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Examples of good governance to avoid conflicts in water sector:
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Summary. This paper will focus on the participatory process carried out by the Optimal Territorial Area Authority (AATO) - Venice's Lagoon to find possible solutions for three key topics within the water politics: *Governance* of the processes and participation: innovative institutional/territorial coordination skill, technical/financial planning skill and bottom-up participated processes management (Water Common Good Fund); *Vulnerability Factors* within the water systems: being able to identify and solve vulnerability factors both external and internal (i.e. in urban draining, sabotage and terrorism events); *Replicability* of cooperation experiences and techniques: using participation approaches to carry out water systems in Developing Countries, using the Molecular Cooperation as an innovative tool (i.e. Agenda21 for Water). It will also be presented the Bacchiglione River case study, the participatory process carried out by the Optimal Territorial Area Authority (AATO) – AATO Bacchiglione (Padua), where the public opposition was shifted from Top-Down planning into Bottom-Up. This approach demonstrated the ineffectiveness of the classic top-down decision approach and the good transferability in a lot of similar cases within the water service.

Keywords. Agenda21 - AACQUA21 - Public participation - Molecular cooperation – AATO - Integrated water resource management - Water common good fund.

Exemple de bonne gouvernance pour éviter les conflits sectoriels d'eau : cas d'études du lac de Venise et la fleuve Bacchiglione

Résumé. *Ce travail porte sur le processus participatif développé par l'Autorité de l'Aire Territoriale Optimale (AATO) – de la lagune de Venise pour chercher des solutions possibles à trois problèmes clés dans le domaine des politiques des eaux : (1) Gouvernance des processus et participation ; capacité de coordination institutionnelle/territoriale innovante ; planification technique/financière et gestion participative ascendante des processus (Water Common Good Fund) (2) Facteurs de vulnérabilité au sein des systèmes hydriques : identifier et résoudre les facteurs de vulnérabilité tant extérieurs qu'intérieurs (à savoir, au niveau du drainage urbain : sabotage et terrorisme) (3) Reproductibilité des expériences de coopération et des techniques : utilisant les approches participatives pour la réalisation des systèmes hydrauliques dans les Pays en voie de développement, utilisant la Coopération Moléculaire en tant qu'outil novateur (notamment l' Agenda 21 pour l'Eau). On présente également l'étude de cas du cours d'eau Bacchiglione et le processus participatif adopté par l'Autorité de l'Aire Territoriale Optimale (AATO) – AATO Bacchiglione (Padoue), au sein duquel les pouvoirs publics sont passés d'une approche de planification descendante à une approche ascendante.*

Mots-clés. *Agenda21 - AACQUA21 – Participation publique – Coopération moléculaire – AATO – Gestion intégrée de la ressource en eau - Water common good fund.*

I - Venice lagoon case study - Introduction

The Optimal Territorial Area Authority (AATO) "Venice Lagoon" is made up of 25 Municipalities: 20 of Venice's Province, 5 of Treviso's Province, inside Veneto Region, Italy. The area has an extension of 1.266 squares meters, where live about 650.000 people and where four Water Service Companies currently work (Vesta spa – Venice Territorial and Environmental Services,

ACM spa – Water Society of Mira, ASP spa – Public Services Agency of Chioggia, SPIM spa – Integrated Water Services of Mogliano).

For giving an idea of the water's volume supplied by the AATO Venice's Lagoon, we can think that the annual water needs within the AATO is equal to 1/330 of the water volume of the Garda Lake (49 cube kilometers) and that this lake represent more than 30% of the total freshwater volume collected in all natural and artificial Italian basins.

The peculiarity of Venice and its Lagoon (that give the name to the Authority) is such to need a special care, aiming at safeguarding a delicate ecosystem, characterized by wetlands and by the typical morphology of lagoon lands, that forms the receiving body of the civic and industrial draining system.

The National Law n. 36 of the year 1994 (the so-called "Galli Law"), gives to the Italian AATO the task to write down the Water Master Plan, the main tool for the organization, planning and management of the Integrated Water Service and for the protection and the safeguard of the water resource.

The plan is of primary importance, both because it plans interventions in order to guarantee an efficient, effective and economic management of the water resources for the next 20-30 years, and because the scheduling and the planning of the interventions will be based on a Strategic Environmental Valuation on the use of the resources and the development of the Integrated Water System, coherently with the evolution of the territory. The Water Master Plan has been carried out by the Architecture University of Venice (IUAV) and it is based on three main themes (water resource analysis and safeguard methods, infrastructures systems for the next thirty years, economical, financial and charges plan).

The Water Master Plan highlighted also some critical states within the area, such as plenty of water losses, an inadequate purification of the sewage water and a high waste of the water resource: this situation is in a great disagreement with the conditions of many Developing Countries, where the water's access is a huge problem and often the water resources are used as a political tool in support of strategic, economical and political interests.

It is for this reason that the Safeguard Agreement to the Water Service Companies (Agreement that regulate the task to realize the Water Master Plan) contains a solidarity project (Water Common Good Fund) destined to the Developing Countries suffering shortage of water, such as Middle America and Africa.

So, a fund was created to finance some interventions and works in order to reach the same target: giving water access to everybody. In this way, the AATO municipalities' mayors, gathered in the Ambit Assembly, approved unanimity this venture of international solidarity.

AATO, in particular, suggested and carried out a participated approach for the integrated water resource management (IWRM), becoming leader of a Local Agenda 21 process, called AACQUA21, that can interact with the Water Master Plan. AACQUA21 is an Agenda unique of its kind ever realized in Italy that involved all the local stakeholders, giving consciousness about the importance of water and its use, financing studies in this field set to give knowledge of the local water bodies, foreseeing techniques for reducing water wastes, promoting new kinds of planning such as Ground Water Contracts and finally activating for managing, through local action, the decreasing of the vulnerability of the water resources.

The organization of the AACQUA21 process was given to AATO and to CIRF (Italian Centre for River Restoration). Finally, the AATO, owning the leadership, extended the exchange of views and the Multi Actors cooperation through an agreement with IUAV University of Venice – Planning Faculty of Venice area, and an operative protocol with CIRF, a NGO Association, in the year 2005.

II - The optimal territorial area authority of Venice lagoon

The Optimal Territorial Area Authority (AATO) of Venice's Lagoon was established in the year 1998 on July 29th as an agreement between local government agencies, as defined by the Regional Law n. 5 of the year 1998 and by the National Law n. 142 of the year 1990. The coordination agency is the Province of Venice, whose president is also president of the AATO.

The Authority plans and controls, according to National Law n. 36 of the year 1994 ("Galli Law"), the Integrated Water System (I.W.S.) of a catchments basin including 25 municipalities (also Venice) inside two Provinces of Veneto Region: Venice and Treviso.

The area's ambit extension is 1.266 square kilometers, where about 650.000 people live and where four Water Service Companies currently work (Vesta spa – Venice Territorial and Environmental Services, ACM spa – Water Society of Mira, ASP spa – Public Services Agency of Chioggia, SPIM spa – Integrated Water Services of Mogliano).

The planning of the water services and resources is based on the Water Master Plan, whose main targets are an efficient, effective and cheap management of the resource and the protection and the environmental safeguard of the land, together with solidarity and social participation.

The Political Organs of Venice Lagoon Authority are the President, the Ambit Assembly and the Institutional Committee, while the operative structure is coordinated by the General Director.

III - Water master plan

The Water Master Plan was carried out to realize what established by art. 11 of the Galli Law and by art. 13 of the Regional Law n. 5 of the year 1998, and it includes programs for protecting and planning the use and the distributions of the water resources for the next generations. It represents an important tool to control the evolution and the quality of the Integrated Water System and the Water Service Companies responsible of the water service.

As a matter of fact, a very delicate point of the I.W.S. regards the quality of the water system: it must deal, from one side, with the Water Service Companies which must continually improve their performances and, from the other side, with the city dwellers/consumers who pay the water charge and must be able to verify day by day the improvement of the water system in terms of quality and quantity.

The Water Master Plan must accord to some general principles:

- Water must be considered as a human common good, for it is an irreplaceable source of life;
- Water resources are not endless: they must be preserved, controlled and protected;
- Water that comes back to the nature, after being used, must not compromise any further use that could be made.

These principles are included in the "Water Manifest", a document drawn up by the International Committee for the World Water Contract, promoter of a worldwide campaign on the water's theme.

Since water is necessary for life, the good governance of water resources needs a participated and integrated approach (holistic method) that conciliates socio-economical development and protection of natural ecosystems essential for the water bearings.

Considering the delicate area that AATO Venice's Lagoon must administer, the integrated use of soil and water is an environmental priority that must suggest the rules for a sustainable

development and must find out, within the Water Master Plan, enlightened governance and planning of the Integrated Water System.

IV - AACQUA 21 – An Agenda 21 for water: Features

AACQUA 21 is the Local Agenda 21 for the safeguard and the governance of water resources promoted by AATO Venice's Lagoon. Thought to involve actively the stakeholders of the area, Aacqua21 aims to carry out concrete actions for knowledge, divulgation and participation of everybody who wants to realize a sustainable development of the Integrated Water System inside the territory of AATO Venice's Lagoon.

Thus, AACQUA21 is a participated planning process, inspired by Agenda 21, and it was born within the Water Master Plan of AATO Venice's Lagoon. AACQUA 21 is a local and monothematic Agenda 21 (the first and unique of its kind ever realized in Italy).

The aim of AACQUA 21 is to improve the participation and the agreement about the contents of the Water Master Plan, giving also the structure for the Action Plan (introduced and approved by the Ambit Assembly of the AATO Venice's Lagoon in the year 2004), since they must be carried out together.

Started in November 2003 to inform about the Master Ambit Plan, AACQUA 21 process involved AATO Venice's Lagoon in a lot of meetings with trade unions organizations, companies, municipalities and drainage societies which gave to the process the real function and utility: being the main tool of AATO Venice's Lagoon for the governance of water resources and the Integrated Water System. In fact, within the Water Master Plan, some methodologies are defined to safeguard the water bearings, the service quality levels for the customers and the companies, the different conditions for the use of water and the charges that the customers will have to pay for the water, for the sewerage system and for the purification plant.

AACQUA 21 is therefore a participated process, a way to promote and to facilitate a direct dialogue between city dwellers, institutions and other organizations around a work-table: it is the so called Environmental Civic Forum that aims to make clearness on AATO Venice's Lagoon behavior.

V - Water common good fund

AACQUA 21 established as an operative tool the "Water Common Good Fund". In fact, one of the main Actions written in the Synthesis Document for the Local Action Plan was the setting up of an annual and permanent Fund (called, in the begin, Solidarity Fund), oriented to finance projects that aim to favour the access to drinkable water in the Developing Countries.

The AATO Venice's Lagoon, according to the targets of the Johannesburg's Action Plan, to the principles defined by the National Law n. 36 of the year 1994 (Capo I), by Agenda21 and by the "Water Manifest" drawn up by the International Committee for the World Water Contract, established an annual and permanent fund called "Water Common Good", set to finance projects that aim to:

- Favor the access to the drinkable water in the Developing Countries
- improve the basic sustainable sanitation (water disinfection, idrosanitary system) in countries suffering shortage of water and missing of basic sustainable sanitation facilities in Asia, Africa and Latin America, specially the poorest areas/countries (Water Poverty Index indicator).

The establishment of this fund is foreseen by the art. 17, comma 8 of the Agreement for the development of the integrated water system, that reports: *"Referring to the principles, the charge*

is increased to 1 (one) eurocent for every cubic meter of water supplied. The total amount must be saved by the Water Service Companies, and its exclusive ownership and availability is owned by the AATO Venice's Lagoon. The Fund is set to finance international cooperation projects that pursue sustainable models of water management in countries suffering shortage of drinkable water".

The Fund management is regulated by the applicative rules of the solidarity fund approved by the Ambit Assembly of AATO Venice's Lagoon with the agreement n. 1135/04 of 30th November 2004. With the Ambit Assembly's agreement of 20th April 2005 was approved the Announcement for the years 2004-2005. The procedures of the Projects' Valuating Commission finished on December 20th 2005, with the approval of the winner projects (8). The operative phase started on January 2006 and must finish within 12 months.

Main features of Water Common Good Fund:

- Financed projects to carry out in the Developing Countries
- Activation of a different channel of continuative and permanent solidarity: not traditional (top-down) but popular (bottom-up). The fund is annual and permanent.
- Simplicity and immediacy for the communication of the social value
- Simplicity of the financing and management system

VI - Alliance for the molecular cooperation

Partners of the alliance for the molecular cooperation (A.C.M.) are:

- Optimal Territorial Area Authority (AATO) - Venice's Lagoon: it has functions of management/ operating/technical and financial Governance of International Cooperation Projects for the Water Common Good and analysis of the water systems' vulnerability.
- IUAV University of Venice – Planning Faculty: it cares about the scientific validation function for the sustainable development within water sector and the Cooperation and Monitoring Projects.
- Italian Centre for River Restoration (CIRF): it cares about the coordination, organization and participated approach functions within the projects. Expertise on Technologies for the reduction of Environmental vulnerability.

Two kinds of molecular cooperation can be identified:

- Micro Molecular Cooperation: this new kind of Cooperation has been defined by the promoters as a "micro molecular cooperation". In fact, the "molecular" subjects are the city dwellers (circa 650.000) of the AATO-Lagoon area, who use about 50 cube meter of water each, every year.
- The cooperation is based on saving 1 eurocent for every cube meter of water supplied.
- So, the contribution from every city dweller for the Water Common Good Fund is nearly 0,5 €/city dweller/year. Inside the AATO Venice's Lagoon approximately 70 million cube meters of water are supplied every year. So that, in two years (2004-2005), 1.400.000, 00 € have been collected.
- Macro Molecular Cooperation: starting up a Molecular Cooperation Pact to national level, spreading to the all 91 AATO in Italy the model of the Water Common Good Fund.

Since the national water's use is approximately: 5 milliard cubic meters/year, this action could mobilize about 50.000.000, 00 Euro per year 50.000.000, 00 Euro per year for water politics in the Developing Countries.

All three partners trust in multi-institutional teams and join together useful skills for the three key topics within the water politics:

1. Governance of the processes and participation

Possible by using participation approaches to carry out water systems in Developing Countries and by using the Molecular Cooperation as an innovative tool (Water Common Good Fund)

The new referring level and the new planning scale provided by AATO Venice's Lagoon, finally allow an adequate governance of the processes for the development of the infrastructures and the technologies of the Integrated Water System and, at the same time, of the city dwellers and stakeholders' democratic participation processes (Agenda 21 as a participated and methodological approach for the application and the reform of the integrated water system)

The main targets of the Water Master Plan are:

- o Protection and safeguard of the water resource in terms of quality and quantity (valuated through the Strategic Environmental Valuation)
- o Planning and sustainable development of the water use
- o Effective and efficient management of the integrated water system Effective and efficient management of the integrated water system
- o Consumers protection Consumers protection

2. Vulnerability factors within the water systems

It means being able to identify and solve vulnerability factors (external and internal, i.e. in urban draining, sabotage and terrorism events).

Water, especially nowadays, is a potential politic and military target, so all the picking up, purification and distribution system becomes a possible target: its vulnerability must be carefully protected through prevention, protection and safety systems.

Therefore, the Water Master Plan contains the strategic lines for the approach to vulnerability (D.V.S.I.), but, above all, defines in detail all the defense, protection and safety systems against accidents or terrorism outrages.

Targets of the Water Master Plan are:

- o Definition of internal and external vulnerability factors of the infrastructural supplying, purifying and distribution water system and of the metropolitan hydrogeologic system
- o Diagnosis of: hydrogeologic vulnerability on metropolitan scale and Integrated Water Systems (D.V.S.I.)
- o Reconnaissance of: Hydrogeology, network, installation (vulnerability points and risks factors) and monitoring system conditions
- o Specific design and peculiar achievement of protection and defense technologies for every different kind of installation.
- o Definition of measures and vulnerability prevention systems coming from accident, terroristic outrage or sabotage risks. Tools: Regulations on water for human consumption

3. Replicability of cooperation experiences and techniques

It is possible through:

- o An innovative institutional/territorial coordination skill, technical/financial planning skill and bottom-up participated processes management (i.e. Agenda21 for Water)
- o Repeating the vulnerability diagnosis DVSI in all urban and metropolitan Integrated Water Systems with special reference to the Occidental civilization.
- o Structural application of the new protection and safety technologies for all the risks connected to the carrying out of the integrated water system in the Developing Countries.

VII - Bacchiglione River case study - Introduction

Bacchiglione River case study analyses the public participation process developed in the Bacchiglione Basin (North-east Italy) during the period from April 2002 to November 2003.

This case study has arisen as a result of the need to safeguard drinking water resources in the upper Vicenza area (Veneto) which are seriously threatened by pollution and – even worse – by the waste originating from the towns' purification plants.

The Authority responsible for the Water Infrastructure Project within the area which lays under the Bacchiglione river basin was therefore obliged to start interventions regarded as a priority in order to safeguard the drinking water resources and to improve the environmental conditions through instillation of a wider and more effective sewerage and purification system.

The creation of a Technical Work Team aimed at favoring tools of integrated planning grounded on the negotiation of interests and on participation. This group has been supported by another purely technical team whose task is to get data and information useful to work out one or more possibilities related to the proposal of the final location of the two waste water treatment plants. Afterwards a participatory process has been put into place involving three different workshops within the duration of the project, as well as various meetings in order to supply valid indications to the formulation of the Water Infrastructures Plan (*Piano d'Ambito*). This plan was hopefully likely to be institutionalized and utilized in order to study all the problems related to the Bacchiglione, while assisting members of the technical work team to identify types of decisions required to be taken.

It provides a clear example of the NIMBY syndrome (Not In My Back Yard) where the clash of interests can't be solved and where consequent lobby, opposition, boycotting actions is evident. The social learning process generated by public participation (PP) has brought decision makers and stakeholders to reframe the problem from a local issue to a "basin" issue, drawing attention to the overall problem of guaranteeing adequate water quality levels in the watershed as a whole. The main success of the PP, indeed, lies in the fact that social consensus was finally achieved, and this success has stimulated the regional government to encourage similar initiatives in other ATOs.

On the other hand, if social learning (SL) is regarded as a value "in itself" for the sake of democracy, openness and "ethical sustainability" of water management, the judgment is far less positive, since in the end the Public Authority (PA) was very reluctant to recognize the forum as a place in which policy targets and strategy could be changed, questioned, reframed etc, and used it only instrumentally. This generates the risk that after reaching the consensus over the plan the whole process loses its "momentum" thereby reducing also its potential for improving SL in the future.

VIII - Approach

The participatory process analyzed in the Italian case study is located in the area of the Bacchiglione river basin (North-east Italy).

The informal participation has been largely developed in the last ten years in Italy and there are several examples among which also the case considered can be analyzed.

It can be regarded as a “Pact for Waters” involving three main characteristics which are identified below:

- o Instrument to create particular interests within a common good, and to develop the territory, while enhancing its peculiar characteristics. This instrument is to involve the local knowledge drawing upon relevant expertise, particularly those people who work in the scientific and technological innovation fields.
- o Agreement promoted by local boards, by social parts or by other public or private subjects, related to the realization of an intervention program characterized by precise objectives aiming at the promotion of local development.
- o Instrument to identify a coordinated whole of productive and promotional interventions, as well as infra-structural and functional ones”.

The participatory process has at least firstly been started up in order to support the formulation of the Water Infrastructures Plan as to a single action to be performed (waste water treatment plant of *Thiene*); afterwards, the structuring topics gradually increased due to the interaction among the stakeholders, the technicians and the advisors responsible for the Program planning; it has been finally claimed that the emerged solutions will represent an advanced prototype to be extended to the whole Bacchiglione area.

We have a privileged description of this project as two research workers in our University have personally followed the participatory process since its very first start through until its last meeting, being therefore able to identify the values and defects associated with the process. As to this element, a critical and “*super partes*” analysis of the Bacchiglione Pact has been made, attempting to analyze all the defects from every possible perspective.

Moreover the analysis of the case study is based on information gathered from:

- o Analyzis of public documents produced during the participatory process (CD-Rom, Internet site, etc.);
- o Interviews with key actors about their impressions of the participatory process.

The institutional water planning of the Bacchiglione river basin is organized in several levels. The national law n. 183/1989 founded 7 authorities which provide the water planning in the river basins of national. The river basins, located in the North-east Italy (Isonzo, Tagliamento, Livenza, Piave, Brenta and Bacchiglione) are represented by the same authority.

The objectives of the River Basin Plan are more general and concern different aspects of the water governance:

- o Water quality;
- o Water quantity budget;
- o Soil protection.

The water quality objectives of the Bacchiglione River are deeply defined by the Regional Water Quality Plan (RWQP), where different kinds of actions are individuated (Waste Water treatment plants, river restoration, etc.).

The Water Infrastructures Plan (WIP) plans point by point the water infrastructures which contribute to achieve the quality objectives defined by the Regional Water Quality Plan. The WIP is produced by the Authority of ATO "Bacchiglione" (*Ambito Territoriale Ottimale* – Optimum Territorial Area). This organisation is composed by the representatives of the different level of the Public Administration (Region, Districts, and Municipalities) and the Water Service Companies of the Bacchiglione river basin.

The relationship among the objectives of the 3 different levels of the water planning in the Case Study of Bacchiglione River is schematized in **Figure 1**.

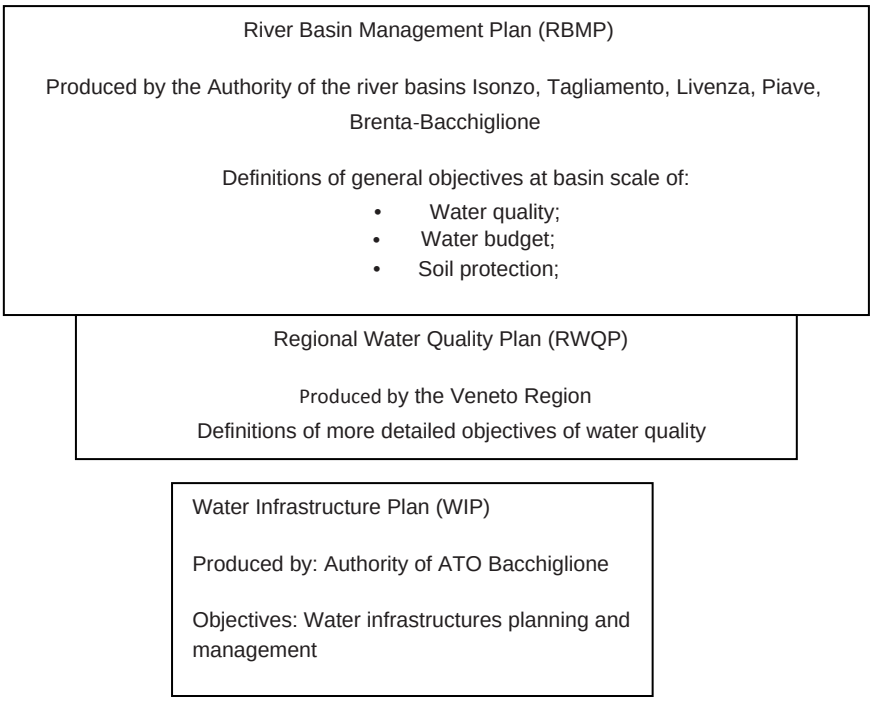

Figure 1. Objectives of the 3 different levels of the water planning in Bacchiglione River case study.

IX - Description of the process

1. Activities/Phases

The decisive element of this process goes back to 1989, when the Regional Water Quality Plan planned the doubling of a waste water treatment plant placed in the high plain (see Figure 4) and the subsequent construction of a waste water pipeline in order to convey its waste down to the plain. While carrying out this project it wasn't properly clear where to discharge the polluted load as the right place should have been just upriver of the landscape protection area (*Bosco di Dueville-Vicenza*), which undergoes specific protection standards by a Regional Territorial Plan (*PianoTerritorial eRegionale diCoordinamento*) as resurgence area: a possible waste would unavoidably alter the resurgence water's characteristics.

Great was the concern of the Water Service Director, of the downstream communes, and of the citizens (Fishermen). The Authority of ATO "Bacchiglione", born when the project was already started and needed a solution, decided to face it actively.

The Authority of ATO –"Bacchiglione" firstly set up a Project Team (PT). This group has been supported by a more specifically technical group, named Operative Technical Team (*Gruppo Tecnico Operativo* – GTO) whose task was to collect all the data, the information and the elements useful to advance one or more technical proposals about the final destination of the waste water pipeline. The Project Team was composed by:

- The director and the technicians of the Authority of ATO;
- The Regional Administration of Veneto;
- The District Administration of Vicenza;
- The technicians of the Regional Environmental Agency (ARPAV);
- The technicians of the Water Services Companies;
- The planners of the water infrastructures project;
- The technicians of the Municipalities of the area involved by the pipeline problem.

The GTO consisted of all the Project Team members and moreover of:

- university consultants experienced at the water and at the planning field;
- Irrigation Boards representatives involved in the problems related to the water main.

This approach was, at the beginning, reserved to a few people, afterwards the number of the stakeholders involved in the process increased. The choice was made because of a deeper knowledge of the problem as the team project members became increasingly aware that not only a small part of the territory was involved, but that the effects might have had been spread all over the basin. Moreover, shifting the attention to the whole basin enabled the necessity of analysing the critical points for the entire basin to be raised.

The decision of starting up a wider participation approach originated from the support provided by some of the technicians who cooperate with the board, and who were aware of some positive participative experiences either in Italy or abroad; far beyond from following the indication of Directive 2000/60/EC which supports Public Participation. A new phase therefore started (October 2002) and in it 300 members were involved.

The Widened Technical Group (*Gruppo Tecnico Allargato* – GTA) was the group who was made up of part of the project team, part of the GTO and selected and representative members of stakeholders who were participated to the 1st Workshop. In Table 3 the composition of groups is summarised.

The second phase of the process was finalised in October 2002 and finished with the editing of the Water Infrastructures Project. The October 2002 workshop was the first plenary event of the Participatory Process, which continued in April 2003, and which ended in November 2003.

The workshop was organised either through plenary sessions in the morning or through work sessions, structured in thematic groups, in the afternoon. About 200 people took part in the first two meetings: all of them were skilled or well respected either in technological or in scientific innovations.

The participation at the workshops of other stakeholders, not involved in the GTO or GTA works, was authorized by the Authority of ATO, which defined, with the support of the university consultants, a list of guests.

Their cooperation with local boards and private and public subjects was successful in finding agreements related to the interventions aimed at specific promotion of sustainable local development objectives.

In the third workshop, attended by the Environment Ministry, even more participants were involved; this fact is the evidence of the considerable share given by trade associations, public boards, private and public subjects, technicians, universities, citizens and mass media. During the workshop, the main elements of structuring the Water Infrastructures Plan were expounded: in particular, the process which concluded this phase of the process can be divided into the following parts:

The **Table 1** collects the chronology of several meetings organized during the participatory process, with their purpose, the adopted methodology and the level of involvement.

Table 1. Chronology, purpose, methodology and involvement level of meetings.

Data	Meeting	Purpose	Methodology	Involvement level
April 2002	Project Team meeting (24 members)	To understand how solve the problem of waste water pipeline.	Round Table	Consultation
June 2002	GTO Meeting	To analyse the collected data and proposed alternative solutions	Round Table	Information-retro-action Consultation
October 2002	1st Workshop: "*Patti per le acque: il fiume Bacchiglione*" Invited: 224 Participants: 130	To present the problem, the analysis and the alternative solutions	Extended Workshop Working groups	Education Information Consultation
February 2003	Constitution of the GTA	To analyse problems connected to the Bacchiglione River Basin	Working groups	Information-retro-action Consultation
February-April 2003	GTO and GTA meetings	Analysis of River Basin, our problems and the alternative solutions	Working groups Briefings	Information-retro-action Consultation
April 2003	2nd Workshop 2: "*Scenari e prospettive per il fiume Bacchiglione –Il Piano e oltre il Piano*" Invited: 189 Participants: 90	Presentation of studies about the river basin and suggestions for the redaction of the Water Infrastructure Plan.	Extended Workshop Working groups o	Education Information Consultation
May-October 2003	GTO and GTA meetings	Analysis of feasibility of proposed solutions and other studies about the river basin	Working groups Briefings	Information-retro-action Consultation
November 2003	3rd Workshop: "*Il Piano d'Ambito*" Invited: 340 Participants : 110	Presentation of the other studies about the river basin and the technicians decisions about the redaction of the Water Infrastructure Plan.	Extended Workshop Working groups	Education Information Consultation

2. Outcomes

All the topics used in the workshop's editing, as well as the speakers' speeches, the team- work's records, the workshop's results, can be regarded as outcomes and have been recorded in two interactive CD Rom.

During the process some alternative actions proposals were produced by the participants. As at the moment of writing this report the redaction of the new plan is still underway, then it is impossible to evaluate how the plan includes these suggestions.

Moreover, during the Participated Process, some stakeholders reported the workshops and the team – work's contents. The fishermen group can be regarded as a good example; the representatives of the group were invited to the workshop and organized another meeting in order to inform the groups' participants about the choices and the alternatives highlighted during the ATO meetings.

Another important output of the process is the degree of social learning reached by the participants. As well described in a following paragraph (Framing/reframing), the evolution from local to basin issues is a consequence of the process of improvement of knowledge. However, it is not possible include, among the outputs, some effects on the decision-making process.

3. Feedback

In order to analyse the feedback property, the objectives of a participated process use in the Bacchiglione river case, must be taken into account:

- The participation was born to support the decisions to be taken as to the Water Infrastructures Plan (*Piano d'Ambito*) editing.
- A Participated Process was carried out in order to reduce the conflicts and to make the stakeholders and participants come to an agreement.
- The participation was useful to educate the stakeholders about the rivers' problems, about the approaches to be applied to the existing legislation, to the innovative technologies etc. At the end of the process which lead to the Water Infrastructure Plan editing, it was noticed that all the three above mentioned points had been successfully reached.

In this case the process has not produced any change within the river's management institutional context. When the time came to the final decision the public administration withdrew itself into its ivory tower, regarding the process as a consultation chance. Many participants were frustrated because of the process' conclusion, in particular as they hadn't been able to verify whether the suggested and shared proposals had been acknowledged as plan variation.

4. Analysis

A. Framing - Reframing

The Participatory Process was, at the beginning, a simple collaboration between the "institutional" stakeholders – assisted by a few technicians – and some people who were experienced in this sector: the aim was to analyse the best solution to solve a precise problem concerning the localisation of a wastewater discharge.

Thanks to the contribution of a technician, professor at Venice Architecture University (Prof. E. Trevisiol, IUAV – University of Venice), who had experience in supporting other Participatory Processes, and of a director of the board in charge of Water Infrastructures Plan editing in the Bacchiglione basin, the process has been extended to other stakeholders: at first those belonging

to the district mostly interested by the principal problem, and afterwards to those somehow bound to the river's basin territory.

A stakeholders' network was therefore created and it was mainly composed of Institutional Boards, Environmental and Cultural Associations, Sports Associations (Fishermen and Canoeists), Farmers Associations, Industrial Associations, experts, technicians, basin Authorities, land – reclamation syndicate. Shifting from a "precise" to a "widespread" problem, a different approach has been adopted: at the beginning researches and analysis had been carried out in a restricted part of the basin's territory, afterwards a deeper knowledge of all the Bacchiglione basin was regarded as necessary.

Surveys made by other boards were taken into account, comparing their knowledge and, in some cases, other studies were commissioned in order to deepen some problems and some alternative solutions. The Participative Process, besides its development, allowed the evolution of knowledge too, thus creating not only a general culture among the stakeholders but putting also in touch their skills and favouring communication and consent.

B. Assumption of Roles / definition of roles

By observing the pattern also previously analysed, every group role is now checked: the Project Team's aim was, in its first phase, to decide about the different alternatives for the solution of the manifold's problem as to the already mentioned depurator. In the second phase, its role was to direct the decisions for the Water Infrastructures Plan formulation all over the Bacchiglione basin - as stated by the director of the authority of ATO in an interview.

GTO aim was to supply specific knowledge and studies, especially in the first phase; afterwards, its task was to keep the stakeholders and the project team in touch and to provide incentives for discussions during workshops, thus acting as"facilitator/mediator". One of the consultants played a leading role in promoting the Participatory Process that later on was developed.

This was the most active group in finding and working out all the data gathered: the aim was to supply on the one hand the materials to be distributed during the workshops, on the other to consider the ideas suggested and to bring the decisions to the project team, even if the decisions taken were always to be evaluated by the project team itself.

The cooperation between these two groups lead to the creation of "participation moments" (Workshops) thus providing the basic knowledge and preparing all the materials and making them available for the stakeholders.

The GTA was the group who gathered part of the team project, part of the GTO and part of the stakeholders. The meeting among these groups aimed at considering how to set out the widened workshops which subsequently occurred, considering the speeches as to the contributions given by the stakeholders' representatives. Other stakeholders mainly played the role of "educators" as to the river's basin and as to the relationships with institutional boards; they also brought forward their knowledge, in particular:

Environmental and Cultural Associations brought forward either a technical approach or a specific point of view as to different problems.

Sports Associations (fishermen, canoeists) as river's direct "exploiters" who can better appreciate any improvement and who are in the position of evaluating some problems. Farmers Associations who are to be educated as far as the water resource's safeguard and exploitation. Industrial Associations are, together with the farmers', the river's most polluting elements: they were mainly involved in order to highlight the problem.

C. Boundary management

The management of the Bacchiglione river basin is more and more aimed at by several interests who sometimes seem to be antithetical. The action's and interest's range (boundary management) is kaleidoscopic and characterized by a lot of facets whereas even single person has a widespread relationship network within such a process.

Since the lack of confidence between the planning and the realisation of the project, mainly managed by technicians, was increased, it was decided to discuss the problems related to the pipeline matter. From this viewpoint, the Authority of ATO Bacchiglione founded a new work group represented by associations and boards directly involved in the *Tubone* (waste water pipeline) matters and supported by a technical group.

Afterwards, in the negotiated process, new participants were let in and the discussed problems' list became longer and longer: the pressures' status on the Bacchiglione system was expounded; the river's evaluation instruments (park river areas, ecological networks), monitoring, precautionary measures, as to the water resource, have been taken into account.

From the local to the basin area the problem became wider. The participants themselves doubted, new people were involved between the first and the third meeting: this fact shows how big the contribution brought by the stakeholders and the participants of this privileged ambit has become. Despite of this positive vision, industrialists and farmers' associations play an important role among the always present and invited stakeholders, but they never accepted the invitation. Their absence is caused by their perception about the process' efficacy, being a direct and informal negotiation with the public authority only, regarded as a more incisive element. This is what usually happened in the past. Such a behavior can be somehow retraced to the fact that the public authority didn't make it clear (or may be that it wasn't itself convinced) that the participatory process was the right place where to take decisions.

"Smaller groups" - that is to say all those associations who are not often taken into account - agreed to take part in the process.

D. Evolution of interest, functions and strategies

The Participated Process in the Bacchiglione basin was born thanks to the team project and the GTO, who realized how the problem was actually involving environmental and cultural wider interests.

A wider stakeholders' involvement occurred; a further increase in participation showed from 200 to 300 guests; a clear signal of a deeper interest towards the problem. A deep changing occurred also within the GTO: from the role of experts some consultants passed to the one of promoters of participated process, and, afterwards, to the one of facilitators/mediators during the PP.

As to the strategies' changes an evolution was suggested: an interactive forum was born in order to increase the interaction and the communication levels among the stakeholders. Unfortunately it didn't get the hoped success, as two participants only were finally present. Such a system was clearly regarded as "biting off more than one could chew".

E. Critical events (turning points) analysis

The process' evolution was characterized by some turning points, or – to better specify, by a progressive enlargement of the themes, of the territorial context, of the involved stakeholders. The process was born from the involvement of some experts who aimed at a possible solution to a very local problem. One of them, in particular, made the Water Infrastructures Authority to involve a larger group of stakeholders. After the consultations with technicians and experts only, different groups of stakeholders, interested in the local problems, were therefore involved. Subsequently, during the very first workshop, the decision of analysing the basin's problems and

therefore of involving a bigger number of stakeholders acting on behalf of the interests of all the Bacchiglione river basin, was gradually reached.

F. Mechanisms that foster social learning

One of the consultants who was firstly called as a"water expert" was the one who fostered the creation of a Social Learning Process. As his previous experiences dealt with other participative processes, only as time went by he managed to convince the Director of the Bacchiglione River Basin Authority, to institute a participative process which was also brought to the Third World Water Forum in Kyoto (Trevisiol, 2003 (a)). This choice was mainly accepted as a promotion in order to release AATO to its public and to be well liked by politicians. The consent problems raised by some of the Water Infrastructures Plan's choices induced even the people responsible of the editing of such an instrument to involve also "Right-holder" chosen among the associations and boards directly interested in the river's basin problems. These can be grouped in the following categories:

- o Administrative stakeholder, who put a legal pressure;
- o Water Service managers, who put a financial pressure;
- o Boards Associations, who put a social pressure.

The Mediators or facilitators of the Participative Process may play a leading role in its creation. Their aim was to stimulate discussions and interaction meanwhile making some most difficult or most-aimed-at-technicians more easy to be understood, especially to those who are not expert in this field. Who played this role had equally the task to acknowledge the points which would have needed furthermore explanations in subsequent moments in order to increase comprehension and agreement. A system which, supported by workshops and team works, led to the creation of the Social Learning was represented by the availability of all the interactively produced and endowed documentation which could be always available and easy to be downloaded in any moment by anyone who might be interested in it. This system led to the information spreading and the implementation of a "basic" culture even for the non expert ones.

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