3 questions for…

Laurent Roy, Director of Water and Biodiversity, Ministry of Ecology, Sustainable Development and Energy

What are the major challenges we face when it comes to water?

The major challenges are access to drinking water and high-quality waste water treatment services. This is first and foremost a human challenge, since those populations who do not have access face major health and social impacts (obstacles to education, etc.). It is also an economic challenge, since scarcity of water can hamper development, agriculture and all other activities in general. Finally, it is a geopolitical challenge in the sense that water issues can lead to conflict. We need to deliver both technical and organisational solutions to these problems, using short-cycle, inexpensive and environmentally friendly water treatment systems such as dry toilets.

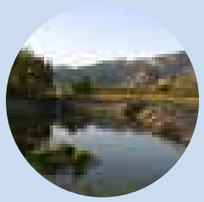
What experience can France bring to the table?

France has extensive experience in terms of shared governance (users, companies, elected representatives and administration) and water management at river basin level. Another of our strong points lies in the water funding mechanism, which is based on two principles: “water pays for water” and “polluter pays”. This system delivers the funding necessary to support investment, as well as to manage and sustain infrastructure in the long term. We need to combine this system with a consideration of social issues, to ensure that poor populations also have access to water.

What challenges must France and the other countries in attendance at the Forum meet?

The impacts of climate change are felt most acutely among the population when it comes to water – the expansion of deserts, more intense periods of precipitation, longer droughts and more violent floods. We therefore need to adopt a global water policy that takes climate change into account, then tailor this policy to the specific needs of each territory as part of a collective careful water resource management project. For example, we need to combat water loss in distribution networks, prioritise low-water-use crops, develop safe and reliable wastewater recycling systems and, where necessary, increase storage capacities.

Examples of French water cooperation at international level



China

Cooperation on river basin management

At institutional level, France collaborates on water-related matters both within Europe and beyond. In 2012, France signed a cooperation agreement with China covering integrated water resource management in the Hai river basin. The project, which is largely funded by the Seine-Normandy Water Agency, aims to test a number of water management tools (such as “polluter pays” principle, river basin governance, etc.) in the pilot Zhou river sub-basin. An assessment report has already been delivered, and a river basin management plan is expected to be finalised in 2015.

Palestine

Cooperation around a water tower project

Water Agencies are allowed by the law to allocate up to 1% of their revenue to international solidarity. The French Development Agency (AFD) and Water Agencies coordinate their activities in Palestine to enhance water efficiency. The AFD and the Adour-Garonne Water Agency have put together a drinking water supply project in the north-eastern region of the West Bank, in conjunction with the Palestinian Water Authority (PWA). The AFD has funded the construction of a drinking water distribution network in the village of Tayasir, while the Water Agency has financed a 500 m³ drinking water reservoir.



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FRANCE FACING THE WATER CHALLENGES

50 years of experience

From Marseille to Daegu: a Forum for water, a Forum for people

Water – a vital resource in the hands of people. This was the clear message delivered at the last World Water Forum, held in Marseille in March 2012. Three years ago, the 6th World Water Forum brought together 35,000 people from 175 countries, providing a stage for large-scale civil society mobilisation around the theme of water, involving young people, women and non-governmental organisations. There was one particularly striking contribution of the Forum: the 1997 United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses entered into force in 2014.

Each Forum has made its own, unique contribution to the vital yet fragile goal of sustainable water management. Back in 2006, the Mexico Forum highlighted the essential role of local and regional authorities in water management. Building on the work completed in Mexico, the Istanbul Forum in 2009 made a major contribution to the formal recognition by the United Nations, in 2010, of water and sanitation as fundamental human rights.

The Daegu-Gyeongbuk World Water Forum represents a major challenge for France, with a pressing need to restore water to its rightful place as a key priority of the international community. Water must be a fundamental aspect of international public policy and one of the global priorities of the Post-2015 Development Agenda, which will be submitted to the United Nations General Assembly for approval in September. At this General Assembly, UN Secretary-General Ban Ki-moon will launch the Sustainable Development Goals (SDGs). These represent a new ambition, namely to achieve a more effective balance between the three dimensions of sustainable development: the environmental, the social, and the economic. Water must also be high on the agenda at the United Nations Climate Change Conference in Paris in December 2015. In short, water is central to our efforts to adapt to climate change – a fact that must be asserted clearly and without ambiguity at the Daegu Forum.

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HOW DOES FRANCE manage its water?

Large water cycle management

A tool for DECISION-MAKING

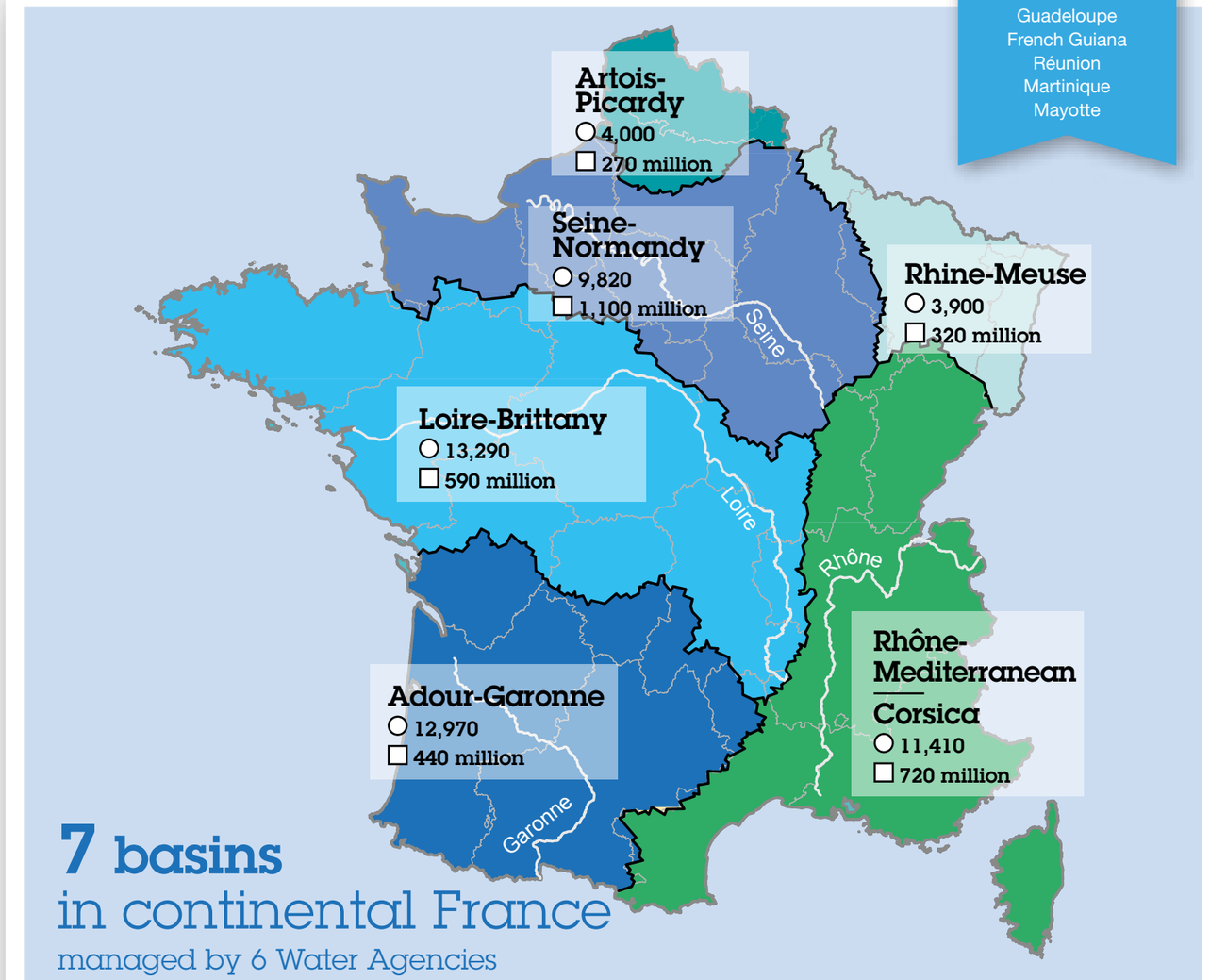
Basin Committees act as "Water Parliaments" that operate at river basin level. There are seven of these committees in continental France, and one for each overseas region. In terms of their make-up, 40% of members are user representatives (agriculture, manufacturing, NGO, etc.), 40% are local authority elected representatives, and 20% are central government representatives. They make strategic decisions on water and aquatic environment protection policies, producing river basin management plans, which set out the fundamental principles of the water policy over a six-year period.

A tool for FUNDING

The six Water Agencies are executive bodies responsible for implementing the policy decisions of the Basin Committees. They are public bodies with no regulatory authority. Their role is to participate in water management within their river basin.
They collect fees charged to users, levied on a *pro rata* basis according to water use and environmental impact under the "polluter pays" principle. The Water Agencies use this income to grant subsidies or loans to support public interest projects conducted by public or private entities (high-quality drinking water production, water purification, aquatic environment maintenance and restoration).
The Water Offices fulfil the same role in the overseas river basins.

A tool for REGULATION

A river basin coordinating Prefect (representative of the State) is appointed within each river basin, to coordinate water resource enforcement and management activities in conjunction with local Prefects, and in line with national water policy.
The National Office for Water and Aquatic Environments (ONEMA), a public body under the authority of the Ministry of Ecology, is responsible for conducting field inspections. In 2016, it will be amalgamated into the new French Biodiversity Agency.
Where cases of degraded water quality or regulatory non-compliance are identified, administrative sanctions (formal notification order, deposit, suspension) or criminal sanctions (fines of up to €75,000 for natural persons and €375,000 for legal entities, and up to 6 months' imprisonment) may be applied.



5 OVERSEAS BASINS
Guadeloupe
French Guiana
Réunion
Martinique
Mayotte

7 basins in continental France
managed by 6 Water Agencies

Number of actions funded in 2013-2014
Budget allocated to these actions (in euros)

Legislation

1964 — **First water law** (management by basin)

1992 — **Second water law** (water becomes a "shared national asset")

2000 — **EU Water Framework Directive (WFD)** which sets water status targets for 2015 and 2027 at the latest

2006 — **Water and aquatic environments law** which transposes the WFD into national law.

The small water cycle

France is served by network of some 35,000 water distribution and waste water treatment services. The infrastructure is owned by municipalities, which can decide whether to manage water directly or delegate management to a public or private body via a temporary contract. All costs associated with these services must be covered by water bills, under the principle of "water pays for water". Municipalities set the final price of the water and sewage service.
In France, 99% of inhabitants have access to drinking water. Some 83% of households are connected to a collective waste water treatment network (the remaining 17% have standalone systems).

2 examples in the basins

Rhine-Meuse Basin
A purification plant that produces natural gas

A waste water purification plan that supplies natural gas? It may sound like something out of science fiction, yet the Biovalsan project in Strasbourg – sponsored by local natural gas distributor Réseau GDS, Lyonnaise des Eaux and Degrémont Service – does exactly that. Following a filtration process test phase, the plant will go live in September, producing at least 1.6 million m³ of purified biomethane per year through the fermentation of purification plan sludge. This "green" gas will be fed into the natural gas distribution network, providing a quantity of energy equivalent to 5,000 low-consumption homes.
This pilot project costs a total of €7 million, and has received €2 million of funding from the European Commission through the LIFE+ programme. It is a feat of technical and ecological prowess, since all of the biogas produced will be converted into biomethane with no energy loss. Replacing natural gas with biomethane will lead to a 66% reduction in greenhouse gas emissions from the Strasbourg-La Watzenau waste water purification plan.

Rhône-Mediterranean Basin
A climate change adaptation plan

In May 2014, the basin produced a climate change adaptation plant focusing on three key areas: storing water in the soil, combating water waste and supporting biodiversity.
A series of maps was produced, showing that all territories are vulnerable but to different extents. As a result of falling river levels, combined with rising water temperatures and river-based developments, the Saône, Doubs and Ain are vulnerable to eutrophication.
The plan addresses the problem of soil sealing: for every 1 m² of soil sealed in urban areas, 1.5 m² of water infiltration zone will be created. This is an effective way of protecting against excessive flooding and restoring groundwater levels. In order to combat waste, the plan aims to reduce water leaks from distribution networks, which will have to provide a minimum yield of 85%. The plan also calls for a 20% reduction in the use of water for irrigation.
Finally, in terms of protecting biodiversity, floodplains covering 20% of the surface area around riverbeds will be recreated by 2050, while the protection of wetlands becomes a priority.