



JOINING FORCES

Metropolitan governance & competitiveness of European cities

“Governance in Externalities and Environmental Issues
at City Region Level”

SEVILLE - Seminar Working Document
15, 16 & 17 April 2009



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PART 1

1. INTRODUCTORY NOTE TO THE THEME: “GOVERNANCE IN EXTERNALITIES AND ENVIRONMENTAL ISSUES AT CITY REGION LEVEL”

Market failures in the fundamental theorem of welfare economics mean that under particular circumstances market is not working efficiently. They provide a set of rationales for government activity. Externalities present a type of market failures. These effects are working in the similar way in the relationship of communities. The actions of one of them may have effects on the other ones. If a community constructs a smelly sewage plant, in a location such that the winds blow the bad outputs over the neighbouring communities, there is an important externality. This is called spillover effect. Not all spillovers have negative consequences. For instance, good water sources of the surrounding area makes positive effects on the city.

Either market or government can react on externalities in different ways. One among others is internalization of externalities in such a way to form economic units of sufficient size which means that most of consequences of the externality occur within this unit. For instance city region as established unit of internalization makes possible to unify positive and negative effects, as ‘producer’ and ‘consumer’ side of public goods. Harmful effects and costs can be minimised in this way, while cost effectiveness can be enhanced.

In the case of big cities internalization is realized with administrative decisions, i.e. creation a new level of government. However, as it was highlighted in the earlier stages of our common cooperation in the working group ‘Joining Forces’, it is not mainstream solution nowadays. Instead of governmental solutions more flexible instruments of governance is highlighted. Cooperation is preferred rather than simple forcing unification of city and surrounding municipalities, involvement in private financing rather than simply subsidies from the national budget, participation rather than bureaucratic methods, etc.

Environment as a total seems to be a very broad issue for our capacities of investigation. Let us focus on only two interlinked issues from this complexity, such as problems of

- solid waste management
- maintaining sewage systems, waste water disposal and treatment

at city region scale.

What is the existing role of governance in development and provision of public services on these particular areas in partner cities of the working group? Solutions, actors involved, methodologies for solving problems are interesting either as existing practice or initial strategies for the near future.

1. Some of the problems of solid waste and waste water at a city region scale

Forward-looking cities cooperate with nearby towns and villages to protect local environment from pollution in order to maintain their sustainable development. By fixing leaks and otherwise promoting water efficiency, cities can make full use of a valuable resource and reduce demand on reservoirs. Recycling of water is already becoming more common, but water-short cities could make reuse of water even easier by separating household and industrial wastewater. By composting organic waste and mining trash for

reusable paper, glass, and metal, cities can reduce the amount of material that enters the waste stream in the first place.

Organic waste – paper, food scraps, lawn clippings, and even human waste – is a valuable resource. European cities are leading a trend toward composting, which transforms this castoff organic matter into a product that invigorates agricultural soils. Most developed cities the overwhelming majority of waste is like this. Some cities have gone a step further toward preventing landfill overflow by involving the industries that create disposable goods or generate waste. Municipalities have created, for instance, a labelling program to spur small- and medium-sized industries to reduce waste: companies receive the city's environment quality label if they reduce solid waste by a definite percentage. This is only an example on possibilities for local actions in this area.

Nevertheless, on the other side, even the most expensive methods of waste disposal – high-tech “sanitary” landfills and incinerators – might not completely free of health risks. Toxins from landfills can leach into groundwater, and heavy metals, chlorine compounds, and dioxin are among the hazardous components of incinerator ash. When rainwater is channelled into sewers, less water infiltrates the soil to recharge underground supplies. It means that different ways of territorial cooperation should focus directly also on prevention of damages.

2. Some managing fields of government and governance in action

(Municipal cooperation) Conservation of land protects water quality. Municipalities can control emission together, enhancing effectiveness this way. A number of cities are finding that cooperating with neighbouring regions, industries, and agriculture to protect watersheds is ultimately less costly than trying to make polluted water safe for drinking.

(Cost-effectiveness in city regional scale) Other approaches include low-cost methods of wastewater treatment. Cities also have the potential to shift from being repositories of waste to becoming important sources of raw materials. To some extent, the forests and mines of the twenty-first century may well be found in our urban centres – in the form of city recycling plants. Local authorities can spur the transition by providing incentives for composting, recycling, and waste-based industries.

(Coordinated local influence on pricing) A key to water conservation is removing incentives for profligate use. Lack of meters, inordinately low prices, and prices that decline as usage increases these all encourage wastefulness. Water is under-priced because a higher level of government limits the amount that a utility can charge. And subsidies allow water companies to charge less than needed to recover costs. This under-pricing rewards excessive use, so the problem feeds on itself.

(Role of NGOs) City partnerships with local nongovernmental organizations and private business can promote innovations in water supply, sanitation, waste collection, and recycling. Where cities have been unable or unwilling to extend water and waste services to their poorest inhabitants, some neighbourhoods have stepped into the breach with low-cost solutions.

(Role of private sector in provision of public functions) Increasingly, cities are looking to tap the resources of the private sector. In some of the countries, while the private sector has a long history in solid waste collection and disposal, it is just entering water supply and sanitation because governments realize that they will be unable to come up with so huge public money needed over the next decade for reliable water systems. In general, a minority

of financing for water comes from private sources. However, national models are different from this aspect. Nevertheless, privatization, in various degrees, is also a growing trend. Water supply and sanitation are important public services, so some form of public control or regulation will always be needed to make sure that quality and prices are reasonable. Investors may find providing water more attractive than taking it away – the cost invested in water supply can be recovered by user fees, whereas it is harder to charge for sewers each time they are used – but both services are essential to the common welfare.

(Linkages to city regional economic development) The job creation potential of recycling may be even greater in more wasteful societies. Recycling, for instance, generates many more local jobs than land-filling or incinerating waste does.

3. Governance as a tool of internalization of environmental externalities in waste management of city regions

The role of following points to give ideas to notes on partner cities. Waste management is only example from environmental issues. Our investigation highlights some issues of governance, neglecting professional technical, legal public policy details in this matter. This aspect combines different subjects of our seminars. Only relevant points in each case should be summarized referring on member cities of the working group. The main points are expected to follow just in order to better comparison. However, most relevant aspects or more interesting cases would be good to describe in a more detailed way. This is a potential basis for further discussions in one of the group-meetings. We also try to find out similarities and differences later on. The purpose of this kind of comparison is not more than drafting some of the models for others how to solve environmental problems in formal or informal city regional units.

1. Main characteristics of waste management at city-region level

- 1.1. Division of public tasks among different government tiers on
 - solid waste management
 - water supply
 - maintenance and development of sewage systems in the city region
 - waste water disposal and treatment

Are there any similarities or characteristic differences in scale of management of these functions?

- 1.2. Conflict management concerning localisation of plants: how to solve NIMBY [not-in-my-backyard]-syndrome?
- 1.3. Private involvement in delivery of services in solid waste and waste water treatment; what is the character of private sector here esp. paying attention to major private companies which are in monopoly position?
- 1.4. Options for common integrated solutions. What kind of external effects have been internalized at this scale for the last decades?
- 1.5. Main results, problems, challenges in management of waste at city-region scale recently. Local options for generating recycling

2. Forms of governance in managing waste at city-region scale

- 2.1. Role of strategic and spatial planning in development of economy of waste
- 2.2. Framework of managing projects on waste collection, selection and disposal

- 2.3. Examples of recent projects, lessons learned
 - 2.4. Role of user charges or/and subsidies in finance of public services concerning waste
 - 2.5. Formulation of policies on waste management at city-region scale: cooperation among formal decision-makers, institutional frames of municipal associations. Is there any specific policy-making institution or practice of decision-makers on issues of solid waste and waste water as types of public service provision?
 - 2.6. Success and failures in integration the city and its area focusing on enhance of cost-effectiveness from a strategic point of view (naturally, no need a framework of cost-benefit analyses)
 - 2.7. Sustainability concerning waste management; environment-friendly solutions and preferences
- 3. Role of citizens as voters, consumers or purchasers in provision of public services of waste management**
- 3.1. Forums and forms of public opinion concerning disposal; conflicts between city and outskirts
 - 3.2. Bargaining process between interested municipalities
 - 3.3. Consumers' position against providing monopolies
 - 3.4. In what extent can purchasers be able to influence the level a services?
 - 3.5. Is there any influence by neighbourhoods on organization of waste management? What kind of advantages can they realized from their position?
 - 3.6. Main ideas, recent conception for development of systems or methods of citizens' and stakeholders' involvement in provision of public functions in city and regional solid waste and waste water management

Methodology

According to our common method in the working group, all partners are asked to prepare a brief note on their own situation. The package of information might be a basis of our discussion in Seville or later on. You are free to select from points above as subtopics. In particular case, naturally, only relevant issues should be highlighted, and you can omit issues that seem to be indifferent from your point of view. At the same time, please, add what you think would be important to know for all of us about your case. Each note should not be longer than 3 pages in this format.

2. CONTRIBUTIONS FROM PARTNERS

2.1. Brno

2.2. Brussels-Capital Region

2.3. Burgas

2.4. Eindhoven

2.5. Florence

2.6. Krakow

2.7. Lille Metropole

2.8. Seville

2.1. Brno

As far as metropolitan region (area) is concerned, no legal regulations has been introduced to allow conduct an integrated initiatives concerning waste management, water supply, sewage treatment so far.

The municipal level is generally responsible for all these issues.

Municipal bodies are responsible for all basic competencies – in the metropolitan area framework as well. Nevertheless there is a possibility – given by the Czech legislative – to cooperate with each other.

Joint infrastructural solutions within the metropolitan area are implemented to the low extend.

Additionally governmental bodies on “higher” level (national, regional) prepare their own plans and programmes.

WATER SUPPLY

In the Czech Republic the **municipalities** are responsible for water supply. Municipality acts in autonomous and delegated powers – state administration (municipality with extended competence has delegated state power as a water administration over the municipalities in its district). **The Statutory City of Brno** is responsible for water supply within its territory, owns water supply network and performs other activities according to the Law on Water and Law on water supply network and sewages. The City of Brno, as a municipality with extended competence, has in its administration district only the area within the city borders and has no competences over other surrounded municipalities.

The Department of water and forestry management and agriculture of the **Brno City Municipality** is responsible for realization of the water management strategy and flood control (autonomous powers). At the same time this Department has competences of the 1st level water administration (state administration – permissions for water disposal and treatment, statements to investment intentions, permissions for establishment and enlargement of water structures, register of water pipes and sewages, etc.) Some competences in this field are also provided by the city districts.

The Technical Network Department of the Brno City Municipality is responsible for administration of water infrastructure in the possession of the City of Brno. According to the contract with the City of Brno **Brno’s water works and sewages, joint stock company** (Brněnské vodárny a kanalizace a.s.), supplies drinking water. The City of Brno is a major stakeholder (51%).

State - The Water Protection Department of the Ministry of the Environment is the central water management authority in particular with respect to the following issues: protection of quantity and quality of surface water and groundwater, flood prevention, water planning at the national and international level, including programmes of measures, international co-operation in water protection, legislation in water protection standards etc.

Region – The Regional Authority of the South Moravian Region – Department of environment is a water administration authority in the filed of water management, water protection, operation of public water pipes and sewages. At the same time it works as a flood protection authority.

Brno has sufficient sources and reserves of a good-quality drinking water which enable a development of the city and its agglomeration. The city is supplied with water from three sources outside the city. The water supply is stipulated by the contract.

WASTE WATER DISPOSAL AND SEWAGE SYSTEM

By waste water we mean contaminated water piped away to the waste water treatment plant via sewage network. It does not include rainwater- which is absorbed into the soil.

The Statutory City of Brno (Brno City Municipality - Department of water and forestry management and agriculture) is responsible for development of Brno's sewage system. This department processes the Plan of development of water and sewage system and Sewages regulations.

The Technical Network Department of the Brno City Municipality is responsible for the property administration of sewage system in the ownership the City of Brno. The total length of public sewage network is 1015.7 km.

The Statutory City of Brno signed a contract with **Brno's water works and sewages, Inc. (BVK)**, the contractual operator of the sewage system which ensures waste water disposal and treatment for the city. BVK has been operating since 1992 and the mandatory treaty will terminate in 2026. BVK also operates the waste water treatment plant in Brno – Modice. Except BVK, Water Joint Stock Company (Vodárenská akciová společnost, a.s.) operates in surroundings of the Brno.

State – Plan of development of water and sewage system in the Czech Republic (PRVKÚR) is a strategic document of the state policy in the field of public water and sewages system. It represents a long-term conception with the perspective to the year 2015.

Region - Plan of development of water and sewage system of the South Moravian region (PRVKÚK) is the basic element in planning in the field of water and sewage system. It contains strategy of water supply including the sources of surface water and groundwater which are considered for the purpose of treatment of the drinking water and strategy of public sewages and waste water treatment in the region.

The system of waste water disposal is financed from the city budget. The citizens pay water and sewer rates. If a company contaminates the river, it pays for this contamination to the state. The waste water treatment plant in Modřice states the limits (in its regulations)- some companies have their own limits or they purify waste water in their treatment plants first and then they can pipe away this treated water to the sewage system.

Other **municipalities** like Lipvka, Šlapanice, Rozdrojovice are connected to Brno's sewage system and to the waste water treatment plant in Modice. There are not serious conflicts between the municipalities, relations are determined historically or stipulated by the contract. Technical problems, accidents, defects and repairs are solved and ensured by the operator – BVK or Water Joint Stock Company (Vodárenská akciová společnost, a.s.)

Projects, results, and problems

Main projects in the field of the waste water disposal and in renovation and reconstruction of the sewage system are: reconstructions and completion, construction of retentive basins, extension of the waste water treatment plant in Modice.

The **waste water treatment plant (WWTP)** in Brno - Modřice was put into the operation in 1961 and partially extended in 1970's and 1980's. After the construction of WWTP waste water is not piped into the rivers but is treated and returned back to the water supply system.

However WWTP was not able to meet the limits set by Czech governmental regulations and especially was not able to abolish nitric and phosphoric adducts from the waste water. Furthermore, the growing demand of the City of Brno and the surrounding agglomerations for connecting to the Brno sewage system exceed in the WWTP capacity. WWTP also missed modern technological equipment. At the beginning of 1990's, all these reasons above led to the preparation of the Project Modice – overall reconstruction and extension of WWTP. The project was financed by the loan – the Loan Agreement was signed with the European Bank for Reconstruction and Development in 1999. The completed modern waste water treatment plant with sufficient capacity was put into the permanent operation in March 2005.

Substantial part of the sewage system is built from concrete which turned out to be less resistant than expected. It wore out and reconstruction of sewage system (especially of the basic sewages) was needed. In the 1990's (when the 1/3 of the sewage network was in serious disrepair) the reconstruction was partly financed by PHARE and ISPA programmes. The reconstruction financed by ISPA continued until 2005. At the moment the main problem has risen out from very intense development of the city and the increasing living standards (usage of dishwashers and grinders).

WASTE

The operating of the system of collection, preparation, transport, separation, usage, and removal of communal waste is defined by a generally-binding decree and running costs of the system were in 2007 covered by local payments. Responsibility for the whole system is delegated to the local governments. The Statutory City of Brno (Brno City Municipality - Environmental Department) is responsible for this issue. The Statutory City of Brno signed a contract with **SAKO**, a. s., the contractual operator which ensures waste management for the city.

Recently there was an increase in the number of collection points for “residual waste”. In 2007 SAKO Brno, a.s. turned 69,487 tones of such “residual waste” into energy. The separation of glass, paper, and PET bottles continues. Reusable items are collected as part of the operation of collection centers, collection points, and authorized bodies participating in the city's collection system, or in public buildings (schools, nursery schools). Gradually, the number of collection points for reusable items is increased.

Hazardous waste is collected by a mobile collection unit and at waste collection points. The most important project relating the waste management represents the modernization of Spalovna (incinerator facility) – owned by SAKO. The aim of this project is to ensure more efficient waste management in Brno.

CONFLICTS

Conflicts related to the location of facilities became reasons for the postponement of construction of those needed facilities. These facilities are located based on local spatial development plans.

If conflicts arise, they are solved on the basis of the Act concerning the Provision of Information on Environment, Act concerning its Protection and Environmental Impact Assessments. The Act provides for environmental impact assessments to be prepared for spatial development plans and for any inconvenient projects, as well as stipulates general public access to these documents.

INVOLMENT OF CITIZENS

Development projects are publicly discussed (in the case they concern spatial plan – it is stated in Law). Discussions with the citizens and expositions on the theme of flood-prevention measures regularly take place in Urban centre Brno. Citizens are also informed about the problematic by media and the Brno Metropolitan newspaper.

2.2. Brussels-Capital Region

1. Main characteristics of waste and water management at city-region level

1.1. Division of tasks among different governments tiers

Since 1980, the competences over environmental issues are shared in Belgium between the Federal State and the 3 Regions. The competences of the Regions in those issues were increased with the Constitutional reform of 1993 creating the actual Federal State.

The Regions are competent for:

- Environmental protection, including waste policy, water policy and policy for dangerous, unhealthy and inconvenient settlements
- Nature conservation and hunting.

The Regions exercise their powers in their respective territories and in compliance with European and International rules and existing Federal laws.

The Federal Authority remains competent, either exclusively or jointly with the Regions in the following subjects:

- The establishment of product standards that cover all requirements to be met, including the environmental ones, by products before being put on the market. The federal government is solely responsible for eco-labels and environmental taxes.
- The transit of wastes as defined by European authorities, as transit of waste through the territory of a member state and for abroad. The transit of waste between the three regions is not affected by this provision.
- Protecting the environment and the population against radiation. This includes ionizing radioactive waste. This aspect of Environmental and health policy is linked to the exclusive federal jurisdiction.
- Coordination of international environmental policy and implementation and/or application in Belgian law of some environmental legislation from the European Union
- Protection of the North Sea
- The import, export, and transit of non-indigenous plant species and that non-indigenous animal species including their remains, this exception is within the jurisdiction of the Federal Ministry of Agriculture.

1.2. Private involvement

Private companies are involved in water and waste management but those two sectors are mainly managed by public authorities..

Waste management

We have to distinguish between household waste and non-household waste:

- For households waste: Bruxelles-Propreté, the public regional Agency for waste, is solely responsible for the collection and treatment of waste within the Brussels-Capital Region. The waste is either treated in the Region or sent to Wallonia or Flanders.
- For non-households waste: Businesses or administrations are free to sign a contract for the collection and treatment of waste either with the regional agency or a private company. The private.

Water management

There are 2 public companies and one private company involved at different stages in the water cycle management.

- The distribution of water is the responsibility of the public inter-municipal company called **IBDE (Intercommunale Bruxelloise de Distribution d'Eau)**. The 19 municipalities of the Brussels-Capital Region are involved in the management of this company.
- The IBDE is supported at several stages of the water cycle by another public company called **Vivaqua**. Vivaqua is one of Belgium's leading water producers. Everyday, it supplies some 400,000 m³ of drinking water to 2,1 million people located in the three regions of Belgium.

At the city-Region level, the three major tasks of Vivaqua are:

- **producing water** which it principally supplies to inter-municipal authorities, such as IBDE in Brussels, and to other Communes in the metropolitan area of Brussels.
- **providing services** to inter-municipal authorities, like the IBDE, and to Communes located in the metropolitan area of Brussels. Those services entrusted it with the operating of their water distribution network and the administration of the service to the customers, as well as the management of their sewage systems, collectors and rainwater basins,
- **running** the southern sewage treatment plant of the Brussels-Capital Region



Source: Vivaqua

As shown in the graph, most of the water used in the Brussels-Capital Region is caught in the Walloon Rivers. In Brussels, they are also two catchments points in the two main forest, 5 reservoirs, and one pumping station.

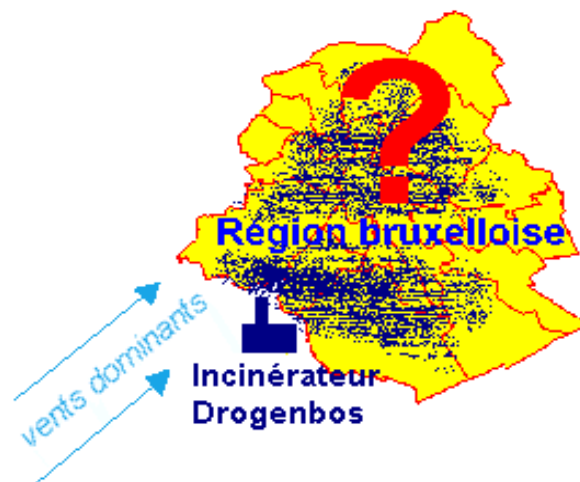
- In June 2001 following an international call for tenders issued in 1997, the Brussels-Capital region awarded Aquiris - a consortium led by **Veolia Water** - with a

concession contract to design, build, finance and operate the Brussels North wastewater treatment plant for a period of 20 years. The Brussels North wastewater plant is treating wastewater from the Brussels North Region (the "North" and "La Woluwe" sub catchment areas) as well as wastewater from Flanders. The Brussels-Capital Region and Aquiris have signed the biggest public private partnership (PPP) contract in the water sector in Belgium. It serves 22 local authorities within the metropolitan area of Brussels with a combined population of 1.1 million.

1.3. Conflict management concerning localisation of plants

At the city-region level the Brussels Capital Region have had several conflicts with the Flanders Region concerning the localisation of plants.

For instance in 1997, the Flemish government wanted to build an important incinerator plant of 207.000 tones/year just at the border of the Brussels-Capital Region, despite the opposition of the Parliament and the Government of the Brussels-Capital Region and the negative Opinion of the IBGE (The Brussels Institute for the management of environment). Finally the building permit delivered by the Flemish Government was cancelled in 2002 by the High Court of Justice (Conseil d'Etat) and the project was abandoned.



Source: Comité de quartier du Bempt

2. Forms of governance in managing waste and at city-region level

2.1. Cooperation agreements on environmental issues at the city-region level

Cooperation on environmental issues at city-region level is implemented through the signature of Cooperation agreements between the Brussels-Capital Region and the other two regions. The most important cooperation agreements concerning environment are the following:

- 1994: Control of atmospheric emissions
- 1994: Exchange of information on projects having a trans-regional impact on environment
- 1994: Policy of importation, exportation and transit of waste
- 1995: Creation of the CCPIE- Comité de Coordination de la Politique Internationale de l'Environnement (Coordination committee for international policy on environment)
- 2002: Cooperation for the elaboration and implementation of a national climate plan

- and the reporting procedures for the implementation of the Kyoto protocol
- 2008: Reinforced cooperation for the prevention and management of waste packaging.

2.2. Cooperation in waste management at city-region level

The Brussels-Capital Region cooperates with other Regions and the Federal State in waste field for:

- reporting obligations to the European Commission regarding the problem of waste. The Region must meet the obligations imposed by the EU which establishes a framework for the development and transmission of statistics on waste
- coordinating regional positions in the field of waste at the European or international level
- actions associated with the product standards or conditions for their placing on the market.

This coordination is carried out particularly in the CCPIE - Comité de Coordination de la Politique Internationale de l'Environnement (Coordination Committee of the International Environmental Policy) which was created within the Ministerial Conference on the Environment . A Group Director on Waste within the CCPIE focuses on the problem of waste.

Furthermore, there is collaboration for some specific cases with the other regions, aimed at strengthening the effectiveness of specific tools and simplify the procedures. Thus, for the obligations of recovery, it is essential to have common approaches to the provisions relating to the placing of products on the market.

The same goes for monitoring movements of waste. Waste can in principle move freely between the Belgian Regions. However, the Region of Wallonia has enacted a ban on landfill for waste from other Regions. Exemptions may be obtained by a strict application procedure to the Walloon Waste Office (OWD). The Memorandum of Understanding which is the basis of this application procedure for notice has expired since 1994 but the two regions continue to collaborate on that basis. There are no restrictions on transfers of waste to the Flemish Region and the movements of waste to and from this region are followed by data from a register.

2.3. Results of the cooperation and challenges for the future

Between 2000 and 2005, the quantities of waste going to landfill in the Walloon Region and Flemish have decreased by more than half. In 2005, + / - 389,000 tonnes of waste went to landfill in those two Regions.

Transfers of waste to other Regions as to other countries are an important component of the regional policy because:

- the Brussels-Capital region has only one goods industry to integrate materials for recycling (Lead)
- the Brussels-Capital region has no facility, landfill, or processing facility for hazardous waste

The region has facilities mainly for pre-treatment of waste (sorting, packaging, disassembly, etc.) and a waste disposal by incineration.

It is necessary to ensure that companies located in Brussels access routes for the disposal located in other regions while having a responsible policy respectful of the goals of the other regions and Europe regulations (abandonment of the land-filling of organic waste, setting up a hierarchy of waste management, limiting the amount of waste for disposal).

3. Planning and public involvement in the decision-making process related to environment in the Brussels-Capital Region

Citizens, voters, or purchaser can participate through the different following tools:

- The public is involved in granting environmental permits for installations subject to impact assessments.
- The public is involved in granting planning permission for projects subject to impact assessments.
- The public is consulted within the framework of the elaboration of communal mobility plans and communal Development plans
- The High Council of Nature integrates public input on the matter.
- The participatory platform for the forest of Soignes is a permanent tool for concerted decision making with the public.
- Citizens are involved in planning decisions and management of green space nearby.
- The Council of Environment integrates the views of civil society in environmental matters.
- A Brussels' citizen panel has provided recommendations on air pollution generated by road traffic
- The Youth Parliament in Brussels for water was used to sensitize 55 000 young people. 100 taps fountain were installed.
- Total transparency of environmental information is being developed via the website of Brussels Environment (the Regional Administration for environment and energy).
- Documented information is provided promptly to the Environment Committee of the Regional Parliament.
- Reasoned responses are made to many parliamentary questions on environmental management.
- Assessments of the implementation of the Waste Plan (2003-2007) were performed.
- Assessments of the implementation of the Plan Noise (2000) were conducted (2003.2006) a new draft plan has been developed.
- Assessments of the implementation of the Plan Air/Climate (2002) were performed.
- Two plans of allocation of GHG's have been submitted to the government.
- In 2003, there was a Regional public inquiry on the National Action Plan on Environment and Health.
- Procedures for impact assessment and ex-ante public inquiry has become mandatory for each environment plan or program
- A proposal for concurrent communication and public inquiry for future integrated environmental plans is envisaged.
- A proposal for Common Specifications for the study of the impact of future environmental plans for Noise, Waste, Water, Energy / Air / Climate is considered.
- Dissemination of a comprehensive integrated report on the state of the environment is compulsory since 2007.
- Environmental objectives are integrated into the Regional Development Plan and the annual government Statement.

2.3. Burgas

1. Main characteristics of waste management at city region level

Division of public tasks among different public tiers in solid waste and waste water management:

The institutional framework of solid waste and waste water management involves different stakeholders at different levels, which share responsibilities and functions within the whole process of planning, construction exploitation and monitoring and control on facilities and services:

The Ministry of Environment and Waters /MOEW/

The Ministry develops national policies and legislation on solid waste management, provides permissions for treating hazardous waste and for activities related to non hazardous waste utilization. It is also responsible for the management of water resources and their distribution among the consumers.

The Executive Environmental Agency within MOEW

The Agency's basic responsibilities lie in monitoring air and water quality, soil, radiation and waste and receiving data from the monitoring stations nationwide.

The river basins are the basic units for the integrated water management. There are four river basin districts in the country that are designated according to the natural situations of watersheds dividing the drainage areas of one or several major rivers within the territory of the country. The defined river basins do not conform with the administrative divisions of Bulgaria. For these districts 4 River Basin Management Directorates are established within the structure of MOEW and these are the bodies that implement the water management policy on local level.

The River Basin Management Directorates participate in the regional, municipal or district spatial development councils. They prepare and present written opinions on investment projects for development, reconstruction, or rehabilitation of the water-supply and sewage networks and systems, including treatment plants for drinking water and for waste water.

Regional Inspectorates on Environment and Waters /RIEW/

RIEW are regional departments of the MOEW, which control the state policy implementation at regional scale. The Regional Inspectorates on Environment and Water (15) perform monitoring and controlling functions in reference to the fulfillment of the requirements under permits for waste water discharge issued by the River Basin Directorates. The Inspectorates control the emergency releases of waste water and maintain a database on the monitoring and control concerning the condition of waste water.

RIEW control solid waste management activities (including solid waste collection, transportation, deposit, recycling and utilization) and monitor and control the compliance with the requirements laid down in the complex permits issued to landfill operators and polluters.

Other state institutions are also involved in different sectoral aspects of the solid waste and waste water management: the Ministry of Economics and Energy (controls trade with ferrous and non ferrous metals), the Ministry of Public Health (mainly involved in dangerous waste treatment) etc.

Municipalities

Municipalities are responsible for the organization of solid waste management activities on their territories and this includes: provision of containers and dust bins, solid waste collection and transportation to depots and other installations, construction, maintenance

and monitoring of depots and installations, provision of waste separate collection and recycling, prevention of dung-hills, specific waste management etc. The mayors of the municipalities have the right to apply sanctions against persons and entities, whose activities are in contradiction with national legislation and local regulations concerning waste management and treatment.

The municipal administrations play an important role in the implementation of the environmental policy in the water sector. Their basic tasks are related to:

- development of programs for protection of the environment;
- construction, maintenance and operation of UWWTP;
- providing public information regarding the state of the environment;
- control on the implementation of the legal requirements in small facilities of local importance.

Currently the ownership of the water management systems and facilities is regulated by the Water Act. The entire infrastructure for water supply and sewerage in the settlements, constructed before 1998 represents corporate property of the water companies. The infrastructure constructed after 1998 is owned by the municipalities. According to the National Strategy for Management and Development of the Water Sector 2004 – 2015 (adopted by the Council of Ministers in 2004) the ownership of the water management systems and facilities shall be regulated in separate legislative acts which are currently under preparation by the Ministry of Regional Development and Public Works.

The basic principle for formulating the price of the water supply and sewage services is the establishment of price levels that will offer the opportunity for a full coverage of operational costs. Profitability of up to 12% is calculated to the costs. For some companies the percentage of profitability is different for the households and for the legal entities. The elements included in this expenditure section comprise only tax-eligible expenditure and do not include investment costs other than depreciation. Investments are most often provided by governmental authorities in the form of subsidies.

Private involvement in delivery of services in solid waste and waste water treatment

There are two basic principles integrated in the national legislation and municipal regulations related to waste management activities:

- “THE POLLUTER PAYS”, which means that all the expenses related to waste management and treatment are covered by the industrial enterprises and the households that produce it. According to the Local Taxes and Charges Act a household tax on solid waste is collected which goes to the municipal budget;
- “THE PRODUCER’S RESPONSIBILITY”, a principle which integrates three basic approaches. A producer or importer of products could either pay charges which go to the Enterprise for Managing the Environmental Protection Activities (body implementing environmental protection activities (projects) in compliance with national and municipal strategies and programs on environmental protection. Sources of financing are state budget, external donors, collected taxes and imposed sanctions) or participate in organizations for utilization of waste.
- Some of the private enterprises may decide to individually fulfill their responsibilities on waste management and treatment.

According to those two principles the Municipality of Burgas has introduced a system for separate collection of packaging waste and has contracted the ECOPACK – an organization for waste utilization of packaging waste. Containers of three different colors are distributed and information campaigns are organized to motivate people and households to separate

waste. A strict control over commercial centers and markets is implemented in order to reduce quantity of packaging waste for collection.

Private sector is also involved in waste collection and transportation which covers 100% of the municipal territory. Following public procurement tendering procedure a private company was assigned the responsibility for waste collection and transportation, cleaning the streets and public places and a municipal company is the landfill operator. Two more private operators, licensed to implement waste management activities are contracted by the municipality in order to collect and transport vehicles out of use.

Options for common integrated solutions

National legislation as well as municipal measures related to waste management are based on the principles of effective management, i.e. development of integrated system, based on collecting, transportation, treatment and disposal and monitoring of activities and places of disposal. There are several priorities set in the Municipal Program 2007 – 2011:

- reduction of quantity of waste;
- improvement of the organization of solid waste collection and transportation;
- effective system of separate collection;
- prevention of illegal pollution and dumpsites.

Unfortunately building such a system is a long going process requiring commitment and large investments. Several steps were undertaken though by the Municipality of Burgas during the recent years in order to insure effective waste management. One of these is the ISPA “Waste management for Burgas region” project, started in 2007 and aiming at constructing a regional landfill for solid waste generated in 9 municipalities. Burgas Municipality is the leading beneficiary of the project, which includes construction of 2 transfer stations, a temporary station for hazardous waste, installation for recycling of the separately collected waste, recycling of construction waste etc. A Regional Waste Management Association was established by the 9 municipalities in order to meet the purposes of the project.

Creation of Regional association of municipalities is actually one of the basic requirements of the “Environment” Operational program 2007 -2013, under which municipalities are main beneficiaries of funds and is conducted in order to increase efficiency in waste management and treatment.

Together with those infrastructural investments the Municipality is also targeting several other aspects of waste management related much more to waste separation and quantity reduction and prevention of illegal dumpsites:

- planning and construction of a modern landfill for construction waste;
- closing illegal dumpsites in certain residential areas with compact Roma population;
- construction of places for containers in residential areas and the city centre;
- awareness raising campaigns among the population – a good example is the information campaign implemented together with the private waste management operator in Burgas under the motto “Why do we pay more for the cleanness in Burgas?” The campaign aims at preventing illegal disposal of construction and large waste – major problem in the rapidly growing city.

2. Forms of governance in managing waste at city region scale

Formulation of policies on waste management at city region scale

The processes of planning in the field of waste management at different level in Bulgaria started in 1999, when the first National program on waste management activities was developed in compliance with the Waste Management Act. Now the third National program is in action and provides the framework under which Municipal waste management programs are developed. Now as Regional Associations between several municipalities are starting to be established a third programming level can be distinguished. The member – municipalities may decide to delegate some of the decision making processes to the Association and a regional Program on waste management activities is introduced.

The first municipal program for Burgas was developed under the Green Burgas project, funded by MATRA program for the period 1998 – 2008 and has been recently updated.

Main priorities in waste and waste water management are developed in the Municipal Plan of Development 2007 – 2013 where one of the strategic objectives for the program period is described as improving the living standard and attractiveness of the living environment. Improving quality of life is revealed as assuring a sustainable economic growth and environmental protection. Several priorities are defined:

- air quality improvement;
- safe access to drinking water and ecologically orientated waste waters management system;
- modern and effective waste management system;
- biodiversity protection.

There are also several operative and action plans developed by the Municipality of Burgas concerning environmental issues:

- Action plan for gradual restriction and prohibition of use of bags of polymeric materials
- Plan of action in case of exceeding the standard norms and limits of air pollution under bad meteorological conditions and other factors – the Plan is developed under the Integrated program for air quality control;
- System for environmental management in the municipal administrative building.

Instruments for implementing waste management activities at city region scale

Institutional instruments:

- **Environmental Protection Directorate within the Municipal administration** – a unit responsible for municipal policy formation and implementation in the field of environmental protection;
- **Permanent Commission on Environment within the Municipal council** – discusses and proposes solutions on environmental issues in front of the Municipal Council.

Instruments of control:

- **Eco Inspectorate** – in order to facilitate the implementation of the Municipal program and regulations on waste management a specialized unit for control was recently created, consisting of 5 eco inspectors.
- **Citizens' control** – a telephone line, operated by the Municipal administration, which gives opportunity to citizens to self monitor and signalize about any violations to municipal regulations.

Financial instruments:

As mentioned above there several mechanisms for financing waste management activities, based on the principles of “the polluter pays” and “the producer’s responsibility”. The great amount of funding waste management infrastructure still comes from the Operational programs and mostly the “Environment” Operational Program, under which municipalities are major beneficiaries.

According to the Local Taxes and Charges Act the municipalities collect the so called “household tax”, which goes to the municipal budget and is allocated for waste management activities such as collection, transportation and treatment of waste, cleaning of public places, maintenance, monitoring and closing of waste landfills. The amount of the tax is a subject of the Municipal council decision for each settlement and is still calculated on the basis of tax valuation of property. There are two basic issues about those taxes which can form a great portion of the waste management budget at municipal level:

- the amount paid by the households is defined only taking into account the operational expenses of the Municipality, expenses related to closing, planning and construction of landfills not included. There are of course social reasons why the taxes are not increased;
- the way the “household waste” taxes are calculated do not stimulate families, individuals and legal entities to reduce production, separate collection and utilization of waste.

3. Examples of recent projects, lessons learned

1. Project: “INTEGRATED WATER PROJECT – BURGAS”

ISPA measure 2005/BG/16/P/PE/003 an “Integrated water project in Burgas” is financed according to financial memorandum, signed by the European Commission and the Government of the Republic of Bulgaria and co- financed by the European Bank for Reconstruction and Development (EBRD). The project includes:

1. Lot 1 – Rehabilitation of the water supply network in Burgas
2. Lot 2 – Extension of the sewerage network in Burgas
3. Lot 3 - Reconstruction of waste water treatment plant in Burgas.

2. Project: “EuropeAid/123191/D/WKS – BURGAS, MEDEN RUDNIK”

Wastewater Collection and Treatment in Bulgaria

The project scope covers the construction of WWTP for the treatment of the waste waters of one of the largest residential areas in Burgas – Meden Rudnik, including three stages of treatment to reach compliance with the EU Directives for discharge into the sensitive area – the Black Sea.

3. Project: “Investment project for the water supply and sewerage network of Burgas-Meden Rudnik”, financed under Operational programme “Environment” 2007- 2013

The project Rehabilitation of the water supply and sewerage network in Burgas includes:

- Replacement and extension of the water supply network based on the results of the Feasibility study - totally 18km.;
- Rehabilitation of the sewerage pumping station “Pobeda” including replacement of degraded pumping facilities;
- Replacement of sewerage collectors with insufficient capacity and construction of new ones, including 2 sewerage pumping stations, in conformity with the results of the Pre-Feasibility study- totally 4. 8 km.

4. Project: “Investment project for the sewerage network of Dolno Ezerovo and construction of pressure pipeline to the waste water treatment plant”, financed under Operational programme “Environment 2007 - 2013”

The project activities include construction of sewerage network, sewerage pumping station and connection to Waste water treatment plant Burgas.

5. Project: Technical support “Integrated project for management of the drinking and waste water - Gorno ezerovo, Burgas”, financed under Operational programme “Environment 2007 - 2013”

6. Project: Technical support “Integrated project for management of the and waste water- Rudnik and Chernomore, municipality of Burgas”;

7. ISPA measure “Waste management for Burgas, Dobrich and Provadia region” – construction of a new regional landfill for household waste is planned for Burgas which includes construction of transfer stations, a temporary station for hazardous waste, installation for recycling of the separately collected waste, recycling of construction waste;

8. Liquidation of pesticides from an old store in the village of Bryastiovets, funded by the Enterprise for Managing Environmental Protection Activities

2.4. Eindhoven

Water management in the Netherlands

Introduction

Sufficient clean water is of vital importance to humans, animals and the environment. No one wants to live near polluted water in ponds or canals. In the summer, we want to be able to swim in open water without having to worry about getting sick. It is also easier to produce drinking water from high-quality surface water. Good water quality is also very important to plants and animals. It contributes to a larger variety in flora and fauna.

On the other hand a large part of the Netherlands is kept dry (or wet) by artificial means. In the past areas were brought under cultivation. The land was adapted to suit habitation, agriculture, industry, and recreation. This was accompanied by an extensive infrastructure that included not only roads and railways, but primarily investments in water management. The Dutch seem to take for granted the efforts required to keep the land dry, to produce water of a high quality, and to harmonise water management with social functions in a densely-populated country. However, without the continuous operation and maintenance of the many dikes, locks, pumping stations, flood barriers, canals, and ditches by Water boards, the safety of more than nine million people would be jeopardised. This note gives a brief overview of the history, tasks, and formal position of the Dutch Water boards.

History

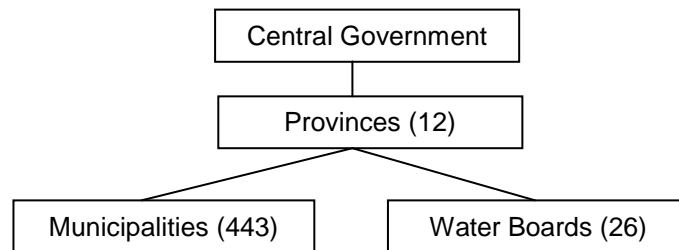
Characteristic for the Dutch landscape are three rivers and a stretched coastline. Historically there was a lot of flooding both from the sea and the rivers. More than half the country would be flooded if there were now dunes, dams and dikes. It has therefore always been in the common interest to keep the water out. The ever-present threat of the loss of land and lives requires short lines of communication between the authorities and the residents who maintain the infrastructure. Therefore it was considered that the threat of flooding was best dealt with by local authorities.

The government system for controlling the water emerged in the 13th century as the unpredictable water system was finally tamed and the land drained for agriculture. Local water control boards were set up to maintain the local water defence system, the waterways and the various water levels. They were created at national level and implemented top-down by law because of their contribution to a common good. These bodies were also granted the right to make their own local laws for their specific situation. This early form of local government played an important role in the development of a political system in the Netherlands. In the 16th century this experience with a decentralized government was a key-factor in the formation of the Dutch Republic!

Although water boards exist for a long time, this does not mean that their position has always been undisputed. In the second half of the last century a fundamental discussion took place. After an extensive research the conclusion was drawn that the local and regional water management should be executed by governmental bodies specialised in that kind of care. The functional form of administration was that those who had an interest in the duties performed by the Water boards should also bear the costs and be represented in the

governing bodies. This principle is better known as the triplet of interest-pay-say and implies an own governing body and tax area. This was in fact the continuation of the existing Water boards and the Dutch House of Representatives was highly unanimous about the necessity of the continued existence of the Water board and its position in the Dutch form of government.

The Water board nowadays can be seen as an example of a functional decentralised administration with its own governing body and financing structure. It is solely concerned with the execution of tasks in the field of water management. From a hierarchical point of view, the Water board has the same status as the municipality. As apparent from the Dutch Constitution, the provinces play an important role with regard to the organisation of the Water board. It is their responsibility to set up, discontinue, lay down rules for and supervise the Water boards.

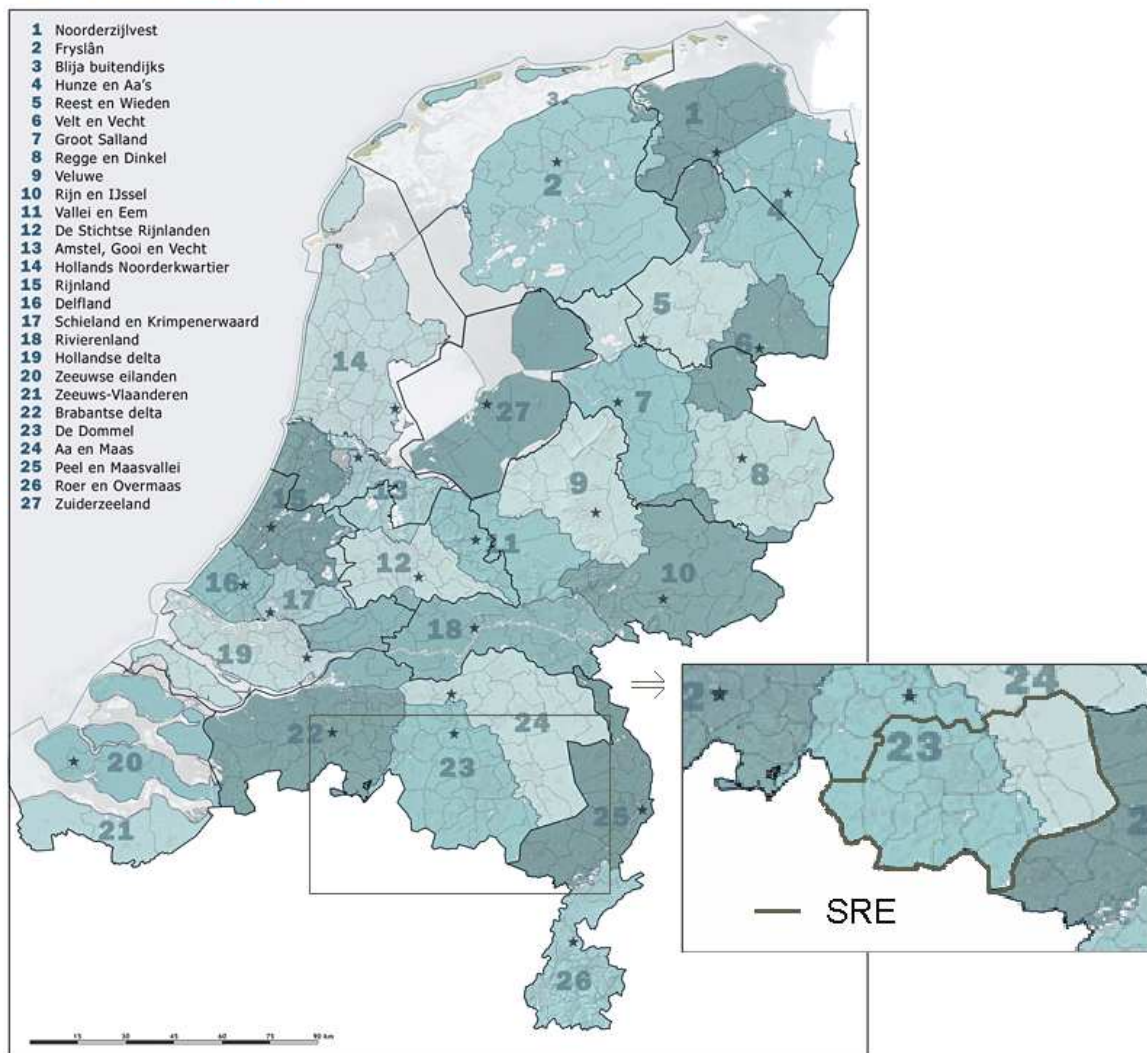


The boundaries of Water boards

We have mentioned above the main reasons why at national level was decided to implement Water boards in the Netherlands. This primary function of the Water boards has basically remained unchanged to this day. This does not mean that nothing has changed over the years. For example the number of Water boards decreased from around 2600 in 1950 to 27 at the moment. An important reason for this merging process is the handing over of water quality control, including wastewater treatment to the Water boards in the seventies. A second reason is the introduction of integrated water management, which means that various tasks concerning surface water and groundwater from both the quantitative and qualitative standpoints should be looked at in their mutual connection and therefore preferably be brought together in one organisation.

But still boundaries of the Water boards are not just random lines on the map. These boundaries are primarily determined by hydraulic factors: sub-catchment basins, dike rings, pumping and storage areas, etc. As a result they usually do not correspond with municipal and provincial borders. There is also no linkage with regional authorities like the SRE who have no tasks in water management.

27 Water Boards



The role of Water boards in water management

After reading the text above you might think that Water boards are the only water management authorities in the Netherlands. But in fact this is not the case. Water management is carried out by all levels of government; that is by the national government, provinces, municipalities, and Water boards. The Dutch administrative organisation and the relevant regulations are tailor-made to suite various tasks the one expects from the government in de field of water management. Some examples are listed below.

Flood protection

This task consists of the protection of the Netherlands from flooding by flood defences. This task is still considered to be a 'core task' in the Netherlands because of the threats from both the sea and the big rivers. This task is both literally and figuratively a matter of life and death, besides which big economic interests are also involved. Flood protection is the responsibility of the central government and Water boards. The central government is entrusted with the care of the coast (maintenance of the coastline) and the management of the dams that close off the big arms of the sea in the west of the country. The other infrastructural works (dikes, dunes, and storage basin embankments) are managed by the Water boards.

Water quality

This task could be described as the protection of surface water from pollution. Water quality management aims at reaching certain water quality targets that are geared to the various functions of the respective waters (ecology, the extraction of drinking water, agriculture and so on). A major part of this task is the construction and operation of treatment plants where household and industrial wastewater is purified. The central government and the Water boards play a primary role in the management of water quality. The central government's task is to manage the main water system, whereas the Water boards manage the regional and local waters. To this end, the Water boards operate approximately 390 wastewater treatment plants with related pressure pipelines.

Water quantity

This task deals with the management of the amount of surface water in a particular area. Water quantity management is aimed at reaching one or more water levels and maintaining them, as well as possible. The objective is to prevent surpluses and shortages in different areas. The central government manages the so-called 'main water systems' such as the big rivers and the territorial part of the North Sea. The management of the quantity of water in lakes/streams etc of regional and local interest is generally the responsibility of the Water boards. The legal system includes instruments like a system of registration and permits for discharging, withdrawing.

Waterways

This task consists of maintaining the sheet piling and the depth of waterways, and the operation of locks and bridges. The management of waterways is carried out by the central government and the provinces, who, in turn, sometimes delegate this task to Water boards.

Intermezzo: drinking water supplies

This task does not fall under water management but it is linked to it because ground and surface water form the main ingredients for drinking water. The supply of drinking water lies in the hands of water companies and is regulated in the Water Supply Act. The companies are owned by the provinces and de municipalities.

The composition of Water boards

The Water boards consist of a governing board, an executive committee, and a chairperson. These governing bodies are comparable to those of municipalities (municipal council, municipal executive, and mayor).

The governing board consists of representatives of categories of stakeholders who have an interest in the tasks executed by the Water board. The idea behind this is that those who are considered to have an interest in the tasks bear the costs for this proportionally and have a say in the assemblies. A distinction can be made between general task interests and specific task interests. General task interests reflect the representation of the interests of everyone living or residing (living, working and recreating) in the district. Specific task interests indicate the specific interests of certain stakeholder categories in the tasks executed by Water boards. The stakeholder categories are

- The owners of real estate consisting of open land ('open land' category)
- The owners of real estate consisting of buildings ('buildings' category)
- the users of business buildings, as representatives of those discharging industrial wastewater ('business buildings' category)
- The representatives of the general task interests and the specific task interests of those discharging wastewater from households ('residents' category)

The province lays down the number of seats by which the various categories are represented in the governing board in the regulations for each Water board. Here the nature and size of the interest of a particular category in the tasks carried out are taken into account, as well as the contribution to the costs to be paid by this category. If a Water board is located in a densely populated urban area with a lot of industrial activity, the 'residents' and 'business buildings' categories have a larger share in the governing board than in a Water board in a sparsely populated area with a lot of agricultural activity. The average governing board consists of thirty members.

Governing board members are elected for a period of four years. In the election of the governing board the balance of power between the various categories of stakeholders within the board has already been predetermined. The division of seats is laid down in the regulations by the Provincial Council and therefore the election of the members is not a question of how many seats in the governing board will be assigned to a particular category of stakeholders but of which people are going to have the predetermined number of seats for the various categories. Therefore there are two types of elections: direct and indirect. The representatives of the category 'open land' are always elected directly. Representatives for the category 'business buildings' are always elected indirectly. The members of the Chamber(s) of Commerce in the district of the Water board are entitled to vote. For the 'buildings' and 'residents' categories the province can choose to have direct or indirect elections.

The executive committee of a Water board consists of the chairperson and a number of other members to be determined by the governing board. The executive committee is responsible for managing the daily business.

The chairman of a Water board is not a member of the governing board and has no vote. By contrast, the chairman is a member of the executive committee in which he or she does have the right to vote. The chairman is appointed by the Crown for a period of six years and is responsible for the proper promotion of the Water boards tasks and chairs the meetings of the governing board and the executive committee.

Self-financing

Unlike provinces and municipalities, who are largely financially dependent on support from the central government, Water boards are to a large extent financially independent. This independence is a result of the fact that they have their own tax system. The system of regional taxes means that Water boards are largely financially independent of national politics and economic fluctuations. The necessary investments in water control provisions therefore do not have to compete with other governmental expenditure. This independence provides also an excellent starting position for attracting long-term loans for financing big investments.

Charges are mainly levied for expenses relating to the flood protection task and water quantity management. Water boards have a limited number of tax categories which are laid down in a national Act:

- residents (related to residential space);
- owners of the real rights of land ('open land');
- owners of the real rights of buildings ('buildings').

Water boards in the Eindhoven City Region

There are two Water boards in the territory of the Eindhoven City Region. *De Dommel Water board* is active throughout the entire Dommel basin, from the Belgian border to Den Bosch, an area currently accommodating almost one million inhabitants. *Water board Aa and Maas* is named after the rivers the 'Aa' and the 'Meuse'. This area is located at the east side of the province of Noord-Brabant. It spans over 161.000 hectare. Twenty-nine municipalities lie in this area and over 700.000 people live here.

As mentioned above the Eindhoven City Region (SRE) has now involvement in water management. But although water management is a separate field of responsibility, it has much in common with other fields of government policy such as spatial planning. The concept of 'integrated water management' is often used in this context. This not only takes into account the relationships within water management itself (the quantity and quality of surface water and groundwater) but also those within the other policy fields mentioned. An example is the water assessment laid down in the spatial planning act. The act in question stipulates that plans in the field of spatial planning must indicate the consequences they entail for water management. The objective of this water assessment is to prevent the (ill-considered) building of new urban or industrial areas on locations that are unsuitable from the water management point of view. In these fields the Water boards are one of the partners of the spatial planning department of the Eindhoven City Region (SRE).

2.5. Florence

The Italian jurisdiction over environmental issues is shared between different levels of government by following the principle of subsidiarity. It means that National State and Regional State own political and legislative powers, while administrative functions are held by Provinces, Municipalities and inter-municipal authorities.

Tuscany Region use to plan over environmental issues by drawing the Regional Program of Environmental Action (RPEA)¹. The policy making process of RPEA is emblematic of Tuscan regional governmental style in the extent with it is characterized by an high level of co-operation between the Region and other actors both institutional (Provinces, Municipalities, inter-municipal authorities) and not institutional (i.e. employers associations, trade unions, environmental association.)

RPEA is a five-year plan containing claims and priorities of the regional policies. It also includes the amount of financial resources to be spent; it indicates the institutions charged to implement them and the tools useful for addressing the policies. Moreover, on the ground of the RPEA, the Region draws the sectoral plans in the field of energy, water, waste, natural resources, soil, and use of land.

One of the main regional tools on environmental issue is the Tuscan Regional Agency for Environment Protection (TRAEP)². Since 1996, TRAEP promotes environment protection and prevention through a network of provincial department and local services.

TRAEP deals also with:

- promoting sustainable and conscious behaviours;
- monitoring the state of health of the environment and the degree of its pollution;
- preventing of risks;
- controlling the fulfilment of laws and standards by firms and private citizens;
- providing technical assistance to other public authorities concerned in environmental issues.

Other players in this policy arena are: Provinces, Municipalities, Authorities of Optimal Territorial Areas (AOTA)³, Basin Authorities⁴ and utilities management firms (mainly public).

Provinces cover an important role in these matters. Actually, they are responsible for:

- granting authorizations (water, air pollution, noise pollution, Environmental Impact Assessment);
- monitoring activities (water, waste, air and noise pollution, soil and subsoil);
- promoting the awareness on sustainable development and on energy saving;
- waste management coordination.

Municipalities have more specific functions:

- monitoring air quality, home heating and water consumptions;
- planning on bicycle/pedestrian paths and street furniture;
- rehabilitating noise-generating activities,
- monitoring on electromagnetic pollution,
- green buildings regulation;
- waste management, river cleaning and soil conservation.

¹ Programma Regionale di Azione Ambientale (PRAA)

² Agenzia Regionale per la Protezione dell'Ambiente (ARPAT)

³ Autorità di Ambito Territoriali Ottimale (AATO)

⁴ Autorità di Bacino

However, in order to exploit economies of scale, municipalities belonging to a continuous Optimal Territorial Area (OTA)⁵ shall coordinate themselves in managing utilities.

A further territorial coordination tool in environmental issues is linked to the **Agenda 21** of the Florentine Area⁶. Since in 2003, the 9 municipalities of the Florentine Area recognized the similarities in their environmental criticalities and the need to gather them in order to deal with the air pollution issue, they decided to create an Association of Homogeneous Area⁷ that would set a common path toward environmental sustainability.

The Association is concerned to coordinate municipal policies in the fields of air and noise pollution, waste and water management. Another aim of the Association of Homogeneous Area is to harmonize the 10 municipalities monitoring activities over the on-going mobility infrastructure building process (high speed train tracks, third lane of the motorway, tramway system).

In 2004, the partners of the Association signed a more binding memorandum of understanding where they decided to take the name of Agenda 21 of Florentine Area. They also adopted a Local Action Plan, in which they agreed on increasing the political cooperation between the municipalities and on sharing their human, economic, and instrumental resources aiming to promote and implement common projects on sustainable development.

As the first operational step, Agenda 21 of Florentine Area drew a set of intermunicipal guidelines on energy policies, building regulation, incentives for renewable energy, regulation on green, parks and CO₂ absorption. Moreover, they created a tool to evaluate the energetic impact and the emission produced from public policies.

THE GOVERNANCE OF WATER

The water network is managed by inter-municipal authorities that govern over areas that the Region had defined as optimal. The Optimal Territorial Area (OTA) concept had been introduced by the national law n. 36/1994 on the water service. The Authority that governs over the OTA - the AOTA - is a consortium of municipalities. AOTA has the role to plan, organize, and control the integrated water cycle, but it can't manage directly the cycle. Hence, AOTA select, entrust and control a utility management firm that use to manage the integrated water cycle.

The AOTA aims also at guaranteeing an optimal level of drinkable water supply and, at the same time, at pursuing the quality of the water, the respect of the environment, and at protecting the users.

By the regional law n.81/1995, Tuscany Region divided its territory in 6 OTA. Florence city region take part to the OTA number 3, namely the OTA Medio Valdarno. OTA n.3 includes 53 municipalities belonging to 4 different Provinces (Arezzo, Firenze, Prato, Pistoia) and provides water to about 1.200.000 inhabitants.

Publiacqua s.p.a. is the firm, whose shares are prevalently owned by municipalities, which since 2002 managed the water cycle of the OTA 3. It means that Publiacqua provides water,

⁵ Ambito Territoriale Ottimale (ATO). The border of OTAs are decided by Regions.

⁶ In that case, the Florentine Area is composed by 9 municipalities of the first Florence's urban belt (Bagno a Ripoli, Calenzano, Campi Bisenzio, Fiesole, Firenze, Lastra a Signa, Scandicci, Sesto Fiorentino e Signa).

⁷ Associazione d'Area Omogenea

defines the water rates as well as manages the aqueduct, the sewers and the water purification.

The Basin Authority of the river “Arno” integrates the activity of the AOTA. Basin authorities are a specific bodies instituted jointly by the National State and the Region that use to govern over hydrographical basins intended as unique systems and as optimal areas (regardless of administrative boundaries) for the soil and the subsoil conservation, the rehabilitation of water supply, and for environment protection. The Basin Authority is the place where all decisions concerning the basin of a river are planned and where all the levels of government are represented.

THE GOVERNANCE OF WASTE

The jurisdiction over waste is shared between the National State, Regions, Provinces, and Municipalities. National State plays the role of guidance and coordination, uses to define criterions for the integrated waste cycle management, plans on waste reduction, and promotes recycling awareness campaigns.

Regions use to draw the Regional Plan for waste management, approve provincial projects on the location of new waste disposal facilities, have the power to define the borders of the Optima Territorial Area for waste management, and may incentive waste reduction and recycling.

Provinces have administrative and technical tasks (i.e. identifying areas for waste disposal facilities, controlling the waste management), while Municipalities account for defining the modality of waste collection and transportation, managing of hazardous waste, and approving projects on the remediation of polluted sites.

As for the water, even the waste is managed at an inter-municipal level: the Optimal Territorial Area (OTA). The authority that governs over OTA is a consortium of municipalities called Community of the Optimal Territorial Area (COTA)⁸. COTA adopts the Industrial Waste Plan; rules and controls over the methods of waste management; fixes the waste tax rates and entrust firms to manage the service.

Since October 2008, the OTA of Florence, that of Prato and that of Pistoia had been joined in the OTA of Central Tuscany that now comprehends 77 municipalities.

⁸ Comunità di Ambito Territoriale Ottimale

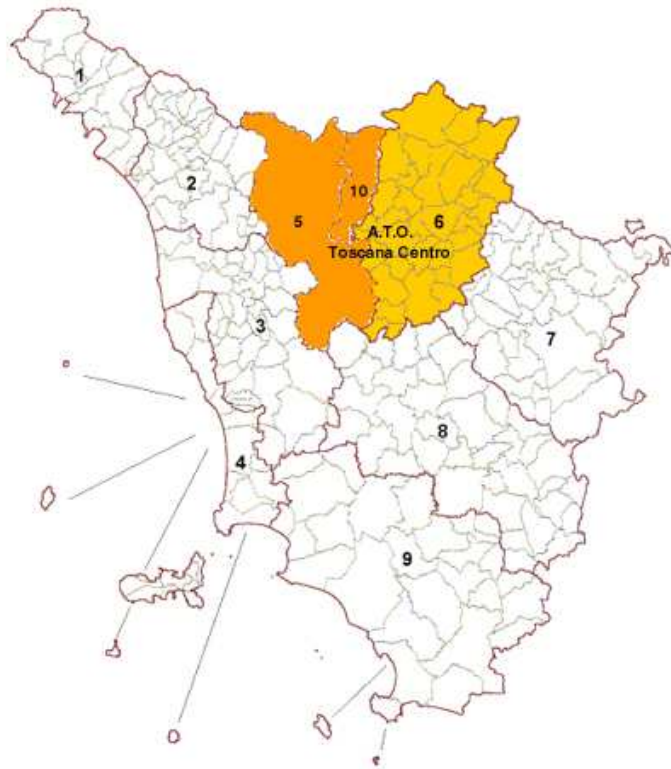


Figura 1 - The new Optimal Territorial Area on waste management of the city-region of Florence

The institution of a city-region level of waste management had been the occasion in which the 77 municipalities of the OTA signed a new memorandum of understanding where they engaged their administration in reducing the production of urban waste by 15% and in reaching the threshold of 55% in recycling.

2.6. Krakow

1. Main characteristics of waste management at city-region level

1.1. Division of public tasks among different government tiers

As far as urban regions (metropolitan areas) are concerned, no legal regulations have been introduced, which would allow to conduct, in an integrated way, all activities related to waste disposal, water supply, as well as sewage networks and treatment systems. The basic level of administration, which is responsible for all those systems, is the local one, i.e. the commune. Accordingly, within the Krakow Metropolitan Area, the respective basic competences lie in the hands of all local governments within the urban region, which may cooperate with one another.

According to regulations, a commune is responsible for meeting the collective needs of the community in the fields of environment protection and nature conservation, water economy, water systems and water supply, sewage systems, waste and sewage disposal and treatment, cleanliness and order, sanitary facilities, waste dumping yards, as well as the supply of electricity, heat, and gas. Nevertheless, there are a number of formal and organizational links between activities of local governments and those of state government authorities and regional governments.

The basic activity of the central government consists in the provision of legal grounds for local government activities in the field of waste management, water supply, sewage disposal and treatment. The most important legal acts include the Nature Preservation Act, the Waste Management Act, and the Water Law. In addition, governmental bodies prepare the related plans and programmes.

Waste

To attain objectives assumed in the state's ecological policy, and to implement legally determined principles of waste handling, "Waste Management Plans" are prepared. The goal of those plans is to create a nationwide network of integrated and sufficient systems and facilities for waste recycling and neutralization.

Water supply

The responsibility of government authorities as regards water supply concerns, first of all, preservation of water resources. There are specific planning documents prepared by the government, which support that goal. Those documents include the following: "National Water and Environmental Programme", "Flood Protection and Drought Prevention Plan", "Plan of Water Management in River Basin Areas", and "Conditions for Use of Waters in Water Regions".

In order to ensure proper management of waters, area development plans which are prepared by local and regional governments are subjected to the approval of authorities and institutions, which are responsible for water management (RZGW Regional Water Management Authorities), in respect of, among other things, rules set out in governmental plans and programmes.

Sewage system

Responsibility for sewage discharge and treatment rests with local governments. However, government authorities supervise and coordinate the related activities of local governments. The Programme includes a list of areas, which need to be covered with sewage systems, as well as a list of indispensable projects concerning the construction and modernization of

collective sewage systems and municipal sewage treatment plants. Regional authorities submit annual reports on the Programme implementation progress to the government, based on reports originally provided by local authorities.

1.2. Conflict management concerning localisation of plants

Conflicts related to the location of facilities causing inconvenience to their neighbourhoods, such as landfills, waste incineration plants, or sewage treatment plants occur very often, and equally often become reasons for the postponement of construction of those needed facilities. Those facilities are located based on local spatial development plans. If conflicts arise, they are solved on the basis of the "Act Concerning the Provision of Information on Environment and on Its Protection, Community Participation in Environment Protection and Environmental Impact Assessments". That Act provides for environmental impact assessments to be prepared for spatial development plans, and for any inconvenient projects, as well as stipulates general public access to those documents.

1.3. Private involvement in delivery of services

All forms of ownership of facility operators are legally admitted.

The waste-dumping yard in Krakow is a landfill site for the city of Krakow, and for one of its neighbouring communes. The Commune of Krakow owns the yard, and the yard operator is MPO Municipal Services and Waste Management Company, a limited-liability company. The Company is owned by the City of Krakow, which holds 100% shares in it. The Company also acts as an operator, which collects waste, along with several other operators. The landfill prices are determined in a resolution of the City Council of Krakow. Other waste dumping yards operate based on similar principles, and the same about other companies, which collect waste within the urban region area.

As regards water supply and sewage treatment in the area of Krakow, the MPWiK Municipal Water Supply, and Sewage Company, a municipal joint-stock company is the monopolist in that area. A similar situation exists in the remaining communes.

1.4. Options for common integrated solutions

Joint infrastructural solutions within the metropolitan area are implemented to a low extent. The largest landfill located in Krakow serves additionally only a single commune. Local communities have objected to the future location of the contemplated waste incineration plant, a facility to be shared by many communes of the region. A slightly better situation exists in the field of water supply. Main water intake facility for Krakow has been installed in the commune located in the peripheral part of the urban area. In neighbouring areas outside Krakow there are water intake buffer zones, which are covered by spatial development plans for those areas that provide limitations to land development. Part of neighbouring communes is connected to the water supply system of Krakow.

1.5. Main results, problem, challenges

Infrastructural solutions within the Krakow Metropolitan Area still, to a low extent, take into account the cohesion of activities. Also low is the communes' activity in establishing entities, which would conduct a comprehensive waste management. There exist too many inefficient landfill sites, as well as those, which do not comply with regulations. One of the main challenges for near future will be to locate a waste incineration plant, which would be common for the whole area. Also necessary are joint, integrated activities as regards a waste composting plant, as well as waste handling stations to minimize the number of waste

load travels. Another great problem is that of the organization of disposal of asbestos and of cars that have been withdrawn from use.

2. Forms of governance in managing waste at city-region scale.

2.1. Role of strategic and spatial planning in development of economy of waste

Spatial planning for the metropolitan area has to play a fundamental role for the proper distribution of infrastructure networks and facilities. It is mandatory for local spatial development plans to take those issues into account. In a general scale, those issues are included in regional spatial development plans. However, it is only the planned (mandatory, according to regulations) performance of the metropolitan area development plan that will allow for a better coordination of activities and increasing the effectiveness of funds being spent.

2.2. Framework of managing projects

Waste management plans provide frameworks for the preparation and performance of projects concerning waste collection, selection, and disposal. Such plans are drafted on national, regional, county and commune levels, with maintaining of the conformity of lower-level plans with those of the higher level. National, regional, and county plans of waste management cover all types of waste generated within the area of a given administrative unit. A commune waste management plan concerns municipal waste, generated within a given commune's area, as well as that brought into it. Waste management plans determine, among other things, the distribution of facilities for waste collecting, recycling, and neutralizing, as well as types of contemplated projects and sources of financing them.

2.3. Examples of recent projects, lessons learned

Activities taken in recent years focused mainly on the modernization of existing waste dumping yards, as well as the liquidation of those that did not comply with regulations. The basic project in that field is that of the planned location of the waste incineration plant, as well as increasing the share of segregated waste.

A large project, already completed, is the "Kujawy" sewage treatment plant, which was modernized and extended in 1999. This is the largest and the most modern facility of the type in the region. Further development of the plant has been scheduled.

2.4. Role of user charges

Fees for waste handling and for sewage disposal are determined based on market principles.

2.5. Formulation of policies on waste management at city –region scale

Waste management and sewage disposal policies have not been formulated for the metropolitan area. Programmes of environment protection and plans of waste management, developed on regional and county levels, play the coordinating roles. Certain joint activities are taken by voluntary associations of communes in respect of common water supply networks and facilities.

2.6. Success and failures in integration the city and its area focusing on enhance of cost effectiveness

As far as the Krakow Metropolitan Area is concerned, one cannot report any substantial successes in the integration of projects aimed at the effectiveness of infrastructural facilities that are developed. Such calculations are made, within a limited scope, by local government authorities, as well as by utility operators.

2.7. Sustainability concerning waste management

Sustainability in the field of waste management and sewage treatment is reflected in sectoral programmes and spatial development plans. They are gradually implemented. However, despite high progress in last years and in particular as regards the construction of sewage treatment plants, the Kraków Metropolitan Area is still behind with such facilities.

3. Role of citizens

3.1. Forums and form of public opinion concerning disposal

Forum for public discussions is provided mainly by the mandatorily organized discussions over plans and programmes being drafted, for which, also mandatorily, strategic environmental impact assessment documents are prepared. In addition, those environmental impact assessments that relate to projects, which are likely to be causing inconvenience to their neighbourhood, are made publicly available. Particularly severe conflicts concern the locations of facilities for waste recycling, composting, and disposal. A sharp conflict appears mainly in relation to the location of the waste incineration plant, where local or district communities organize protest campaigns, whereas city authorities conduct information campaigns.

3.2. Bargaining process between interested municipalities

Negotiations between communes concern mainly large projects, which are cost-effective only for large populations. Those negotiations concern both the location, as well as the rules of financing and using the planned facilities. Also the utility operators conduct negotiations.

3.3. Consumers' position against providing monopolies

Companies, which supply water and handle sewage, are monopolists, and that makes it impossible to their clients to choose other operators. Such possibility exists in the case of companies that collect waste, and the related prices are imposed mainly by that municipal company, which manages the landfill site. Decisions of commune councils are essential as regards fees.

3.4. In what extend can purchasers be able to influence the level a services?

There is no interrelationship between fees and quality of provided services. These are mainly the regulations, which ensure the quality of water.

3.5. Is there any influence by neighbourhoods on organization of waste management?

Neighbourhood affects infrastructural projects mainly as regards the location of inconvenient projects. This takes place at the stage of drafting spatial development plans together with strategic environmental impact assessments. There also exists a legal

possibility of determining the so-called "limited-use areas", where owners have limited possibilities of using their land because of nuisance caused by certain facilities located in there, and there are compensations paid to such owners.

To a lower extent, neighbourhood impacts the effectiveness of projects through combining certain projects, mainly waste disposal facilities, as well as locating projects that are shared by several communes.

3.6. Main ideas, recent conception for development of system or methods of citizens' and stakeholders'

Main ideas and conceptions of the development of infrastructure are reflected in recently prepared planning documents. The process of preparing those documents involves both local communities, and operators providing infrastructural services. Plans and programmes are prepared on local and regional levels. On the metropolitan level, the process of planning has the nature of preliminary declarations and initiated organizational activities, which include the establishing of the KMA Communes Council and the operation of the KMA Communes Forum.

2.7. Lille Metropole

SOLID WASTE

Waste management in France

In 1993, the average weight of waste generated was 320 kg / inhabitant / year and in 2002, it has raised to 360 kg / inhabitant / year.

In order to deal with this increase the State initiated in 2005, a “national plan” (“plan national de prévention de la production de déchets”) aiming at reducing the production of waste. The objective was to reduce to 290 kg / inhabitants / year; the objective for 2015 is 200 kg / inhabitants / year (average quantity of waste produced by inhabitants).

If the State is setting the main objectives, technical, economic and functional competencies regarding the localisation, organisation and management of the waste management devices lies with the local authorities (communes / municipalities / inter communalities). The management of urban waste, mainly of a domestic nature, is strictly of communal competence.

Lille Metropole - Solid waste management

Initiated in 1992, the household waste treatment policy is still very much guided by the principle of “Throwing away less, sorting more, handling better”. Splitting waste into different categories, rubbish tips, sorting centres, ultra-modern recycling centres: 200 million € was invested between 1997 and 2001. Since then 122 million € has been invested in funding the final extension of the waste separation programme, the building of additional sorting centres, an organic recycling centre and smaller facilities such as new rubbish tips.

More specifically:

- Organising household refuse systems for the community
- Managing the outsourcing of household refuse collection
- Encouraging the sorting of household waste
- Campaigns of communication and awareness raising

100 years of history...



The first company “Arthur Collin” specialised in household waste collection was developed in 1904. In 1914, this company was commissioned by the city of Lille to collect household waste. In 1940, this company had grown up and became “SARL Traitement des résidus urbains” or TRU.

In 1968, the “communauté urbaine” framework was enforced by law in the Lille area. This new organisation gave more opportunities for the TRU development. Given the challenge of this new territory, the Company decided to invest in new materials. To do so, the TRU opened its capital to new partners and enlarged its sectors of activity: transport of industrial waste, industrial cleaning, etc. In 2001, the TRU became Esterra.

Esterra is today one of the main actors in solid waste management in the Lille Metropole area.

Actors:

Lille Métropole Communauté Urbaine that gives the direction associated to:

	<p><u>Name:</u> Esterra <u>Statut:</u> SA – incorporated company <u>Stakeholders:</u> Veolia Environment and Sita (part of Suez consortium) <u>Capital:</u> 8 M€ <u>Contract with LMCU:</u> service provision market (délégation de service public) <u>LMCU Turn over:</u> 87 M€ <u>Activities:</u> waste collection and waste management <u>Additional information:</u> -1 1 354 people -2 308 vehicles -3 1.2 millions Inhabitants concerned by household waste collection -4 1 000 clients (companies, etc.) -5 800 000 t of waste collected per year -6 9 activity areas</p>
	<p><u>Name:</u> Triselec <u>Statut:</u> SAEM – semi-public corporation created in 1992 <u>Stakeholders:</u> LMCU (68 %) + professionals in charge of waste collection and waste management (re-use, recycling, etc.) <u>Turn over:</u> 16.5 M€ <u>Activities:</u> waste collection and waste management & re-use and recycling</p>
	<p><u>Name:</u> VALNOR <u>Statut:</u> SA – incorporated company created in 1997 <u>Stakeholders:</u> Affiliate to VEOLIA via DALKIA (49 %) and CGEA (27 %), AUBINE (17 %), ORDURES USINES (5 %) et par l'Union des Services Publics (1 %). <u>Contract with LMCU</u> <u>Activities:</u> management of sorting and recycling centre (refuse incineration, composting, sorting) waste collection and waste management <u>Additional information:</u> Valnor is in charge of the management of <i>the Centre de Valorisation Energétique (CVE, 350 000 tonnes)</i> = Material recovery centre (Energy recovery from waste) for 15 years. The company is remunerated on the basis of unit costs by the treated ton (21.71 € / t) (result of the total amount of operation and management expenditures less the receipt of the valorisation of various products)</p>

Territory:

Lille Metropole Communauté Urbaine

Some Facts & Figures

- 689 617 t collected
- 434 117 t of domestic waste
- 400 kg of domestic waste / inhabitant / year
- Selective household waste collection in 83 communes
- 930 000 inhabitants are sorting their waste (LMCU = 1 100 000 inhabitants)

Facilities:

- Waste reception centres: 7 are already functioning, 8 are planned (4 will open in 2010)
- Sorting centres: 2 – total of 82 376 t including 82 376 t that are recycling and upgrading (91.1 %)
- Energy produces:

- 337 358 t of waste incinerated in 2006 = 174 994 MWh produced
- Organic waste: capacity 108 000 t / year that produced: 34 000 t of compost + 4.5 millions of litres of gas oil using in 100 buses / public transport

Conclusion:

Even if there are several players active in the process, the overall responsibility lies within Lille Métropole Communauté urbaine for its territory. The situation is very similar in other parts of the Metropolitan areas with Inter-municipal authorities being responsible, public-private or fully private companies being operators.

The issue of waste management has not been raised so far at a wider geographical level.

WATER

Water management in France

Main Regulation / Law on water:

- Law of 3 January 1992: This law has created two new planning tools: SDAGE (schéma directeur d'aménagement et de gestion des eaux – « water management master plan ») and SAGE (schémas d'aménagement et de gestion des eaux – « water management plan »).

A specific SDAGE defines in each “water basin” the main directions for a balanced management of water within the framework of the law.

- Law / 23 October 2004: according to European regulation.

Today the policy is based on 4 principles:

- an integrated approach, taking into account the physical, chemical and biological balances of the ecosystems: surface and underground waters, quantity and quality
- a scale adapted to the effective management of water resources: the water basin
- consultation and participation of all categories of users
- incentive economic tools: polluters and users pay

Controls are made by the National government offices: DIREN at Regional level and the MISE at the level of the “department” l.

Competencies are divided between the State, the local authorities (communes / municipalities / inter communalities) and the users.

At National level, the “comité national de l'eau” – National committee (that gathers elected representatives, people from economic, social fields and civil society) on water is consulted on the main directions and on projects, law / regulations and rules.

At the water basin level (territory adapted to the management of water resources), the committees “comité de Bassin” & “Commissions Géographiques” gather: local representatives from communes / departments and regions, representatives from economic, social fields and civil society, and Officials (State technicians).

At the water sub-basin level (each water basin is subdivided) the local water commission (Commission Locale de l'Eau) takes part in the development of the “schéma d'aménagement et de gestion des eaux” (SAGE) – (water management plan”) which gives information relative to the use of water. This commission gathers: representatives / local councillors (50 %), users, administrations.

At the local level, communes (36 000 in France) are in charge of water supply and sanitation system (waste water and rain water) that is to say this issue is dealt with at municipal level.

Decisions concerning the development and / or refurbishment of facilities insuring the water supply and the quality of water are taken at the water basin level.

Users support, by paying the water they use, the majority of the expenses related to investments and operation of the facilities needed for the management of water.

Lille Metropole – Water and sanitation

LMCU main political objective is to step up the fight against pollution in terms of drinking water resources, sanitation networks, and purification plants. LMCU has also decided to accelerate the programme designed to combat flooding by allocating € 91.6 million over several years.

70 million m³ of drinking water is provided every year. LMCU owns 250 water pumping plants, 60 storage basins, 426 storm overflow tanks as well as 7 purification plants (with another three currently under construction)

More specifically, LMCU's role consists of:

- Managing the community's public water and sanitation system
- Being the contracting authority with regard to maintaining and extending the sanitation networks and water purification plants.
- Implementing European Directives concerning pollution.

LMCU is also in charge of protecting the water resource: champs captants (harnessing fields, etc.).

Drinking Water sources: 71 % of the water is coming from underground water (water table in chalk and carboniferous limestone) and 29 % is coming from river « Lys ».

Some Facts & Figures

- Water price in 2007 = 3,19 € (taxes included) / m³ – price including supply agreement, waste water sanitation, tax rate, State tax
- More than 1 million inhabitants concerned
- Water consumption = 105 l / day in 2007
- 63 000 000 m³ of dinking water produce in 2007 (6 % less than in 2006)
- 4 122 km of pipe / network to transport and distribute drinking water
- 13 reservoirs
- 19 water towers
- 2 352 controls made by DDASS and 5 020 controls made by LMCU, Institut Pasteur and SEN
- 4 503 km of pipe / network to collect and transport waste water
- 9 Sewage treatment plants (5 are cross boundary (border?) plants)
- 2 new Sewage treatment plants planned
- 1 Waste Stabilization Ponds / lagooning

PLAYERS:

Lille Métropole Communauté Urbaine coordinates the producers and suppliers. Within the territory of Lille Metropole the water production is done by:

Drinking Water production:

3 producers:

- Lille Métropole Communauté urbaine
- La SEN (Société des eaux du Nord)
- La SMAEL (Syndicat Mixte d'Adduction d'Eau de la Lys).

Drinking Water distribution:

LMCU delegates its competence concerning drinking water distribution to ("délégation de service public"):

- The SEN (Société des eaux du Nord) – concession contract for a duration of 30 years (started on 1st January 1986) - concern 60 communes of the territory - 1 031 500 inhabitants
- The SIDEN-SESEA (Syndicat Intercommunal de Distribution d'Eau du Nord - Syndicat d'Exploitation des Services d'Eaux et d'Assainissement) – leasing contract for a duration of 15 years (started on 1st January 2000) – concern 2 communes of the territory

In 23 communes the public service of "drinking water" is directly managed by the SIDEN France - Syndicat Interdépartemental de Distribution d'Eaux du Nord de la France under the control of LMCU (exploitation en régie).

Contractors are in charge of maintenance and management of all distribution facilities in their territory.

Sanitation

Public service (Statutory corporation) – sanitation is managed by LMCU on the whole territory

WATER & THE LILLE METROPOLITAN AREA

SDAGE & SAGE

The Lille Metropolitan Area is concerned by the SDAGE of the water basin Artois Picardie

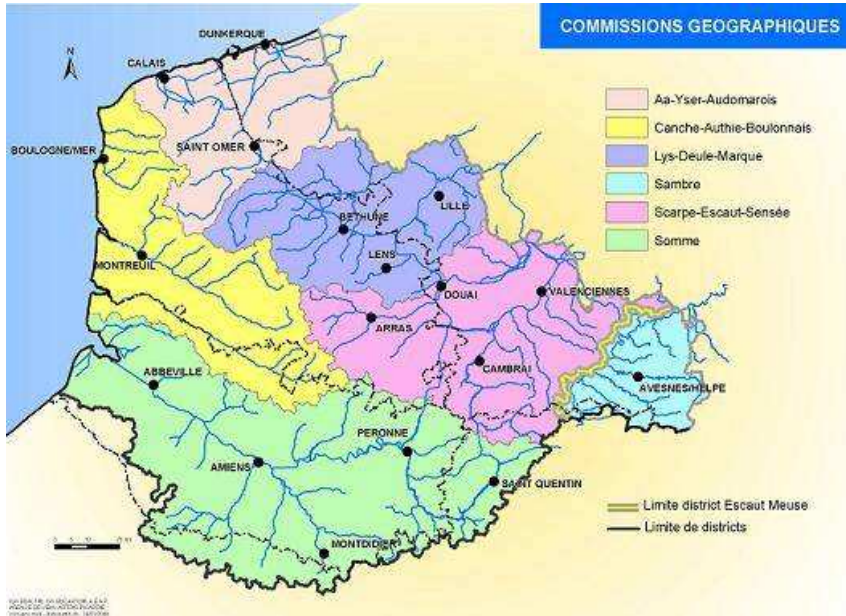


Fig 2: Périmètres des 6 commissions géographiques du Bassin Artois Picardie. (carte de l'Agence de l'Eau Artois-Picardie)

The territory is divided in 8 SAGEs.

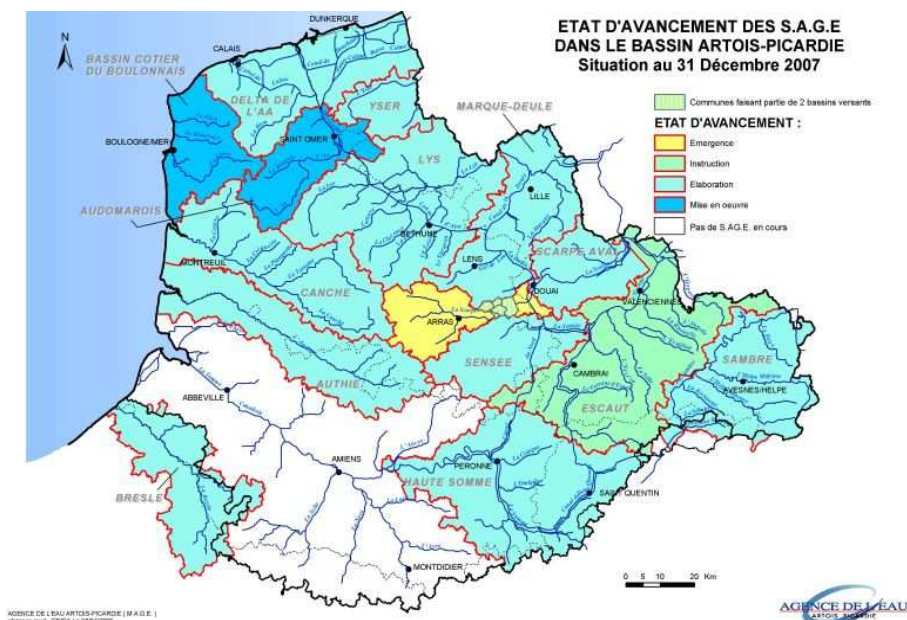


Fig3 : Répartition des SAGEs dans le Bassin Artois Picardie, 8 SAGEs couvrent le territoire de l'Aire Métropolitaine (Lys, Scarpe Aval, Escaut, Sensée, Delta de l'AA, Marque – Deûle, Sambre, Yser) (carte de l'Agence de l'eau Artois-Picardie)

WATER a CO-OPERATION THEME for THE LILLE METROPOLITAN AREA

Providing water in relevant quantity and quality to residents and preserving the water resources for the next generations are real challenges for the Lille Metropolitan area.

Water provided by the water basin Artois Picardie is sufficient but vulnerable (underground water (water table in chalk and carboniferous limestone)).

In June 2006, water resource and its management became one of the cooperation themes for the Lille Metropolitan Area. A specific working group has been set up which works on:

- the creation of an observatory of the water resource
- the development of a common strategy to protect and to preserve the water resource
- the harmonisation of the cost of water

WATER & SANITATION

Water supply, management, and sanitation concern various and numerous players in the Lille Metropolitan Area. There are several players in each territory – examples:

- See example of Lille Metropole p4 & 5
- Below, example of the « Communauté de Communes du Cœur d'Ostrevent »

Communauté de Communes du Cœur d'Ostrevent: located in the former coal mining area (southern part of the Lille Metropolitan Area), it was created in 2000 and is composed of 21 communes.

The competence on water management is concerning 16 communes only (because water was managed by the same structure before the creation of the Communauté de Communes). In 4 communes water is managed by the private sector – Noréade.

And in the last one, the competence depends on a coordination board of municipalities (syndicat intercommunal).

Division of competences and operators - Communauté de Communes du Cœur d'Ostrevent (CCCO)

network	Number of communes concerns	Competence	Operator
Waste water	16 communes	CCCO	Private (Véolia Eau) service provision market (délégation de service public)
	4 communes	Private (Noréade)	Private (Noréade)
	1 commune	Syndicat intercommunal	
Storm Water	17 communes	Communes	CCCO
	4 communes	Private (Noréade)	Private (Noréade)
Drinking water	16 communes	Private (Noréade)	Private (Noréade)
	5 communes	Petits syndicats intercommunaux	Private (Véolia Eau)
Water treatment	16 communes	CCCO	CCCO
	4 communes	Private (Noréade)	Private (Noréade)

The geographical limits do not correspond to the water supply and sanitation networks. It is generated some problems:

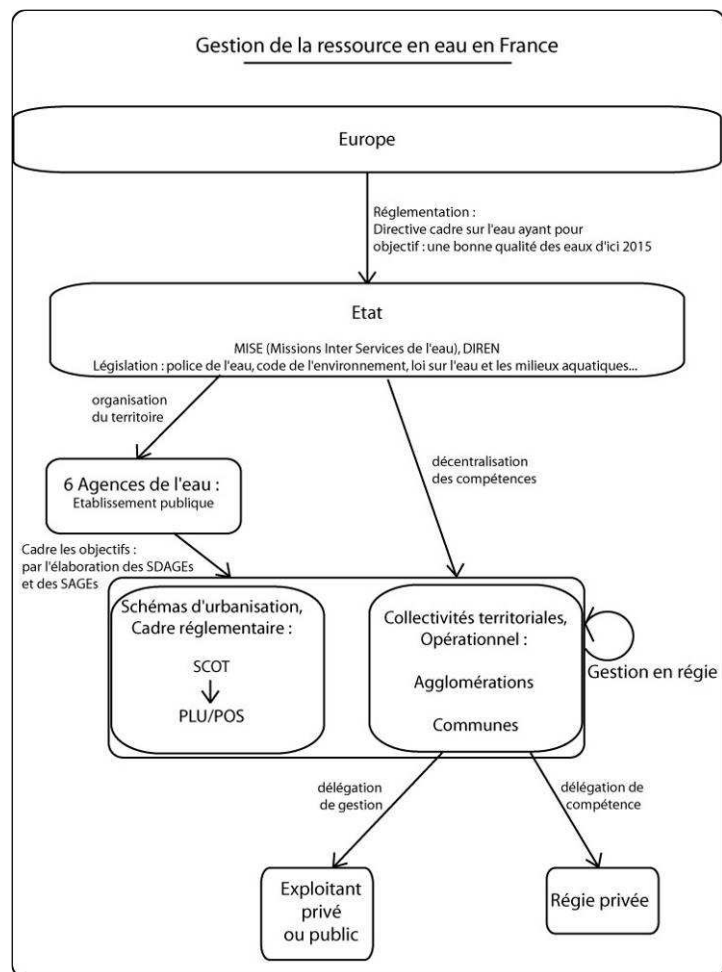
In the « Communauté de Communes du Cœur d'Ostrevent », some water coming from communes managed by Noréade can be in the network of the CCCO.

In this case, there are some conflicts because the management policies are different. Moreover the pipe / network is an old heritage of the coal-mines companies with a very bad division between waste water and storm water.

As the private network is not separated from the public one, it implies that in case of major storms, the CCCO has to deal with important volumes of water coming also from the other network.

In this situation, the question is how to manage investment? How to deal with a balanced distribution of taxes?

The solution will be to homogenise the management of water for the whole territory (which imply legal, administrative problems, etc.).



2.8. Seville

Water management

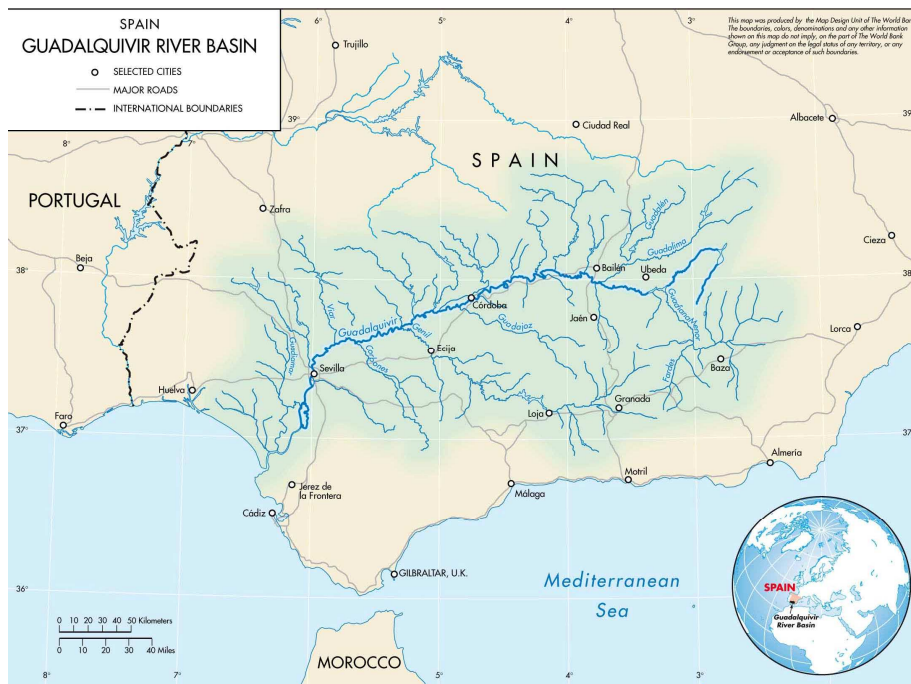
Water management in the Guadalquivir river basin

Water resources in Spain have the statute of public good. The current constitution, which was adopted in 1978, declared that all continental and coastal waters are in public domain. This confirmed and deepened principles introduced by Water Acts of 1866 and 1879. As for the management system, the early establishment in 1926 of central government-run management authorities at the level of river basins (the **Hydrographical Confederations, CH**), set the principle of basin-scale structures for the management of water that remains unchanged.

From 1926 to 1985, CHs were mainly charged of water works construction and operation. In 1985, they became integrated water resource management agencies, including the responsibility of water use management, a competency they had had during some periods before that time. This shift was introduced by the **Water Act of 1985**, which marked the beginning of a move from the sole emphasis on supply augmentation to the incorporation of additional goals such as water quality improvement, demand management, water use efficiency and environmental protection. CHs were given their model of organization, which had to integrate the objective of user participation.

The 1985 law also enacted the transfer of infra-regional water basins to regional governments (which actually was not completely carried out), leaving the inter-regional basins under the authority of central government.

Seville and its metropolitan area are located in the **Guadalquivir river basin**, an inter-regional basin, consequently managed by a CH within the terms of the 1985 law. The Guadalquivir River runs westwards across Southern Spain, with 90% of the basin area located in the Andalusia region.



Source: World Bank

Until 2009, like other CHs, the CH of the Guadalquivir River acted as an integrated water resource management agency. It dealt with water works, water planning and the monitoring of water resource conditions (including water quality). Regarding water planning, the CH's main functions included the allocation of resources between users (through water concessions), and their adaptation during drought periods as well as the decision of flow releases during wet periods. In the case of the Guadalquivir River basin, risks of drought and of floods are particularly severe.

In 1999, a set of amendments to the 1985 law were introduced. They mainly consisted of an update, taking into account the EU Water Framework Directive of 1998 (increased water quality requirements, recognition of the ecological values of the resource, etc). These amendments also gave holder of water licenses new options of transfers of water, such decisions needing the CH's approval.

Within this system, there are 4 categories of water users: **irrigation associations** (irrigation is by far the main consumptive water use), **hydroelectric companies, industrial users, and public and private water supply companies**. The latest category derives from the responsibility of municipalities for the supply of drinking water to users and for sanitation and waste water treatment. Municipalities carry out these functions various different forms: groupings of municipalities (mancomunidades), creation of public companies, concession to private companies, mixed public and private arrangements, etc. In this perspective, municipalities make up one category of stakeholders among others. Water users are represented in various boards and bodies of the CHs, as well as other stakeholders such as professional associations and environmental groups, in a lesser extent.

Traditionally, irrigation water communities and central government have been the major stakeholders in terms of influence and powers. Irrigation became in the beginning of the 20th century a decisive factor for the development of agriculture, a pillar of Spanish economic development, even more in the Guadalquivir River basin, poorer and more rural than the rest of the country. This context led to a formal recognition of this group of users and consequently a special position among other stakeholders. National government's clout has resulted from its decision-making power regarding top appointments in these agencies and its funding of a significant part of CHs' budgets (the other part stemming from tariffs and taxes to water users) as well as the obligation of basin strategic plans to comply with the National Hydrological Plan.

The system has been characterized by an unbalanced representation and position in the relationships with CH personnel of the various stakeholders. Over the last decades it failed to adjust representation in order to reflect the large urbanization process. CHs' organization does not include conflict resolution mechanisms over policy direction or water resource allocation, while past drought episodes did trigger conflicts between irrigation communities and urban water suppliers.

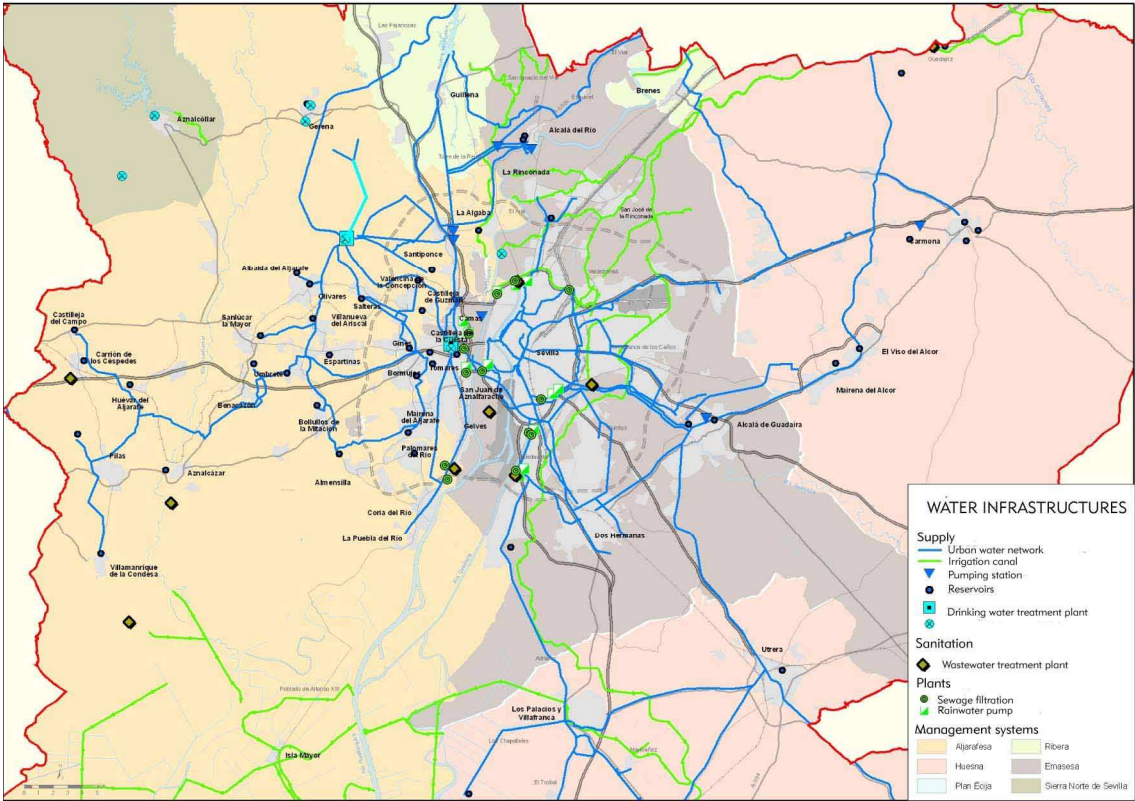
Another actor has emerged as a significant actor: the regional government (Junta de Andalucía). With a wide range of policies overlapping water issues (natural resource management, environmental and public health protection, economic development, land use planning, agriculture and forestry), regional government has increasingly got involved in water issues, mainly through the support of intra-basin projects for water quality and management and use efficiency, the funding of treatment plants, and technical assistance to municipalities. Regional government also created in 1994 the Andalusia Water Council, a forum for public discussion and policy recommendation. This initiative represented the will to address regionally the severe regional water problems on a participatory basis.

The situation culminated in 2005 with the progressive passing of the responsibilities on regional water resources to the regional government of Andalusia (regional government currently manages 96% of water resources located in the regional area). The **Water Agency of Andalusia** was created at the same time as the executive agency of the Junta de Andalucía. The regional part of the Guadalquivir basin was transferred in January of 2009, and makes up one of the 4 Hydrographical Districts (DH) under the responsibility of the agency.

Each DH includes different participation bodies. The most important is the Water Commission that includes “traditional stakeholders” as well as “newcomers” such as consumer and neighbour associations. As for the Guadalquivir River Basin, there is still a strategic planning at the whole basin-scale, directed by the central government. The Water Commission of the Guadalquivir DH was set up in February 2009 and is in a transitory phase, with the same composition as the Water Council of the former CH (except regarding the representation of regional government).

Urban water management in the metropolitan area of Seville

Over the last years, municipalities in the metropolitan area of Seville have endeavoured to develop an integral approach to the water cycle, from adduction to reinjection in natural environment, following the evolution of water laws. It has included the setup of processes of monitoring and control of the resources, impulse by the Andalusian Water Agency for Water and managed by the Water Provincial Consortium (a structure gathering the Water Agency of Andalusia, the provincial government of Seville and the urban water suppliers of the province). Agreements between both have allowed the programming of works on water infrastructures, especially wastewater treatment plants and interconnections of supply systems, especially at metropolitan level.



Source: POT AUS, Junta de Andalucía

The metropolitan hydraulic system consists of three main subsystems managed by distinctive public companies: Emasesa, which serves the capital city and the main cities of the first metropolitan belt, Aljarafesa and Huesna.

EMASESA, the Metropolitan Company for Water Supply and Sanitation of Seville

EMASESA started in 1974 as a municipal company for the management of the urban water circle in the Andalusian capital and currently supplies drinking water to 11 of the 46 municipalities of the Metropolitan Area of Seville, an area of 1,050 km² and 987,080 inhabitants, which represents 74% of 2009 metropolitan population. It is responsible for the sewage collection and wastewater treatment of 10 of these municipalities. The company also supplies raw water to 26 municipalities of the Aljarafe area of the metropolitan area and to the municipality of Guillena. EMASESA is the second largest integrated water cycle management company in terms of customers in Spain. Its turnover in 2008 reached 103.2 million €.

The 11 municipalities (Sevilla, Alcalá del Río, Coria del Río, Puebla del Río, Mairena del Alcor La Rinconada, El Garrobo, Alcalá de Guadaíra, Dos Hermanas, San Juan de Aznalfarache, Camas) make up the shareholders of EMASESA. The municipality of Seville owns 71% of the company capital.

EMASESA Stakeholders

	% Participation
Ayuntamiento de Sevilla	70.88
Ayuntamiento de Camas	2.68
Ayuntamiento de San Juan de Aznalfarache	2.02
Ayuntamiento de Dos Hermanas	8.28
Ayuntamiento de Alcalá de Guadaíra	8.16
Ayuntamiento de El Garrobo	0.06
Ayuntamiento de La Rinconada	2.81
Ayuntamiento de Mairena del Alcor	1.78
Ayuntamiento de Puebla del Río	1.1
Ayuntamiento de Coria del Río	2.62
Ayuntamiento de Alcalá del Río	0.83

Source: EMASESA

The supply system of the company consists of:

- 4 reservoirs and one currently under development
- 3,400 km of networks
- 38 pumping stations
- One drinking water treatment plant

The wastewater management system is based on:

- 2,300 km of network
- 1 composting plant (capacity of 25,000 tn/year)
- 25 pumping stations
- 4 wastewater treatment plants

Acting for efficiency and consumption reduction

Data shows that water consumption decreased over the last 20 years. These results were achieved through result from modernization and maintenance of infrastructures, facilities and networks. Plan of networks' renovation makes up 50% of the investment budget of the company, with an average of 40€ million per year. Intervention on facilities and networks principally aim at reducing water losses, which is also the purpose of the minimum night flows method to mitigate leaks impact. The current rate of losses is 14.8%, already below the level objective set for 2011 (15.5%). EMASESA also carried out a campaign for the installation of electronic individual meters for monitoring purposes.

Tariff structure and restrictions to irrigation with drinking water were other tools used by the metropolitan company to mitigate drinking water consumption.

Awareness-raising campaigns towards the population (as well as the memory of severe drought periods) and major consumers (companies and industries) also contributed to the decrease in water consumption. These efforts allowed to reach in 2008 a daily consumption of 129 litres per inhabitant, one of the lowest level in Spain where the average consumption is 178 litres.

Interaction with stakeholders and public participation is considered by EMASESA as an essential focus in order to successfully face the necessary changes in the management of water resources and their associated ecosystems. These interactions are made through direct attention, relations with civil society (associations, NGOs and other organized groups), collaboration agreements, technical exhibitions and conferences, and actions focused on the youth.

Water management and urban planning considerations

Currently, structure of commerce in historic centres and scattered urban tissue involve complexity and vulnerability of the network system and make difficult the establishment of a systematic management of networks.

In the perspective of consumption reduction and effective water recycling and reusing, EMASESA also advocates for the integration of water supply and sanitation issues as essential items in city-planning and for a planning-model that should break with the unlimited growth pattern. The compact city is obviously the ideal pattern.

Innovation and renewable energy

Innovation is an important focus in EMASESA's activities. Between 2000 and 2008, the company carried out 35 R+D projects, with a total investment of 1.392.407 € and the collaboration with various universities and investigation centres. Key issues for R+D are ecosystem management, distribution, drinking water and waste water treatment processes (supercritical oxidation, sun-dried sludge and composting) and the integration of TICs in the management system.

In its approach of technology integration and innovation, EMASEA stresses on the importance to find adapted solutions in function of each municipality's situations and issues.

EMASESA is also integrating renewable sources of energy, developing solar-power generation and endeavouring to maximise the use of its inputs and outputs:

- Solar photovoltaic energy: developments in tanks and buildings (1,500 Kw) and one solar plant (1,000 Kw)
- Cogeneration of biogas in 4 waste water treatment plants (3,200 Kw)
- 3 mini-hydroelectric plants (11,277 Kw).

These developments currently cover around 60% of the company's energy consumption. The strategic goal is to achieve 100% of energy supply through renewable energies by 2013.

3. SYNTHESIS OF THE THEME

“GOVERNANCE REGARDING EXTERNALITIES AND ENVIRONMENTAL ISSUES AT CITY-REGION LEVEL”

Externalities in environmental problems are a very broad theme, so we narrowed this topic down in advance to focus on specific and practical issues more related to governance. Our initial preference was for solid waste management and operation of sewage systems, waste water disposal, and treatment at the city region level. In the seminar, mainly water treatment was preferred to the above-mentioned issues. However, notes on partner cities scrutinise the other themes as well.

So far, a set of city region instruments of governance was found on the occasions of previous seminars. In Eindhoven, for instance, inter-municipal cooperation (SRE) was introduced at the level of the urban area. In addition to this mainly horizontal form of cooperation, in Florence city region vertical cooperation was also relevant, among other things such as involvement of different levels of government in a strategy-oriented formal institution (Firenze Futura). We also realised the involvement of private actors, entrepreneurs in both cases. Going forward, our aim is to enhance this experience of specific solutions, seminar by seminar. However, it is known that we cannot get a full picture from short direct impressions about one or another city-region.

Examples are good for us as lessons to draw possible consequences with wider relevance for European cities and their urban areas.

The term governance covers many kinds of managing relationships. In this game, players can be very different. They are levels of administration, types of local government, national government, public bodies, private stakeholders, etc. On the other hand, apart from actors, methods can be really varied. Managing projects, making financial incentives, funded from private sources, etc. are very popular instruments. Collection of relevant knowledge in the establishment and enhancement of a wider scale of cooperation and introducing active forms of harmonisation as policy orientations can be relevant for local politicians and also members of Local Support Groups to strengthen or make Local Action Plans of their own. This added value, which is politically relevant from the European point of view, makes common efforts in favour of a city regional integrated approach easier than before.

Environmental issues are quite good examples for the development of non-structural forms of administration, policy-making, introducing financial incentives and involving the public.

1/ Lessons learned from the case of Seville

In order to correctly approach the question of governance, here we present new ways of innovative spatial strategic planning of regional development.

The terms “metropolitan area” are preferred to “city-region”. It refers directly to the Agglomeration of Seville, which comprises 46 municipalities including the city, with around one and a half million inhabitants, 50 percent of whom live outside the city itself.

Nowadays there is not any structure or board for metropolitan governance. However, the approach now is to create one in the very near future. This future board should consider as partners: the Seville city council, the rest of the 45 municipalities in the metropolitan area around the central city. The province and the region of Andalusia could also play a role. This

structural idea is based on real cooperation here, among others, in the field of environment friendly and sustainable development.

1.1. Public sector companies in regional development

The role of public sector companies is very important in the fields of ecology and renewable energy, because they have been developing programmes for the promotion of these technologies.

On the other hand, local economic development focuses on the production of energy this way, as the largest solar energy production works in Europe is located in the city-region. Other entities include specialised companies involved in development systems and applications for making energy from renewable sources or in lending for services for installation systems such as this.

1.2. Public sector companies in urban service provision

Effective metropolitan cooperation is working in the field of public transport through the Consorcio Metropolitano de Transportes [a public agency under public law], which was generated by an initiative of the Regional Government of Andalusia. There is a definition of tasks, a formal budget, other funding possibilities, etc.

Thanks to the decision of the Seville City Council, water-cycle management has been opened up to other municipalities in the area. The public sector water company [EMASESA] provides services to 45 other municipalities by merging small public sector water companies. This management by stock-holdings represents a special form of cooperation at the city region level. To establish this format, a broad political consensus was needed, based on common types of party affiliation at that time. Nevertheless, the common organisational framework for public service provision is based on consumer fees exclusively, to make it non-dependent on the initial political intention later on, when other majorities are eventually in power.

2/ Similarities and differences between partner cities

There are different forms of non-structured administration dealing with the provision of widespread urban services concentrated on environmental sustainability. Some key characteristics are listed here, such as:

- specific co-operation between different levels of government;
- management through public or public-private companies;
- public strategic management at city region level for managing common utility services;
- specialised public institutions with a historic tradition.

2.1. Specialised governmental co-operation

AOTA in Italy

The water network is managed by inter-municipal authorities that govern areas that the region had defined as optimal. The Optimal Territorial Area (OTA) concept had been introduced by the national law on the water service. The authority that governs the OTA - the AOTA - is a consortium of municipalities. AOTA's role is to plan, organise and control the integrated water cycle, but it cannot manage it directly. Hence, the AOTA selects, entrusts and controls a utility management firm that is used to manage the integrated water cycle. The AOTA aims also to guarantee an optimal level of drinkable water supply and, at the same

time, preserve the quality of water, respect the environmental preference and protect users' interests.

By regional law, the Tuscany Region has divided its territory into 6 OTAs. The Florence city region has a stake in OTA number 3, namely the Medio Valdarno OTA. This OTA n.3 includes 53 municipalities belonging to 4 different Provinces (Arezzo, Firenze, Prato, and Pistoia) and provides water to about 1,200,000 inhabitants. Publiacqua s.p.a. is the firm whose shares are mainly owned by municipalities, which since 2002 have managed the water cycle of OTA 3. This means that Publiacqua provides water, defines the water rates and manages the aqueduct, the sewers and water purification. The "Arno" River Basin Authority supervises the activity of the AOTA. Basin authorities are specific bodies instituted jointly by the National State and the Region that used to govern hydrographical basins intended as single systems and as optimal areas (regardless of administrative boundaries) for soil and subsoil conservation, the rehabilitation of water supply and for environment protection. The Basin Authority is the place where all decisions concerning the basin of a river are planned and where all the levels of government are represented.

COTA in Italy

As for water, even waste is managed at an inter-municipal level: the Optimal Territorial Area (OTA). The authority that governs an OTA is a consortium of municipalities called the Community of the Optimal Territorial Area (COTA). A COTA adopts the Industrial Waste Management Plan; rules on and monitors the methods of waste management; fixes waste tax rates and entrusts firms to manage the service. In October 2008, the OTAs of Florence, Prato, and Pistoia joined the OTA of Central Tuscany, which now consists of 77 municipalities.

Cooperation agreements between regions in Belgium

Cooperation on environmental issues at city-region level is implemented through the signature of Cooperation agreements between the Brussels-Capital Region and the other two regions or with the central government. These contracts are really an agreement between parties of the federation and no more. They do not cover any functional division of tasks or delegation of any function from one to another.

The same goes for monitoring movements of waste. Waste can in principle move freely between the Belgian Regions. However, the Region of Wallonia has enacted a ban on landfill for waste from other Regions. Exemptions may be obtained by a rigorous application procedure to the Walloon Waste Office (OWD). The Memorandum of Understanding which forms the basis of this application procedure has expired since 1994, but the two regions continue to collaborate on this basis. There are no restrictions on transfers of waste to the Flemish Region. The movement of waste to and from this region is monitored by data from a register.

2.2. Public sector companies in the provision of public utility services

The most interesting tradition of involvement of private companies in the provision of solid waste and healthy drinking water supply is in France. Delegation of public competences, notably service provision, means public sector contractual relationships with private providers under the control of the public administration. However, at the same time, service fees are covered by consumers on the basis of their private contracts. So except for what concerns infrastructure, there are no subsidies in this relationship. In the case of Lille city region, this task is done at the level of the Lille Métropole Communauté Urbaine. The function is entrusted to this statutory body 'at large' in the cases of solid waste collection and

disposal. As far as water management is concerned, delegations of competence are spread among some of the big companies that work in the water basins.

Public sector companies play an important role in other cities in our group. In these cases, the content of public sector action is closer to the municipal content. This means companies are owned by territorially involved local governments, such as EMASESA in Seville. Similarly, in the city region of Florence, delivery of most of the local utility services is managed in this way.

In another model, the city-municipality has simply a stake (not necessarily a majority stake) in the service-providing company. The city of Brno has 51 % stakes in the water and sewage company. On the other hand, waste management is based on a contract between the city and the operator of the service. Surrounding municipalities from the city region seem to be linked to the delivery system on a contractual basis.

3/ Role of strategic planning in the provision of public utility services

In general, waste and water management plans are based on territorial and regional linkages. In the case of waste, the concerned area can be large and service effectiveness; economies of scale are focused very much by different development projects. Among others, Krakow, Brno and Burgas are influenced by different initiatives including EU ones. As far as water treatment and supply are concerned, the water basin forms a natural unit of basic management of services to be provided.

Strategic planning is a basis for policy-making in areas of public services, such as waste management and delivery of water and sewage services. At the same time, programmes and projects are to be built on strategic planning, especially through EU Structural Funds, with other sources of funds from the EBRD, etc.

4/ Public institutions focused on collective tasks

Water Boards in the Netherlands

The Water Boards are one of the oldest democratic institutions in the Netherlands. Water management is very important, since around a quarter of the Netherlands lies below sea level. Like the central government, the provinces and the municipalities, Water Boards are public bodies. The water authorities are responsible for protecting the land against the water. Their work includes the construction and maintenance of dams, dykes, and locks, the control of water flows and levels, and the maintenance of water quality. Water Board executive councils are elected by property owners in their localities. In recent years, other residents have also been granted the right to vote. However, the chairman of the executive committee is appointed by the government.



**“Governance in Externalities and
Environmental Issues at City Region Level”**
SEVILLE – seminar Working Document
15, 16 & 17 April 2009

PART 2

1. PROGRAMME



“Seville has undergone the most important transformation and modernization process since the celebration of the Expo’ 92 World Exhibition. As then, a number of areas in the city centre are currently undergoing an urban renovation process. Once all these projects have been completed, Seville will be an even more beautiful, enjoyable and pleasant city. It will be “a city for people”. The way in which we define economic development implies that the quality of life for our citizens is improved. The people’s city is one that combines public transport, buses, metro lines, bicycle lane and wide-open spaces for pedestrians.”

Alfredo Sánchez Monteseirín, Mayor of Seville

Wednesday, 15th

16:00 Meeting point at the hotel Béquer. C/ Reyes Católicos, 4.

OPENING AND WORKING SESSIONS ON THE SEMINAR’S THEME

Venue: Cuarto del Maestre, Real Alcázar de Sevilla. Patio de Banderas s/n.

16:30 – 16:45 Reception and registration at the Real Alcázar de Sevilla.

Venue: Cuarto del Maestre, Real Alcázar de Sevilla. Patio de Banderas s/n.

16:30 – 16:45 Reception and registration at the Real Alcázar de Sevilla.

16:45 – 17:15 Main conclusions and lessons from the Florence seminar on “Governance in (Mobility and) Transport at City-region Scale”

17:15 – 18:00 Tamas Horvath – Introductory note on the theme: Governance in « Externalities » & Environmental issues at city region level.

18:00 – 18:30 Presentation of a case study from the partnership.

18:30 – 19:00 Questions and answers. Discussant: Enrique Hernández, head of the Sevilla Office for Strategic Planning

19:00 – 19:45 Guided visit to the Real Alcázar, the most ancient functional royal palace in Europe.

19:45 – 21:00 Walking tour of the “Barrio de Santa Cruz”, the old jewish quarter, and tapas **Dinner**

Thursday, 16th

08:30 Meeting point at the hotel Béquer. C/ Reyes Católicos, 4.

TOUR OF THE CITY AND METRO AREA: EXPERIMENTING INNOVATIVE SOLUTIONS FOR SUSTAINABILITY

08:30 - 09:00 Bus transfer to Sanlúcar la Mayor.

09:00 - 10:00 Fighting against climate change: visit to Solúcar platform [ABENGOA], the most advanced solar platforms system in the World.

10:00 - 10:30 Bus transfer to Sevilla.

10:30 - 11:00 Urban cycling tour: from the Tech. park Cartuja 93 (former site of the EXPO '92) to the Alameda de Hércules (a renovated public space).

11:00 - 12:00 Meeting with local representatives [Sevici and TUSSAM] on environmental challenges at urban and metro levels. Venue: Casa de las Sirenas civic centre.

13:00 - 15:00 **Lunch**

WORKING SESSIONS ON THE SEMINAR'S THEME

Venue: EMASESA headquarter [metropolitan water public company]. C/ Escuelas Pías, 1.

15:00 - 15:15 Reception

15:15 - 15:45 The Sevilla view on the seminar's theme: metropolitan water cycle management. Manuel Marchena, CEO of EMASESA.

15:45 - 16:05 Presentation of a case study from the partnership.

16:05 - 16:20 Coffee break

16:20 - 16:40 Presentation of a case study from the partnership.

16:40 - 17:00 General debate. Discussant: Tamas Horvath, Urbact lead expert.

17:00 - 17:30 Arrival at the hotel

20:00 - 20:30 Visit to the historic Sevilla City Hall. Welcome words by Mr. Alfredo Sánchez Monteseirín, Mayor of Sevilla.

21:00 **Dinner**

Friday, 17th

9:00 Meeting point at the hotel Béquer. C/ Reyes Católicos, 4.

OPEN SESSIONS: EUROPEAN DIALOGUE ON METROPOLITAN GOVERNANCE

Venue: EMASESA headquarter. C/ Escuelas Pías, 1.

The executive committee of the Strategic Plan Sevilla 2020 [here under the format of the Urbact Local Support Group] will discuss on metropolitan governance interacting with the Joining Forces partnership [cities of Lille, Florence, Krakow, Brno, Eindhoven, Bourgas, Brussels and Sevilla].

09:30 - 09:45 Presentation of the session. Enrique Hernández, head of the Sevilla Office for Strategic Planning.

09:45 - 10:30 Keynote speaker. José María Pascual. AERYC network Movement of Cities and Regions and principal advisor of the Strategic Plan Sevilla 2020. "The New Territorial Governance".

10:30 - 11:30 What kind of metropolitan governance for Sevilla?

Round table: Sevilla port authority, Sevilla Chamber of Commerce, Tech. Park Cartuja 93, Sevilla Business Association, Junta de Andalucía, Diputación Provincial de Sevilla, Subdelegación del Gobierno, Trade Unions [CC.OO. and UGT], University of Sevilla and University of Pablo de Olavide.

Facilitator: José María Pascual.

11:30-12:00

Coffe break.

12:00 – 12:45

Opening a dialogue at European level. Representatives of the cities of Lille, Florence, Krakow, Brno, Eindhoven, Bourgas and Brussels. Facilitator: Thierry Baert, Agence de développement et d'urbanisme de Lille Métropole

12:45 – 13:00

Key findings and conclusions.

13:30 – 15:00

Lunch

CLOSING SESSION

Venue: Laredo building, floor 2. Plaza de San Francisco, 1.

15:30 - 16:15

Conclusions, evaluation & end of the seminar.

16:15 – 17:00

General questions on Joining Forces working group.

17:30 – 18:30

Guided visit to the Museo de Bellas Artes de Sevilla, the second painting museum in Spain.

Optional



2. SOME VISITS & SUMMARY OF PRESENTATIONS

Solúcar platform [ABENGOA] - Sanlúcar la Mayor

The most advanced solar platforms system in the World.

Abengoa Solar is a company committed to developing PV, CSP and industrial heat technologies for commercial, industrial and utility applications.

A primary focus of Abengoa Solar is the use of R&D as a means of continuous product improvement in manufacturing, installation and operation. (Abengoa Solar New Technologies

Solúcar platform

Location: Sanlúcar la Mayor, Sevilla

Type of Project: The Solúcar platform will generate 300 MW from a variety of solar sources: 50 MW from tower technology, 250 MW from troughs, 1.2 MW produced by photovoltaic technology, and 80 MW from dish Stirling technology.

The platform located in Sanlúcar la Mayor will have 300 MW of installed capacity when it is completed in 2013. It will produce enough energy to supply 153,000 households, and will prevent the emission of 185,000 tons of CO₂ per year. During the lifespan of the platform it will reduce an estimated 4 million tons of CO₂ emissions.

The platform covers a land area of 800 hectares and will create 300 permanent jobs for a total investment of 1.2 billion Euros.

At present, there are four plants in use at the platform (Seville PV, Casaquemada, PS10 and PS20), delivering power to the grid, and another three plants under construction (Solnova 1, Solnova 3 and Solnova 4).

Source / More Information: <http://www.solucar.es/>



EMASESA

“EMASESA was formed on 23 October 1974 by Seville City Council as a private municipal corporation, whose purpose is to manage the direct supply of water to Seville and, by arrangement with the respective municipal councils, to the towns of Camas, Dos Hermanas, Alcalá de Guadaíra, Mairena del Alcor, San Juan de Aznalfarache, Coria del Río, La Puebla del Río, Alcalá del Río, La Rinconada and El Garrobo. The company also supplies raw, untreated water, to the 26 towns of the Aljarafe area, just outside Seville, and to Guillena - Las Pajanosas.

It is also responsible for the public sewerage systems of the towns of Alcalá de Guadaíra, Camas, San Juan de Aznalfarache, Coria del Río, La Puebla del Río, Alcalá del Río y Mairena

del Alcor, and treats the waste water from Seville itself, Alcalá de Guadaíra and Dos Hermanas, that is, almost 92% of the total treated water it supplies to its users.



EMASESA is a anonym corporation, whose purpose is to provide services related to the management and administration of all stages of the integral water cycle: storage, transport, treatment (including fluoridation), distribution, billing for residential, commercial, industrial and official use; that is, every stage from the regulation and exploitation of water resources to the discharge and treatment of sewage and the treatment of the resulting sludge.”

Source / More Information: <http://www.aguasdesevilla.com/>



3. MEETING WITH LOCAL SUPPORT GROUP

What kind of metropolitan governance for Sevilla?



1. Round table: Sevilla port authority, Sevilla Chamber of Commerce, Tech. Park Cartuja 93, Sevilla Business Association, Junta de Andalucía, Diputación Provincial de Sevilla, Subdelegación del Gobierno, Trade Unions [CC.OO. and UGT], University of Sevilla and University of Pablo de Olavide.

2. Opening a dialogue at European level: Representatives of the cities of Lille, Florence, Krakow, Brno, Eindhoven, Bourgas and Brussels.



4. NEW APPROACHES TO GOVERNING METROPOLISES: NETWORK GOVERNMENT OR METROPOLITAN GOVERNANCE

By José M^a Pascual Esteve - *Estrategias de Calidad Urbana*

(Translated from Spanish)

A. Einstein: "The mere formulation of a problem is far more essential than its solution, which may be merely a matter of mathematical or experimental skills. To raise new questions, new possibilities, to regard old problems from a new angle requires creative imagination and marks real advances in science." (1921. Nobel Museum).

1. Scale change in city management

Clearly, scale change in city management is correlated to transformations in urban realities. Transformations which we cannot take for granted but must clearly identify in order to focus appropriate management of them.

Until the development of industrial cities from the second half of the nineteenth century, urban agglomeration consisting of houses, streets, public squares and other types of buildings was located inside the boundaries of the municipalities so that city management was the responsibility of the municipal administration.

The growth of urbanization driven by the Industrial Revolution meant that the urban agglomeration exceeded the territorial limits of the municipality and extended to other neighbouring, or nearby, towns. The development of multi-municipal urbanization has acquired different forms:

- The rapid spread of urbanization through neighbouring municipalities creating an urban continuum in space.
- Suburbanization of the outskirts, decentralizing housing and industries from the central municipality to nearby municipalities but without territorial continuity of urbanization, and establishing between them a relationship of domination (subordination between the central municipality and the outlying or suburbanized municipalities).

The multi-municipal growth of urbanization raised the issue of whether to extend the territorial limits of the central municipality or create new governments that covered the entire metropolitan territory, as is the case with the institutionalization of metropolitan areas. The absorption of outlying municipalities by the central municipality prevailed in the second half of the nineteenth century, and the formation of metropolitan governments prevailed for most of the twentieth century, until it lost strategic value especially in the '60s.

The expansion of central municipalities was gradually abandoned because the urbanization process increasingly intensified and included more municipalities, and the latter increased their opposition to being absorbed by the central municipality as much for the loss of identity as for the political subordination that this meant.

In the twentieth century, the '60s and '70s saw the emergence of metropolitan governments in Europe, meaning metropolitan areas equipped with a power structure to more efficiently manage public services and territorially plan an urban agglomeration consisting of several municipalities in which one has a central role creating the Metropolitan Area as a socio-economic and urban reality.

Urban expansion involved the creation of what have been called metropolitan regions. These are characterized by their polycentric character, where alongside the central municipality we find other metropolitan subcentres which, in their turn, have a sphere of influence and centrality in the same territorial scope and interact with each other and with the main organizational centre of the metropolitan territory. These urban dynamics integrate physically distant urban spaces seamlessly in the urban agglomeration. Consequently, the regional or federal territory acts more and more as a large town or city where not only has the urban-rural contradiction disappeared, but also urban dynamics are spread to more remote rural areas of the municipalities generating metropolitan realities. All this means greater complexity in territorial management, since alongside relations of hierarchy we see increasing complementarity between municipalities. The very fact that we are encountering a more extensive and more complex urban reality means that we are facing a greater number of functional areas corresponding to the metropolitan services being considered. So, concerning the drinking water supply, the pertinent territorial area may be the state or the region; concerning mobility, it may be the metropolitan region; for local police services, it may be within the territorial scope of the urban continuum, and with regard to social services the area will be the municipality or neighbourhood.

2. Metropolitan Governments: An unsatisfactory experience

Metropolitan government is a recurring issue in territorial politics.

In Spain, cities such as Barcelona, Bilbao, Malaga, Seville, Valencia and Segovia, amongst others, see government of the metropolis as a strategic necessity. Many Spanish cities, because of their limited municipal expansion and medium-sized, though high-density, population, have a large conurbation in neighbouring municipalities. These characteristics make them irrelevant in the system of European cities if we confine ourselves to the characteristics of the central municipality of the metropolis. Thus, in their city marketing projects, these cities include data relating to the metropolitan spread because those relating to the central municipality are clearly seen as insufficient. Let us be clear: the competent city in the global information era is the metropolitan city, or as I will show later, the region city or cities.

The need for a metropolitan strategy leads again to the resurgence of an old theme: the institutionalization of the governments of metropolitan areas. By this is meant governments that cover the territory of the central municipality and its area of influence and have competencies in planning and management of services assigned by the group of municipalities. In this author's opinion, to consider the institutionalization of the governments of metropolitan areas in the same terms as in the past is totally inadequate. Today, metropolitan strategy requires a new way of governing the territory. Here are the reasons:

1) The experience of governments in metropolitan areas is not at all satisfactory and we can see throughout Europe a loss of relevance of the governments of metropolitan areas; this is for various reasons mentioned in a whole series of studies:

- Firstly, the dissatisfaction of the vast majority of metropolitan governments with respect to their territorial limits, and the competencies attributed to them.⁹ Secondly, the strengthening in many European countries of the federal or regional governments that questioned the

⁹ This is one of the main conclusions of the study drafted by the now defunct Metropolitan Area of Barcelona (Metropolitan Corporation of Barcelona), published in the journal *Fórmules i tractaments dels problemes metropolitans*, 1989.

existence of an administration between the municipal and the regional, the autonomous governments being ready to assume the competencies of the administration of metropolitan areas.

- The aforementioned existence of a new level of planning called metropolitan region in which several municipalities generate asymmetric areas of territorial influence, has left behind in most metropolitan territories the now limited metropolitan area level.

- If the metropolitan territorial level is no longer the most appropriate, the political institutionalization of this level is even more problematic and tends towards more horizontal *modus operandi*. In the late '90s, the trend in metropolitan policy in Europe was to provide the metropolitan area with a territorial strategy rather than a traditional territorial or urban plan. A strategy that is defined according to the major dynamic challenges and options for comprehensive, economic, social, cultural and territorial development, and that tends to balance or coordinate the interests of the different public and private actors operating in the territory.

2) The governments of metropolitan areas have been designed on a principle of verticality and hierarchy and exclusive competencies that not only did not work in the past but is anachronistic today.

- The exclusive competencies between public administrations that inevitably must coordinate their actions and budgets for developing complex projects which territories now require to create added value.

J. Vignon¹⁰ has pointed out that the idea of organizing political reality by assigning to each geographical level a level of competencies should be abandoned, since it no longer reflects the reality of a world that has become very complex and is characterized by an increased overlapping of responsibilities and a very fast flow of information.

- Relationships of hierarchy and verticality between levels of administration contribute to increasing the centrifugal force of councils adversely affected by hierarchical decisions. Top-down planning and scheduling, in which lower-level territorial administrations need guidelines from a higher-level administration to act in the territory that constitutes its electoral sphere, does not seem very democratic and is certainly rejected by outlying municipalities.

3. New territorial realities: Greater interdependence between territories and greater autonomy for territorial governments

In the global information era or, if you prefer, in the network society characterized by increasingly intense flows between territories, or rather between metropolitan cities supported mainly by information technologies, these flows generate a greater interdependence between territories. As a consequence of this, new territorial realities have emerged that require a new way of approaching territorial governments and especially governments of the metropolises. These realities, as indicated below, do not deter us from the challenge of metropolitan governments, but require a new approach in the way of governing the territory.

¹⁰J. Vignon is head of the Governance Working Group at the General Secretariat of the European Commission. See the interview in *Instituciones y Desarrollo*, Barcelona, Instituto Internacional de Gobernabilidad, 2001.

- Strategies define the territory, not the reverse.

The growing interdependence between territories means that, depending on the sectoral strategy of a city or a regional network of cities, we will have a suitable territory to develop it. So, if we are talking about social policy, perhaps the level may be submunicipal; in respect of mobility it will be supramunicipal, and in respect of the water cycle it will also be supramunicipal, but certainly different from before. And the same could be said in relation to solid waste, housing and culture. If we are referring to tourism and port and airport logistics centres, we are certainly referring to the international level.

In certain cases strategies logically covered macro-regional territories at nation-state or international level.

It is clear that, depending on the strategy, we will find a territory appropriate to the scale and intensity of interactions, and it is also clear that economic calculation alone cannot create either territorial organizations or territorial application of strategy. We must move towards an organization of interadministrative action that is open, flexible, horizontal (non-hierarchical), based on suitable and conscious interests, and of course asymmetric in all respects.

With a network structure, it is not necessary to politically institutionalize cooperation between networks of more than one region, since its horizontal, flexible, informal and relatively stable structure helps drive interstate and interregional projects of common interest to citizens of a different politico-administrative level.

- The municipality and its government must be seen as the basic relational unit.

Traditionally, the existence of a multi-municipal urban agglomeration is often interpreted as a loss of relevance of the agglomerated municipalities, and it is not unusual for these municipalities to try to have it abolished. This is particularly the case with a zonal understanding of metropolitan planning, in which municipalities would be practically monofunctional. From a network-territory point of view, the municipality is considered a basic relational unit, which is divided into different networks of flows with other municipalities. Hence the need for comprehensive planning.

The municipality is used to creating a sense of belonging and identity amongst the population, which has resisted, even with extreme violence, attempts to abolish and absorb it. In a sociocultural configuration of multiple territorial identities, the municipality is used to being the most primary¹¹. Sociopolitical organization of territory, within the limits of the global information era, will be based on local autonomy to ensure effective interdependence.

- The main city (cities) is (are) crucial for the integration of systems of cities and municipalities and of each of these component cities and municipalities in the opportunities offered by a more global society.

From the standpoint of autarkic municipalism, the city, which is the primary node of the network, is seen as a devourer of services and resources, and as a factor of imbalance and counterpower to be demolished in a vision of the jurisdictional territory of regional governments that is both romantic and homogenizing.

¹¹ In some cases, the primary territorial identity is the neighbourhood or residential area.

In a world interconnected through local spaces, ensuring that a municipality is properly integrated depends on the quality of the node to which it is connected in the first instance. The different parts of a territory cannot claim to be part of the global network, but of a local network or networks, in which there is a primary node or nodes, city (cities), through which all parts of the territory are connected, and from this main city or cities municipalities are connected to the global network.

- In our globalized world, the city is generally a region of cities.

The extension and intensification of urbanization has led to the formation of what have been called "metropolitan regions", characterized by their polycentric character, in which, alongside the municipal centre, we find other metropolitan subcentres, which, in turn have a sphere of influence and centrality in the same geographical area and interact with each other and the main organizing centre of the metropolitan territory.

The characteristics of current economic development imply the flexible specialization of firms and the need for a quality production environment increasingly located in a large area, network operation and the formation of "production chains" between firms, which in more and more cases are located in areas which exceed the so-called metropolitan areas. Moreover, the need for R&D and innovation in all the clusters and business networks of the production sectors implies the necessary coordination and search for synergy amongst the research/technology/training/production functions of each of the sectors, and especially of the emerging and traditional sectors that generate higher added value.

In this sense, the equivalent of the competitive city¹² in the global information era is an organized constellation of cities and municipalities. In most cases, thinking locally to act locally is thinking regionally and, more precisely, thinking about the regional systems of cities.

As globalization processes move forward and macroeconomic policies are gradually unified, the specific economic policies developed at the level of regions, departments, autonomous communities or federal states become more relevant to economic and social development, as do policies for training, employment, culture, tourism, health, social services, mobility and territorial accessibility. That is to say, all policies that provide human capital, facilities and infrastructure for differential economic development.

Moreover, the emergence of the identity of the citizenry, which develops in a complementary way to globalization, occurs at the level of territory we call regional. This identity, conceived in a way that is pluralistic, inclusive and open to interaction with other identities, is considered key to economic and social development for its implications for the generation of social capital and civic culture.

- Networks of regional cities are rational and intentional constructions for interlinking the territory's proximity networks.

While geographical and historical background is a key and legitimizing element of networks, this should be identified not in terms of these parameters, but based on the generation of current and future added value and on the vision of the metropolis or metropolitan region in nation-state and international spaces.

¹² Competitive in the sense that it generates an urban environment that facilitates the generation of added value on the part of firms and entities.

The functional conception of territory went into crisis when territory was made the Fordist production paradigm typical of industrial society and of organization of monofunctional spaces to facilitate economies of scale. Organization of the regional territory into areas has proved unsustainable from the standpoint of human ecology.

But while this all-encompassing paradigm has gone into crisis, there is still another all-encompassing paradigm. This is the case with that which developed particularly in the early decades of the twentieth century in Europe, which we might describe as balancing, bucolic and all-embracing and which was at the basis of the most unsuccessful regional plans. It sought a regional territory that was wholly balanced demographically and in terms of services, i.e. almost symmetrical and invariable.

This situation, which was never realised and opposed the technological, economic and social development of both industrial society and the current information society, has prevented effective planning of the territory and the provision of new opportunities for equity in access and benefits in quality of life for the majority of the population.

- The cities-region – preferable to the city-region or region-city.

The vision of autonomies or regions connected through their cities and municipalities is the most appropriate perspective and the one where work is needed. The concept of a city-region where the whole of the region operates as a city, gives rise to two significant dangers. On the one hand, to a zonal conception of the regional territory, i.e. functional specialization. A second danger of a political nature is the total subordination of city councils to the rulings of the regional government, which is seen as the supreme mayor.

By contrast, from the cities-region perspective, it is about taking advantage of developmental factors specific to cities, looking for horizontal cooperation among them and thereby rebalancing the regional territory.

It is not about reducing the demographic, economic and social potential of cities in accordance with an assumed zonal or bucolic rebalancing, nor is it about encouraging an equally inefficient urban gigantism where the whole region is subordinate to a central or principal city. The aim is to develop a regional strategy, undoubtedly participatory and enriching of local autonomy, which integrates, coordinates and complements the potential of the different cities of the territory.

- Territories, be they municipal or supramunicipal, require a strategy for being active in economic and social development.

In an outdated but still very influential vision, the territory or place is assigned a passive role, simply supporting an economic and social development that originates with either the nation state or in an assumed extra-territorial globalization.

By contrast, the city, the local level, has stood out as an active generator of economic and social development for which it needs a strategy or, even better, strategic management to lead and promote human development. Where territory is seen simply as a support, management of the territory, land use, densities, infrastructure and services, i.e. an urban planning document, is only needed so that disorder does not produce diseconomies.

- Today, territories need a strategic plan, as the basis of a new territorial management, fully compatible with and complementary to a territorial and urban management plan.

To promote, lead and manage spatially the human development of a territory through networks of cities.

Autonomous communities, federal states and regions in general need in their turn to have a strategy to guide and strengthen their systems and networks of cities and cooperation between players based on the principle of subsidiarity, and which focuses physical planning towards a shared solution of territorial issues.

4. Metropolitan Governance: Initial recommendations

New realities require a new way of governing the metropolitan territory: government based on the management of interdependencies between actors and the municipalities at metropolitan level, a scope defined by the mobility of people between municipalities, and the existence of facilities and infrastructures that serve the territory and of challenges that require shared projects.

An method of government that develops a new management, the management of interdependencies or strategic management, dubbed governance. Governance means the recognition of complexity as an intrinsic element of the political process and collaboration of actors in the context of multiple networks and the new position of authorities in the process of government, which means adopting new roles and instruments. With metropolitan government organised as a network, the overall advantage is in having a collective construction based on articulating the challenges and interests (not the positions) of the various governments in a territory.

From a governance perspective, we make a series of suggestions for focusing metropolitan government based on autonomy and the municipal interdependencies underpinning new metropolitan approaches:

- **Prioritize horizontality based on shared goals in the face of the political and administrative institutionality of the metropolis.** This involves putting the objectives before the means and, once they have been defined and developed in executive projects, seeking the most efficient management method for this project, not generating new political and administrative institutions, as these are born, grow, reproduce and never die. And they raise many formal and bureaucratic issues, like the distribution of offices and honours, which often acquire greater importance than meeting civic challenges.

- **Seek intermunicipality rather than supramunicipality.** This is not about seeking (non-existent) interests higher than those of municipalities, but about articulating such interests in shared strategies and projects that not all municipalities participate in but according to the challenge that is claimed to be addressed, which will define the specific territory.

- **Identify a shared strategy.** This is the most effective way of initiating a metropolitan dynamic based on collaboration and mutual commitment. Municipal interests seem more concurrent from the perspective of a future beyond immediate contingencies. It is advisable to begin drafting metropolitan strategy on the basis of the strategies and structuring projects of municipalities, i.e. a concurrent strategy.

- **Exercise multilevel government.** In horizontal-type metropolitan administrations, multilateral government should be exercised not only between city councils but also between different levels of administration. In this sense, it is essential that the regional or

autonomous government see the region as it is: a system of networks of municipalities, and not go looking for a non-existent private territory in which to exercise its powers.

- Promote municipal political success based on effective benefits for the population. One of the main difficulties of municipal cooperation stems from the fact that elections are won municipality by municipality, and candidates immersed in the service manager paradigm only consider projects that are located in their municipality, rather than those to which the population of their municipality will have access and from which they will benefit. This is about putting people's needs above locations.

In short, governing at metropolitan level is not the same as creating supramunicipal governmental institutions, as has been believed until now. A new society is emerging: the network society, and this calls for new approaches, new leaner, more efficient and less costly forms that help us understand the complexity of society's new challenges.





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