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Water governance in France

Institutional framework, stakeholders, arrangements and process

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Forewords

This chapter is based on three main books and works, namely:

- *Stakeholders and their financial responsibilities in the French water management*, by Gabrielle Bouleau (2003, updated by Sophie Richard in 2008);
- *French Water Legislation within the context of the Framework Directive. Recent developments*, by Gabrielle Bouleau and Sophie Richard (2008);
- *Thau basin. Case study report*. Chapter 2 of the I5 project (part of the European IWRM.NET project), by Gabrielle Bouleau, Sylvain Barone and Sophie Richard.

Acronyms

AAPPMA: *Association agréée de pêche et de protection des milieux aquatiques*, fishing association

ASA: *Association syndicale autorisée*, association of owners

CE: Code of environment

CLE: *Commission locale de l'eau*, local water commission

CSP: *Conseil Supérieur de la Pêche*, national fishing council, repealed by the LEMA and replaced by the ONEMA

DDASS: *Direction départementale de l'action sanitaire et sociale*, State service in charge of social sanitary issues at departmental level

DDSV: *Direction départementale des services vétérinaires*, State service in charge of food security and animal health at departmental level

DDT: *Direction départementale du territoire*, State service in charge of environmental issues at departmental level

DREAL: *Direction régionale de l'environnement, de l'aménagement et du logement*, State service in charge of environment and development at regional level

ECJ: European court of justice

EP: European parliament

EPTB: *Etablissement public territorial de bassin*, river basin territorial public body

EU: European union

LEMA: *Loi sur l'eau et les milieux aquatiques*, act on water and the aquatic environment of December 2006

MISE: *Mission inter-services pour l'eau*, inter-service mission for water

NGO: Non governmental organisation

ONEMA: Office national de l'eau et des milieux aquatiques, National office for fresh waters

PoM: Program of measures

RBMP: River basin management plan

SAGE: *Schéma d'aménagement et de gestion des eaux*, water development and management plan, at basin level

SDAGE: *Schéma directeur d'aménagement et de gestion des eaux*, Water development and management master plan, at water district level

VAT: Value added tax

VNF: *Voies navigables de France*, public body in charge of managing navigable waterways

WFD: Water framework directive

1. Introduction

French water context

France is a country of medium population density¹ (relatively low compared to the rest of Europe). France is provided with an abundant supply of water and is located upstream all international rivers that flow across the country. Therefore France is independent for most of its water resources and very few inter catchment water transfers are needed. Nevertheless, the springs of the Rhône and the Garonne are impacted by foreign diversions in Switzerland and in Spain. On the Rhône, Swiss policies may hamper inflows in summer, in addition to all French diversions. Yet, competition and conflicts between uses exist² and have resulted in making evolve both regulation and allocation of stakeholders' roles in public action for water.

Main stakes for water management

Key issues in the water sector in France are (Bouleau, 2003):

- Water shortages. They occur especially in the Southwest, in summer, when irrigation needs are high and river flows are low. Some rivers and water tables are experiencing severe drought because of withdrawals;
- Pollution. The average quality of rivers and aquifers is decreasing over time. Water quality objectives and discharge standards are not respected everywhere. The worst performing industries are often the most polluting. In addition many aquifers are threatened by pollution by nitrates or pesticides;
- Powerproduction. France mainly produces power through nuclear plants, some of them located on rivers evaporating large quantities of water. Hydropower is used to adjust this basis production to the demand. It often results in sudden changes of flows downstream dams operation.
- Price of water. It has increased dramatically since 1991 to deal with pollution control investments (sewage system and treatment plant). Consumers are more sensitive to water prices and are more reluctant to accept further increases;
- Flooding hazards. Flooding areas in France account for 4% of the land and cost approximately 150 million Euros of damage each year. During the last two decades about 250 people died due to flooding;
- New uses. Recreation uses (tourism, fishing, kayaking, bathing,...) and environmental NGOs are becoming increasingly involved in the management of rivers.
- Territorial management and planning. How to integrate areas for flood expansion and mobility in spatially increasingly constrained or in high speculation areas (e.g. coastal areas) is becoming an important issue.

The enforcement of the European Water Framework Directive (WFD) is not such an administrative issue in France as it is in other countries, since competent authorities (water agencies) already have jurisdiction over major watersheds (districts). As far as the WFD

¹ 63, 6 million inhabitants and 98 inhabitant per km² in 2007 (INSEE, available on line: http://www.insee.fr/fr/themes/tableau.asp?reg_id=98&ref_id=CMPTEF01105, accessed on July 9, 2009)

² Especially during low flows periods and taking into account the ecological "use" of water (i.e. water for the ecosystem).

implementation is concerned, setting and reaching objectives of water quality (good status) and implementing cost recovery policy are more challenging for France and will require necessary changes and adjustments.

Water in France is not managed according to its ownership, but its uses. After (i) an overview of the water governance institutional framework, (ii) the water governance arrangements will be tackled: the main stakeholders will be described and key issues of the current process of making decision will be dealt with, in the general context of implementing the WFD. The original institutional tools developed to integrate different water uses for the sake of ecosystems preservation will also be considered.

Regulation will not be dealt with in this chapter³. However, it must be kept in mind that any project, development or work is still subject to specific rules. At the time of moving from policy to action, regulation is a necessary step to be taken into account when designing technical solutions.

2. Water governance institutional framework: historical background and present situation

The hegemony of the central power in France relies on the concept of “public utility” (benefit to the nation) that is defined by the State itself (Pezon, 1999 ; Porter, 1995 ; Cohen-Tanugi, 1985). During the twentieth century, the French State has managed to impose this idea that it is responsible for the public interest in the field of water, by different means. First, by implementing, in 1964, a water management at catchment level that weakened local authorities’ power (*départements* and municipalities). Second, by codifying public decisions in quantitative or administrative routines which are only controlled by the State itself (especially since the 1992 Act on water). Third, this was done also by coupling up the speech with an important financing policy of redistribution, through the water agencies in particular (Bouleau, 2007).

Nevertheless major reconstruction of public action that occur since the 1960s in the field of water management made evolve the role of the central regulator State as exclusive producer of public policies (Richard and Rieu, 2009).

Indeed, the emergence of new levels of public action at local and sub-national levels, combined with the assertion of the influence of Europe has changed the scale of government and increased interactions between levels. The highly centralized State of the 1960s has evolved in stages towards a more decentralized and territorialized situation, characterized by the involvement of different stakeholders in the co-construction of public action. The increased role of private sector stakeholders also participated in a redefinition of the powers and scope of public action. This broadening of the political community that shapes public action, contributes towards making the State one of the entities producing public policy, in strong interaction with local governments, the private sector and associations. This evolution is summarized in the concept of governance (Hooghe and Marks, 2002, Rhodes, 1996).

³ To go further, see: Bouleau G. & Richard S., 2008. *Les lois sur l'eau à la lumière de la directive cadre. Evolution récente de la réglementation française de l'eau*. Paris, Editions de l'Engref, 182p. English version to be published in 2009. *French Water Legislation within the context of the Framework Directive. Recent developments*.

Four significant elements account for understanding the current water governance framework in France, in the context of implementing the Water Framework Directive. First the evolution of the relations between the central State and local political entities, second, the lack of binding quality standard objectives for freshwater, third, pending prosecutions for insufficient enforcement of previous European directives and fourth, high expectations of the civil society. The following is a historical presentation of how these elements came into being.

Relations between governmental levels and political entities

France has a long tradition of centralization. The State gained legitimacy through military, colonial and economic power as it provided the French people with security and welfare. Scientific expertise and financial autonomy are primarily located at State level. Lords' privileges and property rights were abolished during the Revolution along with all property requirements for voting. Private property rights were reallocated among former tenants. The government divided the country into 100 *départements*⁴ and more than 36,000 *communes*⁵ (municipalities) ruled by executive boards elected through territorial representation. In addition, the government had State offices –with State employees - at the *départemental* and *régional* levels⁶ to control territorial decisions and provides financial support to their projects. Very recently, in 1982, the first act on decentralisation established 22 *régions* with distinctive competencies from *départements*. It also restricted the State control on territorial decisions to legal compliance but it did not suppress the tradition of cross-funding for territorial projects. In 2003, a second act on decentralisation went further in delegating new competencies from the State to local governments (*départements* and *régions*). The public bodies of the governance system are presented in Figure 1 and Figure 2.

⁴ The *départements* were created in 1790. The Consulate established the *Conseil général* (General Council) and the *préfet* (Prefect) in 1800. The law of 10 August 1871 gave the *département* the status of local authority. The *département* is an administrative structure separate from the State administration, which must support the interests of the population of a specific territory. The General Council is competent to settle departmental affairs, but it has no power of decision in all areas. The 1871 law specifies its operating modalities, establishes the renewal of the board by half every three years and the election of the President of the General Council after each renewal. Councillors are elected for a term of six years by universal suffrage. The right to vote is granted to all adult citizens. Before 1982, the executive remained entrusted to the *préfet*. The Act of 1982 (and afterwards the Act of 2003) provided the General Council with new skills while the executive is transferred to the President of the General Council, which prepares and implements the *département's* budget.

⁵ The *commune* is the smallest French administrative subdivision, but it is also the oldest, having succeeded to the towns and parishes of the Middle Ages. It was first established in 1789. The law of 5 April 1884 is regarded as the main municipal law, establishing the general principles of organisation, supervision and expertise of *communes*. This law is still the basis of the existing *communes*. It considers equally the large and small municipalities and provides for a uniform regime for all:

- a municipal council elected for six years and renewed in full. The law establishes that the City Council's deliberations rule the affairs of the town, which opened a field of broad skills;
- a mayor who is the executive of the municipality that he represents and manages the budget. It prepares and executes the decisions of the municipal council. It is also a representative of the State vested with certain powers: civil, administrative policy, and enforcement of laws.

⁶ Local governments.

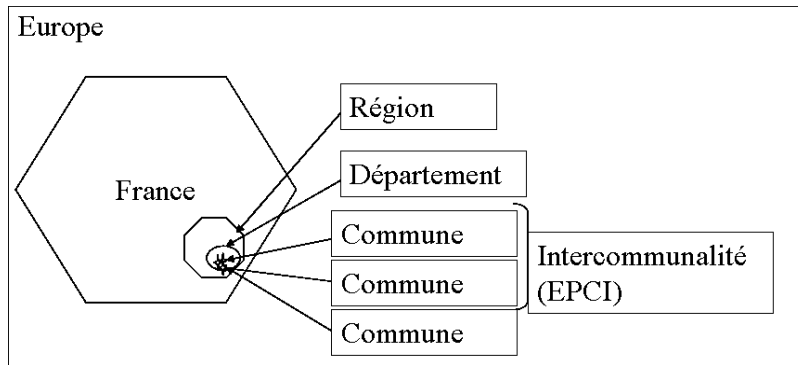


Figure 1. Territorial administrative levels in France: projects at lower level often benefit from financial support from upper levels.

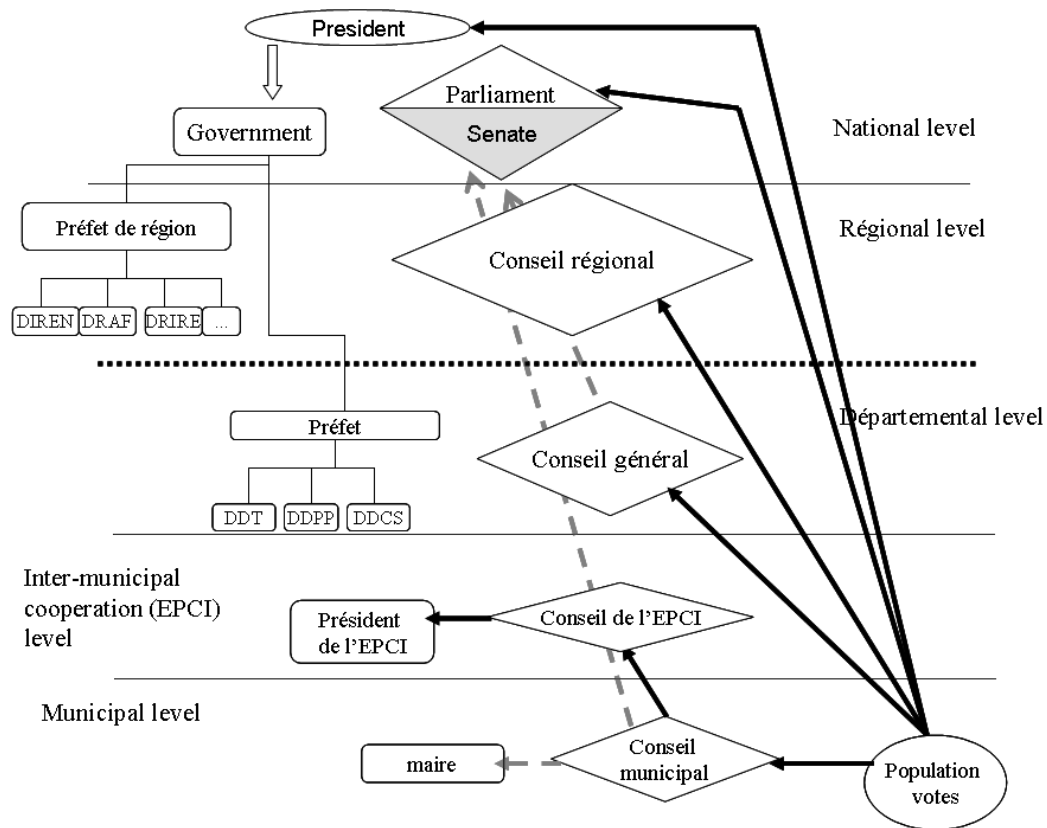


Figure 2. State administration and territorial political entities in France. People vote through common suffrage for territorial political entities (municipal, departmental, and regional boards) and for national parliament and president. The governmental administration has territorial divisions at all levels but municipal where mayors are supposed to implement some governmental policies. Territorial political entities have different competencies and no hierarchical relations.

Institutional framework

Ownership of water and water rights: originality of the French regulation of water

A country of codified law, where water is managed according to its uses and not to its ownership

France is a country with a system of codified law. The State was built under the *Ancien Régime* both by progressive centralisation of the law and military authority. Science and technology served this project of unifying the nation, which was carried out both before and after the Revolution, particularly with technical organisations controlling the development of service channels (road development or *Ponts et Chaussées*) and the administration of natural resources (mines, water and forestry).

In France waterways were progressively appropriated by kings as absolute monarchy developed. They became public property just before the Revolution (Marc, 2006). Riparian rights are much more recent (1898)⁷. The right of water use has always been largely ruled by the State. Historically, this has been carried out by concessions in the public field and by authorization in the private field. But environmental law is now tending to progressively harmonise these two fields. The present importance of the role of the State is a matter of discussion. Some people consider that decentralisation is accompanied by an increasing power of local government and of civil society, others take the view that environmental legislation enables the State to increase its power over the totality of watercourses (Bouleau & Richard, 2008).

The duality between public and non-public (private) domains

The Napoleonic Civil code (1804) established the public ownership of the shipping and floating waterways initiated under the *Ancien Régime*. For private (non public) water streams, the Civil code only describes the limits of riparian rights and enables the appropriation of both spring and rain waters. But it has nothing to say in respect of the conditions of use of such streams. For an entire century, the “issues related to these water streams, because of the silence of the law, were included in the fields of case law and doctrine (...)” (Marc 2006). This division of France’s waterways has been maintained including when they lost their shipping use. Today, water courses are divided into two categories: State rivers (*rivières domaniales*) which bed and banks are public, and non-public rivers (*rivières non domaniales*) which banks belong to riparian owners. State rivers are mainly waterways, but small rivers can belong to the State when they used to be of national interest for shipping or log driving. The water of the watercourses is always a public common good⁸, even if the stream belongs to the public domain. The State is the owner of the bed and banks of State watercourses, but not of the water itself.

⁷ For more information, see: Bouleau G. & Richard S., 2008. *Les lois sur l'eau à la lumière de la directive cadre. Evolution récente de la réglementation française de l'eau*. Paris, Editions de l'Engref, 182p. English version to be published in 2009. *French Water Legislation within the context of the Framework Directive. Recent developments*.

⁸ It also exists private waters that belong to the landowner. These include “closed” waters, rainfall which falls on his land and springs emerging from such lands.

Restructuring public action in France (1964-2009): institutions before the WFD and their development for implementing the WFD

In countries with codified law, the practical implementation of water management lead to modify the institutional framework shaped by successive legislative steps, revealing the social forces involved. As Pierre Lascoumes says "regulation is a music score more than a command, the social stakeholders are invited to play but nothing happens without them" (Lascoumes, 1994). Indeed, the adoption of a law constitutes a moment of publicity and of ritualized collective decision, which gives a particular character to the text and gives it legitimacy. It works like a mirror of society at a given time. In France, considering the role of the State, parliamentary forums are a particular place of expression of society debates, where social stakes often find a window of opportunity (Bouleau & Richard, 2008).

Therefore, the understanding of the present water governance in France requires a detour through some laws that determined the structure of the institutional framework in the field of water during the twentieth century.

The establishment of the Water Agencies system (1964 Act)

The 1964 Act came into force during the "the thirty glorious years" (a period of high economic growth between 1945 and 1973) within a planned economy and a centralized political system. At that time, the State was the exclusive producer of public policy, particularly in the economic and environmental fields. This law turned the central organisation of water management in France into a more decentralised system. It introduced new places of public action by creating both:

- basin committees, which are forums for negotiation, consultation, guidance and decision-making on water at the territorial level of the catchment,
- and the *Agences financières de bassin* (Water basin financial agencies at that time⁹), public institutions in charge of levying a tax on water (ecotax)¹⁰ to be reinvested in a policy to solve the water pollution problems caused by economic development (Bouleau and Richard, 2008; Kaczmarek, 2006).

It stated the principle of management for each river basin by creating six large French river basins: Artois-Picardie, Rhin-Meuse, Rhône-Méditerranée and Corse, Adour-Garonne, Loire-Bretagne and Seine-Normandie¹¹. The creation of the *Agences financières de bassin* was the major innovation of this law. Based on a physical reality (the basin/watershed) and recognised by a regulatory power (the basin committee) the Agency blurred the administrative institutional boundaries by bringing together neighbouring regions and users with different concerns.

Adopted in response to the criminalization of pollution, which was denounced by fishing federations, this law begun recognising the importance of environmental issues. However, the real environmental awareness of public policy in Europe started from the seventies, with the adoption of the first European directives in the field of water and the rise of the environmental movement. In France this movement developed mainly in the eighties.

⁹ Current *Agences de l'eau* (Water agencies).

¹⁰ *Redevance*, in French.

¹¹ The Act on Corsica of 22nd January 2002 created the *Comité de Bassin de Corse*. The action area of the Agency is therefore now composed of two "river basin districts" each having their respective river basin committee: the Rhône-Méditerranée river basin committee and the river basin committee of Corsica.

River basin planning and concerted local water management (1992 water act)

Despite legal provisions, binding river quality objectives provided for in the 1964 law were never designated before 1992 for all rivers¹². The administration in charge of river quality (*police de l'eau* (water policing) under the authority of the *Préfet* would establish guiding documents¹³ and deliver pollution permits relying on its own expertise without assessing completely the cumulative effects of pollution and water diversions.

Adopted in a context of decentralization and modernization of State services, the 1992 water law reflected a growing awareness of environmental issues, in response to serious accidents or major pollution (Chernobyl, Sandoz, 1986).

The 1992 water law introduced a planned and concerted water management per district and basin. It allowed new forms of public action through local participatory mechanisms such as *Schémas Directeurs d'Aménagement et de Gestion des Eaux* (*SDAGE*, District Master Plan for Water Management) and *Schémas d'Aménagement et de Gestion des Eaux* (*SAGE*, Basin Plan for Water Management). The *SAGE* plan should be compatible with the *SDAGE* plan. These tools opened the local decision-making process to "representatives" of civil society, through both the basin committees -at district level- and the Local Water Commission (*Commission Locale de l'Eau, CLE*) -at local level. Besides, the 1992 Act created the conditions for greater control of the State. It subjected the activities and operations related to water and aquatic environments to a system of nomenclature defining the thresholds for authorisation or reporting and submitted the planning documents to signature of the *Préfet coordinateur de bassin* (Richard and Rieu, 2009).

The water act of 1992 also gave new competencies to the *Agences de l'eau*. They became in charge of planning water uses, defining priorities in water allocation and setting general objectives for river restoration in these district master plans called *Schémas Directeurs d'Aménagement et de Gestion des Eaux* (*SDAGE*). Although their provisions remained vague, they became more and more binding.

Towards a partial re-centralisation (2006 water act)

The water act of 2006, called *loi sur l'eau et les milieux aquatiques* (Lema), renovated the institutional organisation of water management. In particular, it made the levies of the *Agences de l'eau* constitutional and created the *Office national de l'eau et des milieux aquatiques* (*Onema*, a central office of freshwaters). This creation is similar to a partial re-centralisation as regards the monitoring and surveillance of water quality, which is a major issue in the context of achieving good status or good potential advocated by the WFD.

The water act of 2006 establishes *SDAGEs* as the French equivalents for the River Basin Management Plans (RBMPs) under the WFD and imposes that land use plans at municipal (*PLU*) and inter-municipal (*SCOT*) levels should comply with them.

In some areas, *SDAGEs* designate threatened water bodies where additional regulations should be negotiated locally. For this purpose a local commission is enacted (*Commission*

¹² For a complete review of main French water laws in the second half of the XXth century, please refer to: Bouleau G. & Richard S., 2008. *Les lois sur l'eau à la lumière de la directive cadre. Evolution récente de la réglementation française de l'eau*. Paris, Editions de l'Engref, 182p. English version to be published in 2009. *French Water Legislation within the context of the Framework Directive. Recent developments*.

¹³ *Circulaires*, in French

local de l'eau, CLE) by the *Préfet*. Members are State representatives (at most 25%), water users (at least 25%) and local elected representatives (at least 50%). The CLE has the duty to set up a local plan of water management (*Schéma d'Aménagement et de Gestion des Eaux, SAGE*) setting local objectives and appropriate regulations to meet the objectives and solve the conflicts or tensions between users. This allows for a new form of local governance to develop.

WFD and goal of achieving “good status”

The role of Europe in environment policy has increased between the 70s and 2000. Notwithstanding the principle of subsidiarity, Member States' policies may not be in contradiction with the community objectives (Porta, 2006 in Bouleau, 2008). The WFD illustrates the specificity of the model of European integration. The WFD strengthens the level of the water district as the appropriate level for water management and encourages the active participation of all stakeholders in the implementation of the Directive. If the obligation of result is not new for the Member States, the fact that outputs are ecological and coupled with a economic binding scheme is, however, relatively new in the field of water (Bouleau, 2008). From a governance perspective, the WFD strengthens river basin organizations (Basin Committee and Water Agencies), but also involves some changes in collective action, making them more participatory.

The WFD¹⁴ was first transposed into French law by the order n°2004-338, modifying the environmental code (*Code de l'environnement*). Then further transposition was decided under the new water act of 2006 called *loi sur l'eau et les milieux aquatiques* (Lema).

High expectation of civil society (Grenelle de l'environnement)

In October 2008, a multi-stakeholders platform gathering governmental representatives, professionals and associations was set up at the national level to take decisions in the field of the environment and sustainable development. This process was called the “Grenelle environnement” referring to the social agreement of Grenelle signed in May 1968. It resulted in a new law which was adopted by the Parliament and currently under the review of the Senate.

Driven by the high expectations of the civil society in terms of quality objectives of freshwaters, the projected law stipulates that 66% of all water bodies in each hydrographical district should achieve the good status by 2015.

¹⁴ Directive 2000/60/CE of 23rd October 2000.

3. Water governance process and arrangements

The recent evolution of the role of the State, under the influence of both global structural changes and the emergence of new places of public action, allows the transition from a centralized form of government towards governance. This transition is particularly well illustrated in the field of water policy in France, as seen in the previous section. It involves new stakeholders, growing interactions at different territorial levels, between levels and stakeholders as well as increased complexity, as we shall see further. Resulting public action is characterized by a co-construction and sharing of expertise and resources between levels.

Competencies of institutions relevant in water management: main stakeholders

In this section, the main stakeholders involved in water governance in France are presented. Public, private and associative stakeholders are increasingly involved in the process of decision-making for public action with a growing complexity and multiple interactions.

A feature of the French stakeholders: the *maîtres d'ouvrages*

The duty to decide on water-related projects (infrastructures), to initiate them and endorse the related responsibility is called *maîtrise d'ouvrage* (ownership) and authorities exerting it are called *maîtres d'ouvrage* (cf. figures 3 & 3bis). This duty is legally distributed by sectors among different elected boards. Command and control are mostly the duty of the State, but municipalities have some prerogatives in this respect for drinking and sanitation purposes.

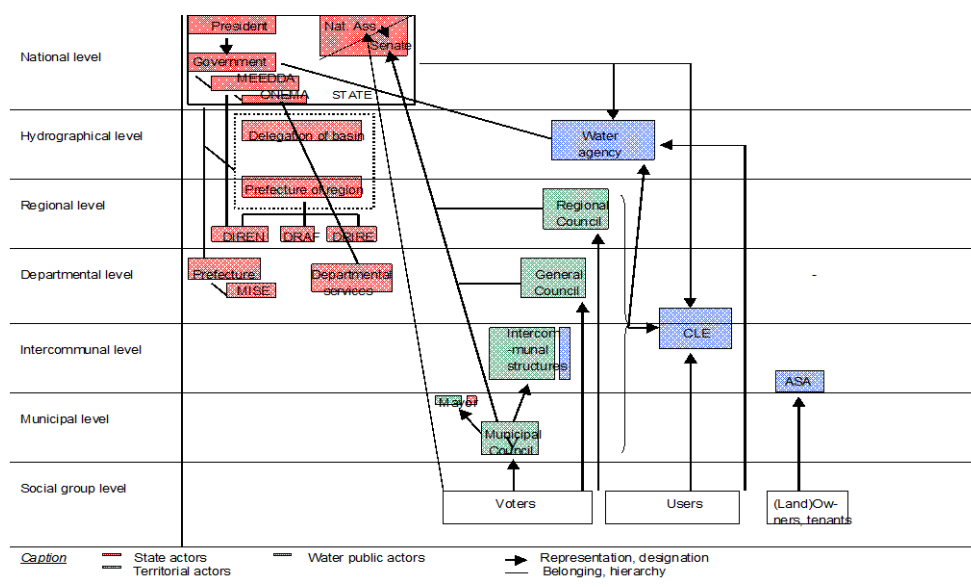


Figure 5. Water policy actors (France). 1/ Statuses

Figure 3. Water policy actors in France. 1/ Statuses

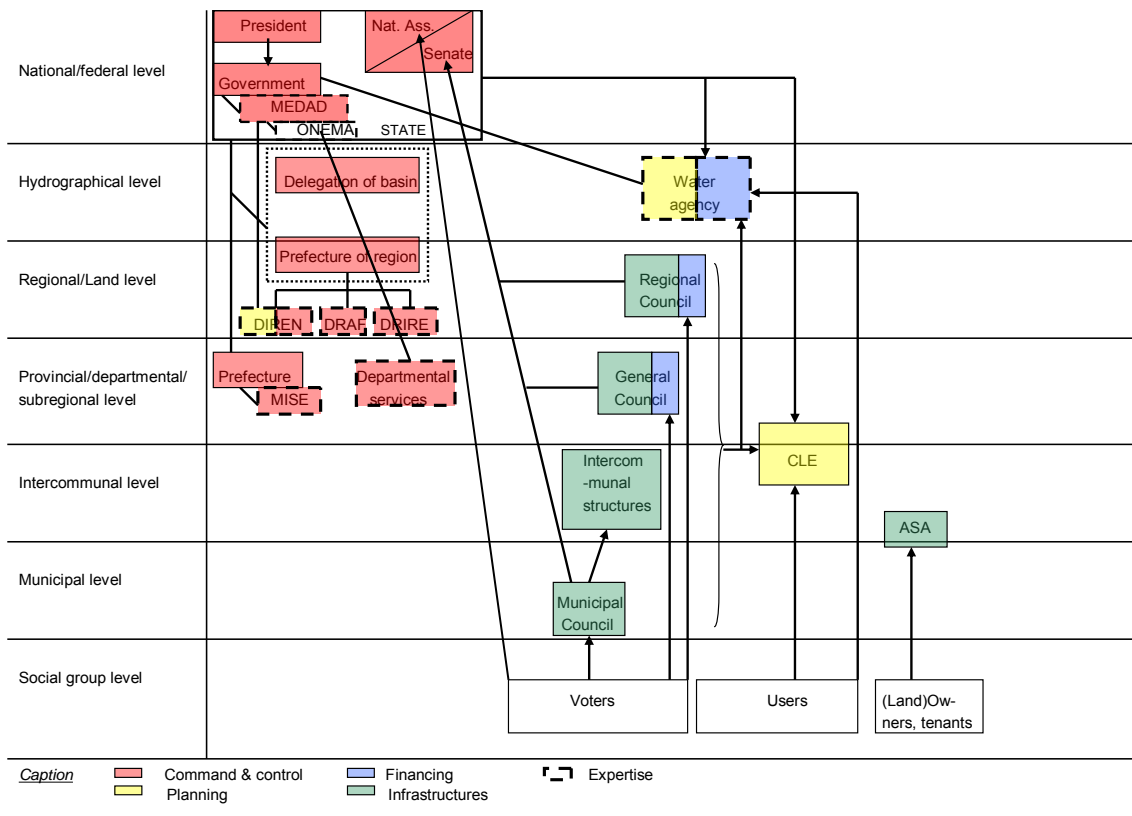


Figure 3 bis: Water policy actors in France. 2/ Functions¹⁵

State, Europe and public bodies

Influence of Europe on water governance

EU main institutions¹⁶: role of Parliament, Council and European Commission in proposing and approving EU directives in the field of water

The countries that make up the European Union (EU), its member States, remain independent sovereign nations but they pool their sovereignty in some domains, in order to gain a strength and world influence none of them could have on their own. Pooling sovereignty means, in practice, that the member states delegate some of their decision-making powers to shared institutions they have created, so that decisions on specific matters of joint interest can be made democratically at European level.

The EU's decision-making process in general and the co-decision procedure in particular involve three main institutions:

- the European Parliament (EP), which represents the EU's citizens and is directly elected by them;
- the Council of the European Union, which represents the individual member states;
- the European Commission, which seeks to uphold the interests of the Union as a whole.

¹⁵ DIREN, DRE and DRIRE are in the process to merge. In some regions, DIREN have significant State funds to support flood mitigation measures.

¹⁶ For further information see: http://europa.eu/institutions/index_en.htm

This institutional triangle produces the policies and laws that apply throughout the EU. In principle, it is the Commission that proposes new laws, but it is the Parliament and Council that adopt them. The Commission and the member States then implement them, and the Commission ensures that the laws are properly taken on board.

Two other institutions have a vital part to play: the Court of Justice upholds the rule of European law, and the Court of Auditors checks the financing of the Union's activities.

The powers and responsibilities of these institutions are laid down in the Treaties, which are the foundation of everything the EU does. They also lay down the rules and procedures that the EU institutions must follow. The Treaties are agreed by the presidents and/or prime ministers of all the EU countries, and ratified by their parliaments.

Community directives in the field of water

Community directives relating to water have been very sector-based up to 2000. Some advocated minimal standards for certain categories of water according to their use (food, bathing, shellfish-farming). Others protected vulnerable water (seas, atrophied areas) from a whole list of dangerous products or were designed at limiting their discharge. There was one, sometimes even several, for each type of product.

The directive with the widest scope before the WFD (because it affected all municipalities) was the one on urban wastewater of 21st May 1991 (modified on 27th February 1998) and which set deadlines for collection and at least secondary treatment.

A project of water ecological directive has been under study by the EC general direction of the environment, and supported by ecologists since 1988. But this project came up against the economic difficulties of 1980s, with representatives of Member States rejecting the text. In 1999, the Treaty of Amsterdam came into force with a new co-decision procedure, which gave Parliament more power, particularly in respect of water quality. After three and half years of institutional negotiations on this proposition, and having narrowly avoided the failure of a conciliation procedure between the European Council and Parliament, the directive was eventually passed in spite of considerable changes from its initial version (Kallis and Butler 2001).

EU pending sanction: recentralization

France is threatened by pending cases for lack of enforcement to EU water laws. The European Court of Justice (ECJ) declared ten cases were infringements to EU water laws and demanded quick compliance. The ECJ may pronounce sanctions in case of insufficient execution of its decisions by the French State (art. 228 of the treaty). Such sanctions have already been applied against France who breached EU fishing laws in the Atlantic. It cost 77 millions Euros to the French government and was deduced from the budget of State administration divisions who failed to enforce the related legislation.

This precedent dramatically changed the governmental attitude towards EU laws. The strategy now revolves around minimising the risk of prosecution. It entails recentralisation as observed with the creation of ONEMA.

It also results in understating the status of waterbodies. The worry is that a site might be classified as better than it really is and might be downgraded when more information is available. Such a case could be interpreted as an infringement to the WFD which prohibits further degradation. By understating the status of waterbodies, France may invest unnecessarily in restoration measures. The opposite strategy is adopted by the UK, where

civil servants commonly use the term ‘no gold plating’ to prevent expensive measures from being undertaken on poor quality water bodies.

State

Environmental laws and State restructuring

The Ministry of Environment (*Ministère chargé de l’environnement*) states the national policy in the water domain (edict 2007-995 of 31 May 2007 and edict 2000-426 of 19 May 2000).

At governmental level, three directorates used to rule environmental issues: the directorate for the prevention of pollution and risks, the directorate for the protection of nature and the directorate of water (*DE*). In 2007, however, President Sarkozy decided to combine the ministry of equipment and the ministry of environment in one single ministry of ecology, energy, sustainable development and land planning. This decision resulted in a reorganisation of directorates. The directorate of water and biodiversity emerged as one sub-unit of the directorate of land and environmental planning. This ministry controls the Water agencies.

State organization at regional and departmental level experienced similar restructuring: agricultural and urban policies are to be gathered in one departmental State office: Departmental Directions of land planning (*DDT Directions départementales du territoire*); industrial, land-use and environmental State offices issuing permits are already combined in regional State offices (*DREAL Directions régionales de l’environnement, de l’aménagement et du logement*).

At the basin level, the river basin coordinator (*préfet coordonnateur de bassin*) coordinates the actions of the prefects of the regions and the departments (Article R213-14 CE).

At the *région* and *département* levels, the prefects coordinate the State services responsible for the implementation of the regulations.

Command and control policies

Under the responsibility of the *Préfets*, at departmental level, the *Mission inter-services de l’eau (MISE)*, coordinating mission between State water services) is in charge of enforcing water legislation and coordinating State services action in the field of water. The administration has two networks with which to apply the law. Administrative procedures (authorization decrees, formal demands) and legal procedures (fines, courts). Environmental polices thus have two roles: the instruction of the project to prescribe rules for the planned works, and the checking on the ground to ensure compliance both to these rules and to environmental protection as a whole. The law has provided that a fine (“procès-verbal”) cannot be issued in the name of several texts. When dealing with a polluting event, the authorised officer reporting the offence has to choose between the fishing policing, the policing in charge of the inspection of listed premises and the water policing.

Public domain management

The public domain is ruled by the ministry in charge of public works (recently joined to the ministry in charge of environment). Levees for flood protection are State property on the public domain but can be transferred to departmental assembly (*Conseil général*) for operation and maintenance. Waterways and water diversion for power generation are managed by private companies under state leasing.

Agences de l'eau and Onema

Agences de l'eau

The 1964 law established six *agences de l'eau* (basin agencies) which boundaries follow hydrographical logic with no consideration with former administrative limits (see figure 4). These *agences de l'eau* are under the co-responsibilities of the river basin coordinator (*Préfet coordonnateur de bassin* who is the State representative in charge of the largest region of the basin) and a *Comité de bassin* (basin committee) representing water users appointed by the river basin coordinator (Nicolazo 1993). They determined levies (ecotaxes) collected by Basin Agencies first based on oxygen demand then additional parameters. The *agences de l'eau* cannot initiate projects for they are not *maîtres d'ouvrages* (see figure 5). They deliver grants to fund projects initiated by industries and municipalities. Their financial support amounts typically from 20 to 50% of the total cost.

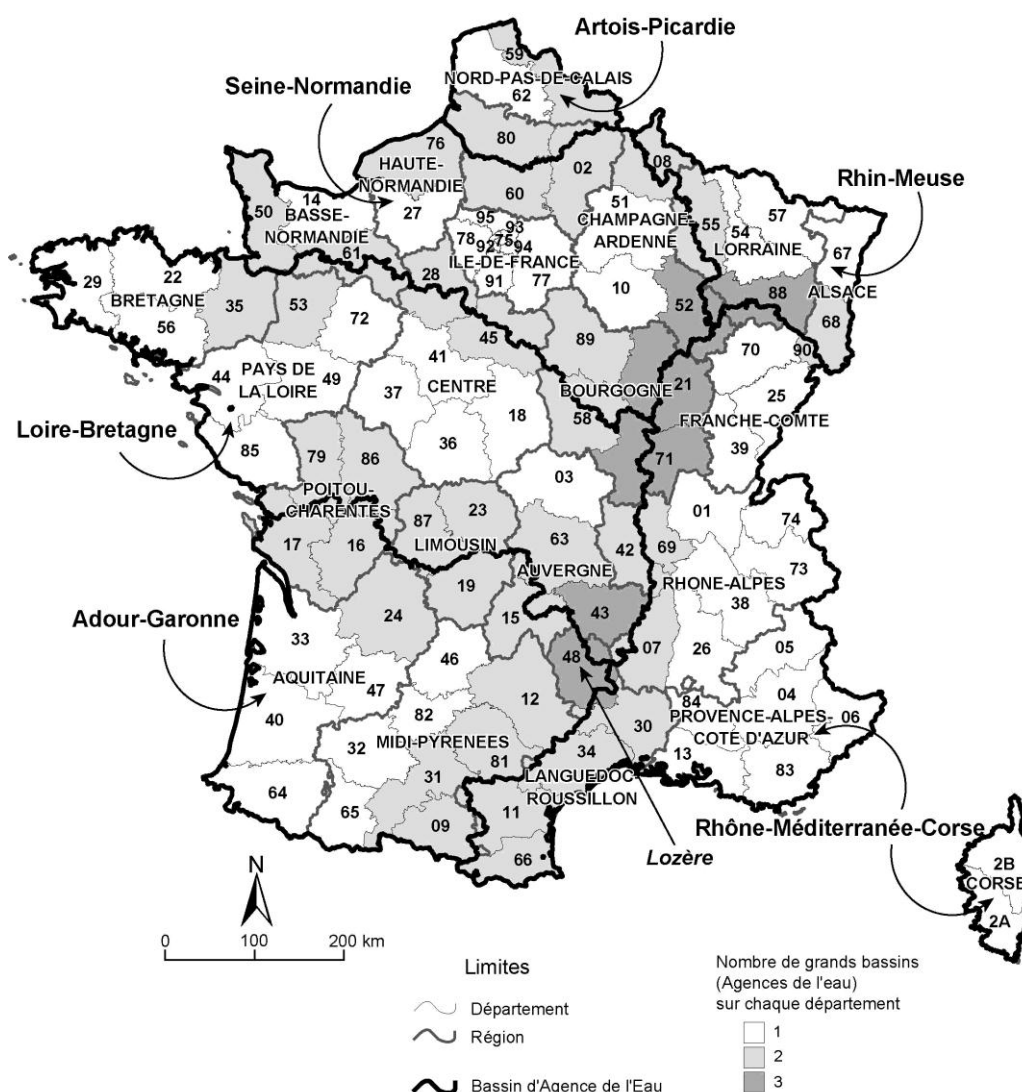


Figure 4. 6 water agencies (Agences de l'eau) were created in 1964 according to hydrographical limits which do not fit with administrative levels. Many departments (presented here by their numbers) are split among two or three different water basins. Regions (presented here by their names) are most generally in one basin but region Bourgogne and Poitou-Charentes for instance are also dealing with two agencies. Members of the comités de bassin are appointed by the river basin coordinator to represent political local entities (regions, departments, municipalities), water users and State offices.

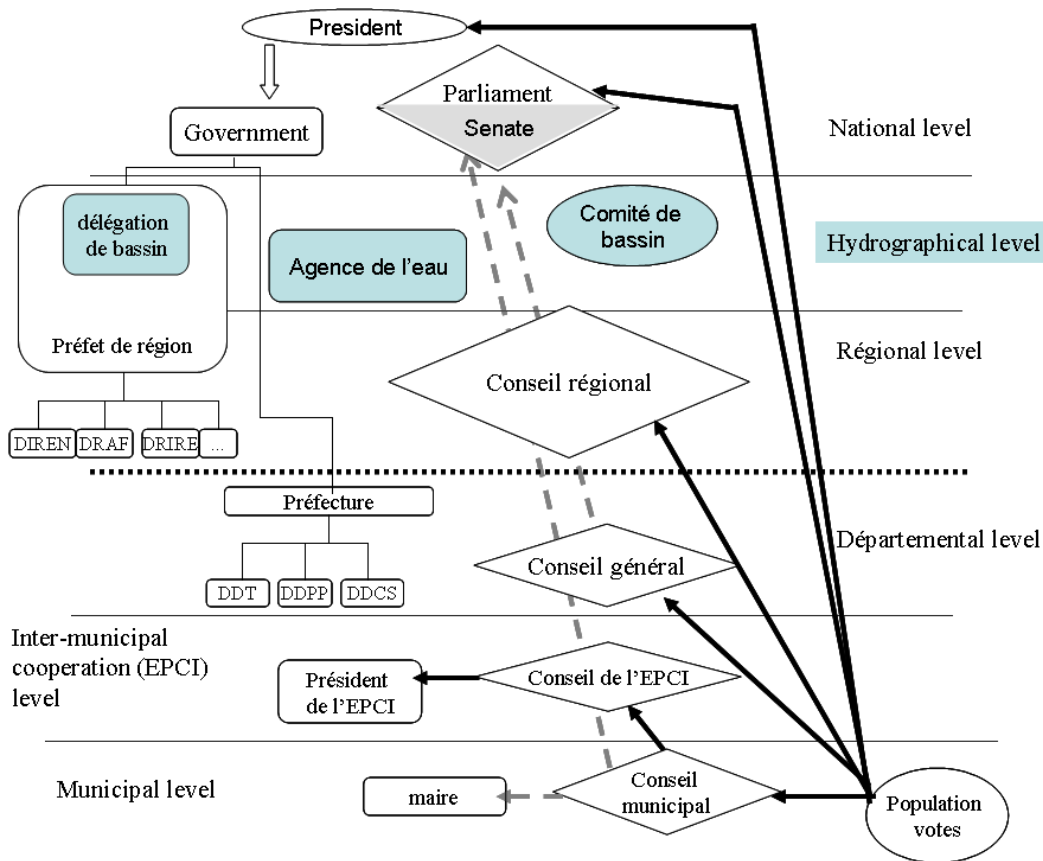


Figure 5. Governance of the hydrographical level. The *préfet* of the largest region in the hydrographical district is appointed as river basin coordinator (*préfet coordonnateur de bassin*), and leads the dedicated State office named the *délégation de bassin*. He designates members of the *Comité de bassin* to represent water users according to State law. The *comité* votes levies and action plans under the control of Parliament and the *agence de l'eau* implements its decisions. The *SDAGE* is co-designed by the *agence* and the *délégation de bassin*, subject to public hearing and eventually approved by the river basin coordinator.

Implementation of the WFD and ONEMA

The water agency (*agence de l'eau*) is the executive body for decisions taken by the river basin committee. The river basin committee (*comité de bassin*) drafts the RBMPs (replacing SDAGEs (Article L.212-1 CE)), which require approval from the river basin coordinator (Article R213-4 CE). Under the responsibility of the river basin coordinator (*préfet coordonnateur de bassin*), programmes of measures (PoM) will be designed by water agencies and *délégations de bassin*, incorporating possible national measures undertaken at state level. PoM must consequently be approved by the river basin committee (Articles L212-2-1, R212-19, R212-20 and R212-21 CE).

Under “Lema”, the WFD implementation in French regulation was the impetus for the creation of a central office of freshwaters (*Office National de l’Eau et des Milieux Aquatiques*, ONEMA). It gathers 800 State employees for monitoring and command and control policies on field and concentrates state expertise on fresh waters (see figure 6). It is financed by a portion of levies collected by Water agencies. ONEMA takes the lead for setting procedures to implement the WFD nationwide, standardizing indicators and methods.

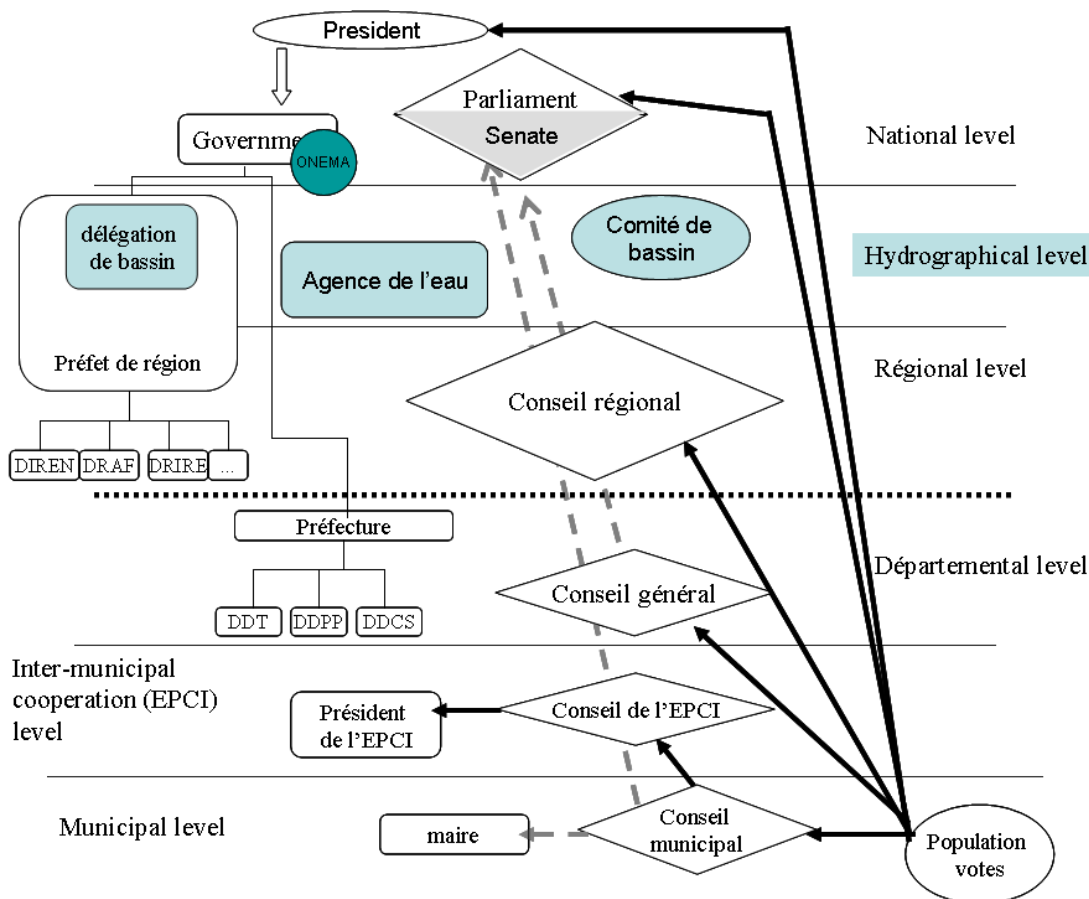


Figure 6. ONEMA was created to harmonise the WFD implementation at national level.

Other public bodies: such as VNF

Voies Navigables de France (VNF) is a public body responsible for managing navigable waterways in France. It is under the supervision of the ministry in charge of transports and environment. VNF charges owners, whose facilities are located on the public navigable area, whatever the purpose of these facilities might be, pumping or discharging water. This tax depends on the surface and the pumps' capacity.

Local governments and their groupings

Local governments (collectivités territoriales)

Local governments (*collectivités territoriales*) are French political/administrative institutions/structures, separate from the State administration, which must support the interests of the population of a specific territory. Their definition and organisation is determined by the Constitution (Article 34 and Title XII), laws and decrees. These provisions are contained in the General code of Territorial authorities. A local government is defined by three criteria:

- it has legal personality, enabling it to sue.
- it has specific jurisdiction, which is entrusted by the Parliament¹⁷
- it has a decision power, exercised in a council of elected representatives. The decisions are then implemented by the local executive powers.

¹⁷ Parliament exercises legislative power (legislation and control of executive power). In France, the Parliament consists of two chambers: the National Assembly and the Senate.

The main *collectivités territoriales* in France are the municipalities, the *départements* and the *régions*.

Municipalities and their grouping

The *commune* is the oldest and the smallest political subdivision. It can be a small village with less than 100 inhabitants, a town or a large city like Paris. A *commune* has jurisdiction in terms of wastewater treatment. It is responsible for monitoring connections to the public collection network, the collection, the carrying off and disposal of wastewater, and the elimination of any resulting sludge. Moreover, for buildings that are not connected, the *commune* carries out a control of non-collective sewerage equipment. The Water Act of 2006 confirms the *commune*'s jurisdiction in terms of drinking water supply, which was an optional duty before. *Communes* can also provide drinking water production, its transport and storage¹⁸ (articles L2224-7 and thereafter of the General Local Authorities Code).

The organization of water supply, collection and treatment of wastewater and stormwater are under the responsibility of municipalities and their groupings. Each municipality also has the obligation to monitor non-collective wastewater treatment¹⁹ (septic tanks and land application). These skills are transferable to a public body for inter-municipal cooperation (*Syndicat Intercommunal*, mixed syndicate, district, and community of municipalities...). Once power production became nationalized after WWII, the first remaining motivation of cooperation has been for drinking water. To operate, the town collects four taxes that feed the general budget: tax on buildings, tax on non-built areas, housing tax and business tax. Water services and sanitation budgets are annexed budgets to the general budget of the municipality. They are provisioned from water billing and possible grants. The General Code of Local Authorities requires that both water and sanitation services are balanced. This means that the water bill has to cover the costs of water services and only these, and the bill for sanitation has to cover the costs of sanitation services. Income and expenses are balanced. Municipalities with fewer than 3 000 people are allowed to pay a subsidy from the general budget to the budget for the water and sanitation services and may have a single accounting system for water and sanitation. The water and sanitation bill is subject to Value Added Tax (VAT), which for water and sanitation services is 5.5%.

Other collectivités territoriales: départements and régions

The laws of decentralisation assigned compulsory jurisdiction in terms of water neither to the Regional governments nor to those at Departmental level. However, water is considered as a key issue in terms of local politics by most *Départements* and several *Régions*. With this in mind Departmental governments allocate a significant part of their revenue to water issues – on average 11,9 € per inhabitant (meeting of French Departments in 2003) – and seek from legislative bodies duly recognised competence and appropriate funding for it. The legitimacy of Departmental governments to act in the field of water is based on three factors: their financial and operational involvement (owner and initiator of the network, technical and administrative assistance to municipalities, dialogue structures), their democratic legitimacy

¹⁸ « (...) However, the competencies in terms of drinking water assumed at the date of enforcement of the Act N° 2006-1772 of December 30, 2006 on Water and the Aquatic Environment by *Départements*, authorized landowner boards (*Association Syndicale Autorisée*) or automatically created ones, cannot be carried out by the municipalities without the agreement of relevant public bodies” (Article L2224-7-1 of the “*CGCT*”).

¹⁹ The implementation of *SPANC* (non-collective sanitation public services) and their control is enhanced by the Act on water and the aquatic environment of 2006.

to act on behalf of the public interest and finally the recognized requirement to manage water at local level (Grandgirard 2006, in Bouleau and Richard, 2008).

Thus, Departmental Governments have remained the primary financers of water services, after the municipalities themselves, as a complement to the financing by the Water Agencies. The Water Agencies are making an increasing number of contracts with Departmental governments to define and harmonize action and to finance this type of investment. Moreover, the Departmental Governments manage Accommodation Solidarity Funds (“FSL”) and particularly their aspects relating to water²⁰, thus introducing an element of social cohesion.

Some *Départements* have also implemented specific measures to finance the network renewal (Renaud et al., 2006).

Other forms of cooperation between municipalities (and with or without other collectivités territoriales): specific role of EPTB

Intercommunalité

The term *intercommunalité* refers to different forms of cooperation between municipalities. This *intercommunalité* allows municipalities to join together in a public body for inter-municipal cooperation (*EPCI*). Unlike the local governments, inter-municipal structures have only limited powers (principle of speciality). There are two types of *intercommunalité*:

- the associative or flexible form (known as “without own taxation system”), financed by contributions from municipalities that are members. It allows them to manage together activities or public services;
- the deeper or federal form (known as “with own taxation system”), characterized by the existence of both compulsory competencies and own taxation system.

Specific role of EPTBs (*Etablissements publics territoriaux de bassin*, River basin territorial public bodies)²¹

EPTBs come within the scope of the Water Act 1964 which had thought about a coherent system based on three main types of stakeholders in the field of water:

- basin committees,
- *agences financières de bassin* (present "water agencies")
- and public institutions that can be *maîtres d'ouvrages* for water related operations and projects throughout the catchment or sub-basin.

The law of 30 July 2003 on technological and natural hazards has recognised EPTBs as legitimate stakeholders in the management of rivers and flood prevention. The law of 23 February 2005 on the development of rural areas has clarified the role of EPTBs in terms of preservation and management of wetlands. Today many references to EPTBs are included in the code of the environment.

As seen previously, at river basin district level, *Agences de l'eau* have a limited duty of *maîtrise d'ouvrage* that applies only to water-related studies, but not to equipment works. At

²⁰ The Act N°2004-809 of August 13, 2004 related to local freedoms and responsibilities introduces a new system of solidarity with a social basis by transferring to the Accommodation Solidarity Funds (“FSL”) the competence to grant financial assistance (under the form of guarantee, loans, refundable advances, securities or subsidies) to the individuals or to the families having difficulties to pay the expenses related to their water bills. These come now within the competence of the Département Governments.

²¹ For more information, see: <http://www.eptb.asso.fr/>

sub-basin level, the Local Water Commissions (CLE) are not *maîtres d'ouvrages* for works and projects either. In order to fill this gap, the 2006 Act on water and aquatic environments encourages the emergence and the strengthening of institutions whose role is indeed to endorse this duty (*maîtrise d'ouvrage*) for all works. “*In order facilitate, at river or river sub-basin level, the prevention of floods and a balanced management of the water resource and the preservation and management of wetlands, the concerned local authority and their groupings can work together within a River Basin Territorial Public Body (“EPTB”)*” (Article L213-12 of the CE).

Such an association presents the following advantage: “*the Water Agency can charge, at the request of a River Basin Territorial Public Body and its own benefit, a tax introduced by this body for a provided service in application of article L. 211-7. The income from this tax is fully paid back to the budget of the River Basin Territorial Public Body, after deduction of management charges*” (Article L213-9-2 of the CE).

Private stakeholders

How is water distributed between sectors?

In France, out of 32.6 billion m³ withdrawn per year, 5.75 billion m³ are really consumed and do not return to the natural environment (see table 1).

Sector	Withdrawal ²²		Net consumption	
	Billions of m3	%	Billions of m3	%
Drinking water	5.9	18%	1.4	24%
Irrigation	4.7	14%	2.8	49%
Industries (without powerplants)	2.9	9%	0.25	4%
Energy production (powerplants)	19.1	59%	1.3	23%
Total	32.6	100%	5.75	100%

Table 1. Distribution of yearly water withdrawals and consumption per sector in France (Agences de l'eau / SoeS, 2008 (2006 data), Ministère chargé de l'écologie, 2007)²³

Private services

Private water supply

Individuals may be supplied from private springs or pump water from their own sources for themselves or their family. The volume of wastewater that is discharged into the public network is assessed on a flat rate basis and the individual is charged accordingly.

Any professional (industry, farmer,...) using a private water supply must have previously applied for authorisation from the health authorities. Creating a protection area around it may protect the source but regular analyses are also necessary²⁴.

²² 19% of the withdrawals come from underground water and 81% from surface water.

²³ Available on: http://www.eaufrance.fr/spip.php?rubrique187&id_article=449

²⁴ EU drinking water directive, French water laws of 1964 and 1992.

The *Agences de l'eau* and *Voies Navigables de France* charge taxes and levies on water bills. They both may also receive taxes from individuals who are not connected to any public network. Actually, anyone who pumps water from river or groundwater shall pay tax to the water agency due to the polluter-pays principle. Anyone who diverts water from navigable ways shall pay taxes to *Voies Navigables de France*.

Individual sanitation

Every new building must reach satisfactory sanitation standards, whether this is through the public sewer system or by individual facilities. Private sanitation is not possible on all land since it requires permeable types of soils.

As seen previously, the Mayor is the responsible for checking individual sanitation systems.

Industries that manage their wastewater on their own pay directly to the water agency for the remaining effluent discharged to the river. The water agency orders a case by case assessment of the total amount of pollution of each industry. Upon this assessment, the tax is calculated according to different scales for each sort of pollutant and its precise load.

Water and sanitation private companies managing public services

Limits and responsibilities of the public service

As seen previously, the public water and sanitation services are under the responsibility of the municipalities or their groupings.

The water supplied by a public service must be of drinking water standard, unless specifically stated otherwise. A protection area must be implemented to protect every public source for drinking water. A by-law specifies the constraints for this area. Public drinking water must be regularly monitored.

As regard sanitation, all collected wastewaters must be suitably treated, to contribute to reach the quality objectives set in the scope of the WFD.

The service management²⁵

The public networks are managed by two different stakeholders. One is the *maître d'ouvrage*, owner of the network. The other is the manager in charge of operating and maintaining the system. In France, most public networks belong to the *commune* or its grouping, which therefore is the *maître d'ouvrage*. However, in some very few cases, private companies may have done the investments.

The commune may manage the service itself or it may entrust other body with the task to do so. The agreements differ from one case to another (see table 2).

²⁵ To go further, refer to: Bouleau 2003. Stakeholders and their financial responsibilities in the French water management. ENGREF Document pédagogique, Paris. 92p.

Type of management	Duty of the operator	Duty of the owner
Direct labour operating (<i>régie directe</i>)	The <i>commune</i> (Mayor and employees) is responsible for the service. It manages the network, maintains it, replaces it when needed, registers water meters and bills the consumers. The job can be done either by a manager or a service provider.	
Short public contracts <ul style="list-style-type: none"> • service provider • operating 	Tasks and means of the manager or the service provider are defined in the specifications bound to the contract	The manager is paid by the <i>maître d'ouvrage</i> who maintains responsibility for the service.
Delegation for public service (contracts for 12 years or more) <ul style="list-style-type: none"> • <i>régie intéressée</i> • <i>affermage</i> • <i>concession</i> 	The operator manages the service at his own risk according to contracted objectives. <ul style="list-style-type: none"> • The operator is paid by the commune according to results • Consumer fees go to the operator (<i>déléataire</i>) and the commune • Consumers or the commune pay the operator who provides the investment. 	The <i>maître d'ouvrage</i> transfers the responsibility of the service to the operator. <ul style="list-style-type: none"> • Provides the necessary investments and checks the results of the service and charges the consumers directly • Provides investment and checks the results of the service and water-pricing • Only checks the results of the service and water-pricing

Table 2. Different types of agreements for water and sanitation services management (Bouleau, 2003)

Direct labour operations (*régie directe*) and *affermage* are the most common. In France, around 50% of water services are operated directly, 50 % are delegated. Delegated services supply 75 % of consumers with water. Three main companies manage the delegated services, *Veolia* (ex-*Compagnie Générale des Eaux*), *Suez-Lyonnaise des Eaux* and *SAUR*, a subsidiary of the Bouygues group. The turnover from delegation (*part fermière*) is about 5 billion euros per year and is broken down as illustrated below (see figure 7).

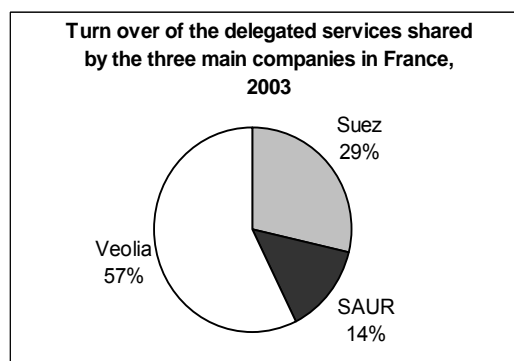


Figure 7: Turnover of the delegated services in France (Bouleau, 2003)

Industries

Industries that use water are not different from other consumers. They are either connected to a public network for water and/or sanitation or they have their self-private facilities. These cases were dealt with in the previous section.

Those industries whose operation presents a risk to the environment (e.g. plants, big cattle farms, warehouses, quarries, etc..) are classified as listed premises²⁶ and submitted to a specific regulation.

Farmers

Most industries deal with issues of water management by themselves, whereas farmers benefit from an institutional framework that promotes collective management. In France, nearly half of the irrigated farms benefit from collective network. And about two third of the irrigated farms have a private access to water resource (Gleyses and Rieu, 2000).

There are many different types of collective management in France. Associations of private owners (*associations syndicales*) may build and operate water infrastructures (levees, drainage, irrigation canals). If such infrastructures are acknowledged of public utility by the State, all beneficial owners are bound to pay charges to cover the building and operating cost according to their acreage and water use (ASA, *associations syndicales autorisées*). ASA are mainly developed in the South of France.

Regional companies for development (*Sociétés d'aménagement régional, SAR*) are also quite typical of the French panorama of collectively managing water for irrigation. They are three²⁷ and were created in the south of France to develop the region with hydraulic infrastructures. SAR are private companies in which the public sector is the major shareholder. Their missions are of general interest. These companies run a public service, but have to balance their budget like private companies. They are under State supervision from their creation. However, the law of 13 August 2004 allowed the transfer to the regions of State property (ownership or *maîtrise d'ouvrage*) granted to the SAR. Therefore, since 2008 the State concession for two SAR has been transferred respectively to the regions Languedoc Roussillon (for BRL) and Provence Alpes Côte d'Azur (for SCP).

Farmers have a strong voice in public action in France, through both trade unions and lobbies and a strong representation of rural communities in the parliamentary authorities.

Power plants (nuclear, hydroelectric,...)

After the Second World War, the French government decided to resemble all power plants in a unique public monopoly, *Electricité de France* (EDF). It was the main concessionaire of France powerplants. Its role has been to produce power and supply electricity to everyone. Some *communes*, which had previously directly built and operated small power plants, were able to keep them but had to sell the electricity to EDF.

Where it was profitable, EDF created big dams to generate hydropower: 15% of the French power production comes from hydropower. And 80% of the French power production is generated by nuclear power plants (Bouleau, 2003).

²⁶ Installation classée pour la protection de l'environnement (ICPE), in French.

²⁷ BRL (Compagnie Bas Rhône Languedoc), CACG (Compagnie d'Aménagement des Coteaux de Gascogne), SCP (Société du Canal de Provence)

The 1919 Act, which governs hydroelectric concessions²⁸, planned originally, a preferential right for the concessionaire in place at the time of renewal of the concession. However, this was deemed contrary to the European law that opened up electricity generation activities to competition. At the European Commission's request, French authorities abandoned the right of preference. It has been repealed with the adoption of the 2006 Water and from now on, any renewal of hydropower concession is now subject to competitive bidding through a call of tender. It is estimated that 34 hydropower concessions of EDF will expire between 2020 and 2025 and will enter into a phase of renewal between 2008 and 2013, some of them representing major electrical issues for the country (Sénat, 2007).

Regarding governance process, this change allows for extending the range of stakeholders - including European ones- involved in hydropower generation issues.

Recreational water-related activities and tourism

Since 1960 the practise of sports in fresh waters (raft, canoe, rowing...) has increased a lot and continues to evolve. This evolution is shown by the number of licenses issued annually by the federations up to the 90s. Since then free practice outside federation has grown at the expense of clubs.

Practitioners usually practise these sports in summer when river flows are low. Over-crowded areas affect riverbeds and banks stability and damage fishing habitats. Artificial flow released to support leisure navigation also disturbs fauna. There is no specific regulation on this issue but the *Préfet* can deny boats accessing to some points during critical periods, according to the assessment of any likely impact.

Consultancy

The increasing role of consultancy in public action construction is briefly dealt with in the following section on expertise.

NGOs

Angling (fishing) associations

Carole Barthélémy has shown that from the 20th century, anglers have reported all kinds of degradations of the environment (railways, river canal systems, dams and locks, sewage works, factories, poaching and pests) (Barthélémy 2003).

From 1849 until 1941, fish was considered as a food associated with public well-being and river management consisted of promoting restocking made necessary by industrialisation. Then, from 1941 until 1984, the practice of fishing became institutionalised. Fishermen have indeed been organised in associations and federations since the 1941 Act with a central committee of the federations at national level. Furthermore at that time, the CSP²⁹ -National Fishing Council- was born from a proposition of fishermen to the State to reinforce ways to stop poaching and to stop damaging the environment. At that time, the fishermen took responsibility for their role as "recognized activists for the quality of the rivers". The CSP and fishing association were very bound. A clear separation of tasks between fishing associations and policing activities have been conducted in the 2006 water Act, with the repeal of CSP and

²⁸ That applies to the most powerful plants and the ones with greatest interest in terms of security of supply.

²⁹ *Conseil Supérieur de la Pêche*, in French. The CSP has been repealed by the Lema (2006 water Act), and replaced by the ONEMA.

the creation of ONEMA. Fishing association's competencies are from now on clearly reoriented towards:

- the protection of fish species and their habitats
- and the development of fishing activities as a leisure.

Together with environmental associations, fishing associations can speak on behalf of the environment in the formal or informal institutions of public decision-making, such as *CLE*, *comités de rivière* or *comités de bassin*.

Environmental NGOs

The major role of environmental associations in the growing awareness of environmental issues is dealt with in the following section on expertise.

Current process of making decision and setting environmental objectives

Decision making structures: formal and informal concerted water management loci

Since the 60s, the various stakeholders introduced in the previous section are increasingly involved in the co-construction of water public action in France. The evolution of the governance institutional framework allows for more space for “qualified representatives” in institutionalised loci for water management such as *Comité de bassin*, *CLE* or *comité de rivière*. In loci such as *CLE* or *Comité de Bassin*, percentages of formal representatives are defined by national law. However, the choice of local representatives that compose such places of public action is very dependent of local uses, tensions or conflicts. Therefore, even if the institutional framework is very present, local adaptability of rules is a reality. Informal loci are also concerned with an increase involvement of stakeholders in decision-making processes.

Specificities in knowledge infrastructure at national level: expertise

Since the 19th century, the State has set itself as a master to define “public utility”, advised by corps of engineers who have monopoly on public expertise (Thoenig 1973; Cohen Tanugi 1985). Three **technical corps of engineers** manage water. The corps of *Mines* is traditionally in charge of industrial affairs and power generation, the corps of *Ponts et Chaussées* traditionally focuses on land-use and large public infrastructures (waterways, highways, cities, ...), the corps of *Génie Rural, Eaux et Forêts* rules agricultural issues and rural affairs. Unchallenged by civil society, strongly subjected to internal peer-review processes, each corps developed its one-best-way to manage water notably within specific public research institutes. Today, the implementation of the WFD largely relies on state experts coming from public research institutes (IFREMER, BRGM, Cemagref, ...), *délégations de bassin* and *agences de l'eau*.

Until recently **regional, departmental and municipal boards** had little technical staff and heavily relied on state or private expertise but things are changing as the State reduces its staff. This illustrates the weakening of State power. The expertise is still at State level but as we have seen in previous section many decisions are to be taken by local elected boards.

As a consequence of the evolution of governance, the increasing role of **consultancy** (private expertise) in public action leads to a fragmentation of knowledge and threatens the monopolistic expertise of the State.

Environmental associations are important stakeholders, which have been very efficient in raising public awareness on pollution and ecological crises since the 70s. However their status is weak which hampers their power. The law of 1901 on associations states that members of the executive board of the associations cannot be employed by the association. Only volunteers can lead associations in France, which considerably restricts their power. Such environmental NGOs are unevenly located in France. They have a greater power to influence politics in the North than in the South.

Therefore public participation is seen as a necessary challenge by both NGOs and experts.

Funding and cross funding

The *agences de l'eau* raise a total budget of 1,700 Million Euros per year which is entirely dedicated to water management and should cover the cost of the WFD implementation. This budget is allocated to projects according to a 5-year programme approved by the *Comité de Bassin* and the State parliament. This programme is bound to become the Programme of Measures (PoM).

Local *maîtres d'ouvrage* (*communes, syndicats, EPTB, départements* and *régions*) raise funds from water-related fees. The law of 1992 stipulates that “only water pays for water” which means that water users should cover 100% of the cost of municipal services including the ecotax charged by the water agency for environmental costs. This ecotax (*redevance*) is then used for water protection as an incentive.

Nevertheless initial cost of water infrastructure often benefit from subsidies coming from upper levels. Local *maîtres d'ouvrage* often rely partially (up to 80%) on financial support from governance levels located above. Such a separation of powers poses a challenge to the State that is legally responsible for the implementation of the WFD but has to rely on other *maîtres d'ouvrage* to implement measures consisting of infrastructures.

The major part of water infrastructures in France have been built in the last century, benefiting from public funding and cross-subsidies. At present, new large investments are less and less frequent and the major issue is maintenance and renewal of existing infrastructures.

Current process of setting environmental objectives and implementing WFD

Legal framework: command and control policies

The administrative supervision of the watercourses is under the responsibility of the *Préfets* in each department and the mayors (Article L215-7 of the Environment Code). The enforcement of the law relies on State administration at the departmental level (6 to 10 agents per department) and on NGOs. Environmental associations perform as a suppletive administration for the environment as they voice out most habitat degradations and get subsidies from the Ministry of the Environment (Lascoumes 1994). Mayors issue construction permits, and they control pollution at the local level.

Command and control are mostly the duty of the State, but municipalities have some prerogatives in this respect for drinking and sanitation purposes.

Organisational framework for implementing the WFD

French organisation of water management is river basin oriented since the 1964 Act that establishes the *agences financières de bassin* (current water agencies) and the *comités de bassin* (watershed committees). Hydrographical districts in France mostly correspond to the boundaries of existing water agencies. Small adjustments occurred to distinguish between the Meuse and the Rhine basin, to separate coastal rivers on the Channel from the Scheldt catchment.

Although not explicitly mentioned in the environmental code, the competent authority reporting WFD implementation to the European Commission is the river basin (district) coordinator (*préfet coordonnateur de bassin*) supported by State employees of the *délégation de bassin* and employees of the water agency. For international districts, international commissions take the lead. For instance, in the Rhône-Méditerranée basin, the *délégation de bassin* is located in Lyon.

The Ministry of Environment initiated the designation of water bodies supported by Cemagref expertise on hydro-ecoregions. Then water agencies made some adjustments. Maps and reports are designed at the basin level.

The characterization of water bodies (state and pressures) and the design of the programme of measures have generally been made by experts in *agences de l'eau* based on central expertise and models.

When they exist, SAGE designed at local level and approved by the *préfet de department* (art. L212-3 CE), should comply with SDAGE. They should set up rules in order to meet WFD objectives but the majority of non-State members of the CLE are not accountable for the WFD implementation. Only the State is. It is not clear yet what means the State may use to enforce the WFD. Possibly limitations of cross-funding may become a tangible threat in the coming years.

Public involvement in implementing the WFD

In most water districts (basins) the public was asked to answer a questionnaire sent to all inhabitants and focused on the main orientations given to the SDAGE. For instance, in the Rhône-Méditerranée district, the process of consultation was the following.

Date	Public event	Content
2003	Geographical commissions of the basin committee	information on natural waterbodies, WFD methodology through examples
	Basin Committee	validating the WFD organization for the characterization, designating natural waterbodies, information on protected areas
	On-line information	maps on water quality and pressures, evolution scenarios
	Technical meetings at regional level	sub-basin working groups on pressures, risk for not achieving the good status, confronting local experts judgements and basin data
	Basin Committee	validating the table of contents for characterization, discussing data on protected areas

2004	Sectorial working groups Geographical commissions of the basin committee Basin Committee On-line information Consulting local governments On-line information Geographical commissions of the basin committee On-line information	collecting contributions for the evolution of activities by 2015 and for "important questions" discussing characterization examining first draft of characterization, and cost-recovery report Register of protected areas first draft of characterization first draft of characterization appendix to characterization (maps, list of waterbodies, local expertise) appendix to characterization (maps, list of waterbodies, local expertise)
2005	Basin Committee Mailing Reporting Public consultation Technical meetings at regional level	Official approval of the characterization report characterization report sent by ordinary mail to individuals on simple request The State reported to the EC the synthesis of all characterization documents questionnaire sent to all inhabitants method and definition of the programme of measures
2006	State notice Geographical commissions of the basin committee state decision state decision	on fundamental orientations draft for fundamental orientations approving basin data and maps monitoring program
2007	Basin Committee Geographical commissions of the basin committee Basin Committee	discussing SDAGE first draft discussing SDAGE first draft discussing SDAGE second draft and Program of Measures
2008	Nationwide public consultation	basin-oriented questionnaire on fundamental orientations
2009	Consulting local governments	SDAGE draft

4. Conclusion

Main features of water governance in France might be summarised as follows:

- the changing role of the French State which, while remaining a major stakeholder in the field of water, is no longer alone in making public action and decision. The progressive involvement of the European Union in the water policy combined with the French decentralisation laws are responsible for transferring part of the central State's power towards both the local and the European levels.
- the challenge of implementing the WFD involving, in terms of governance, (i) a partial recentralisation with the creation of ONEMA; (ii) an increasing need for environment voices and a redefinition of the experts's contribution in making public action, and (iii) a growing awareness and involvement of the public in defining public action for water.
- the evolution of water governance institutional framework allows to: (i) transfer competencies towards territorial authorities and making emerge *intercommunalité* in water governance process; (ii) create new places of public action that are competent for making their own local rules (according to the national and water district regulations). This is particularly true for the *Agences de l'eau* and the *CLE*; and (iii) strengthen the role

of the *maîtres d'ouvrages* (such as EPTB) in implementing the decisions of the CLE. The rise of these structures in the construction of local public action for water should better reflect the issues of territorial solidarity for water management.

- the development of concerted water management in formal and informal local places, as a characteristic of the French governance.

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