



January 2008

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

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Publication of ISO/TC 224 International Standards

The three ISO International Standards developed within the committee ISO /TC 224, dealing with the management of drinking water and wastewater utilities and the assessment and improvement of the services, were published in English and French on the 1st of December 2007. This publication concludes five years of work, 7 meetings of the Technical Committee - led by France and managed by AFNOR - and many meetings or events organized in parallel to the plenary meetings of the technical committee, particularly to the attention of developing countries.

This process started in 2001 upon a proposal from France and involved about thirty countries, ten international organizations and more than 100 experts.

These standards are the following:

**ISO 24510 Activities relating to drinking water and wastewater services
-Guidelines for the assessment and for the improvement of the service
to users**

**ISO 24511 Activities relating to drinking water and wastewater services
- Guidelines for the management of wastewater utilities and for the**

assessment of wastewater services

ISO 24512 Activities relating to drinking water and wastewater services - Guidelines for the management of drinking water utilities and for the assessment of drinking water services.

These standards are useful tools for bodies responsible for water services, operators, users, but also for the international institutions (UN, OECD, World Bank) as part of their development policies.

These standards are available from the ISO website (<http://www.iso.org/iso/store.htm>).

ISO/TC 224 standards, new tools for improving governance in water services, a world-wide challenge of the Millennium Development Goals

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").

The mid-term assessment of progress to the MDGs in water published in 2006 and 2007 by UN organisations (WHO, UNDP, UNEP, UNESCO, etc) highlights regional disparities in the respect of these objectives with persistent delays in rural areas and in Africa. Moreover numerous new experiences have been conducted world wide involving more or less private-public partnership at a local or national level whose

comparison may give common teaching on successful processes for the efficiency of the services and the final satisfaction of users.

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, with problems of funding and capacity-building. 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 to elaborate reasonable plan of development and provision of water services and strengthen the capacity of local authorities to evaluate the effectiveness of service delivery.

Implementation of these ISO standards does not depend upon adoption of the ISO 9000 series and/or the ISO 14000 series of standards. Nevertheless, these standards are consistent with 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.

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/ TC138, 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), expanding the concepts dealt with in the standards on "corporate behaviour" for private companies (Global Compact, Account Ability 1000, Social Accountability 8000,etc...) as experimented in ISO 26000 standards in preparation

Moreover ISO/TC224 standards are a good example of a sustainable development approach involving various stakeholders taking into account economical, social and environmental constraints in the management of utilities for the improvement of services to users.

A globally relevant standard applicable worldwide

AFNOR (Association française de normalisation), the ISO member body for France, holds the secretariat of the technical committee ISO/TC 224 that presently includes 35 participating countries and 18 observer countries¹. Among the developing countries, Argentina, Uruguay, Colombia, Ecuador Malaysia, Indonésia, Morocco, Tunisia Nigeria, Uganda, Zambia are members of the technical committee, such as several members of eastern Europ.

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 has wished to produce globally relevant standards which implies that these standards 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" (DEVCO) 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 authorit

Organisation

¹¹ Countries members of ISO/TC 224: Algeria, Argentina, Austria, Belgium, Bulgaria, Canada, Cuba, Czech Republic, Denmark, France, Germany, Indonesia, Israel, Japan, Kenya, Malaysia, Morocco, The Netherlands, Nigeria, Norway, Portugal, Republic of Korea, Russian Federation, Slovakia, South Africa, Spain, Sweden, Trinidad and Tobago, Tunisia, Uruguay, UK, USA, Venezuela et Zimbabwe

ISO/TC 224 drafts have been developed within four working groups (WG) and one ad hoc group for DEVCO under the supervision of the TC:

WG 1 “Terminology”, France

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

WG 3 “Drinking water” (ISO 25412), Canada and Malaysia

WG 4 “Wastewater” (ISO 25411), Austria and Republic of Korea

Ad hoc group “Developing countries”, Morocco.

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 regulations;

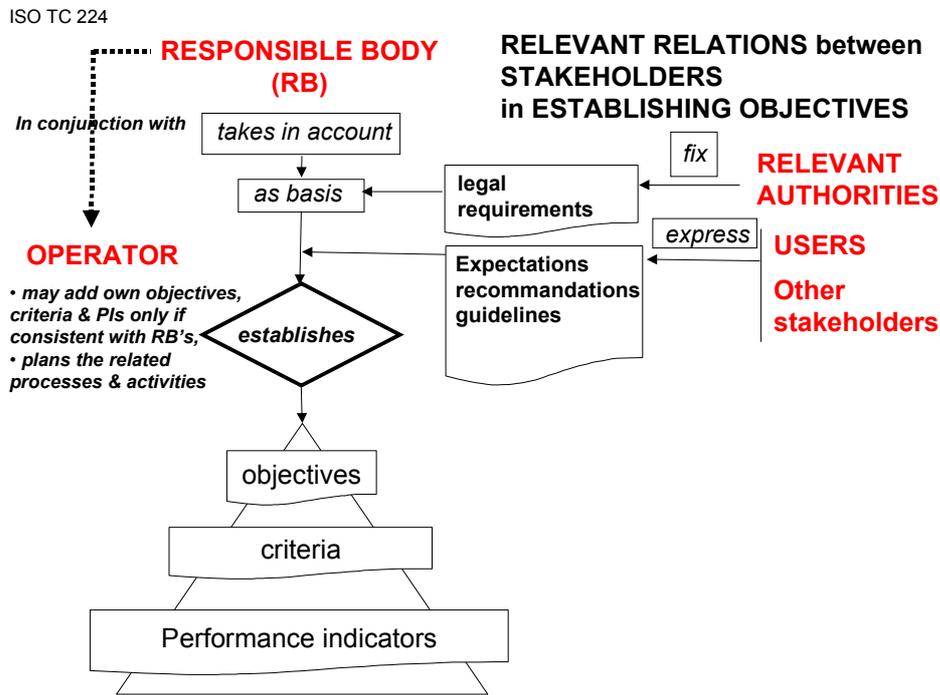
5. Methodological proposals for setting or selecting measurable service quality criteria and performance indicators (PIs) allowing to compare, at a local level, the observed results with targets set by the water responsible bodies (PIs are just given as examples).

Point 1 and 2 are common to the three standards.

The terminology group 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.

Considering that a main objective of these standards is to provide the relevant stakeholders with guidelines for assessing and improving the service to users, it was necessary to specify the role and function of the main parties involved in the dialogue (useful to develop a better understanding of objectives of services and, functions and tasks of utilities

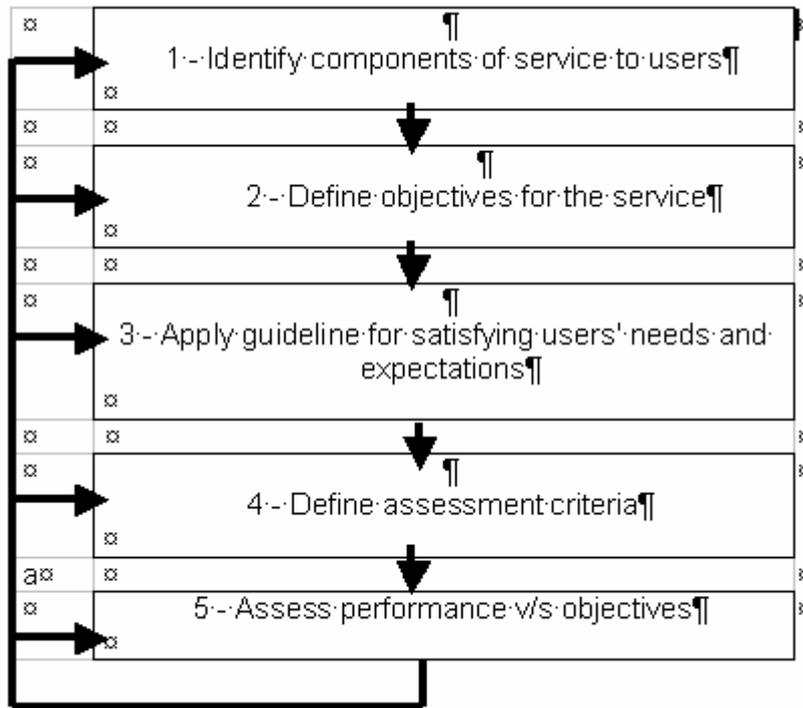
A schematic graph is proposed in the standard involving relevant authorities, responsible bodies, operators and users.



The choice of these general terms reflects the large range of situation encountered in the world in water service. 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. The responsibilities of relevant authorities, in charge of defining and checking the compliance with legal requirements or guidelines are more often assumed by national administrations in charge of water affairs, but it could be an international organisation like WHO or a regional one, like the European Union.

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.

These standards propose a step by step process



This process is consistent with a "plan-do-check-act" (PDCA) approach with loop back from assessment systems to the objectives and the management;

ISO 24510 " Guidelines for the assessment and for the improvement of the service to users" includes an inventory of users' needs and expectations and provides for each one a possible performance indicator and/or improvement guidance for meeting that expectation.

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.

Aspects considered in **ISO 24511 and ISO 24512** are more oriented on management aspects in relations between responsible bodies and operators taking into account problems of protection, public health, protection of the environment, provision of services in normal circumstances as in time of crisis, sustainability of the services and of community development.

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. collective 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. 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.

Current work

ISO/TC 224 standards are the result of a long process beginning in 2001 with several plenary meetings in Paris (France) , in Ottawa (Canada) , in Daejeon (South Korea) , in Rabat (Morocco) , in Berlin (Germany) , in Punta del Este (Uruguay) and in Tokyo (Japan) in December 2007.

AFNOR	<i>Technical Committees +WGs</i>	Paris	Ottawa	DaeJon	Berlin	Punta del Este	Tokyo		
P15									
---1999	---2000	---2001	---2002	---2003	---2004	---2005	---2006	---2007	---2008
ISO inquiries	proposal France	creation TC			CD	DIS	FDIS		publication
	opport								

The final Draft International enquiry (FDIS) in 20067 has emphasized a large support of all ISO members and comments resulting from this enquiry were dealt with at the Punta del Este meeting.

Back on the last committee meeting

The last meeting of ISO / TC 224 was held in Tokyo in November 2007 at the invitation of the Japanese delegation and under the chairmanship of Mr. Jean Luc REDAUD, responsible for chairing the committee since 2003. About 60 experts

representing 20 countries attended the meeting.

It was agreed that the technical committee would focus only on communication/promotion and application of the standards over the next three years because the priority is now to experiment these new tools at the national and /or regional levels. Therefore, all members were invited to carry out actions to promote the standards and to implement the three published documents. France will continue managing the chairmanship and the secretariat of the committee.

The technical committee decided to launch complementary works on 3 issues for the period 2008-2010, with the status of preliminary work items:

- Collect examples of the application of the three standards (work allocated to a new working group under the responsibility of Argentina);
- Produce guidelines for physical asset management of water supply and wastewater system (work allocated to a new working group, led by Germany with vice-convenorship from Canada and Austria);
- Establish guidelines for crisis management of water utilities (work allocated to a new working group convened jointly by Germany and Israel).

It was also decided to follow-on the work of the group dealing with the adaptation of these standards to developing countries, for which a first test was initiated in Africa.

According to the ISO rules, an enquiry for assessing the usefulness of the standards will be organized after a three years period, i.e. end of 2010, with a view to undertake a possible revision of the standards. Members of the committee will meet again in 2011 in order:

- To decide on a possible revision of standards in the light of the experiences made around the world and
- To consider the follow-up to the preparatory work that will be done by the new working groups from 2008 to 2011.

For further information on ISO/TC 224, contact the secretariat of the committee, Mme Laurence THOMAS, AFNOR (laurence.thomas@afnor.org).