig 9: Policy Italian procedures on Enrironmental Impact Assessment



After the presentation of environmental impact studies on behalf of the proponents, a public

participation phase is foreseen as obligatory. This is intended as purely consultive, with no binding effects on the final decision that remains on the competent authority.
The biggest difference between the two levels, in any case, is represented by the fact that national EIA is concluded by the Ministry of the Environment, and in case of a negative outcome, it can stop the project. In other words, Ministry of the Environment has a sort of "veto power".
At the Regional level, the final decision is usually a responsibility of the whole Regional government, meaning that an eventual opposition on the Environment side might well be reversed by means of a superior political evaluation. This also means that the weight of PP is higher in the former case, since it is likey that Ministry of Environment is more keen to accept stakeholders' view in opposition to the project. This can be verified empirically: the number of projects resented for national EIA who obtained denials or requests for modification are, on average, much more than at the regional level.
On the other hand, the experience made so far does not allow
On the other hand, a limit that has been recognized is the fact that EIA regards projects and not policies as a whole. Therefore, PP intervenes at a reatively late stage, with some possibilities to have a voice or a role in the definitive implementation (eg the location of a plant) but not on the "upper level" decision that has opted for that particular facility (eg a waste management plan based on the construction of incinerators).

Fig 10: Environmental policy procedures on Strategic Environmental Accessment



The *Strategic Environmental Assessment* (SEA), concernes the evaluation environmental process about plans, programs and policies, at the national and regional level. It follows again the input arising from the European level, and already has some application in the legislation of some

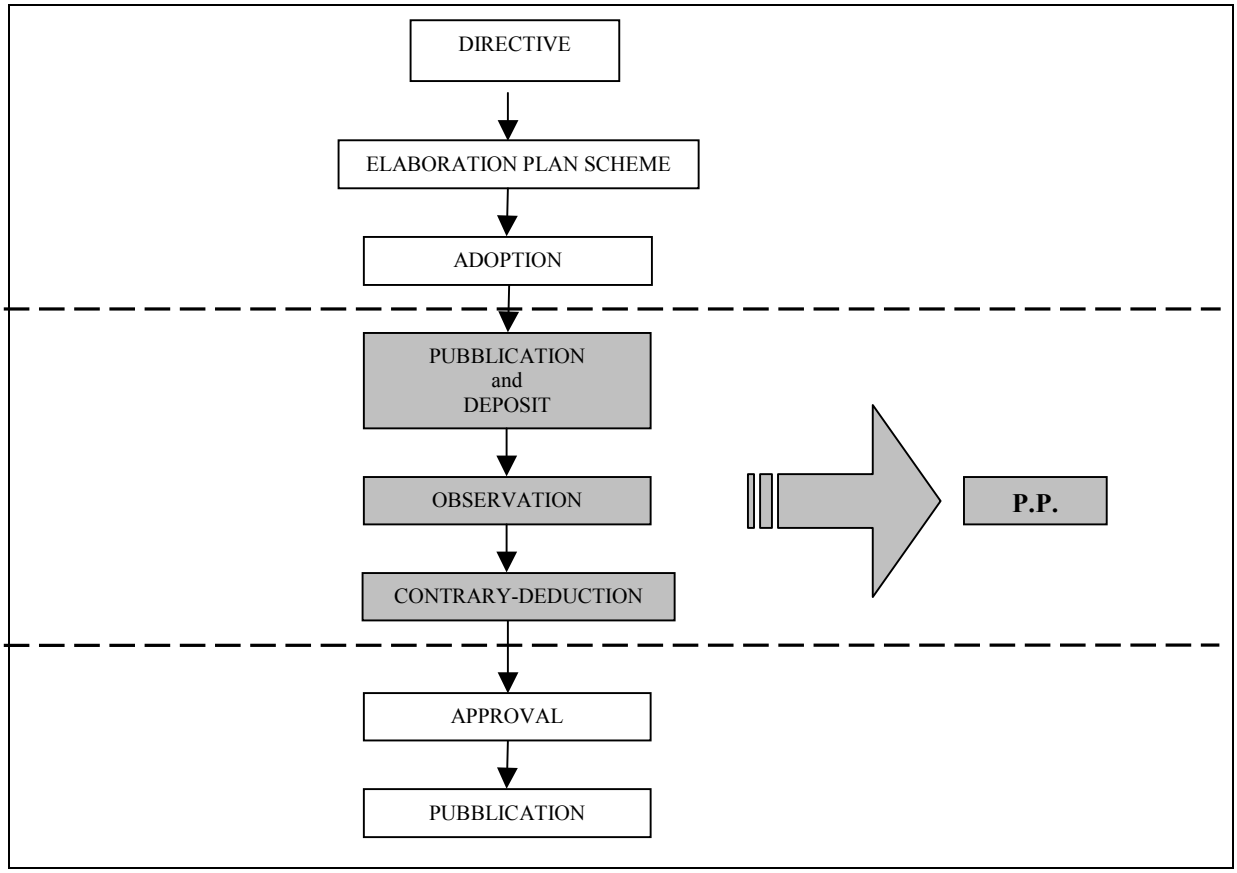
Regions. All in all, however, SEA has represented the object of studies and public debates much more than being so far a concrete practice.
In figure 10, environmental policy procedure is described, in order to identify the public involvement.

2.2.2 Urban Planning

Urban and territorial development planning was intended since the beginning as an instrument aimed at governing the compatibility of different land use, locating and coordinating them properly to optimize them. In fact, this is one of the best examples in the Italian policymaking in which the distance between policy aims (as declared in the legislation) and its actual outcomes are greatest, namely because of the strong conditioning role that private interests exert and the difficulty to raise political consensus.

For long time the results were evaluated, at best, under the profile of the efficiency and the economy in the employment of resources and the need for verification of the effects was not perceived, neither under the profile of the human health, nor under that one of the relations with the environmental components.

Fig 11: Formal sistems of PP in Italy: the case of urban development plans



The 70s represent a starting point for a more sensitive process of reform, in which gradually environmental concerns and the need for an integrated approach to river basin management emerge.
Urban planning system in Italy is codified by the L.1150/1942 that makes reference to a precise territorial governement's board hierarchy; to a definite part and precise pablic boards's functions in general, and to a precise reation between the boards and the administered inhabitants. Considering

Genaral Governor Plan (*Piano Regolatore Generale*), that is the pre-eminently municipality's urban tool, the participated moment happens in the central plan's phase, when it's published and deposited in expectation of possible contro-deduction.
The public participation in the urban development procedures follows the scheme described in fig. 11.

All the urban development plan forecasts Public Partecipatin in a pecefec moment: during the deposit (usually 30 days), people can make some obsevations, that are approving in a second moment, if they're right.
Urban development plans are constrained by guidelines and general principles for spatial development arising from upper level planning decisions. After a long-lasting development occurring in the last 30 years, the complex network of territorial planning instruments has finally reached a supposed equilibrium through the introduction of the District Strategic Territorial Plan, that represent the basic competence of Provinces. STPs are intended as a hinge between national, regional and basin policies and local spatial development. The following scheme tries to resume differences and hierarchical links between the two levels of planning.

Table 11 – Urban development plan and strategic territorial plan

Urban Development Plan	Strategic Territorial Plan (Province)
❑ Spatial organization's plan ❑ Defines land use to a scale of entire city and localize with precision all the public works ❑ The elaboration is government's responsibility, with PP foreseen only at latest stages ❑ Uses analysis on the spatial phenomenon and critical data ❑ The objective is regulate and control private interference ❑ Its contents are mostly the regulation of private's behaviour	❑ Integral plan with some indication of territorial type ❑ Locates the projects and defines the priorities without defining necessarily the location ❑ In some cases, open to PP through consultation and representatives of stakeholders ❑ Utilizes qualitative analyzes and values territorial factors in the plan's process ❑ Establishes a series of agreements and engagements between different actors to realize swiftly the works ❑ It is a regulatory as well as an active policy instruments

What is important to us is to understand the role and the scope of PP. In both cases, some PP is required and also explicitly foreseen (basically intending it as consultation).
However, while the STP continues to be regulated and designed as a top-down optimisation exercise, UDPs leave increasing space to innovative forms of public participation, yet mostly intended as inter-institutional cooperation (eg hearings of local authorities).
For example, some municipalities have experienced Local Agenda 21 in relation with renewal of their UDPs. Innovative organizational solutions through the creation of mixed public-private companies are increasingly being introduced for the development of new areas or for reclamation of industrial sites. Intensive public hearings are being normally held (Trevisiol, 2002).
In both cases, we can also find good examples of what we have referred to as "informal" PP. In fact the planning process is normally accompanied by an intense debate that occurs outside the institutional arena; its channels are voluntaristic, often bottom-up, usually channelled through local media, local associations and self-organization of citizens. These PPs do not constrain "explicitly" the policy outcome, but of course representing a very important binding for politicians whose

ultimate scope is to raise consensus.

2.2.3 Experiments of PP for regional development: Laeder Programme and Local Agenda 21s

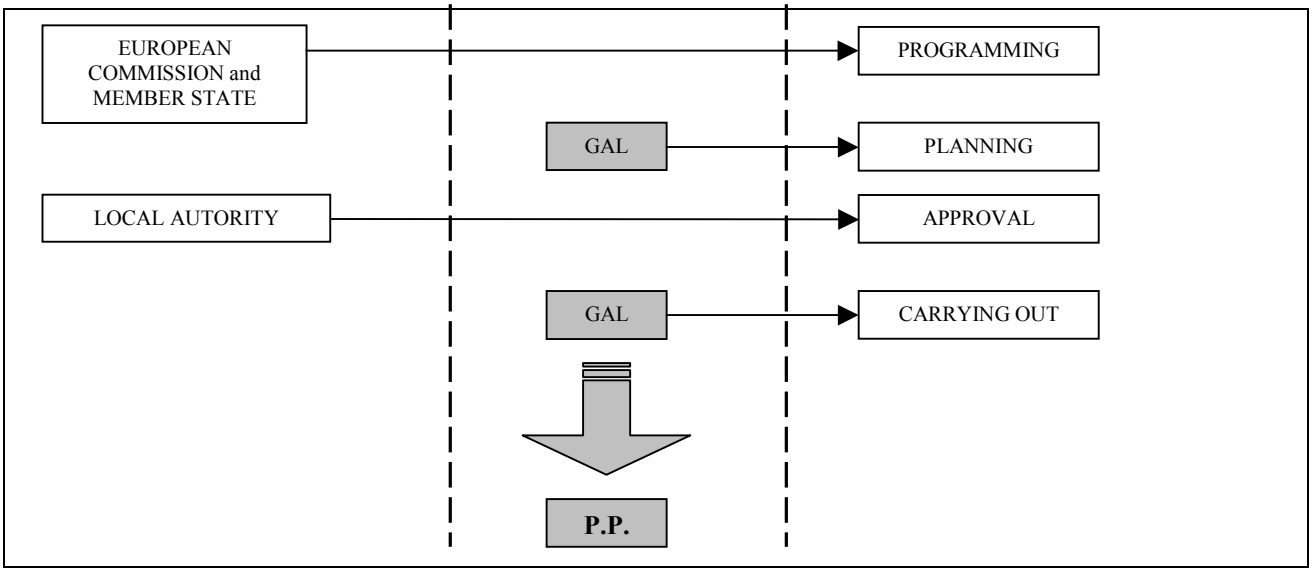
About regional development especially after the introduction of EU Regional policy, the reform of CAP and the introduction of Community initiatives in Italy was applicated Leader.
Leader is a program with the aim to promote integrated, endogeous and sustainable development of rural areas.

Main objectives of Leader Program are:
- to support originality and quality within development strategies?;
- to support the realization of integrated and\or complementary actions with objectives of development of structural programs;
- to boost opening of rural areas about the others european and extraeuropean countries:
- to promote experiences, knowledge and know-how diffusion:
- to test solution about development problems of rural areas, to develop an example for future policies of European Union.

The subjects of Leader are Action Local Groups (*Gruppi di Azione Locale* or GAL), who draft a Developement Local Plan (*Piano di Sviluppo Locale* or PSL), and manage european financing. The GAL is made up of public structures or public-private agencies (locals firms, agricolturals professionals organozations, sportives or cultural associations, etc)

The development's projects realized till now have proposed a participation system based on an approach top-down, proposed by centralized state system. Recently is trying to overturn this vision of the participation offering ascending approach, bottom-up approach where every actor is considered equally.

Fig. 12: Policy procedures to Leader Program



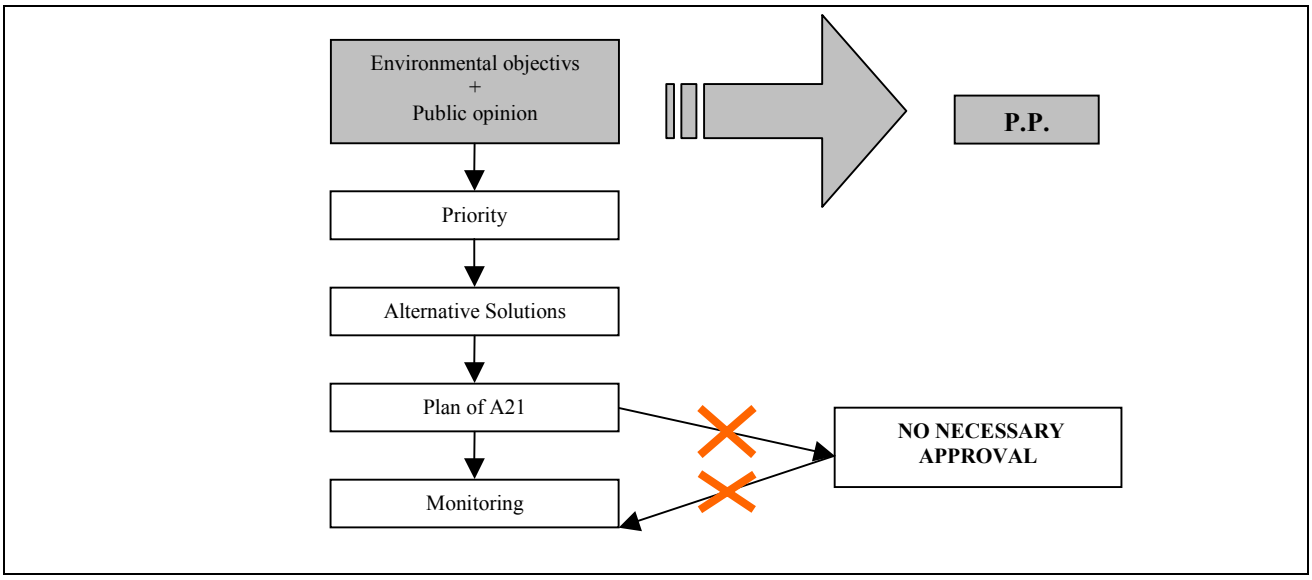
The most significative example of this shape of participation (informal level) is probably Local Agenda 21.

Local Agenda 21 is intended as a participatory process aimed at discussing and finding a common understanding and agreement on the engagements for sustainable development. Following international guidelines, LA21s have experienced a good success in the last years, with some hundreds of local authorities having tried to implement it in a way or the other.

According to a preliminary analysis made by Doria, 2001, however, the experience is far from being a success. It has helped to create a more widespread understanding of the local aspects of sustainability and often pushed the public administration to a more transparent and accessible way to report environmental information. Local "relations on the state of the environment" are being intensively realized, and they also represent a good occasion for testing innovative accounting and reporting techniques, sometimes including the use of ICT.

Yet for the most part LA21s have remained outside the core policies, with a marginal and not 100% willingly commitment of local authorities. In most cases, local authorities have seen LA21s as a way for fostering better coordination of the administrative branches rather than an occasion of dialogue with population and stakeholders.

Fig 13: Informal Plan of Local Agenda 21



On the other hand, other participatory instruments have gained importance in recent years, continuing to follow the traditional "corporative" structure rather than the idea of open processes. Participation is intended here as instruments for bargaining between public actors and (some) stakeholders; or as instrument to capture political consensus and achieve collaboration from those actors that hold resources that are decisive for the success of the policy. Just a bunch of examples in the following list

In the last decade, new instruments for the public participation were developed:

- *Accordo di programma* (L. 142/1990): instrument used for the definition and the carryng out of public works, actions and programs that need the concerted action of Municipalities, Provinces, Regions, National administration and other stakeholders. For example, public representatives bring in the power to introduce new regulations or relax existing ones, or the power to spend public money (originating from national budgets or from European

contributions; privates are required to invest and to carry on at least a part of the economic risk; trade unions might be requested to accept some concessions (eg lower salaries or lower guarantees for workers)

- *Conferenza dei servizi* (l.241/1990): instrument for the simplification of administrative procedures, requiring those branches of the public administration that have a stake in the policy to participate to a coordinating working group. One leading authority is identified, usually that having the most important stake. These "service conferences" are usually imposed by a superior authority, compelling others to participate; it might substitute the "ordinary" bureaucratic procedure.
- *Programma integrato* (l.179/1992): instrument created in order to start up actions for the restoration of quarters and cities. The term "integrated" is used to indicate the involvement of several urban fuctions, different types of buildings and several stakeholdes.
- *Contratti di quartiere*: instrument that promotes integrated interests for the restoration of public quarters.

In the actual sustainable policy framework, voluntary agreements are increasing in the environmental planning and management. Territorial Agreements, EMAS 2, River Agreements and River Contracts.

2.3 Involvement dynamics in RBM

As mentioned in section 1, RBM in Italy seems to devote very little space to PP. In practice, explicit participatory mechanisms can be reduce to a handful of cases, though of some importance:

- Administrative procedures for releasing abstraction licenses since 1933 require a consultation process in which all interested parties have the right to claim for the same concession and expose their arguments. The competent administration then decidesto release the concession to the subject whose claim best represents the public interest (whose definition is left to the arbitrariness of the public authority.
- Waterworks (eg dams and reservoirs) abve a certain dimension and other water-related projects are included in the lists of projects for which an environmental impact assessment (EIA) is required
- Irrigation and drainage boards since 1933 are entrusted with a number of competences concerning flood protection, soil conservation and maintenance of river corridors. They are compulsory associations of landowners; the procedure for creating a Board required that the majority of landowners within a certain territory present a claim to the public authority, together with a "reclamation plan". If the plan is recognized to be in the public interest, the association is created and all landowners are compelled to participate. The Board is ruled by a council in which landowners elect their representants on a surface base. The Council decides for all matters that are relevant for defining and implementing the plan, and above all sets the amount of contribution that associates have to pay. Government can contribute with grants and transfers, what is done especially for new investment.
- More recently, participatory environmental policies aimed at sustainable development (such as Local Agenda 21) have dealt with water policy as well as with other environmental policy issues (with the limits that we discussed above with respect to Italian Local Agenda 21)
- Finally, many recent acts (and above all, Dlgs 152/99, anticipating the implementation of the WFD) mention PP as a requirement for planning; however, this provision so far has never been implemented nor transferred into proper guidelines.

For the remaining part, Italian water policy is hierarchical and not open to participation. Water governance is achieved through administrative decisions (abstraction and discharge licenses; waterworks; regulation of pollution, etc) that are framed within a network of plans that are hierarchically organized around the river basin plan. Plans are conceived as technical documents approved under the responsibility of dedicated branches of the public administration, sometimes with the requirement for consultation (but as we showed above, consulting committees are usually selected on a technical and professional base, and not intended to represent stakeholders).

Water services are the responsibility of municipalities (now jointly associated in compulsory associations at the level of ATO) in which Municipalities and Provinces are represented (in principle, governance mechanisms that rule ATOs are defined be Regions, that might well decide that other actors outside the public administration are represented; but so far, to our knowledge, this has never occurred). ATOs decide on asset management plans, water prices and also contract out the service to business-oriented enterprises (although these can be and in fact in most cases are publicly-owned firms, property of the same municipalities with or without private partners).

Decisions at both levels are legitimated following the traditional political channels; stakeholders representation is only indirect, through the ordinary political process, or through self-organized voice. As far as the results achieved so far show, most of this consultation is inter-governmental (involving local authorities and other public bodies) and only rarely open to third parties.

Public access to relevant information is required by many recent laws; nonetheless, this requirement is mostly general and achievements with this respect are quite modest. For example, law 36/94 creates an Agency named "Comitato di vigilanza sull'uso delle risorse idriche" (Supervising committee on water resources use), whose main task is the collection and elaboration of basic data and information for the sake of benchmarking water services and patterns of water use throughout the Country. The law establishes a long list of matters that should represent the object of an annual Relation to the Parliament. In fact, the Committee has never obtained the status of a real independent agency; its structure is still now (after 10 years) extremely poor and severely understaffed. As a result, annual reports of the Committee cannot claim to have improved very much the level of public awareness over water related issues.

Some Regions have created their own agencies and have developed much better organized information systems, though again in a non-systematic way, giving priority to certain aspects (eg flood protection) rather than others (eg water balances are available only through highly uncertain and outdated information).

Decision processes are highly formalized and bureaucratized; at any stage direct and indirect interaction with involved parties obviously occurs, but often in an informal and not institutionalized way.

For example, the approval of acts having the status of basin plan requires a complex procedure that involves (Massarutto and Pesaro, 1996):

- Elaboration of knowledge (usually, this task is carried on through dedicated project managed by basin authorities, either through direct original research or through collection and harmonisation of existing research)
- Drafting of technical documents (usually, through wrking groups to which Regions, Ministries, Local Authorities and others "lend" their personnel, with a coordination operated by basin authority functionnaires)

- Approval of technical documents and draft plans in the Technical Committee (a statutory advisory board, in which all levels of public administration appoint technicians)
- At some stage, some basin authorities have established to have organized discussions in advisory and consultation groups, open to stakeholders. For example, the Po basin Authority has created a Consultory Committee, whose role so far has been little more than marginal
- Draft planning documents as well as reports and other information are circulated through websites, newsletters and other forms of popularisation that reach a great number of stakeholders
- Finally, approval of the plan by the Institutional Committee (sort of "basin parliament" in which 4 ministries and the presidents of all involved Regions have a seat).
- Once approved, the plan has superior hierarchical ranking to any other policy document; however, basin authorities have no administrative roles nor enforcement powers, thus the implementation of plans rely on the "good will" of the other administrations that are in charge of sectoral policies. Therefore the latter are only in theory "superior", in fact the implementation chain enjoys substantial powers in the concrete definition of measures.

To make an example, the basin plan might introduce criteria for the definition of minimum flows, that in theory should constrain the power of Regions once they decide to issue an abstraction license to somebody or to constrain an already existing one. In practice, this does not necessarily occur, since Regions enjoy substantial autonomy in the concrete release of licenses and operate flow controls themselves.

As this example shows, PP and involvement in fact occur, yet following lines that are quite similar to those that we have recognized in previous chapters. That is, some "formal" moments in which PP is officially foreseen in fact exist, but their actual importance is small and much overcome by other, more subtle and less transparent "participatory" mechanisms.

An analysis of this kind of "participatory" process requires detailed ex-post and on-site case-study research, and is not easy to capture through the mere analysis of existing legislation and institutions.

2.4 Italian experiences of Public Participation in RBM

At the present state of the research, we have selected a number of case studies that will represent the object of elaboration in the next stages of the research.

- Stakeholders repreentation in the planning process: although in many cases explicit representation of stakeholders in consultation processes are foreseen, the most typical form of PP still remains the unpredicted and voluntaristic setting up of consultations aiming at the achievement of consensus. We shall confront two case studies: the Consulting Committee of the Po River basin Authority (intended to be a permanent consultation board) and the case of river Tagliamento, for which "ordinary" planning have foreseen many years ago a set of interventions, whose concrete realization has been later on conditioned and impeded so far by the usual forms of opposition during the implementation phase.
- Voluntary agreements: bargaining between public administration and private actors (generally through their representative associations and/or the influence of largest firms) for defining and implementing policies, on a case-by-case approach. The case we have seected is the agreement reached in the district of Carpi with the textile industry, whose abstractions

fom the underground caused severe lowering of the water table. The agreement foresee a voluntary stop of abstraction and the creation of a joint company with the participation of industry and public bodies, partially financed and subsidised by the Regional administration; the company will be responsible for centralised water supply and wastewater treatment and reuse, in order to reduce direct abstractions from the underground.

- Voluntary agreements without the participation of public actors. An interesting case is represented by the *Patto per i fiumi,* a concerted action promoted by *WWF-Italia*, *Associazione Giovani Imprenditori di Confindustria* (Young Imprenditors Association) and *Coldiretti Lombardia* (Farmers Association). This agreement would facilitate the application of Hydrogeological Plan of Po River Basin, throughout the individualisation of sustainable, practicable and adequate solutions that involve directly the interested actors in an experimental path.
- Formal containers of voluntary agreements: some regions (eg Lombardia) have created in their institutional framework the possibility to engage in "River Contracts", through which agreements between public authority and concerned stakeholders can be reached for the sake of achieving given policy targets. A River Contract of this kind has been started in summer 2003 in the basin of the rivers Seveso, Lambro and Olona (North Italy), one of the most polluted watershed in Italy. This voluntary agreement is promoted and supported by the Regional Administration of Lombardia.
- Information system and opening the policy process to the people: the river basin of Tevere (the Italian pilot river basin for implementing the WFD) among other basin authorities and regional governments is currently working out an information system that is conceived also for the sake of creating a permanent and "lively" data and information set through which the public can have access to water-related information and ongoing policies

Voluntarily-promoted participatory processes. Some administrations have decided in autonomy to engage in participatory processes in order to carry on the duties that the law assigns to them, and for which in principle no binding requirements for PP were foreseen. This is the case of ATO "Bacchiglione", in Region Veneto, that has chosen to engage in a participatory process for the realization of the asset management plan and the choice of solutions aiming at achieving good ecological status of water. In the Bacchiglione case, public participation has been conceived as the organization of a series of workshops with stakeholders' category to the planning process. fishermen, canoamen, administrators, cultural-groups, managers, with the aid of external experts and some use of ICT as a way to share information.

3. Conclusion

The Italian water policy system has undergone an important reform during the last 15 years, aimed at catching up with a long-lasting delay. While having introduced in the institutional framework most of the keywords of the WFD well before its final approval (from the idea or integrated river basin management to environmental planning based on use destinations; from full-cost recovery to demand-side management), their implementation is still under way.

There is an evident paradox in the fact that the Italian instutitional framework is quite advanced, but its achievements are quite distant from the objective.

In the meanwhile, it seems that the attention of the legislator has been concentrated on objectives and instruments much more than on the renovation of policy styles.

Water policy has been traditionally conceived, and still for the greatest part is, as a top-down administrative exercise with little or no space for public involvement.

In fact, this picture is only a part of the story. Top-down policy is in fact just a theoretical model, while concrete policymaking occurs within networks of policymaking in which stakeholders play a

decisive role, though not always clear and explicit.
The tradition of PP in the Italian system owes much more to "corporative" institutions and to lobbyism than to more modern and perhaps fascinating ideas of "direct democracy" and public sector accountability. These institutions have been forced to oblivium for a long period after WW2, mostly because of their linkages with the fascist regime, and also because of a substantial neglect of their importance through national history, much more long-lasting than Fascism.
In the last 2 decades, corporative institutions are experiencing some revenge, and their importance grows together with the trend towards decentralization and federalism, on one hand, and resonsibilization of social actors, privatisation etc on the other hand.
The understanding of these roots is indispensable for understanding the potential developments of PP in Italy in the next years: this is true for all sectors, but particularly true for RBM.

Glossary

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