

Improving the governance of public drinking water supply, sanitation and waste utilities:

References of the International Office for Water

INFORMATION
COOPERATION
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*International
Office
for Water*

2014 Publication

Capacity building for better water management

OBJECTIVE 1: Defining a suitable national institutional framework

The governmental Authorities are responsible for guaranteeing access to drinking water and sanitation for everyone and for managing waste. It is a major stake for public health, economic development and poverty reduction. **They must organize the sector and establish a suitable legal framework.** A clear sharing of responsibilities is of primary importance between Ministries, public Agencies, local Authorities, operators of utilities. **Monitoring and the creation of information systems allow assessing resources and needs, following up initiated actions, measuring the progress made, organizing transparency, comparing the performances of the utilities, etc.**

YOUR QUESTIONS

- How to organize and regulate the sector?
- How to share responsibilities?
- Which legislative, regulatory or normative adaptations?
- How to manage water demand?
- How to build a system of performance indicators?

OUR KNOW-HOW AND METHODS

On the basis of the experience gained in France and in the world and according to each local situation, **IOWater** proposes a support to the Authorities to make:

- **the analysis** of the current situation;
- **the advisable institutional, administrative and legal adaptations:** sharing of responsibilities, health and environmental legislations (laws, decrees, standards), institutional framework for the management of utilities (national operator, decentralization, intercommunity, supervision of public-private partnerships, fair access to water, etc.), financial mechanisms, access to the information and transparency;



Ukraine: Closing seminar of European twinning on WSS

- **instruments for coordination between stakeholders and participative approach** (national water committee, advisory commissions of users of the services, etc.);
- **mechanisms for regulating the utilities or for operating a national regulating Authority;**
- **procedures for planning, follow-up and evaluation:** master plans, management plans, investment programs, water documentation and information systems, etc.;
- **a policy for managing demand** integrating development trends: prospective scenarios of water supply and demand, incentive tools for water saving and waste reduction;
- **national indicators of the technical and financial performances of utilities.**



Albania: Seminar for the presentation of the technical standards for the drinking water supply sector

OUR REFERENCES

- Preparation of a new Water and Sanitation Code in Gabon, 2013-2014.
- Support to the Ukrainian Authorities for establishing a waste management system for Electric and Electronic Components, 2014-2015.
- Establishment of new technical standards for the water and sanitation sector in Haiti, 2012-2013.
- Establishment of new technical standards for the water and sanitation sector in Albania, 2011-2013.
- Capacity building of the Ministry of Housing and Municipal Economy to improve the management of water supply and sanitation utilities in Ukraine, 2011-2012.
- Prefiguring study for the establishment of a partnership organization for sanitation in New Caledonia, 2010-2011.
- Capacity building for the use of economic instruments for the implementation of the European Directive on drinking water in Bulgaria, 2009-2010.
- Study for upgrading the National Water Plan in Algeria, 2008-2010.
- Reorganization of the water and sanitation sector: legal framework, institutional organization in Haiti, 2007-2009.
- Restructuration of the electricity, drinking water supply and sanitation sectors in Mali, 2008-2009.
- Implementation of the European Directive on drinking water supply in Malta, 2007-2008.
- Implementation of the European Directives on drinking water, bathing water and mineral waters in Turkey, 2005-2008.
- Audit of the national, regional and local sanitation organization for ONEE (former ONEP) in Morocco, 2006.
- Feasibility study of the modernization of water and sanitation utilities in Laos, 2002.
- Support to the decentralization and regulation program for the water sector in Bolivia, 1999.

OBJECTIVE 2: Allowing Authorities and Operators to assume their responsibilities and improve the performance of services



Improvement of drinking water supply in North Africa

Management of drinking water supply, sanitation and waste utilities is to be organized closest to the field for better meeting the users' needs. It is necessary to modernize the management of large national public Operators, when they exist, but the international institutions more and more recommend **a decentralization** of responsibilities, usually at the municipal level. Local Authorities are thus gradually **made responsible for organizing utilities**, within the framework given by the Government. They should be able to choose the best suited management method, to decide investments, to set the price of the service and to be accountable for their management to the users. Improving service performance goes through the search for a balance between Technical, Financial and Commercial management.

YOUR QUESTIONS

- How to clarify responsibilities between the stakeholders?
- Which management method (direct public management / private delegated management / mixed management)?
- Which are the methods to reorganize and modernize utilities?
- What action plan to improve the performance of services?

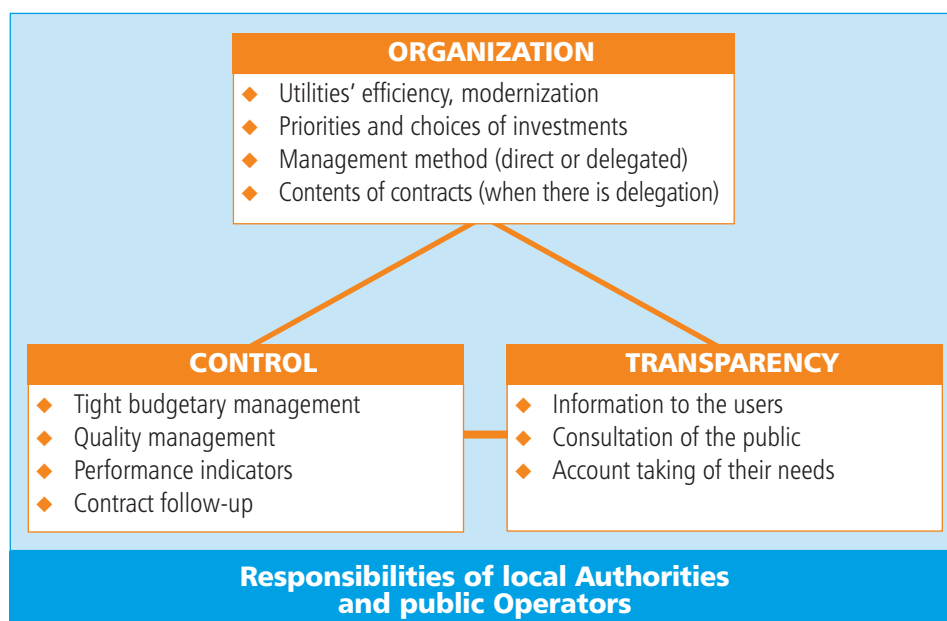
OUR KNOW-HOW AND METHODS

With its experience gained in the various management systems encountered over the world, **IOWater** proposes:

- **audits**, based on an independent analysis adapted to local conditions;
- **support to the reorganization and modernization of utilities;**
- **support to decentralization processes;**
- **definition of the various stakeholders' responsibilities;**
- **creation or strengthening of organizing Authorities;**
- **analysis of the various management methods;**
- **assistance to the drafting of contracts.**

OUR REFERENCES

- Assistance to the towns of Nice, Sfax, Sousse, Jbeil, Byblos and Aquaba for the preparation of their waste management plan under the Mediterranean MED-3R project, 2014-2015.
- Technical assistance and capacity building of the Nairobi Water Company for the reduction of Non Revenue Water, Kenya, 2012-2014.
- Training of the Water Company of Guinea to the patrimonial management and delegation of public services in Guinea, 2012.
- Technical support to the Water and Sanitation Company of Mombasa, human resource management, commercial management and water quality, Kenya, 2010-2013.
- Study for modeling and implementing a program to reduce water losses in the DWS system of Bujumbura in Burundi, 2010-2011.
- Transfer of responsibility from 17 towns to the Urban Community of Landerneau Daoulas in France, 2010-2011.
- Pricing and accounting, financial, technical audit of the agreement with the Water and Energy Company of Gabon (SEEG), 2010.
- Technical, administrative and commercial analysis, recommendations for the organization and means of the Jijel Unit (150,000 inhab.) in Algeria, 2008.
- Audit of utilities, proposals for reorganization and training in Algeria, 2007-2008.
- Audit and reorganization of the drinking water supply and sanitation utilities of the Voiron Community of Agglomerations in France, 2007.
- Preparation of the transfer of responsibilities of sanitation utilities from Municipalities to Limoges Community of Agglomerations, 285,000 pop.eq, in France, 2006.
- ARCHE Program: Audit of water utilities in Kenya, 2004-2006.



OBJECTIVE 3: Developing infrastructures and making sure they are well operating

Access to drinking water and sanitation for all is a prime objective as well as waste management. Public Authorities, either national or local, must **develop infrastructures and make sure they are well operating** (operation, maintenance, renewal, etc.). Special attention should be paid to the underprivileged districts and poor users.

YOUR QUESTIONS

- How to define investment policies and to size the necessary infrastructures?
- How to improve their management?
- How to organize the operation and maintenance of infrastructures?
- How to provide water, sanitation and waste collection in underprivileged districts?

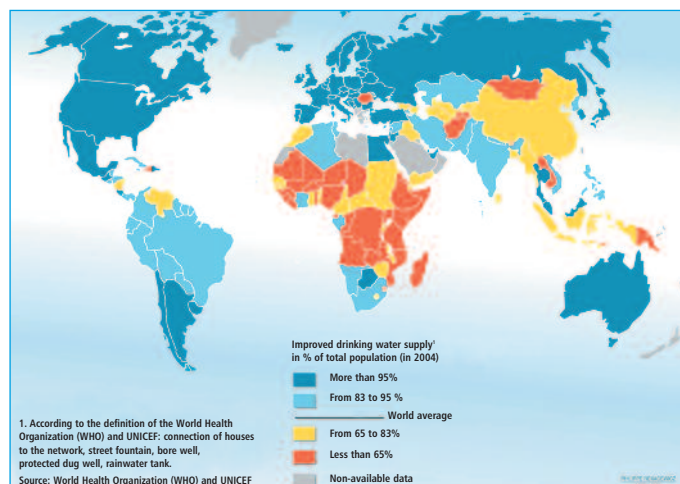
OUR KNOW-HOW AND METHODS

IOWater proposes:

- **technical analyses and assistance;**
- **improving the technical performances of equipment:**
 - ◆ **drinking water supply management:** leak detection and reduction, potabilization techniques, security of supply, interconnections of networks, etc.;
 - ◆ **management of community and on-site sanitation:** sizing of equipment, management of wastewater treatment plants, sludge treatment, storm water drainage and treatment, etc.;
 - ◆ **waste management:** collection, sorting, treatment of waste, biogas, landfill leachate;
- **indicators on the population's access to the services;**
- **master plans for drinking water supply, sanitation and waste collection** suited to local conditions.
- **scenarios allowing projections on 10 or 20 years**, according to the investment policies to be initiated;

OUR REFERENCES

- Assistance with the implementation of pilot projects for waste composting and sorting for the towns of Sfax, Sousse, Jbeil, Byblos and Aquaba under the Mediterranean MED-3R project, 2014-2015.
- Assistance with the establishment of drinking water supply and sanitation master plans for the Intermunicipal Syndicates "SIAEP Couze-Gartempe", and "SYMIVA" of Vassivière Lake and the Porcherie municipality in France, 2013.
- Evaluation of seven projects in the water sector in Africa, with funding from the African Development Bank, in Liberia, Congo and Burkina Faso, 2013-2014.
- Technical assistance to the city of Noumea for improving the operation of its water supply and sanitation facilities in New Caledonia, 2013-2015.
- Assignment for help and technical and economic advice on the choice of process for sludge treatment in Aubenas in France, 2013.
- Development of handbooks for the design and sizing of sanitation facilities of ONEE in Morocco, 2012-2013.
- Audit and improvement of Saint-Paul city wastewater treatment plant - 30,000 pop.-equivalent on the Reunion Island, 2007.
- Mid-term analysis of the decentralized co-operation project of the City of Paris: "Water and Sanitation for sustainable urban development in the rural town of Torodi, in Niger", 2009.
- Training for starting digesters (biogas plant) in the WWTP of Shanghai Municipal Sewerage Compagny Ltd, China, 2009.
- Technical assistance for optimizing the operation of Limoges wastewater treatment plant - 285,000 pop.-equivalent in France, 2004-2008.
- Analysis of the operation of small wastewater treatment plants in rural areas in France, 2008.
- Definition of national sanitation master plans in Haiti, 2007.
- Analysis and definition of the investment program for the sanitation system of Paladru Lake in Isere - 15,000 pop.-equivalent, 15 pumping stations, in France, 2007.
- Technical assistance for improving drinking water production in the Prat plant for the Cher Water Production Union - 14,000 m³/day, France, 2007.
- Low cost techniques for wastewater treatment in rural areas: DEPURANAT Program in Portugal, Spain and France, 2006.
- Assessment for the rehabilitation of the Deyalenzou plant and N'zerekore supply system in Guinea, 2004.
- Technical assessment of drinking water supply facilities in Kindu, Goma and Uvira in DR Congo, 2004.



Access to drinking water over the world (2004)
(% of the population, source: WHO and UNICEF)

OBJECTIVE 4: Organizing the economic management of utilities and financing investments

The viability and quality of public utilities require organizing industrial and commercial management and sustainable patrimonial management of equipment. Multi-year planning of investments, effective commercial management focusing on the users, optimization of the operating costs, fair pricing between the users, recovery of the operating and investment costs, budget balance between income and expenditure are needed.

YOUR QUESTIONS

- How to have a good knowledge of the equipment and existing networks?
- Which policy for patrimonial management?
- How to assess the needs for investments?
- How to improve commercial management?
- How to estimate the total cost of utilities and to improve cost recovery from the users?
- How to define suitable and fair pricing?
- How to set the water price?
- How to balance the utility's income and expenditure?
- How to improve account management and transparency?

OUR KNOW-HOW AND METHODS

IOWater proposes:

- **organization of commercial management:** billing, customers' follow-up, recovery of invoices.
- building capabilities for **account and financial management** (debt, self-financing, cash, amortization, provisioning for asset renewal, budgetary principles, etc.);
- **principles for pricing and water billing**, with price grids and systems for equalization between users, taking into account consistency between the service provided and the price paid, the requirements for water price control and access to the service for poor populations;

- **economic analyses of utilities** (cost-effectiveness, cost recovery, level of prices and taxes);
- tools and methods to assess **the status of the network and installations** (inventory, updating of precise characteristics, information system) and to build a policy for asset management;
- **methods for assessing the investments to be made** in the short, medium and long term, by taking into account the needs for equipment renewal;
- **methods for planning** and spreading out investments over time;

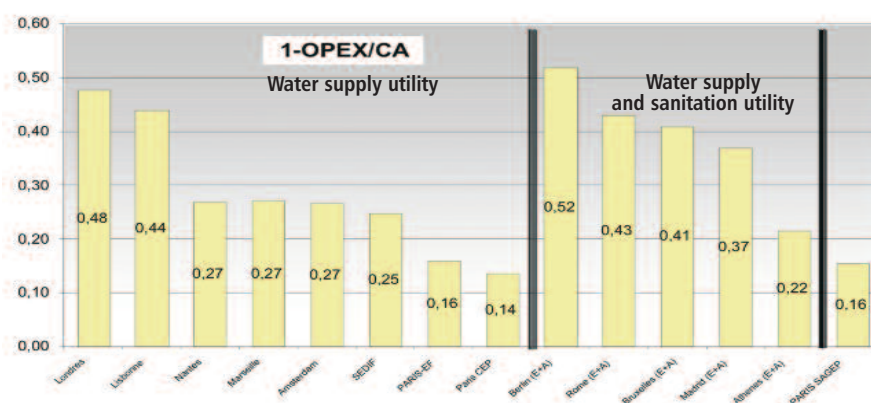
OUR REFERENCES

- Support to the commercial management of the Nairobi Water Company in Kenya, 2012-2013.
- Study assignment to calculate the price of drinking water and sanitation in each of the 36 municipalities of Mediterranean-Perpignan in France, 2011-2013.
- Support to the commercial management of the Mombasa Water Company in Kenya, 2010-2013.
- Study of drinking water supply and sanitation pricing in the Eure Department in France, 2009-2010.

- Development of a customer relationship management handbook for water utilities in Uzbekistan, 2009.
- Training on performance indicators and cost accounting of water supply and sanitation utilities in Morocco, 2009.
- Support to the commercial management of ONEAD in Djibouti, 2008.
- Financial organization of utilities: financial simulation, establishment of price grids, customers' management in Haiti, 2008.
- Analysis of the price of water services in Artois-Picardy Basin as compared with the national and European average price, in France, 2007.
- Comparative study of the quality of utilities of 12 big European cities, Europe, 2007.
- Prospective financial analysis, determination of the utilities budgets and investment program of Mauriac Community of Agglomerations for 2006-2015, in France, 2005.
- "Water Framework Directive Implementation" (WAFDIP) Program in Romania, 2005.
- "ECOWEST-WFD" study, WFD economy in Europe, 2005.

Indicators can evaluate investment policies.
Example: the operating margin of the utility; it covers the investment and amortization costs, the financial expenses and net income.

(OPEX: Operating expenses - CA: Sales turnover)



Comparative study on the service quality of utilities of 12 big European cities [Europe, 2007]

OBJECTIVE 5: Ensuring service quality and transparency

Assessing **the quality of the service provided** facilitates discussion between the interested parties and is a driving force for improvement. ISO international standards, adopted at the French initiative in December 2007, give guidelines for management, evaluation and improvement of the drinking water supply and sanitation utilities.

In particular, **performance indicators** are tools for management and comparison of services ("benchmarking"). They must cover three aspects of sustainable development: environmental, economic, social.

Access to the information, the taking into account of the users' needs and transparency are essential criteria of good governance.

YOUR QUESTIONS

- How to improve transparency?
- How to assess service quality?
- How to control and improve the provision of the service?
- Why, how to involve the users?

OUR KNOW-HOW AND METHODS

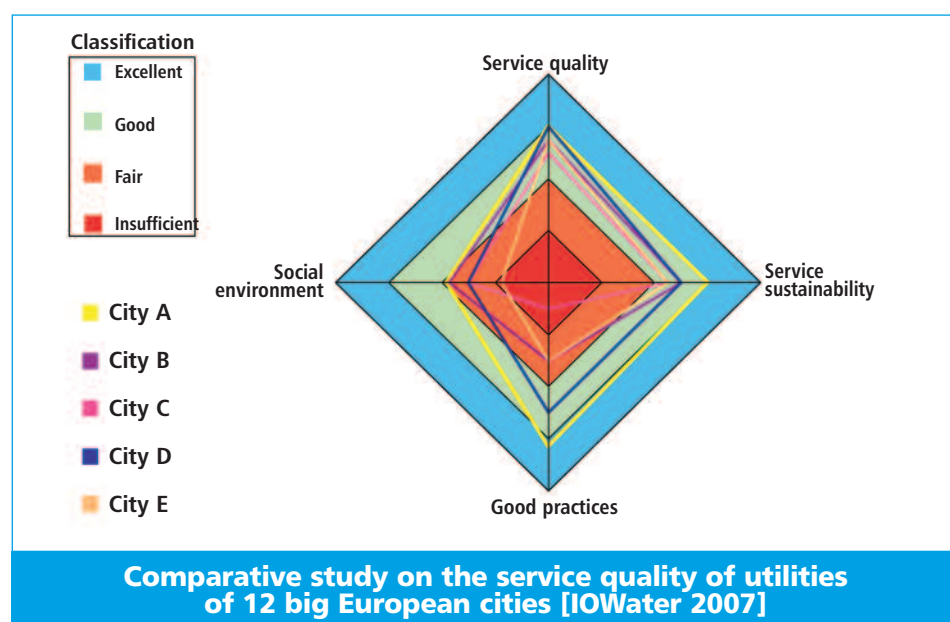
IOWater provides assistance to improve service quality:

- **water documentation and information systems:** identification of the users' needs, data processing and standardization, exchanges and interoperability between databases, technical specifications, catalogues of metadata, etc.;
- **follow-up of budget management of the utilities** and control by financial jurisdictions;
- **evaluation of the services provided by the companies;**
- **methods for assessing service quality:** indicators, data-gathering, benchmarking;
- **control by the Public Authority:** reports to be drawn up by the operator to supervise contract implementation;
- **public information:** explanations to be given to the users on investments and water price, reports to the public on service price and quality;
- **dialogue and participation:** taking into account the users' expectations, organization of Advisory Committees;

- **customers' reception and management;**
- **quality control** and ISO 9000 certification, etc.

OUR REFERENCES

- Support to the National Commission for the Regulation of State's Public Companies for the establishment of an observation system for water supply and sanitation utilities in Ukraine, 2011-2012.
- Development of performance indicators for water supply and sanitation utilities in Haiti, 2008.
- Management of services by performance indicators in South Africa, 2008.
- Comparative study on the service quality of 12 big European cities, Europe, 2007.
- Training on performance indicators of 90 department heads in Mauritius, 2005.
- Training on performance indicators of 50 department heads of the "Algerian Water Company" in Algeria, 2005.
- Supporting CITET quality approach up to its ISO 9001 certification in Tunisia, 2004.
- Definition of performance indicators in 12 towns in Romania, 2004.
- Secretariat of the National Service for Water Data and Common Reference Frames Management (SANDRE) in France, 1992-2014.
- Administrator of the Euro-Mediterranean Water Information System (EMWIS), 1996-2014.



EXAMPLES OF DRINKING WATER AND SANITATION INDICATORS

- Leak rate,
- Compliance rate of discharges,
- Rate of written complaints,
- Average rate of renewal,
- Service price (taxes not included),
- Number of days of malfunction,
- Frequency and seriousness of working accidents,
- Abandonment of claims, payment to a solidarity fund, etc.

OBJECTIVE 6: Capacity building and human resources management



Riyadh Training Center project
(Saudi Arabia)

Capacity building and human resources management are the basis for the **competitiveness of organizations**, whether public or private. With regard to drinking water supply, sanitation and waste utilities:

- ➔ **job technicality requires precise qualifications,**
- ➔ **the entire technical and administrative staff should be well trained.**

Basic and continuing professional training should be increased: this means assessing the training needs and reinforcing HRD by **capacity building on professional training on water and waste and by developing financing mechanisms for professional training.**

Increasing the managerial skills of department heads is a priority.

YOUR QUESTIONS

- How to improve human resources management and motivate its staff?
- How to increase the teams' productivity and efficiency?
- How to assess the training needs?
- How to design and implement a training plan?

OUR KNOW-HOW AND METHODS

IOWater proposes to its partners:

- **continuing professional training courses** for decision makers, managers of utilities, technicians, HRDs, trainers, etc.
IOWater manages the French National Water Training Center - FNWTC (6,500 trainees and 845 courses every year) in Limoges - La Souterraine.
- **support to training engineering for:**
 - ◆ **defining national training systems:** need assessment, definition of a national training master plan for water and waste professions, development of financing mechanisms for training;
 - ◆ **auditing the training needs of utilities and designing training plans:** number of people to be trained, skills to be developed;
 - ◆ **creating training centers:** feasibility study (sizing, localization, statutes, financial arrangement), design of buildings and educational units, drawing up of training programs, training of trainers.
- **reinforcement of HRD duties.**

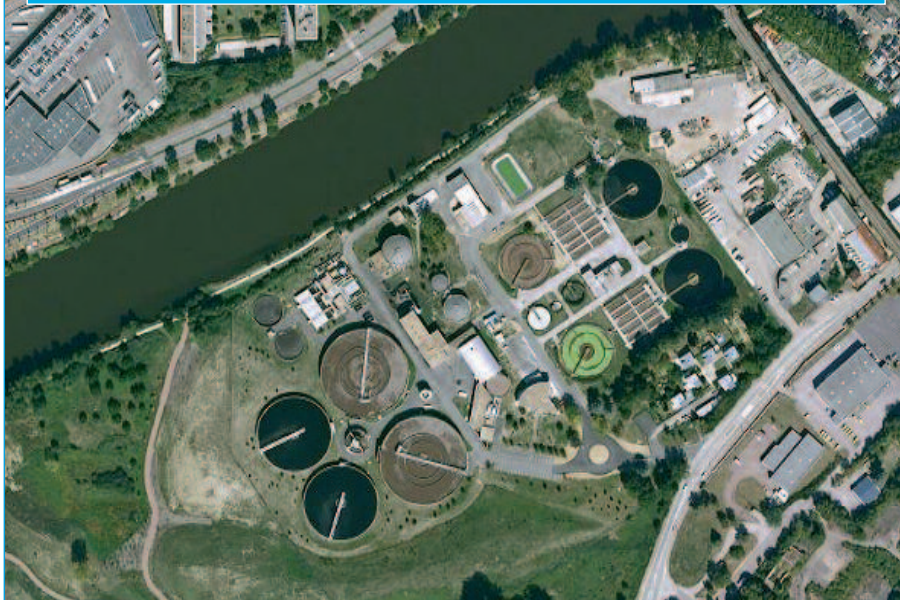
OUR REFERENCES

- Feasibility study of a training center for the State of Sao Paulo in Brazil, 2013-2014.
- Support to the strengthening of the Water Training Center (CEMEAU) of ONEA in Burkina Faso, 2013-2015.
- Training and coaching of the staff responsible for waste management in the towns of Annaba and Ghardaïa in Algeria, 2013.
- Support to the development of the Rand Water Training Center in South Africa, 2012-2013.

- Upgrading of teaching platforms of Lydec training center, Morocco, 2012-2013.
- Development of the training plan, training of ONEE staffs and trainers on sanitation and definition of educational units at the ONEE Water and Sanitation Institute in Morocco, 2011-2013.
- Training of executives of the Water Company of Guinea on patrimonial management, on management using performance indicators and public/private partnerships in Conakry, 2012.
- Development of the skills of ICRC Wathab service personnel and of its project beneficiaries in DR Congo, Guinea, Burundi ..., 2002-2012.
- Feasibility studies of training centers in Palestine, 2011, in Laos, 2005, and Vietnam, 1996.
- Training on the technical management of waste and on the administrative and financial organization of Municipal Waste Utilities in Chad, 2009.
- Support to the Jeddah City Business Unit under the Suez performance contract for establishing a training centre, training trainers and drafting 40 training kits, in Saudi Arabia, 2008-2011.
- Assessment of the training needs in France's Priority Solidarity Zone (PSZ) and proposals for support to the development of training centers, AFD - African Countries and Lebanon, 2008.
- Creation and facilitation of the International Network of Water Training Centers (INWTC), 2008.
- Assistance to the contracting authority for the design of Riyadh training center in Saudi Arabia, 2008.
- Implementation of REGIDESO training plan in the Democratic Republic of Congo, 2006-2008.
- Support to the Kenyan Water Institute (KEWI): creation of a department for professional training and development of a three-year training plan, Kenya, 2007.
- Training program for Public Water Companies in Morocco, 2005-2010.

Governance of public drinking water supply, sanitation and waste utilities?

Allowing the populations to have access to drinking water and sanitation, treating wastewater discharges, managing, collecting and treating waste, achieving good quality of the service provided and users' satisfaction, while complying with a legislative, regulatory and normative, modern and adapted framework, by preserving water resources and the environment with the best cost-effectiveness.



For more than 20 years, the **International Office for Water (IOWater)**, a non-profit-making association, State approved by decree and entrusted with assignments of general interest, has put its legal, economic, organizational, technical, teaching abilities ..., at the disposal of national and local Authorities and public or private operators of community water and waste utilities, in France, in Europe and everywhere in the World.

Analyses, studies, experts' reports, institutional or technical assistance, training: the services provided by IOWater can take all the forms best suited to its partners' practical needs.

Access to drinking water and sanitation is a big challenge over the world. The problems of water quality and quantity are increasing. Impacts of climate change are already sensitive and will intensify: **it is necessary to consider the development of drinking water supply, sanitation and waste utilities from a sustainable development viewpoint, by taking into account all the legal, environmental, social and economic aspects.**

"Water is not a commercial product like any other"

Preamble to the European Water Framework Directive of 23 October 2000

PROBLEMS

Regulating the sector
Organizing - modernizing - decentralizing the management of utilities
Developing access to drinking water and sanitation
Balancing budget, investing, establishing pricing
Improving the service provided to the user
Organizing the teams and training

PROPOSED SOLUTIONS

Defining a suitable national institutional framework
Allowing Authorities and Public Operators to assume their responsibilities
Developing infrastructures and making sure they are well operated
Organizing the economic management of utilities and financing investments
Ensuring service quality and transparency
Capacity building and human resources management

