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The Rise and Fall of the French *Agences de l'Eau*: From German-Type *Subsidiarität* to State Control

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Abstract

The *Agences de l'eau* (Water Agencies) are well known abroad as the French attempt to develop integrated water management at river basin scale through the implementation of the Polluter-Pays Principle (PPP). Yet after 30 years existence, environmental economists became aware that they were not implementing the PPP, and therefore were not aiming at reducing pollution through economic efficiency. Behind the purported success story, which still attracts visitors from abroad, a crisis recently developed. Initially based on the model of the German (rather than Dutch) waterboards, the French system always remained fragile and quasi unconstitutional. It failed to choose between two legal, economic and institutional conceptions of river basin management. These principles differ on the definition of the polluter-pays principle, and on the role of levies paid by water users. After presenting these two contrasting visions, the paper revisits the history of the French *Agences*, to show that, unwilling to modify the Constitution to make room for specific institutions to manage common pool resources, Parliament and administrative elites brought the system to levels of complexity and incoherence which might doom the experiment.

Keywords: France, River basin agencies, levies, Polluter Pays principle, common pool resources

1. Introduction: the paradox of the *Agences de l'eau*

The French *Agences de l'eau* (*Agences*)¹ are frequently presented as a success story for river-basin management at international level. When the OECD popularized the Polluter Pays Principle (PPP), they seemed to offer a good example of its implementation: replacing command and control policies by economic incentive and market-based instruments (Andersen, 1994). They are like mutual savings banks of the water users, who have to pay fees in proportion of freshwater volumes abstracted from the aquatic environment, and on wastewater discharged in rivers. The collected money is returned to those water users willing to invest in improved environmental practices. They have always attracted visitors from foreign countries, and some like Brazil, have explicitly tried to follow the 'French model' of water resources management. Yet, in France this original institutional innovation has remained largely unknown by the public. Battles between pros and cons were fought, but almost only within administrative circles; mediatisation increased after some environmental economists became aware that they were not really implementing the PPP, at least in the way environmental economics defined it. Economists determined that, in their view, the *Agences* were inefficient, and this opinion was expressed in a policy evaluation report (CGP, 1997) in a period of strong increase in levies collected by the *Agences* on domestic water bills². Economists working on green

¹ In order to avoid translation confusions, we keep the French '*Agences*' all over the paper to designate the French River Basin Agencies, rather than 'agencies'.

² According to the 1964 law and subsequent decrees, the *Agences de l'eau* may impose levies on all those who abstract and consume water, on those who discharge wastewater in rivers, on those who modify the flow regime of rivers, and more generally on all those who need the financial support of the *Agences*. But the latter

taxes wondered why so much water pollution remained unabated after such important investments were made with the support of the *Agences* (Andersen, 1994). A thorough but critical assessment was synthesized more recently by one of the best French environmental economists (Godard, 2015: 293-298): he clearly thinks that the *Agences* have abandoned the objective of economic efficiency that was “an important part of the initial justifications which surrounded [the PPP] recognition”. Repeatedly, reports from the Cour des Comptes³ criticised the system for being mutualised: agents pay to a mutual fund which subsidises those who come with environment-friendly projects, but this ends up in blurring their individual responsibility, protecting them from real PPP, and thus making the policy economically inefficient. These reports were publicised by the media, which tended to extend distrust from a few corrupt water supply contracts with large private companies, to the whole water policy realm. As a result, consumer and environmental NGOs, which had remained silent before, started voicing their concerns about being victims of an unfair allocation of pollution and abstraction charges which actually favoured industrial and agricultural interests (Laigneau, 2014, vol.2). The growing issue put water policy and politics back on the agenda, and finally in 2006 the Parliament voted a law subjecting the budget of the *Agences* to its yearly control. This led the French Treasury to recover control of the *Agences*' budget.

In this article, we go back to the 1960's, to explain that these river basin institutions were not 'market-based' instruments. Rather they were an empirical attempt to create institutions for the management (or the reclamation) of water resources as common pool resources based on participative democracy at large territorial levels⁴. Subsequent emergence of river boards at various scales as management structures helped to re-cast water as a resource to use reasonably, separating use rights from ownership rights. 25 years later, the legal definition of water in France was modified through the 1992 law that stated 'water is part of the common heritage of the Nation' – a public trust or common pool resource. This is a fundamental change in France, the country which invented the Civil Code, i.e. a typical attempt to allocate (water) rights only between private and public properties.

The institutional innovation of the *Agences* was at odds with the general constitutional principles of the country; but from a comparative perspective of water policy formulation in European countries, they brought French water institutions closer to what has long been experienced in the Netherlands, and for 50 years in the Ruhr in Germany: river boards run by representatives of the various water uses, implementing the subsidiarity principle⁵: Dutch *Waterschappen*, and even more so the Ruhr *Genossenschaften*, inspired the founding fathers of the French river basin experience (Chéret, 1967). This historical origin is all the more important since environmental economists, who criticize the French system for failing to implement the PPP, ignore that the *Agences* started operating a few years before the PPP was publicised by Barde and Potier in the OECD. Indeed, despite the

cannot manage public works directly, only subsidize investments made by stakeholders who have paid their dues. One must add that in the beginning, agriculture was left out, despite both quantitative and qualitative water issues which would later appear as a result. The rise of the existing levies in the 1990's corresponded to fund needed investment in better sewage collection and treatment after the adoption of the Urban Wastewater Directive of the European Commission and Council (EC 271/91)

³ Equivalent to the General Accounting Office in the US.

⁴ But this creation and subsequent developments lacked an appropriate theoretical background: for instance, Elinor Ostrom's work remained unknown in France until the 2000's.

⁵ The subsidiarity principle (*subsidiarität* in German) is ancient but was developed in 19th century Germany as part of the social doctrine of the catholic Church: if a person or a family can self-support alone then no other instance should interfere; if some exterior support is needed then it should come from the lowest territorial level able to do it. Before upscaling the support, instances at the same level of action should co-operate to support the weak ones. This creates institutions based on community principles, i.e. different actors get together to build mutual support in an equitable way. Thus, it is a principle positioning the Church, followed by the Protestants, beyond the classical opposition between freedom and equality (liberals and socialists, Market and State).

impression they exemplified the PPP, in fact they followed a subsidiary community model that had little to do with this principle. Rather it was based on cooperation and mutual funding between water users. But French environmental economists ignore the existence of Dutch or German waterboards. Yet, in its quite recent water policy dialogue with the Netherlands, the OECD, which had popularised the PPP, globally praised Dutch water governance, and the role of the *Waterschappen* in particular (OECD, 2014).

The debates which took place in the 1960s however resulted in the impossibility to fully transfer the German communitarian and subsidiary model in France, and the *Agences* were maintained in a precarious legal status, later becoming useful scapegoats for the shortcomings of Government policy. Thus, it is now time to undertake a thorough re-evaluation of the concepts and ideas that framed the creation and evolution of French river basin institutions, starting with the possible meanings and practical implementations of the PPP. We shall address this issue through the following: a discussion on the respective roles of Community, the Market and the State; an analysis of the respective roles of representative and participative forms of democracy; a reminder of the developments and functioning of the Dutch water boards and the Ruhr cooperatives, which inspired French expert Ivan Chéret when elaborating the 1964 Water Law. This will shed light on the controversy around the nature of the levies charged in France, which we think illustrates the lack of understanding, by the French political class and high ranking civil servants, of 'common pool resources', and of their need for specific management institutions: typically in river basin boards members are representatives of various water uses, and they co-oblige to work toward aquatic environment recovery while reducing transaction costs through a collective learning process. But can they control the budget issued from levies? In the Ruhr yes, in France no.

2. Discussing economic, institutional and legal dimensions

The French *Agences* started gathering levies from water users/dischargers in 1968. But when the PPP was popularized, there were two competing attitudes:

- Many environmental economists, being trained in neo-classical theory, considered that the level of the levy should be such as to bring polluters to change their behaviour; the levy should be raised up to a point where polluters would reduce their discharges to a level considered acceptable by society. Further, the levy should be collected by the State and there would be no refund to polluters investing in environment-friendly technologies. The purely incentive-based nature of the tax would fit within the 'principal-agent model' and would just bring a correction to 'market failures'.
- Other economists, and many water engineers, aware of the large and indivisible nature of investments in water management, and of the specificity of the assets⁶, preferred to imagine an institutional set up which would bring polluters of a river-basin around a table to organize either a sort of market for environmental services between the concerned water users, or a mutualisation (sharing and pooling) of the costs associated with water resources recovery (supposedly in a rational territory, i.e. a catchment). Levies would then constitute a mutual fund to support needed investments (or compensating the 'losers').

These two attitudes are usually attributed to two founders of environmental economics, A. Pigou and R. Coase. Both of them, however, held more nuanced attitudes⁷. Over time,

⁶ Assets in that case are specific to the geography of the area, and in addition they are heavy and depreciate on the long run, which reduce the flexibility of policy adaptation.

⁷ Concerning Pigou, see Ellickson 1973; and concerning Coase, see Ellickson, 1989.

it became clear that 'pigovians' would favor the first approach, and 'coaseans' the second. Many environmental economists are pigovians. They believe in implementing the PPP within the 'principal-agent' model, in which the State imposes a green tax on polluters which is primarily an *incentive*. 'Coaseans' would rather support less State and more bargaining between stakeholders, leading to the management of a *financing levy* by an equitably represented community of stakeholders. This approach can either lead to 'markets' to optimise the allocation of pollution abatement or of resources, or to arrangements within a community of stakeholders who co-oblige themselves to mutually fund water resources improvements. This latter version is in tune with the work of natural resources economists and political scientists like Elinor Ostrom, who claim that common pool resources need specific institutions⁸. This difference then raises a key question: whether water resources management and allocation should be left to the sole competence of a democratic (elected) government, or whether room should be made for participative democracy within the decision-making structure, where stakeholders are qualitatively represented in waterboards.

In some countries like France, this economic distinction has been associated with a legal one: what is the nature of the economic instrument used by the State or by the mutual funding institution? If the aim is to correct market imperfections, then the levy is-or-should be a tax. In contrast, a financing levy, under the form of a fee for a (public) service paid by the beneficiaries of this service (*service rendu* in French⁹), funds a government intervention in the economy. This distinction carries with it significant consequences in countries with a dual legal system (civil and administrative courts). When the State acts as a sovereign, it collects a tax via a public institution under public law; the tax is subject to Parliament yearly review, and litigation goes through the administrative court system; when the State intervenes in the economy, it does so via a public institution under private law, funded by user charges; there is no Parliament yearly review, and litigation is arbitrated through the civil court. Thus, defining the PPP as an incentive tool will be associated with taxation by an institution under public law, while considering it as a financing tool will be associated with a user/public service fee (*redevance pour service rendu*) collected by an institution under private law¹⁰.

But there is an important additional issue raised by this double dichotomy: in a market economy, agents are free to buy or not to buy a service, be this service rendered by a private company or a public institution under private law. But in the case of the PPP in French water policy, agents are forced to pay the levy anyway: those who don't want to invest in environmental protection do not receive a financial support and can consider the levy a tax. Only if they decide to implement environmentally beneficial changes, will they be eligible to grant funding or to a zero-interest loan from the public institution. This is what the British economist Colin Green called a 'hypothecated levy'.

What we have sketched up to now is framed by a simple neo-classical economic view: there is the Market, there is the State, and there are private and public goods. But this vision leaves no room for common pool resources, which, in neoclassical economics, are

⁸ In this paper we have no room to discuss the possible adaptation of the 8 'Ostromian' rules for the success of local common pool institutions as applied to larger regional river basin institutions. We are presenting this in a paper in French proposed to issue 233 of *Revue Internationale des Etudes de Développement: River Basin Organizations in France and Brazil from a Commons Perspective* (Formiga, Laigneau, Barraqué, 2018)

⁹ Garbage collection is illustrative of the distinction: people are obliged to put out their garbage in standard waste boxes at a certain hour of day. They pay for the collection in housing and land taxes; but some years ago, payment by volume or approximation thereof (like number of garbage cans in a condominium, or of seats in a restaurant) was experimented, targeting the beneficiaries of the service; this turned the garbage tax into a *redevance pour service rendu*.

¹⁰ The distinction between taxations and service fees and the competent courts was made by the first prime minister of the Vth Republic, Michel Debré, who was an officer of the Treasury. See *Ordonnance n°59-2 du 2 janvier 1959 portant loi organique relative aux lois de finances*.

one of two kinds of 'impure public goods'.

Back in the 1960's, R. Musgrave and P. Samuelson defined private goods as susceptible of rivalry with possibilities of exclusion; fully public goods are available to all (no rivalry) and are not excludable. 'Impure' public goods include on the one hand toll or club goods, with no rivalry but possibilities of exclusion; and on the other hand, common pool resources which suffer some degree of rivalry but with no or limited possibilities of exclusion.

In this last category, regulatory institutions as imagined by E. Ostrom offer a third type of PPP implementation: agents who are bound together by their use of a common pool resource will want to create (or eventually will be forced to join) a mutual institution which they will run themselves, to which they will pay varied but equitable levies (depending upon their uses). This institution will fund a sustainable management of the resource. Representation of stakeholders in the institution will be qualitative, based on participative democracy. Conversely, in democratic countries, public procurement of goods and services should be controlled by elected representatives, under the principle that citizens are equally treated in terms of vote and contribution to the public budget¹¹.

No doubt then the potential existence of common pool resources may lead to the revival of traditional forms of resource management¹², which are neither State nor Market, but under some (hopefully non-tragic) commons institutions. In contemporary environmental governance, in practice, a combination of representative and participative forms of democracy is needed.

To summarize, we can sketch a triple distinction between two ideal forms of governance:

Table 1: Tri dimensional difference between economic liberalism and subsidiarity for water policy

Dimension	Liberal coalition (Market + State)	Community-based subsidiary governance coalition
Institutional economics	Polluter pays within principal agent model; levy = incentive to change behavior (pigovian)	Polluter pays with coasean bargaining; levy = mutualised financing of investments
Fiscal law	Levy = tax collected in general budget; no refund to polluters	Levy = counterpart of a service provision; earmarked and mutualised budget
Authority	Representative democracy: public funds collected and spent under the control of elected representatives	Participative democracy: budget appropriation under control of neo-corporatist committee composed of concerned parties

Source: authors' elaboration.

¹¹ In French the use of the word 'collective' is attached to freedom and equality principles whereby decisions are made by people who are elected one person one vote. The word 'common' is attached to communities where decisions are made under participative democracy.

¹² Irrigation communities and water tribunals in Spain, *Bisses/Suonen* in some Swiss cantons, drainage boards in England and the Netherlands, Wasser-und Boden-Verbände in Germany etc.

With this framework in mind, we can discuss how various river basin institutions fit in the dichotomy, starting with Dutch and German antecedents which influenced French reform.

3. Dutch waterboards¹³

The *waterschappen* are an essential element of Dutch economic, social, and political culture. They are the organizations which, back in the Middle Ages, developed polders in the vast floodplain of the Rhine, Meuse and Scheldt, and created a complex system of dykes, canals and sluices, with windmills to ensure the drainage of polders from winter rain. In the past, each polder was independent from its neighbors, and it was self-organized by a group of farmers, who contributed financially in proportion of the length of the dyke along their land, or of the surface area of their fields drained by windmills on the dykes. Stakeholders were equitably represented in the boards, they had a leader (called Dijkgraaf) and their decisions were overseen by the local feudal landlord. *Waterschappen* also exist in Belgian Flanders and in the Dunkirk area in France, but the Dutch ones followed a specific path.

Over the centuries, Dutch polders expanded to cover most of the country. They remained tiny and, indeed, in 1950 there were still around 2650 *waterschappen* compared with 700 municipalities. They were usually small organizations (average land size 14 km²). They survived an attempt by the French invaders in 1798 to consolidate them, and at least to centralize their charging and cost recovery system¹⁴. However, the disastrous winter flood of 1953, with above 1830 casualties, triggered a radical reform: the Rijkswaterstaat (national water directorate) launched an unprecedented program of sea-dykes supposed to resist a 1/10000 yr event. The small waterboards were consolidated (willingly or under pressure of the 12 provinces) into larger units, while they were additionally entrusted with a responsibility for water quality, through the building and operating of all the sewage works, and increasingly protection of the aquatic environment. Over time with urbanization and industrialization, representation was expanded to domestic water users and industry. Today there remain only 21 *waterschappen*, whose prime responsibility is for dyke maintenance and drainage, plus sewage treatment. They are also responsible for returning space to the rivers and for flood water storage. Their importance is illustrated by their cumulated annual budget of €4 bn (half for drainage and flood defence, half for sewage treatment). They are now constitutionalized as functional public institutions of the Dutch State.

Their boards are composed with representatives of industry and agriculture landowners, and also of ordinary citizens who are directly elected; however, the elections today suffer from a quite low turnout: urbanites do not feel as concerned by flood risks and by the need for collective organization as farmers did in the past, and, perhaps, as much as they should. Citizens are directly represented because they pay the levies which contribute to the budget that encompasses both water quantity (dykes) and quality (sewage treatment)

¹³ This section draws on Barraqué, 1995; Perdok, 1998; Mostert, 2016; and OECD, 2014

¹⁴ Napoleon was probably fascinated by the Dutch polders: on the one hand he was suspicious and is supposed to have derided this country with three scathing words, *canaux*, *canards*, *canailles* (canals, ducks, scoundrels); on the other hand, he considered creating a special corps of hydraulic engineering with Dutch engineers. When the lower Scheldt (*Bouches de l'Escaut*) *département* was set up, the public treasurer decided that waterboards' money was public money and that he should centralize their budgets. His argument was that the last created polders were more at risk of catastrophes (*calamitous* was the word), and pooling the budgets would help protect them. But the Dutch responded that each new polder was a special venture and its partners had to take their risks alone, all the more so as newly drained land was more profitable. In the end, the Dutch were very happy when the French withdrew, since the waterboards' collective money had been seized altogether to fund the European war of the emperor! In France conversely, the institutionalization of irrigation and drainage boards led to the running of their budgets by the local public treasurers.

control. Municipalities, which now are much smaller than waterboards (there remain around 400 of them), have no seats, even though they remain in charge of sewage collection in their area, and of land-use planning (which should take the waterboard's policy into account). Therefore coordination between both is needed¹⁵. Today Dutch households pay for sewerage within local taxes (connection to a sewer is mandatory, so it is taxed); they pay water as a commercial service (i.e. through meters and bills) to one of 10 private water companies, which all belong to municipalities and provinces in which they operate; and they still pay their levies to the waterboards on a household basis: they all pay as if their family was 2.5 persons, no matter the number of children, except single member households who pay for only one person¹⁶. This payment mode is consistent with the common pool resource nature of the *waterschappen*.

4. Ruhr Genossenschaften¹⁷

In North-West Germany, there are also vast lowlands which also led local populations to self-organize in water and drainage boards called *Wasser- und Boden-Verbände*. Such local water management communities also exist in Denmark, and many of them also supply water to residents. However, at the end of 19th century something special happened in the Ruhr (Korte, 1990). The area had undergone dramatic and rapid industrialization and urbanization after the discovery of coal and iron ores. Rivers were over-exploited and polluted, and land subsidence due to mining activities at some point interrupted the flows towards the Rhine, thus generating water stagnation and epidemics.

At the end of the 19th century, cities and large industrial corporations of the Ruhr area got together and obtained the right to transform local water boards into institutions called *Genossenschaften*, entitled to force stakeholders to pay levies so as to fund the needed infrastructure in a mutual fashion. Interestingly enough, a subsidiary and community spirit prevailed upon political opposition between conservative steel and coal barons on the one hand, and social-democratic cities on the other.

Four river-basin based institutions were set up, each with a specific function: first, in 1899, the Emschergenossenschaft transformed the polluted river Emscher into a lined and open sewer down to its merger with the Rhine, where it was treated (primary treatment). Second, in 1913, the famous engineer Karl Imhoff obtained the creation of two institutions on the Ruhr River, south of the Emscher: one upstream to create reservoirs so as to store clean water (Ruhrtalsperrenverein), and the other downstream to build and operate sewage works on behalf of concerned cities and industry (Ruhrverband). After WW1, the Lippe River, north of the Ruhrgebiet, got its own board (Lippeverband) to regulate water use by industry and agriculture. This river basin institutions' creation was the first in contemporary Europe. Today there are 11 such *Genossenschaften* in North-Rhine Westphalia, but none in the other German Länder: under the subsidiarity principle, this sub-regional cooperative model was not needed since the traditional *Wasser-und Boden-Verbände* were considered sufficient.

There is a difference with Dutch *waterschappen*, where citizens are directly represented in the boards (through elections); in the Ruhr case, members of the boards are cities, rural districts, and industrial premises of various kinds, i.e. those who contribute directly to the budget of the *Genossenschaften*, as direct users of water resources. Citizens do not pay taxes to them directly but cover what their municipalities contributed, and they are not represented¹⁸. In addition, there are now seats for consumer and environmental

¹⁵ This issue is covered in the OECD Water Policy Dialogue with the Netherlands (OECD, 2014).

¹⁶ In addition, house owners pay a tax based on renting value to the waterboard.

¹⁷ This section draws on Barraqué, 1995, and Kraemer & al., 1998

¹⁸ See table 3 for a summary of comparisons between Dutch, German and French water boards.

NGOs as well as for staff.

Some *Genossenschaften* now take care of large sewage interceptors (e.g. the Emscher now undergoing a €4.5 bn investment to bury the sewer and let the natural river flow again), but none gets involved in potable water distribution, which is the responsibility of cities. Members cannot decide to build their sewage treatment plant by themselves even if they could set up a cheaper project. Basically, *Genossenschaften* are mutual community-based institutions with compulsory membership, doing works 'in the common interest of the basin'. This is the model that the French founding fathers of the *Agences* tried to follow.

5. The creation of the *Agences financières* and *comités de bassin*

Soon after the beginning of the Vth Republic in 1958, the window of opportunity to innovate in water resources management was opened in France by two decisions of President de Gaulle: regionalisation, and independence granted to the African colonies, implying the return of State engineers in the homeland with visions to introduce some innovations (Marié, 1989). For instance, François Valiron, before being the first director of Agence de Bassin Seine Normandie, upon returning from Tunisia, was posted in the national savings bank (Caisse des Dépôts et Consignations). And Ivan Chéret, returning from Senegal, was soon attached to the Commissariat Général du Plan, and became the secretary of a taskforce to study water problems (SPEPE)¹⁹. These engineers had some international experience and knew about water policies in the major neighboring countries and found out about existing river basin institutions²⁰. These experiments were also followed in the US, where academics (Teclaff, 1967) and government officials were trying to set up 'compacts' on some federal rivers which were experiencing environmental problems (Kneese and Bower, 1968).

Chéret had another quality: for family reasons he spoke several languages, had travelled abroad (e.g. US Bureau of Reclamation, Senegal), and represented France in UNESCO's first water decade; he had visited the Tennessee Valley Authority, but he was most attracted by the Ruhr model: the chief problem of post-war economic boom in France was pollution and lack of clean water for large cities like in Germany, not the quantitative issues which framed the reclamation in the US or the Dutch waterboards (or the Spanish river basin authorities). This is why Chéret did not hesitate to take several senators and MPs on a field trip to the Ruhr, and convinced them to implement the same model in France.

But this proved a difficult endeavor from the start: under French republican/jacobine tradition, public funds should be collected and spent under Parliament control. Having representatives of private interests in the boards of the projected public river basin institutions contravened this historical principle. Yet, there was an economic justification to associate all the polluters to the experiment. Within the SPEPE, Chéret was working with Hubert Lévy-Lambert, an engineer of the Corps of Mines, who was trained in economics in the US and who knew Allen Kneese from Resources for the Future²¹. He then brought an additional justification on the need for river basin institutions with a budget funded through ear-marked taxes.

In addition, in the Parliament and Senate, in 1964, left wing members in particular stood

¹⁹ Secrétariat Permanent pour l'Etude des Problèmes de l'Eau.

²⁰ For a comprehensive presentation of river basin as a concept for water management, see Molle, 2009

²¹ He translated and adapted A.V. Kneese's book on economics and management of water quality into French (Kneese, with a preface by M. Lalloy, Dunod, 1967).

up against the idea that municipalities would have to pay a tax to an institution controlled by the right-wing government and by private business. A compromise was to consider the levies as out of the realm of taxation. In the Senate's debate prior to voting the law, the minister in charge of water clearly defined the levies as '*service rendu*' (service fees) rather than taxes:

"M. Edouard Le Bellegou (*socialist MP*): it is not in accordance with our law that taxes and levies would be decided by a sort of council made up 50% by civil servants. Only elected representatives at national level have the right to vote taxes and levies, not the State's civil servants (*applause*). This is the last prerogative of elected assemblies.

M. Marc Jacquet, *minister of public works*: I request the floor.

M. President: the floor is given to the minister.

M. Marc Jacquet, *minister of public works*: your position on this last point is incorrect Mr Le Bellegou. The levies' rates do not fall under the competence of national elected representatives. Many institutions set up levies without intervention of elected representatives. I do not agree with you.

M. Edouard Le Bellegou: voting taxes is a prerogative of the legislator!

M. Marc Jacquet, *minister of public works*: but in this case it is not taxes. In this debate I explained that levies were in fact services fees (*services rendus*) or for provisions made; it is quite different. To give a single example: it is not the Senate that sets the tariffs of Electricité de France²²."

Finally, the government and MPs found a compromise, creating both 6 basin committees and 6 *Agences financières de bassin* covering the whole country. The *Agences* would be the executive branch of the basin committees, composed in majority of elected representatives (1/3) and water users (1/3: industry, consumer NGOs, very few farmers), the rest from government agencies. The committees would vote for a five-year tentative plan. Decisions to fix the level of the fees that each category of users would have to pay on this five-year basis, and to subsidise projects, would be made by an executive board (*conseil d'administration*) where civil servants would have half of the seats. The total amount of the levies (minus the operation costs of the *Agences*) was supposed to allow the *Agences* to give grants or provide zero-interest loans to the water users/polluters ready to invest in environmentally friendly projects within the same five years, in line with the 5-year investment programs adopted beforehand by the *comités de bassin*. The issue of direct investment of the *Agences* in public works like sewage treatment plants remained undecided. But traditional public water managers like municipal or county services remained opposed to this innovation. On December 16th, 1964, the law was adopted with a clear majority, but on the basis of some ambiguity.

The law gave the following definition for the levies: "the *Agence* sets and collects levies from public or private persons, insofar as these public or private persons make the intervention of the *Agence* necessary or useful, or insofar as it meets their interest" (Art. 14 of the 1964 Water Law)²³. With this broad definition, it would have been possible to fully adopt the German Ruhr model, with local authorities, and unconnected industrial premises (i.e. directly discharging in rivers), paying levies, and the *Agences* designing, building and operating the dams and the sewage works in their mutual interest. But this

²² In France there was then a national electricity board which set a uniform tariff over the country. Tariff revisions were proposed by this national company, under the control of the government.

²³ "*L'agence établit et perçoit sur les personnes publiques ou privées des redevances, dans la mesure où ces personnes publiques ou privées rendent nécessaire ou utile l'intervention de l'agence ou dans la mesure où elles y trouvent leur intérêt*".

did not become reality.

6. The first steps of the *Agences financières de bassin*

The SPEPE followed up the law's implementation until the *Agences* were operational. The SPEPE was attached to the DATAR²⁴, created in 1963 when Général De Gaulle launched an important regionalisation process with the ambition to decentralize and democratize public policies: the broad political innovation meant to replace traditional and non-transparent relationships between local elected representatives and State civil servants headed by the prefects, by another type of policy-making called institutionalization of collective action, more transparent and open to public participation²⁵. The *Agences'* creation was fully part of this, with institutions made to develop a community spirit.

Almost 30 years later, the Commissariat Général du Plan was entrusted to evaluate the *Agences* (CGP, 1998), a former director of Agence Rhin Meuse (1970-1980), was audited. When asked why in his opinion the *Agences* had been created, Jean-Claude Suzanne answered: "to fund works in the common interest", thus referring to the above-mentioned Art. 14 of the 1964 Water Law, and further elaborating:

"when you are in the countryside your house must be equipped with a septic tank. It is in your private interest to protect your health. When you live in a city, for housing density reasons you must connect to the sewer for public health protection and comfort. Sewers are in the collective interest of city-dwellers. But the sewage treatment plant is of no interest for these people, since it brings improvements to downstream riparians. Sewage works are of common interest to the stakeholders in the river basin."

By saying this he clearly recalled that the founding fathers of the *Agences* would want them to be like their Ruhr counterparts, and he also showed that some already guessed what Elinor Ostrom would theoretically frame a few years later (Ostrom, 1990).

But the service fee nature of the *Agences'* levies remained unclear. In 1967, following the criticisms of opponents who claimed this choice was unconstitutional, the Government requested the opinion of the Conseil d'Etat (national-level administrative court) about the nature of the levies. Interestingly enough, the high court refused to place the levies either in service fees or in traditional taxation: it argued that on the one hand levies did not remunerate a *service rendu*, since there was no direct and systematic counterpart to the levies' payment. On the other hand, money was returned to those willing to invest in environmental improvements; for them it was a service provision in a mutual manner, and for the others it was a tax. One could also argue levies were not taxes, since they were calculated in proportion of the estimated cost of the 5-yr investment program needing the support of the *Agences*; mutualising service fees was needed given the importance and lumpiness of water-related investments; in addition these actions would usually develop over several years, and this is why programs were attuned to the 5-year national plans, rather than subjected to annual review of the budget. To add complexity, the status of the *Agences* was EPA, and not EPIC, i.e. in the realm of taxation rather than service... Facing the dilemma, the Conseil d'Etat proposed to place the levies in a separate category, using the Latin wording *sui generis* (of its own kind).

But advocates of the river basin institutions also had to face powerful rivals with State water engineers. Before decentralization laws of 1982-83, they frequently ran public

²⁴ Délégation à l'Aménagement du Territoire et à l'Action Régionale, a sort of French Bureau of Reclamation.

²⁵ Non transparent confrontation between 'center' and 'periphery' was described by Michel Crozier's followers as 'cross-regulation' (Grémion, 1976), while new governance formulas were studied by political scientists later (Duran & Thoenig, 1996).

works on behalf of small municipalities. As a counterpart, their corps would benefit from honoraria calculated as a small percentage of the amount of the works. Of course, they feared that the new *Agences* would replace them. In interviews he gave later, Chéret mentioned the opposition of many engineers in the corps, in particular those from the Corps of Rural Engineering and Forestry (Bouleau, 2007). Many local authorities also wanted to keep their government experts at hand²⁶. In the 4 years that followed the vote of the water law, heated discussions resulted in reducing the *Agences'* role to mere taxation and financing bodies, with no police powers and no capacity to build and operate infrastructure to solve water quality or quantity problems (contrary to Dutch or German water boards). The supporters of the *Agences* however thought that this could be changed, as illustrated by Kneese and Bower's presentation of the French river basin experience in 1968:

"The Generalities of the act have given rise to some disagreements over its proper interpretation with respect of collective facilities. At first, some well-informed commentators (e.g. Lévy-Lambert) thought that it permitted the *Agences* to build and operate collective facilities. However, it is now agreed that the basin agencies must act primarily through grants, loans, and contracts with private and public bodies. It is foreseen that these will be used in such a way as to achieve scale economies and lead toward an economically efficient solution. A new law will be needed to enable the basin agencies themselves to build and operate water quality control measures. Since it is now widely agreed that the new basin agencies should have this power, no difficulty is foreseen in getting such a law enacted by Parliament." (Kneese & Bower, 1968).

But this did not happen. In fact, in the beginning, nobody wanted to pay. Industry claimed that taxation would dent their profitability and competitiveness. The ministry of Industry managed to calm this opposition through a link made with the national planning system, very active at the time: the levies paid to the *Agences* by the most polluting and economically fragile sub-sectors ('branches') would be gathered at national level, the ministry would top this fund with additional subsidies, and then would sign a contract with the representatives of the branch to phase the de-pollution of all premises over a few years²⁷. This '*contrat de branche*' policy could not last long, because the European Commission soon claimed that this subsidy system was against the equal opportunity regulations at European level. But it lasted long enough to convince industry that the *Agences* were indeed good partners, providing subsidies and zero interest loans. Industry was convinced that the (political) benefits of joining the pollution control programs were higher than the cost of the levies. In the 1970s, the *Agences* were thus able to rely on industry to convince cities that they should also accept the system. This led to a consensus around river basin committees and *Agences financières de bassin*, being in practice, common pool resources institutions like the Dutch or German water boards, albeit with powers limited to collecting services fees and funding. Water users' representatives in the boards felt the *Agences* were their thing all the more so since Government remained silent.

Now we can sketch a typology of the river basin institutions in the 3 countries.

²⁶ On the initial experience of the *Agences*, see the long and interesting contribution of P.F. Ténrière-Buchot in a special issue of *Water Alternatives* (Ténrière Buchot, 2013).

²⁷ For a detailed account of these industrial branch contracts, see Lascoumes, 1993.

Table 2: differences and similarities between *Agences* and Dutch and Ruhr Waterboards

	Dutch Waterboards	Ruhr Genossenschaft.	<i>Agences</i>
Size	Tiny=> supralocal	Supralocal (catchment)	River basin (Hydro-graphic district)
Status	State institution	Subsidiary institution	State institution
Citizens representation	direct	Indirect via local authorities	Indirect via local authorities
Type of contribution	Service fees (ear-marked)	Service fees (ear-marked)	Service fees => taxes (>1982)
Project ownership	yes	yes	No (only aids to investments)
Police powers	partial	partial	no
Planning powers	yes	yes	Weak (not binding)

7. Pollution and abstraction levies end up in water bills

Yet this initial 'truce' remained challenged, because local authorities indeed claimed that they had constitutional competence over local public services, which implied that they (and not the *Agences*) would build the sewage works, as a complement to sewer systems which they ran and expanded with (then) support from the ministry of Interior, but which were mostly paid by water users in their water bills. They were eager to top these aids and revenues with subsidies from the *Agences* and technical support from Government engineers, but kept finding incongruous that levies would be charged upon democratically elected and sovereign municipalities: they have repeatedly claimed until now that as providers of public services, they could not be made liable for impacts on water resources. The Association of French Mayors (AMF) went on to argue that, since the levies were a counterpart for a service provision, they should be paid by the end beneficiaries, i.e. potable water users. In 1974 the government accepted the argument and decided that levies would be paid directly by water users through water bills, while municipalities (and not the citizens) would still receive grants and loans. The wording corresponding to this shift is '*contre-valeur*'. Doing this was legally tricky but possible: in France, water supply is metered, it is a commercial service in nature, so that topping the price of each cubic meter with a service fee to the *Agence* for water supply improvements will set this fee in the realm of *service rendu*. But for public health reasons it is mandatory to connect the buildings to a sewer if the street is sewered: in that case sewerage is an imposition, and normally the sewer fee is a tax (proportional to the rental value of the building). Thus it could not be charged through the water bills. However, in October 1967, it was decided that in cities, where nearly all the population is sewered and sewers are essential to get rid of domestic wastewater, one could consider sewerage as a *service rendu*, which would allow transferring the charge to the water bill, and thus allow wastewater utilities to recover stable and growing revenues from water users. This also was the rationale for adding the pollution discharge levy of the *Agence* onto the same water bill.²⁸

²⁸ It must be noted that in the same period in Germany, the sewer service was also shifted from an imposition to a commercial service attached to drinking water consumption.

In addition, in 1974, a modulation of the pollution discharge levy allowed to increase it by a factor related to the size of cities, so that the financial support of the *Agences* could meet the higher costs of sewage works in larger cities. This deepened the understanding of the levies as service fees.

In 1975, Michel Rocard, a then high-ranking inspector of the Treasury, who would become prime minister after the re-election of president Mitterand in 1988, was charged to co-ordinate a critical audit of the *Agences*. But he was in favour of decentralization and self-management, and upon auditing Seine Normandy he finally abandoned the hostile position of the Treasury, concluding that close association of stakeholders and budget autonomy made the experiment a success (Rocard, 1977).

In the end, during this initial phase (1968-1981), the whole system was stabilized: the *Agences* levies were de facto considered service fees to be added to people's water bills, but local authorities would be receiving the grants. In addition, the Treasury introduced an 'austerity' price control mechanism, and water prices were frozen in 1978, for a period of 10 years. Things went on at a quiet pace, with money being almost exclusively used to fund treatment plants and multipurpose dams. The Conseil d'Etat also ruled that unless a specific levy on flood risks was created, the *Agences* could not fund flood control projects. No surprise: this additional levy was not created.

8. A first disruption in the system

When the left-wing coalition conquered the presidency with F. Mitterand in 1981, it knew very little about the river basin institutions. Since new MPs had come to power through representative democracy, they naturally overlooked the *comités de bassin*, in which conservative industry and territorial representatives dominated. In France more conservative rural areas are always over-represented compared to cities, in particular large ones. Prime Minister Pierre Mauroy sought to re-balance the composition of the *comités de bassin* with representatives of the newly elected regional councils and also of workers' unions. In May 1982, he asked the Constitutional Council for an opinion on the way to do it: would a decree suffice, or did it need a law?

One month later, this Council answered that it would need a law²⁹. But it added an answer to a question which was not raised: in its opinion, the levies of the *Agences* were *impositions* (taxes). And the Council concluded that since the Parliament had unduly considered the levies as public service fees in the 1964 law and subsequent decrees, it was its duty to take advantage of this law to re-integrate the levies into government taxes, and subject them to its own yearly control. From this moment on, a sword of Damocles was hung above the *Agences* and their budgets. But many people in the water policy community bet that it would be difficult to find a majority of MPs ready to vote the law, for fear that, as mayors, the same would lose access to grants and zero-interest loans.

To add to the confusion, this happened at the very moment when the government allowed the *Agences* to increase the levies paid by water users in a city, by a factor related to the (un)completion of sewers (*coefficient de collecte*). Indeed, in any city the total cost of sewerage piping is about 80% of the infrastructure, and the sewage works only 20%. Funding sewerage expansion was still a priority.

Yet indeed, increasing levies to fund sewerage simply reinforced their character of service fees, and this, just after the Constitutional Council decided they were taxes, in which case there was no more reasons to transfer them onto water bills! But nobody could imagine such an outcome; re-shuffling the levies system into a taxation system

²⁹ Decision 82-124 of June 23, 1982.

frightened the government as well as local elected representatives; this issue was shelved, and law 84-602 of July 13, 1984, just modified the composition of the *Comités de bassin* and *Conseils d'administration*, to make room for representatives of regions and professional unions of employers and workers.

Also, by the mid-1980s, there was an evolution in the type of projects to be funded: until the end of the 1970s the *Agences* supported individual 'end-of-pipe' projects: many sewage works and a few multipurpose reservoirs. But if this would reduce the number of point source discharges, it was insufficient to improve the global environment quality. Maintaining the rivers and their banks in a more environment friendly way appeared as a new challenge and as a costly task for the rural engineers. This is how the idea emerged to develop 'river contracts' where local water committees would decide (and fund) a policy to better manage the banks and the spawning areas. Incidentally, river contracts were first developed in Alsace, where a more German-type customary community culture had remained. After the election of F. Mitterrand, these contracts spread over the country, and in the next 5-year programs of the *Agences* they received privileged support.

In 1988, François Mitterrand was re-elected president, and he chose Michel Rocard as Prime minister. This suddenly changed the picture for the *Agences*: Mr Rocard recalled his 1977 report, and appointed, for the first time, a well-known ecologist, Brice Lalonde, as environment minister. Together they decided to support the *Agences* and doubled their budgets: in fact, this followed the adoption in 1986 of the Single European Act through which the European Commission had gained competency on environmental issues. In the field of water this had resulted in the launching of two new Directives targeted on urban and rural pollution sources. The 1991 Urban Wastewater Directive in particular (UWWD - EC 271/91) would lead to very significant investments in sewage collection and treatment, and it had to be financed through increasing the pollution discharge levies. Yet this increased role for the *Agences* stirred growing opposition from the Treasury and some water users. It was suggested the *Agences* were too big and too 'mutual' to be efficient, suggesting bringing the system closer to the principal-agent model, i.e. to increase the level of taxation to stimulate the polluters' 'individual responsibility', and to break the *Agences* down into smaller units (e.g. separate Loire from Brittany), so as to better target real problems (Martin, 1988).

The ministry of the environment did not want to modify the existing set up that relied on 6 *Agences* and on existing withdrawal and pollution discharge levies. Instead it seized the opportunity of the reinforced water policy by the European Commission to better institutionalize the river contracts of the previous decade. This is why, with the urgency to get a new water law voted, the constitutional issue of the *Agences*' levies was shelved at the time. They were just re-labelled "*Agences de l'eau*", while their budgets doubled. In the 1992 law, the chief innovation was legal: water is re-defined as 'part of the common heritage of the Nation' (which can be understood as 'common pool resource'), and each *comité de bassin* was asked to draft a master plan, SDAGE³⁰, using an extensive public participation process. At the catchment level, every time some rivalry over water quality or quantities occurred, a SAGE³¹ should be drafted. The body in charge of this new catchment plan was to be a *commission locale de l'eau*, made up 50% of elected representatives, 25% government servants, and 25% water users and civil society. Allocating 50% of the seats to elected representatives (instead of less than 40% in the *comités de bassin*) was the compromise sought by the left-wing government to maintain participative democracy, but to make it more acceptable to politicians. On this basis, the government managed to mandate the incorporation of the constraints of an approved SAGE in local land-use plans and in withdrawal and discharge licenses given by

³⁰ Schéma Directeur d'Aménagement et de Gestion des Eaux.

³¹ Schéma d'Aménagement et de Gestion des Eaux.

the prefect (responsible for water police). But the law hardly mentions the *Agences*, and failed to tackle the constitutionality issue: as a result, the *Agences* were supposed to turn towards new tasks like land-use policies to restore the aquatic environment's quality, but through a funding system still focussed on traditional water supply and sanitation (WSS) services improvement via infrastructure investments and technology.

9. The *Agences de l'eau* accused to fail

In 1994 a corruption affair linked to delegating water distribution to Lyonnaise des Eaux, led the mayor of Grenoble to jail. This was bad news for the water sector in general because the media would soon confuse this with the role of the *Agences* in the rising water bills. In 1995, Jacques Chirac was elected president, and Corinne Lepage, a well-known environmental lawyer, was appointed environment minister. She soon proposed her colleague minister of Finances, to 'bury the ax of war' between the *Agences* and the Treasury. This was to be done after an evaluation of the system by the Commissariat Général du Plan (CGP)³². However, during the review process, public protest led President Chirac to call general elections. Surprisingly, elections brought the left coalition back in power, with Ms Dominique Voynet as minister of Land Use Planning and Environment. Then when the CGP report came out (Matheu, 1997), it was used by the new (ecologist) minister as a tool to justify an increased control of her ministry over the *Agences*.

Yet this report was not overly critical, it reckoned that the principal problem in French water policy was the low enforcement of regulation and the inefficiency of the water police. It considered the *Agences* had done a good job, though they were 'not really implementing the polluter-pays principle'. The evaluation contained an in-depth criticism: within the scientific committee of the evaluation, the majority of members were more on the 'orthodox pigovian' side, and many sincerely believed that returning the levy to subsidize investments would lead to over-invest, i.e. to irrational economic allocation. A 'convenient' leak of the report before its publication allowed newspaper *Le Monde* to publish a full page on the 'failure of the *Agences de l'eau*' (Orange, 1997). And the criticism came out again that levies on domestic users' bills made more than 80% of the *Agences*' incomes, and industry and farmers were unduly protected. This argument was however not taken from the CGP report itself but resulted from discussions among a heterogeneous coalition including anti-privatization activists, ecologists, some media and politicians. In the *comité de bassin* Seine Normandie, for example, domestic users had only been represented via elected representatives of local authorities and quiet NGOs like family associations, which supported the system as it was (Laigneau, 2014, vol.2). But with the crisis to come, new representatives of civil society would adopt a much more critical attitude.

But while they were right about their massive contribution to the income side, they forgot to look at the expenses side of the *Agences*' budgets. Indeed, more than 70% of the funds were supporting investments in urban sewage collection and treatment and drinking water projects by local authorities. In particular, compliance with the UWWD of the EU implied investing in sewer completion and sewage treatment upgrades, which led to overall tariff increases. The *Agences* increased their pollution discharge fees in anticipation to be ready to bring support, so they got the blame ... For politicians under media pressure, it was easier to blame the undue protection of industry and agriculture, as well as delegation of WSS services to private companies, for an average doubling of domestic water bills between 1990 and 2004, rather than accepting their own responsibility and that of EU Directives.

³² It is during this evaluation that the above-mentioned dialogue with engineer J.C. Suzanne took place.

In addition, French environmental economists were following the European discussion on green taxes as implemented in Sweden: replacing a taxation of profits by one on environmental damage would procure the same fiscal revenue but would incite polluters to invest in environment friendly technology, which would generate employment. This kind of green taxation was supposed to generate a 'double dividend'.

Typically, at the end of the 1990's the government's economic council advocated creating a general tax on polluting activities (TGAP) which would fit in the pigovian PPP model. The levies of the *Agences* would be included in this TGAP. This, in fact would mean the capture of their budgets by the Treasury (rather than ear-marked funding for projects). Obviously, announcing this within a bill in Parliament immediately put the water policy community up in arms against the TGAP. The *comités de bassin* and the national union of environment civil servants overtly criticized the minister, all the more so that she was from the Green party, i.e. not supposed to side with the Treasury and orthodox economists. In the end, existing pollution and withdrawal levies escaped being included in the TGAP, but a new levy on pesticides utilized by agriculture was included in it³³.

The left-wing government prepared a new law as the idea of a direct representation of domestic water users had surfaced again. But it first decided to follow the opinion of the Constitutional Council of 1982, and to subject the *Agences'* budget to a yearly review by Parliament. In addition, the government also tried to get a new levy voted, this time on nitrates from agriculture. Some also proposed to abandon domestic users' taxation, and to have the levies paid again by municipalities. In his thesis Patrick Laigneau compiled all the parliamentary debates and discovered that the association of French mayors (AMF) had finally accepted this idea. But when the law project was ready, political crisis deepened, and it became impossible to pass the bill before general elections in 2002, which turned out to be a disaster for the left.

10. LEMA: the end of *l'eau paye l'eau* (water pays for water)?

President Chirac was re-elected, and the new right-wing Parliament re-shuffled the bill. The end result was the LEMA (*Loi sur l'Eau et les Milieux Aquatiques*) in 2006, with the elimination of the proposed nitrates levy on agriculture (which could be expected from the new majority) and the replacement of the dual levy system (freshwater abstraction / pollution discharge) by a set of 8 new levies³⁴.

Obviously, the Parliament and Senate could not escape debating the nature of the levies once again. Many MPs knew that to keep them as service fees, they would need to modify article 34 of the Constitution, but they were reluctant to do so. Yet politicians looked for a solution: in the first Senate debate in 2005, rapporteur Bruno Sido started his presentation with these words:

"Concerning the levies' mechanism, your rapporteur is convinced of the need to pick up again, during this bill's examination by the Parliament, a reflection on their legal nature. For sure the Constitutional Council ruled in 1982, giving them the character of *impôts de toutes natures*, and the State Council denies most of these levies being in the realm of *service rendu*. The present bill just endorses this choice, but one can regret it.

³³ However, the level of the tax was successfully lowered by the farmers union, so that it had absolutely no influence, and a few years later it was given back to the *Agences* ...

³⁴ The 8 levies include a continued abstraction/consumption levy; a domestic pollution discharge levy, now extended to all inhabitants in small villages; a levy for modernizing sewer networks (now also paid by connected industrial premises); a levy on net pollution discharges by non connected industry; a levy on pollution by agriculture; a levy on water storage / obstacles on river beds; a levy for the protection of aquatic environment (new name for fishermen's permits); and a stormwater tax on sealed surfaces to be developed not by the *agences* but by local authorities.

"Consequences are indeed important concerning the *Agences'* funds, presently considered as ear-marked taxes, but also vis-a-vis the guarantee of their continuity. Won't the proposed legal designation of the levies expose the *Agences'* financial resources to the risk of being one day subjected to the rules of national budget fungibility?³⁵, i.e. in practice to be merged into the State budget and subjected to its financial appetite?

"On top of this, the *Agences'* subsidies are from now on considered as State subsidies and thus subjected to EU limitations, in particular in the field of environmental protection. How can we then balance these ever-stronger restrictions with the continued participation of industry in the basin committees if any form of aid to them is banned?

"We must explore the new routes opened by the integration of the 2004 *Charte de l'environnement* in the Constitution via the constitutional law of March 1st, 2005. Article 4 of the charter in particular, mandates "any person to contribute to the compensation of damages he/she causes to the environment in the conditions defined by the law".

"Wouldn't it be a solution to consider a new category of levies, identified as contributions aimed at compensating damages to water? Nothing would impede defining the general framework of these levies in the law, but with the aim of leaving enough autonomy to river basin authorities, responsible for water management at an appropriate scale, to meet the targets set for 2015 by the Water Framework Directive. The link could then be kept between these levies and the subsidies to public or private bodies to support integrated aquatic environment recovery policies at the scale of hydrographic districts."³⁶

This final paragraph is ambiguous, because it says nothing about the capacity of the environmental charter to protect the *Agences'* budgets from yearly review by Parliament, and from a preliminary merger into the State's budget. In any case, having the final word in the disagreement with the Senate, a majority of MPs did not understand why they should abandon their public budget control prerogative in favour of institutions which were criticised by so many actors. In the open columns of newspaper *Libération* dated 18 april 2006, former prime minister Michel Rocard, suspecting that the battle against the Treasury was about to be lost, spoke up to defend the *Agences*:

"All this is all the more absurd that the solution does exist. The President of the Republic took in 2004 the initiative to propose the Parliament to integrate the environment charter in the Constitution, which the latter did on March 1st, 2005. [...] "Water levies are obviously a practical translation of these constitutional obligations. It then become logical to rank them administratively not in the «*impositions de toutes natures*», but in the «*redevances pour services rendus*» since evidently, abstraction levies support water supply provision, and pollution discharge levies allow to bring each polluter to contribute to improving the quality of the aquatic environment for all others.

"It is then urgent to amend article 37 of the bill in question, quoting these constitutional articles, so as at last to consolidate the legal status of the levies and thus revitalize a powerful tool of ecological struggle which France had managed to set up 42 years ago.

"In spite of its apparent technical modesty, this matter is extremely serious. If we let go with the incentive character of the levies, pollution will not be fought anymore, it will grow again. [...] there is no one-sided vision here, but only the evidence that general interest is seriously threatened by a lack of legal intelligence. If we don't do this, what on earth was the use of incorporating the environment charter into the Constitution?"

But he wasn't followed by the Parliament. Minister Lepeltier and his staff, and the Parliament were quite hostile to re-defining water levies as mutualised service fees, and

³⁵ i.e. confusion of all taxes into a single income, without any ear marking.

³⁶ Our translation from the transcription of the Senate's debates. In fact this proposal did not succeed, because Mr Flajolet, the rapporteur in the Parliament, and then minister Lepeltier were in favour of subjecting the budgets of the *Agences* to the yearly control of the Parliament.

the issue of putting the *Agences* levies in a separate category devoted to natural resources was once again abandoned. Rapporteur Flajolet probably got convinced that the environment charter was not a strong enough document to circumvent the decision of the Constitutional Council of 1982. In the end, LEMA formally subjected the *Agences*' budgets to a yearly Parliament review. The right-wing majority promised not to touch the ongoing 5-year program budget. They kept this promise, but after election of President Hollande in 2012, the new government was not bound by the promise.

Then, LEMA opened the way for Government seizing part of the *Agences*' budgets to fund policies unrelated with improving WSS environmental performance. In the past, this had happened exceptionally. For instance, with flood prevention measures: back in 1966, the Conseil d'Etat had considered that letting the *Agences* become involved in funding flood control infrastructure, requested the creation a specific levy to do so, within the existing 1964 law under the modification of flow regimes (neither water abstraction nor wastewater discharge). But it was then impossible to create this levy at national level (Barraqué, 2014). However, in 1998 the ministry of the Environment decided to seize 3.5% of the 6 *Agences*' yearly budgets to finalise flood risk mapping. Subsequently diversions from the *Agences*' budgets were repeated and were employed for other government tasks than flood control. In 2004 for instance an amount of 110 M€ was taken to cover the deficit of ADEME³⁷, as shown in fig.1. In 2006 LEMA created the National Office for Water and the Aquatic Environment (ONEMA), entirely funded from the *Agences*' money.

But now, the encroachment on the budgets of the *Agences* for the benefit of Treasury is permanent. As the reduction of the national deficit is now under close scrutiny by the European Commission, it was decided to cut all government spending. Unsurprisingly, the Finance Committee allowed the Treasury to seize 10% of the *Agences*' budget every year until the next presidential elections. This has created a lot of turmoil: the executive boards of the 6 *Agences* delayed a vote of their budget at the end of 2014. Many people including representatives of regional and county councils and mayors expressed their discontent, but in vain: the Treasury's grabbing goes on with no justification given.

Last but not least: ONEMA is now merged with a few other services to create the AFB (Agence Française de la Biodiversité), and from 2018 on, it has been funded from the budget of the *Agences*. Other institutions unrelated to water policy (national parks, national office for hunting and wildlife), will also be funded from the *Agences*' budgets, making permanent the annual deduction of around 300 M€/yr. This represents around 15% of the cumulated water levies, mostly paid from domestic water bills.

³⁷ Agence de l'Environnement et de la Maîtrise de l'Energie.

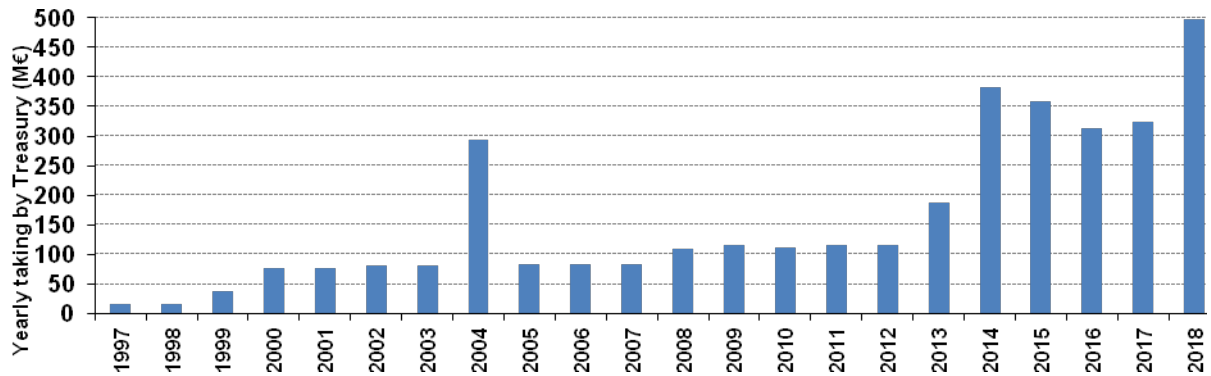


Figure 1: Annual seizing by central government of the *Agences de l'eau* cumulated budgets³⁸

11. Conclusion: French water policy at the crossroads

Our analysis suggests that French politicians acted in an incoherent manner. They voted the subjection of the *Agences'* budgets to Parliamentary control, following the opinion of the Constitutional Council that levies were taxes. But then they should never have been superimposed on water bills, as that corresponds to the other parafiscal category (service fee). Yet 50 years ago, elected representatives would never have accepted the *Agence* system had not the levies been considered service fees, which allowed charging them on water bills rather than on land taxes. The opacity generated over the years has led many consumer and environmental NGOs to think that they were victims of the system, since they are paying now above 80% of the total levies, and they do not see that most of what they paid is returned to their water supply and sanitation authorities to invest in system improvements. Discontent evolves into distrust, and even though they don't know how much they pay for water, many people think their water bill is too high, due to the inefficiency of the *Agences* while in fact it is an artefact of a contradictory and convoluted regulatory system. This crisis takes place at the very moment when elected representatives are increasingly criticized by public opinion after various corruption affairs, and an alleged incapacity to improve the economic situation. Sooner or later, groups of citizens may be tempted to refuse paying the *Agences'* levies in their water bills, and will either request to be directly represented in the *comités de bassin* (Dutch-type solution), or to let their elected representatives pay (Ruhr solution).

Facing this issue, the Biodiversity law voted in 2016 proposed to create a 4th category of non-economic water users in the *comités de bassin* at their next renewal, planned for 2020. We hope that the new composition of the *comités* will support the evolution of the *Agences'* role in the spirit of the WFD. The issue is not just to improve water supply and sanitation services, but indeed to recover the quality of aquatic environment and ecological continuity. With the SDAGE and SAGE, (partly) flood risk management plans, and river contracts, the *Agences* are involved in the new multi-level water governance.

In 2010, Michel Rocard wrote: "An American economist, Ms Elinor Ostrom, professor in Indiana, was the first woman chosen for the Economics Nobel Prize, in 2009, to have shown that, concerning community facilities and collective services, management by their users appears in many places in the world as more efficient than by the State or the Market!" (Rocard, 2010: 84-85, our translation). Improving the culture of common pool resources and their institutions in French society should lead to modify the Constitution so as to recognise a third category of levies, allowing the *comités de bassin* to collect and spend directly their budgets, like is the case in their original model in the Ruhr.

³⁸ The figure for 2017 is provisional.

Integrated water resource management requires supplementing representative democracy with participative democracy. As illustrated by the Dutch and Ruhr examples, institutions for the management of common pool resources do exist and operate, at scales far larger than the Ostromian communities. In France, it is becoming fashionable to discuss the notion of *bien commun* or *communs* as a 21st century solution to the shortcomings of liberal globalisation. With the Cochabamba anti-privatisation struggle in mind, some even consider they could represent the 21st century revolution (Dardot & Laval, 2014). But, beyond a growing consensual discourse on water being a common good, French elected representatives and the media usually fail to see the difference between water resources allocation and WSS services public vs private debate.

Picking up again the comparison with Dutch and Ruhr River basin experiences, there is a striking initial difference: while the latter typically developed under local leadership and a bottom-up subsidiarity principle, the *Agences de l'eau* were imposed by central government to cover the full French territory, which generated immediate opposition at the time of strong confrontation between Centre and Periphery (Grémion, 1976). In addition, Government and Parliament together limited the sovereignty of the *Agences*.

What do we mean with these words? A public institution has the (sovereign) power to arbitrarily constrain citizen behaviour. In environmental policies, there are three associated tools available in a democratic regime (judiciary being a separate power): making rules and enforcing them (police powers); taxing citizens and deciding how to allocate the resulting public budget; and building and operating projects together with planning land use in such a way as to curb private property rights.

From what we gathered in the Netherlands and in Germany, Dutch and Ruhr waterboards are entrusted with some power in the three dimensions, while it is not the case in France, where the *Agences* have no police powers and no authority to manage projects directly. Their hydrographic district master plans are not binding either. They have only had the power to tax water users in proportion of the public budget needed to subsidise water users' environment-friendly projects. This 5-year budget has been subjected to review by both the ministry of the Environment and the Treasury, and now it is reviewed yearly by Parliament. This is also why, to develop integrated actions on aquatic environments, river maintenance, biodiversity, floods etc., various institutions have been developed at a more local level than the 6 *Agences*. These include river contracts, SAGE, local flood plans, and catchment based institutions called EPTB (*établissements publics territoriaux de bassin*). Under the present third phase of decentralisation, it remains to be seen how they will eventually be recomposed, but in any case, these institutions can generally manage projects directly with public money since their boards are composed only with elected representatives (plus their civil servants) but not with industry, agriculture or NGOs. Eventually, if enough of these more local waterboards develop, the role of the *Agences* might become superfluous concerning the most ambitious part of EU water policy now: recovering the aquatic environment's quality through integrated and participative management. Yet one could conversely consider that it is useful to keep the *Agences* as institutions able to review projects in which they are not directly involved, being judge and not judged, and able to balance between nature based and technological solutions (the latter becoming often more expensive than the value they produce).

But then, if their incentive capacity is only based on subsidies and zero-interest loans, they face another problem. Private partners in the *comités de bassin* have difficulties in obtaining support from the *Agences*, which are considered public institutions of the State. Their subsidies qualify as State aids, which are capped by the European Union in order to avoid distortion in the competitive position of companies receiving such aid – but then why would industry want to stay in the *comités*? Indeed this is a very specific French problem: in the Dutch or German case, levies paid to the waterboards are not returned to water users willing to improve the environment, but used by the waterboards to invest on behalf of their members. Those users which reduce their polluting discharges pay less.

In the British or Danish case, there are pollution levies paid by industry and cities, but they basically serve to fund the agencies in charge of controlling polluters, and the money is not returned to them either. In Italy, there are no pollution discharge levies on industry. Now if the French are not able to redefine their *Agences* as non-State, but rather mutual institutions controlled by their members, the system will remain weak, and could indeed evolve towards the British model, with a PPP conception operating under the principal-agent model – as a supplement to the State police power – exemplifying the solution proposed by environmental economists like Olivier Godard.

This paper points at the difficulty for French society (in particular the political class and State civil servants) to accept opening decision making to participative democracy, which has been identified as a good solution for the management of common pool resources, and to foster public participation in general. Currently, it might be a solution to return toward the initial German Ruhr model, and charge levies on the (larger) local authorities now under consolidation, and no longer on domestic users. It could also lead to allow the *Agences* directly build environment friendly projects. It could imply to modify the Constitution so as to recognise a third category of levies to fit better within the concept of 'mutualised service fees'. But the political class and the Treasury don't seem ready to accept what would result in their loss of power. It remains to be seen what will eventually come out of the national water conference called by president Macron due in spring 2018.

References

Andersen, MS (1994). *Governance by Green Taxes, Making Pollution Prevention Pay* (Issues in Environmental Politics). Manchester Univ. Press, 247 p.

Barraqué, B (1995). *Les politiques de l'eau en Europe*. Paris: La Découverte, 305 p.

Barraqué, B (2014). The common property issue in Flood control through land use in France. In *Journal of Flood Risk Management*, doi: 10.1111/jfr3.12092. 13 p. (Virtual Special Issue: *The European Flood Risk Management Plan*), T Hartmann and R Juepner, (eds).

Bouleau, G (2007). *La gestion française des rivières et ses indicateurs à l'épreuve de la directive cadre: analyse néo-institutionnelle de l'évaluation des cours d'eau en France*. PhD thesis in Human and Social Sciences. Paris: AgroParisTech, 457p. <https://hal.archives-ouvertes.fr/tel-00161257/document>

Chéret, I (1967). *L'eau*, Paris: Le Seuil, coll. Société, 128 p.

CGP (Commissariat General du Plan) (1997). *Évaluation du dispositif des Agences de l'Eau*. Paris : La documentation française, 215 p.

Dardot, P and C Laval (2014). *Commun. Essai sur la révolution au XXI^e siècle*. Paris : La Découverte, 593 p.

Duran, P and JC Thoenig (1996). L'État et la gestion publique territoriale. *Revue française de science politique*, 46e année, n°4: 580-623.

Ellickson, RC (1989). The Case for Coase and Against Coaseanism. *Faculty Scholarship Series*. Paper 462. http://digitalcommons.law.yale.edu/fss_papers/462

Ellickson, RC (1973). *Alternatives to Zoning: Covenants, Nuisance Rules, and Fines as Land Use Controls*. 40 U. CHI. L. REV. 681: 729–31

Formiga, R, Laigneau, P and Barraqué B (2018). Regards croisés sur les organismes de bassin en France et au Brésil dans une perspective des communs, in *Revue Internationale des Etudes de Développement*, issue 233, accepted.

Godard, O (2016). *Environnement et développement Durable. Une approche méta-économique*. Louvain-la-Neuve : De Boeck, 494 p.

Grémion, P (1976). *Le pouvoir périphérique. Bureaucrates et notables dans le système politique français*. Paris : Le Seuil, 472 p.

Korte, H (1990). Die entfaltung der infrastruktur. In Köllman W et al., *Sozialgeschichte des Ruhrgebiets im Industrie Zeitalter*. Düsseldorf: Patmos Verlag.

Kneese, AV and BT Bower (1968). *Managing water quality: Economics, Technology, Institutions*, Resources for the Future and Johns Hopkins Press, 328 p.

Kraemer, RA and F Jäger (1998). Germany. In FN Correia (ed), *Eurowater, Institutions for Water Resources Management in Europe*, Vol. 1, Balkema, Rotterdam, pp 183-325

Laigneau, P (2014). *Tristes Aguas Francesas / Tristes eaux françaises*. PhD Thesis in Environnement Sciences. UFRGS / Agroparistech. Tome 2: *Évolution du mode de représentation des usagers domestiques du CB Seine-Normandie (1967-2012)*, 83 p. <https://www.lume.ufrgs.br/bitstream/handle/10183/114439/000953271-02.pdf?sequence=2>

Lascoumes, P (1993). Négocier le droit, formes et conditions d'une activité gouvernementale conventionnelle. *Politiques et management public*, vol. 11 n° 4 : 47-83.

Marié, M (1989). *Les terres et les mots*. Paris : Klincksieck-Méridiens, 214 p.

Martin, Y (1988). Quelques réflexions sur l'évolution des agences de bassin. *Annales des Mines*, n°7-8, juil-août: 117-119.

Molle, F (2009). River-basin planning and management: The social life of a concept. *Geoforum* 40: 484-494

Mostert, E (2016). Between arguments, interests and expertise: the institutional development of the Dutch waterboards, 1953-present. online in *Water History*. DOI 10.1007/s12685-016-0154-1

OECD (2014). *Water governance in the Netherlands: fit for the future?* 296 p.

Orange M (1997) Les Agences de l'eau sous le feu des critiques, in *Le Monde* nov. 14.

Ostrom, E (1990). *Governing the Commons. The evolution of collective institutions for collective action*, Cambridge University Press, 280 p.

Perdok PJ and J Wessel (1998). Netherlands chapter. In F.N. Correia (ed), *Eurowater, Institutions for Water Resources Management in Europe*, Vol. 1, Balkema, Rotterdam, pp 327-447

Rocard, M (1977). *Synthèse du rapport n°77 081 sur les Agences de Bassin*. Paris : Inspection des Finances (unpublished – Archives of Seine-Normandie Agence de l'Eau)

Teclaff L (1967). *The river Basin in history and law*. The Hague: Martinus Nijhoff, 228 p.

Ténière-Buchot PF (2013). Happy like a clam in French water. *Water Alternatives* 6(2): 218-238