

# Water demand management in the Mediterranean, progress and policies

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**PAPER**

**Working group "Factoring WDM into drinking  
and industrial water management"**

*ISO/TC 224. Service activities relating to drinking water  
supply systems and wastewater systems - Quality crite-  
ria of the service and performance indicators*

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**ISO/TC 224 "Service activities relating to drinking water supply systems and wastewater systems - Quality criteria of the service and performance indicators"**

*By Jean Luc Redaud, chairman of the Technical Committee*

**Improving governance in water services, a world-wide challenge**

Water constitutes a worldwide challenge for the 21st century, both in terms of management of IWRM (Integrated Water Resource Management) and provision of access to drinking water and sanitation for the world's population. The United Nations (UN) in 2002 recognised that access to water is an essential human right.

In Conclusion of the Johannesburg World Summit on Sustainable Development, participants agreed on a Johannesburg Plan Of Implementation (JPOI) which specifies for water :

*"25. Launch a programme of actions, with financial and technical assistance, to achieve the Millennium development goal on safe drinking water. In this respect, we agree to halve, by the year 2015, the proportion of people who are unable to reach or to afford safe drinking water, as outlined in the Millennium Declaration, and the proportion of people without access to basic sanitation,*

*26. Develop integrated water resources management and water efficiency plans by 2005, with support to developing countries,"*

Following the two World Water Forum in Kyoto in March 2003 and in Mexico in march 2006, the international community has committed to improve governance of drinking water and wastewater services and, to this effect, has made it a priority to build capacity with local governments ( "local actions for a global challenge").

In the December 2004 report of the United Nations's Secretary-General for the thirteenth session of the UN's Commission on Sustainable Development (CSD13), it is stated that "*a concerted and heightened effort is required from the international to the local level ...to meet the JPOI target*

*4. The 2004 Joint Monitoring Programme for Water Supply and Sanitation (JMP) report concludes that, over the 12 years to 2002, 1.1 billion people have gained access to an improved source of drinking water, with an increase in global coverage from 77 to 83%. While South Asia shows the greatest gains, from 71 to 84%, Asia still accounts for two-thirds (675 million) of world population lacking satisfactory access to safe drinking water. Sub-Saharan Africa has expanded coverage from 49 to 58%, leaving 288*

*million people without access. The JMP reports a sizeable increase in numbers without access to an improved source in urban areas of East and Southeast Asia, the result of rapid urbanisation. Still, by far the largest number worldwide without access to safe drinking water remains in rural areas.*

*21 While there are no official data to indicate progress towards this target, surveys suggest that implementation of national integrated water resources management plan is uneven...*

Regarding main problems to respond to the "Millennium Developments Goals" (MDGs), it appears that in the water sector "improving water governance in services" is one of the first priorities. This sector suffers a lack of legal frame and, implementation of private/public partnership should involve that governments oversight to ensure transparency, accountability and fair and effective provision of services.

Numerous proposals have been elaborated in that way coming from professional organisations (e.g. Bonn Charter of IWA), UN agencies (WHO guideline, charter for access to basic need by UN-Habitat/IGD) or regional groups (guideline for good water governance providing access to safe water and sanitation of the European Water initiative).

Relying on its experience with such national guidelines, France through AFNOR proposed in 2001 to set up an ISO technical committee, which should provide International Standards giving guidelines for service activities relating to drinking water supply systems and wastewater systems. Forty countries agreed to join this proposal.

These ISO guidelines are designed to help public authorities and legally responsible bodies for water services, together with their operators to achieve a level of quality that better meets the expectations of users and the principles of sustainable development.

### **Improving governance, quality and efficiency of water services**

These ISO standards will help:

- Facilitate the dialogue among stakeholders, including users, local or regional or national water public authorities, public or private operators of the water utilities, non governmental organisations, research organisations, laboratories;
- Develop a mutual understanding of functions and tasks;
- Provide methods and tools to define, at the relevant local level, objectives and specifications, and assess performance;
- Monitor performance for monitoring and managing the water utilities and possibly benchmarking them.

ISO/TC 224 guidelines are to be applied on a voluntary basis, in industrialised countries as well as in developing countries, in big cities or small towns, and irrespective of whether the utility operator is public or private.

In developing countries, the application of these standards can help strengthen the capacity of local authorities to evaluate the effectiveness of service delivery.

### **Who is involved in ISO/TC 224?**

ISO/TC 224 guidelines imply that parties who are not usually classified as professional actors take part in ISO/TC 224 work: representative from national administration, elected bodies from local authorities, consumers' organisations, NGOs, etc. ISO/TC 224 is preparing a new type of standards (service standards) compared to the usual analysis methods or products standards such as those elaborated by ISO/TC 147, ISO/TC 23 or ISO/TC 138, therefore national mirror committees have been invited to enlarge (the representation of stakeholders in their mirror committees involved in water services).

ISO/TC 224 standards could be a model of guidelines for public services within the general framework on "social responsibility" (cf [www.iso.org/sr](http://www.iso.org/sr)), expanding the concepts dealt with in the standards on "corporate behaviour" for private companies (Global Compact, Account Ability 1000, Social Accountability 8000, etc...).

### **Ensure a North-South balance**

AFNOR (Association française de normalisation), the ISO member body for France, holds the secretariat of the technical committee ISO/TC 224, that presently includes 25 participating countries and 18 observer countries. Among the developing countries, Argentina, Malaysia, Morocco and Nigeria attended the first meetings of the technical committee.

ISO and the TC have wished to produce globally relevant standards. The committee has active liaisons with international organisations like AIDIS (Asociación Interamericana de Ingeniería Sanitaria y Ambiental), Consumers International, EUREAU (European Union of National Associations of Water Suppliers and Waste Water), IWA (International Water Association), NORMAPME (The European Office of Crafts, Trades and SMEs for Standardisation), WHO (World Health Organisation), and the World Bank.

ISO/TC 224 wishes to develop standards that can be used/implemented as broadly as possible. Thus ISO/TC 224 will have to take into account the specifications of Southern countries and of rural areas. To ensure the broadest possible dissemination of information and exchange on the committee's work, three regional fora were organised in 2004, an Asian forum took place in the republic of Korea in April 2004, a Latin-American one was held in Porto Rico in August 2004, and an African one in Morocco in September 2004. These fora resulted in the creation in September 2004 of an ad hoc group "Developing countries" led by Morocco.

The main tasks of this ad hoc group are to

- ensure that the drafts standards take into account the specificity of the developing countries and to propose adaptations, if necessary;
- study the development of a user's guide for the developing countries;

- define the conditions of a test of the draft standards in some cities from developing countries in conjunction with associations of professionals and local authorities.

### **Responsibilities**

ISO/TC 224 committee oversees four working groups (WG) and one ad hoc group:

**Chairman** : Jean Luc Redaud, (France)

**Secretary** : Laurence Thomas (AFNOR - France)

**WG 1 “Terminology”**, Dominique Olivier (France)

**WG 2 “Service to users” (ISO 25410)**, Enrique Cabrera (Spain)

**WG 3 “Drinking water” (ISO 25412)**, Duncan Ellison (Canada) and S Pillay (Malaysia)

**WG 4 “Wastewater” (ISO 25411)**, Karl Rohrhofer (Austria) and Heekyung Park (Republic of Korea)

**Ad hoc group “Developing countries”**, Mounir Zougari, (Morocco).

### **Current work**

ISO/TC 224 and its working groups met in Paris (France) in September 2002, in Ottawa (Canada) in September 2003, in Daejeon (South Korea) in April 2004 and in Rabat (Morocco) in September 2004.

The last joint WGs' meetings took place in Valencia (Spain) in January 2005. These meetings resulted in three well-advanced drafts as follows:

### **What the programme covers**

1. A general introduction which is a summary of main global agreements resulting from the Johannesburg WSSD and Kyoto Conference on management of water :IWRM, right to access to water as a basic need, accountability and transparency, recommendation on reinforcement of local public authorities, environmental and sustainable principles.
2. The definition of a terminology common to the different stakeholders;
3. The clarification of the users' expectations, specifying the elements of the service as well as the manner in which to express the performances awaited by the users;
4. The drawing up of a list of actions for an optimised management of these services, in agreement with the regulation;
5. Methodological proposals for measurable service quality criteria and performance indicators (PIs) allowing to compare, at a local level, the observed results with targets set by the water responsible bodies (PIs will be just given as examples).

Point 1 and 2 will be common for the three standards.

**WG 1, Terminology**, agreed on a set of 44 terms to be used in the three draft standards. Some examples of defined terms are: assessment, coverage, operator, point of delivery, point of use, responsible body, relevant authority, water utilities, user, etc.

**WG 2, Service to users**, has prepared a service oriented draft standard :**ISO 24510 "Service activities relating to drinking water and wastewater – Guidelines for the service to users"**. This draft includes an inventory of users' needs and expectations and provides for each one a possible performance indicator and/or an improvement guidance for meeting that expectation.

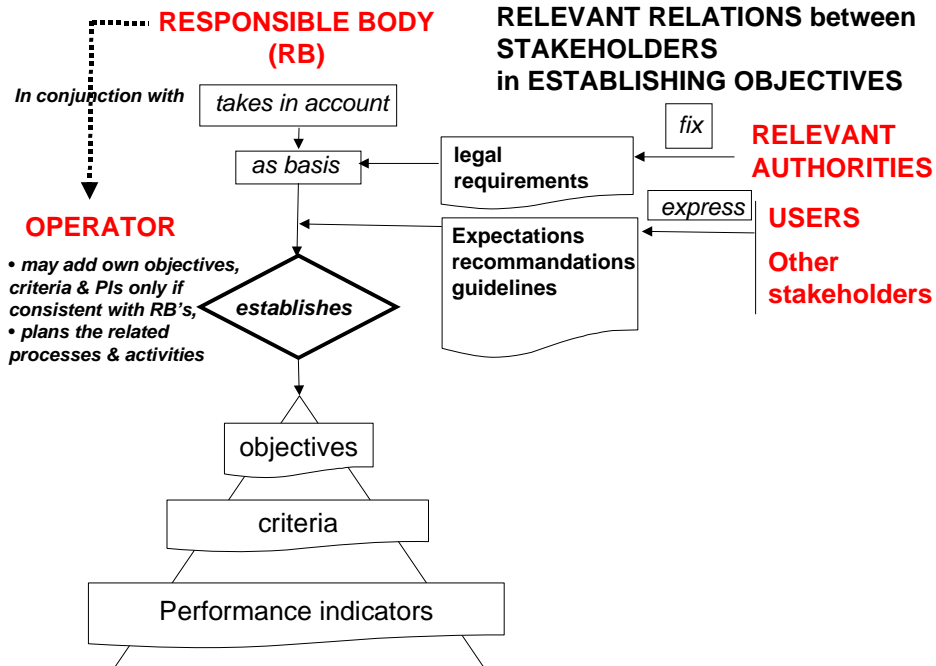
For various reasons, the guidance and performance indicators may not be applicable in all circumstances or may not be applied yet in some countries, in which case they have to be adapted to local conditions or they have to be considered as a goal for continuous improvement.

Aspects considered include: access to water and sanitation services, quality of the service (price of service, continuity of water supply, etc.), contract management and billing (response to billing complaints, etc.), relationship with users (visits to the user, participation of the users, etc), protection of the environment (efficiency in the use of resources, environmental impact, etc), safety and emergency measures, quality of water.

**WG 3, Drinking water**, has prepared a management oriented standard : **ISO 24512 "Service activities relating to drinking water and wastewater – Guidelines for the assessment of drinking water services and the management of utilities"**. This draft deals with all aspects linked with the supply of drinking water, from the catchment of the resource to the delivery to the end user (by direct pipe connection or other means such as trucks, bottles, etc).

**WG 4, Wastewater**, follows the same lines as WG 3 and has also prepared a management oriented standard: **ISO 24511 "Service activities relating to drinking water and wastewater – Guidelines for the assessment of wastewater services and the management of utilities"**. This draft includes sanitary and industrial wastewater allowed to be discharged into a sewer system outside buildings, as well as sanitary waste in undiluted form, sanitary wastewater combined with storm water, and storm water that does not include sanitary wastewater.

The ISO 24511 and 24512 standards will give orientation for a better accountability in services according to a schematic involving relevant authorities, responsible bodies, operators and users. The choice of these general terms reflects the large range of situation encountered in the world in water services: a responsible body is the legal responsible of the water utility, it is usually a local public authority, but it may be a national public company in a developing country, or a NGO for a village in rural area or a private body licensed by a national regulator.



These ISO 224 guidelines will not specify the respective roles of stakeholders, nor define targets or mandatory requirements. They will be relevant for public and private operators and will not supersede the choice by the responsible bodies regarding general organisation and management of water utilities, particularly the choice of having recourse or not to management contracts with private operators.

The ISO 24511 and ISO 24512 draft standards address a large scale of cases in wastewater or drinking water systems at any level of their development (e.g. collectives or semi-collective networks, on-site systems, treatment facilities). These draft standards set out in sequence a description of water services and briefly describe the physical (infrastructural) and managerial (institutional) components of utilities. Core objectives for water services considered to be globally relevant at the broadest level (for examples, protection of public health, provisions of services, sustainability of the water utility, protection of environment) are set out followed by guidelines for the management of the utilities. These objectives are then related to examples of possible actions that may be taken to achieve them. Each objective can also be characterized by related **service assessment criteria**. Finally, for each service assessment criterion there is a range of possible **related performance indicators** that may be used to assess the performance of the service.

Implementation of these ISO standards does not depend on adoption of the ISO 9000 and/or ISO 14000 series standards. Nevertheless, these standards are consistent with and supportive of those management systems standards. ISO 9000 and ISO 14000 mainly deal

with the quality and environmental management of processes; ISO/TC 224 standards will give, only, guidelines and will not be for certification purpose; these guideline are much more oriented on general rules with organisation and performance values involving many stakeholders. Implementation of an overall ISO 9001 and/or ISO 14001 management system may facilitate the implementation of these ISO/TC 224 standards, and conversely, these standards may help to achieve the technical provisions of the ISO 9001 and ISO 14001 standards for organizations choosing to implement them. These standards are also consistent with the principle of the "plan-do-check-act" (PDCA) approach: they link, through a dynamic and interactive process, general methods and tools for developing locally-adapted specifications and objectives, together with the management components and activities, necessary for assessing performance.

### **Schedule**

- *Committee draft enquiry in 2005*

The three drafts standards (ISO 24510, 24511 and 24512) have been circulated to P members, O members and organisations in liaison as committee draft (CD) for a first enquiry in 2005 . More of 80% of the 25-P members have approved the drafts which have been reviewed at a plenary TC meeting in Berlin (Germany) from 17 to 21 September 2005.

- *Draft international standards enquiry (DIS) from may 2006 to september 2006 for all ISO members (100 countries)*
- *Review of comments on ISO drafts in next TC meeting in Punta del Este (Uruguay) in décembre 2006*
- *Vote and publication of Final draft international standards (FDIS) planned for end of 2007*

*As these standards are aimed to be "globally relevant" it will be useful furtherly to elaborate supplementary drafts to clarify the adaptation of the standards regarding a specific context :requests have been pointed out in that way by the PED group in the TC*

*In 2007 possibly decision could be taken to launch TS (technical specification) or PAS (publicly Available Specification) within ISO/TC224 or IWA (I,nternational Workshop Agreement) from voluntary stakeholders and on regional basis.*

***For further information, contact the secretariat of the committee Mme Laurence THOMAS, AFNOR (laurence.thomas@afnor.org).***

***Website : <http://comelec.afnor.fr/iso/tc224e>***