
Principles for effective and efficient corporate governance of water utilities

*Principes pour une gouvernance efficace et efficiente des services
publics de l'eau*

STANDARDSISO.COM : Click to view the full PDF of ISO 24540:2023



STANDARDSISO.COM : Click to view the full PDF of ISO 24540:2023



COPYRIGHT PROTECTED DOCUMENT

© ISO 2023

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword.....	v
Introduction.....	vi
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Overview.....	3
5 Corporate governance for water utilities.....	4
6 Governance framework.....	6
6.1 General.....	6
6.2 Define the vision, mission and strategic objectives of corporate.....	6
6.3 Identify governance gaps.....	6
6.4 Establish decision-making process.....	7
6.5 Mapping and definition of roles and responsibilities.....	7
6.6 Stakeholder engagement for inclusive water utilities.....	7
6.7 Encourage the development of capacity building and sharing of information.....	8
6.8 Adoption of monitoring and evaluation.....	8
7 Influencing factors.....	8
7.1 General.....	8
7.2 Legal aspects.....	8
7.2.1 General.....	8
7.2.2 Legislative framework.....	9
7.2.3 Water policy.....	9
7.3 Guidelines.....	9
7.4 Business model.....	9
7.5 Users.....	11
7.6 Other stakeholders.....	11
7.7 Overall system operation.....	12
8 Implementation.....	12
8.1 Purpose of water services.....	12
8.2 Objectives of water services.....	12
8.3 Viewpoint of system to ensure publicity.....	13
8.3.1 General.....	13
8.3.2 Reliable achievement of required level.....	13
8.3.3 Implementation of corporate social responsibility.....	13
8.3.4 Enhancement of user service.....	13
8.3.5 Effective governance system and internal control system.....	13
8.3.6 Response in the event of a disaster.....	13
8.3.7 United Nations Sustainable Development Goals.....	13
8.4 Organizational functions.....	14
8.4.1 General.....	14
8.4.2 Executive board, board of directors or municipal council committee.....	14
8.4.3 Management committee.....	15
8.4.4 Auditing.....	15
8.5 Monitoring the implementation.....	15
8.5.1 Overview.....	15
8.5.2 Monitoring body.....	15
9 Monitoring or assessment of corporate governance.....	16
9.1 General.....	16
9.2 Assessing the corporate governance of water utilities.....	16
9.2.1 General.....	16
9.2.2 Vision, mission and strategic objectives.....	16

9.2.3	Basic organizational decisions	16
9.2.4	Preparation of day-to-day activities	17
9.2.5	Responsibilities matrix — Who does what	17
9.2.6	Stakeholder mapping and engagement	17
9.2.7	Outcomes of corporate governance of water utilities	17
10	Recommendations of corporate governance	18
10.1	General	18
10.2	Cooperation and relationship between key players	19
10.2.1	Ownership	19
10.2.2	Responsible body	19
10.2.3	Operator of water utility	20
10.3	Openness and transparency	20
10.3.1	General	20
10.3.2	Recommendation 6: openness and transparency	20
10.4	Stakeholder engagement	21
10.4.1	General	21
10.4.2	Recommendation 7: Stakeholder engagement	21
10.5	Monitoring of operational improvement	21
10.5.1	General	21
10.5.2	Recommendation 8: Operations	21
Annex A (informative)	Consensus-oriented decision-making process	22
Annex B (informative)	Stakeholder engagement	23
Annex C (informative)	Specific performance indicator examples	24
Bibliography		27

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 224, *Drinking water, wastewater and stormwater systems and services*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Water is a global issue. Actions and subsequent decisions regarding water utilities are local issues. The United Nations has set 17 Sustainable Development Goals (SDGs), many of which are water related. Specifically, SDG 6 addresses water and sanitation and is intended to be applied at the local service level. People are aware of climate change and its impact on water availability but also the changes in weather, such as rain intensity or frequency, which can increase the risk of flooding events. The Paris Agreement takes these risks into consideration at the international level, but the question still remains on how they are considered at local level.

The water utilities sector is changing more rapidly than ever before and new solutions are being created and conceived. It is of vital importance that appropriate corporate governance systems exist and are implemented to support these changes and ensure that water services are provided which take into account user and stakeholder needs and expectations in a sustainable way.

The information provided in this document improves decision-making processes and outlines roles and responsibilities of responsible bodies and other relevant stakeholders in the governance of water utilities.

The roles of relevant authorities, responsible bodies and water utilities can differ between and within countries and result in different minimum requirements for the operations. Nevertheless, it is recommended that such organizations recognize the importance of effective and efficient corporate governance to allow for the water utility to operate properly.

The Organisation for Economic Co-operation and Development (OECD) *Principles on Water Governance*^[10] are considered as a reference in this document. The OECD principles deal with overall “governance”, in contrast to this document, which deals with corporate governance.

This document describes three levels of corporate governance mechanisms, as follows:

- a) The first level of corporate governance relates to authorizations that are necessary for a water utility to operate. Typically, authorizations required for the water utility to be able to operate include:
 - 1) drinking water services, e.g. abstraction of raw water, water protection areas, building and operating facilities;
 - 2) wastewater services, e.g. discharge of wastewater treatment plants, discharge of non-domestic wastewater into the sewers, sludge disposal;
 - 3) assets, e.g. building and operating facilities;
 - 4) stormwater management services, i.e. collection and storage or treatment of stormwater prior to release into the environment.

Authorizations can be taken at the national, regional or local level.

- b) The second level of corporate governance considers the owner’s mission, including setting the objectives of the service to be provided, the level of service, the setting or negotiation of water prices, and the investment and asset management strategies.
- c) The third level of corporate governance relates to the management of the water utility and the implementation of decisions made by the owner within the relevant authorizations.

Principles for effective and efficient corporate governance of water utilities

1 Scope

This document establishes the basis for a framework for water utilities to operate efficiently and effectively considering stakeholder needs and expectations.

This document is applicable to all water utilities, regardless of ownership and management model (public or private), size, service provided or location.

This document proposes principles for effective and efficient corporate governance of water utilities with a focus on the roles and responsibilities of the responsible bodies and operators and on the decision-making process involving the relevant stakeholders. It also includes key types of decisions to be made.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 24513, *Service activities relating to drinking water supply, wastewater and stormwater systems — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 24513 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

corporate governance

system by which utilities are directed and controlled

Note 1 to entry: Corporate governance is organizational governance applied to corporations.

Note 2 to entry: From Cadbury 1992^[5] and OECD 1999^[8].

[SOURCE: ISO/IEC 38500:2015, 2.4, modified — “utilities” replaced “corporations”. Note 3 to entry removed.]

3.2

governance

system of directing and controlling *water utilities* (3.3), corporate governance systems, *responsible bodies* (3.4), relevant stakeholders, relevant authorities and responsible authorities

Note 1 to entry: This includes all of the processes of governing – whether undertaken by the government of a state, by a market or by a network – over a social system (e.g. family, tribe, formal or informal organization, a territory or across territories) and whether through the laws, norms, power or language of an organized society.

3.3

water utility

whole set of organization, processes, activities, means and resources necessary for abstracting, treating, distributing or supplying drinking water, for collecting, conveying, treating, disposing of or reusing wastewater or for the control, collection, storage, transport and use or disposal of stormwater, and for providing the associated services

Note 1 to entry: Some key features for a water utility are:

- its mission, to provide drinking water services or wastewater services or the control, collection, storage, transport and use of stormwater services, or a combination thereof;
- its physical area of responsibility and the population within this area;
- its *responsible body* (3.4);
- the general organization with the function of *operator* (3.6) being carried out by the responsible body, or by legally distinct operators;
- the type of physical systems used to provide the services, with various degrees of centralization.

Note 2 to entry: Drinking water utility addresses a utility dealing only with drinking water; wastewater utility addresses a utility dealing only with wastewater; stormwater utility addresses a utility dealing only with stormwater.

Note 3 to entry: When it is not necessary or it is difficult to make a distinction between responsible body and operator, the term “water utility” covers both.

Note 4 to entry: In common English, “water service” can be used as a synonym for “water utility”, but this document does not recommend using the term in this way.

[SOURCE: ISO 24513:2019, 3.3.1]

3.4

responsible body

body that has the overall legal responsibility for providing drinking water, wastewater or stormwater services for a given geographic area

EXAMPLE A local or municipal government (e.g. for a village, town or city), a regional government or a national or federal government through a specified agency, or private company.

Note 1 to entry: Responsible body is a category of stakeholder.

Note 2 to entry: The responsible body can be legally distinct, or not, from the *operator(s)* (3.6). The responsible body can be public or private.

Note 3 to entry: The responsible body acts within a framework of law and *governance* (3.2) established by the relevant authorities. It generally establishes the strategy, the specific *policies* (3.5) adapted to the characteristics of its area of responsibility and the general organization of the relevant *water utility* (3.3).

Note 4 to entry: The responsible body can operate the water utility directly with its own means through an internal operator (direct or internal management or “in house”) or entrust one or several operators for the operations (outsourced or contracted management).

[SOURCE: ISO 24513:2019, 3.1.8.3]

3.5

policy

intentions and direction of an organization as formally expressed by its top management

3.6

operator

person or organization performing day-to-day processes and activities necessary for the provision of the service

EXAMPLE 1 Where *responsible body* (3.4) and operator are not legally distinct: a technical department in a municipality, a specific division of a regional authority.

EXAMPLE 2 Of legally distinct entities: a public organization, a private corporate company, a small contractor, an non-governmental organization (NGO), a cooperative.

Note 1 to entry: There can be one or several operators for a given *water utility* (3.3), for example distinct operators for installations' operation, billing and recovering service. Their missions are determined by the responsible body. An operator can subcontract some of its operations to other contractors, if allowed by the responsible body.

Note 2 to entry: The operator(s) can be legally distinct, or not, from the responsible body. They can be public or private.

Note 3 to entry: In the context of this document, an "operator" is not a person employed within an organization to operate a piece of equipment or process.

[SOURCE: ISO 24513:2019, 3.1.8.2]

3.7

owner

person, group of persons or organization that owns the infrastructure or asset

Note 1 to entry: The owner can be the *responsible body* (3.4) or other stakeholders.

4 Overview

Water is the cornerstone of sustainable development, being a driver for economic growth, social welfare and survival of the environment. However, we are currently facing a crisis of water security in many regions of the world, understanding water security as the availability of an acceptable quantity and quality of water for health, livelihoods, ecosystems and production, coupled with an acceptable level of water-related risks to people, environments and economies.^[6]

The water sector is a complex one due to its intrinsic characteristics, such as being fundamental for different sectors and development or having different stakeholders involved in its management.

Water utilities are the key actors for implementing the national water policies at the local level, thus allowing the achievement of the human right to safe and affordable water and sanitation.

Current levels of water security are jeopardized by different pressures, such as scarcity, pollution, unbalanced population growth, extreme weather events and climate change. Water utilities are facing several challenges, including:

- ageing water infrastructure and a lack of investment in water assets to allow their maintenance and renewal;
- water-related risks, such as extreme weather events (e.g. floods and droughts), water pollution and appropriate levels of treatment or scarce availability of water resources;
- institutional factors, such as legislation at different levels, territorial reforms, fragmented institutions, weak capacity at the local level, dispersion of competences, lack of policy coherence among sectors related to water, weak transparency and accountability;
- environmental and socio-economic factors;
- uncontrollable disruptions, such as terrorist activities or cyberattacks.

To be prepared for the future and enhance long term resilience, water utilities need to adapt to the new global challenges the water sector is facing, combining technical and non-technical secure and proven processes, methods and tools, and implementing a more inclusive and sustainable management, engaging all relevant stakeholders.

To achieve these goals, corporate governance of water utilities should assess the range of political, institutional and administrative rules, practices and processes (formal and informal) through which decisions are taken and implemented, consulting stakeholders, as well as holding decision-makers accountable for water management, in order to achieve effective, efficient and resilient water utilities (adapted from the OECD definition of water governance^[10]).

In order to have effective and efficient corporate governance, water utilities should develop and implement a clear framework that covers all domains of the water utilities' responsibilities, including but not limited to:

- a) level of service, which is defined according to customer expectations and is the expression of political decisions;
- b) water resources management strategy, providing decisions which should be taken to:
 - 1) secure and conserve existing water resources identified by the relevant authority;
 - 2) anticipate future needs from population change;
 - 3) support development within the utility's service area;
 - 4) address the effects of climate change, anticipation, preparation and management of crises or other events (drought, flooding, population migration);
- c) asset management strategy covering the entire asset life cycle, including associated requirements such as human resources and finance;
- d) risk management, ensuring water-related risks are managed in a timely manner and at an acceptable cost to ensure protection of the community, public health, the environment and the financial viability of the organization, so that the next generation does not inherit liabilities and costs.

5 Corporate governance for water utilities

Water is a key factor for sustainable growth and water utilities are key players for the fulfilment of the human right to water and sanitation.^[13]

Effective and efficient corporate governance of water utilities should be based on overarching governance principles which should guide the key elements of the water utility's governance framework, such as the ones included in [Table 1](#) (based on the OECD principles on water governance^[10]).

Corporate governance should help to achieve well-managed water utilities, promoting long-term objectives of environmental sustainability and enhancing social welfare. A multi-level and multi-stakeholder approach, integrating the heterogeneous concerns of stakeholders, can improve the management of water utilities.

Table 1 — Corporate governance principles for water utilities

Corporate governance principle	Explanation
Clear definition of roles and responsibilities across all levels of government and water-related institutions involved in water utilities.	Water utilities have different levels of government and water-related institutions involved, and it becomes necessary to clearly define and distinguish their roles and responsibilities regarding policymaking, policy implementation, operational management and regulation, in order to identify and address gaps, overlaps and conflicts of interest.

Table 1 (continued)

Corporate governance principle	Explanation
Foster co-ordination between the different levels of government and water utilities.	In order to avoid gaps, overlaps and conflicts of interest, effective coordination at and across these actors involved in water utilities should be in place.
Encourage policy coherence across sectors	Water is impacted and has an impact on other sectors such as environment, health, energy, agriculture, industry, spatial planning and land use. Therefore, cross-sectoral coordination becomes fundamental between policies for water and these other sectors.
Enhance capability of water-related professionals and responsible authorities involved in water utilities.	In order to achieve effective and efficient water utilities, it is important to adapt the level of capacity of water-related professionals and responsible authorities to meet the water challenges and duties required. Appropriate capability reviews can also further promote motivation of water-related professionals and responsible authorities to contribute to more effective and efficient performance.
Promote information-sharing and education and awareness campaigns across all relevant stakeholders involved in water utilities.	Producing and sharing consistent water-related information can be used to guide, assess and improve water management, as sharing information is a necessary step for transparency. In addition, information, education and awareness campaigns focused on the external stakeholders of water utilities, such as users or other sectors, should be a tool to engage these actors in how to use water and contribute to the improvement of water utilities and their services.
Encourage technological and non-technological innovation in water utilities.	Technological innovation allows water utilities to be more effective and efficient; but to improve the level of service to users, water utilities should promote the adoption and implementation of innovative practices across responsible authorities, levels of government and relevant stakeholders, related, for example, to finance and economics, business models, communication strategies or stakeholder engagement.
Promote multi-level and multi-stakeholder engagement.	A multi-level and multi-stakeholder approach seeking engagement and responsiveness should facilitate managing water utilities effectively and efficiently, considering all stakeholders in the decision-making process and aiming for consensus (see Annex A).
Encourage equity and inclusiveness across water users.	Water utilities should encourage frameworks and practices that allow for managing trade-offs across different uses, users and areas, promoting equity and inclusiveness.
Foster integrity and transparency practices for greater accountability and trust in decision-making and water utilities.	Water utilities should account for their activities and tasks, accept their responsibilities regarding these activities and tasks and disclose results in a transparent way, in order to enhance trust and engagement of stakeholders in their corporate governance. In this sense, transparency, understood as an open, comprehensive and understandable presentation of information addressed to a targeted audience, and integrity, related to moral and ethical principles and values, should be mainstreamed in the water utility.
Promote regular monitoring and evaluation of the corporate governance scheme.	Continuous monitoring and evaluation should allow for identifying the need for improvement of the corporate governance scheme and adjusting it when needed. Evaluating corporate governance can strengthen the accountability of decision-makers and contribute to identifying challenges and anticipating and managing some risks, as well as helping to map the views of different stakeholders. It can contribute to overall good governance as it provides information that can improve some governance gaps.
Encourage sustainability and resilience of water utilities.	Sustainability of water utilities, in terms of operational and financial aspects, should ensure an appropriate level of services for current and future generations. In addition, water utilities should become resilient in order to deal with possible risks and challenges, such as natural disasters or terrorist attacks (see ISO 24518 and ISO/TS 24520).

6 Governance framework

6.1 General

The governance framework is directed to water utilities, including all relevant stakeholders, and should consider both “internal governance” (interrelationships) and the links with external stakeholders.

Achieving effective and efficient corporate governance for water utilities requires defining a framework that considers the following dimensions (based on Reference [9]):

- a) Define the vision, mission and strategic objectives of the corporate governance of the water utility.
- b) Identify corporate governance gaps.
- c) Establish the decision-making process.
- d) Map and define the allocation of roles and responsibilities.
- e) Build a stakeholder map and promote stakeholder engagement.
- f) Encourage the development of capacity building and sharing of information.
- g) Adopt monitoring and evaluation.

6.2 Define the vision, mission and strategic objectives of corporate

Implementing effective and efficient corporate governance of water utilities requires governance of the water utility defining the ultimate line of decision-making, the objectives of corporate governance and the expected use of inputs, i.e. defining the strategic planning process, which should be adaptive enough to adapt to changes and new challenges.

Strategic planning should define the ultimate reasons driving the process and include an external evaluation, e.g. political, economic, social, technological, environmental and legal trends, as well as an internal one.

The mission, the values, the vision and the utility’s wide strategies should be drafted, and long-term strategic objectives defined and finally translated into goals and measures. The process should be monitored and evaluated.

6.3 Identify governance gaps

In order to achieve sound water management, water utilities should identify and address several corporate governance “gaps” (based on Reference [9]):

- Policy gap: including institutional fragmentation of water policy across multiple actors, no clear allocation of roles and responsibilities, no coordination mechanisms and lack of effective policy coherence across sectors.
- Administrative gap: related to the mismatch across administrative and hydrological boundaries to manage water resources and supply water services at the relevant scale.
- Funding gap: regarding unstable or insufficient resource allocation and inconsistent financial management.
- Capacity gap: including gaps in knowledge, human capital, technology and other capabilities to design and achieve sustainable, efficient and effective water utilities.
- Information gap: regarding insufficient or incomplete water information to support decision-making.

- Accountability gap: related to ineffective stakeholder engagement for inclusive and transparent decision-making, and lack of monitoring and evaluation mechanisms.
- Objective gap: lack of clear objectives to enhance synergies and complementarities at the right scale.

6.4 Establish decision-making process

A step-by-step decision-making process should be established to organize relevant information and define alternatives.

The process should identify a decision, gather information, assess alternative resolutions and weigh the evidence to choose between the alternatives, implement the chosen alternative and review the decisions and their consequences.

Effective and efficient corporate governance requires a decision-making process aiming for consensus (see [Annex A](#)), seeking to generate widespread levels of participation and agreement. Such a decision-making process should be inclusive, participatory, collaborative, agreement-seeking and cooperative.

6.5 Mapping and definition of roles and responsibilities

The allocation of roles and responsibilities in the water utilities is dispersed across different levels of government and stakeholders, involving different ministries, public agencies and departments, as well as other actors as service providers.

It should be identified who does what in terms of strategic planning, economic and environmental regulation, information, monitoring and evaluation, at which level of government and how such responsibilities are defined. In addition, problems of overlapping should also be identified given that unclear, overlapping and fragmented roles and responsibilities across policy areas and between levels of government can be a major obstacle to effective water management.^[9]

Mapping roles and responsibilities among stakeholders involved in water utilities should be the first step to clarifying the allocation of these roles and responsibilities among actors in order to achieve effective, efficient and inclusive water utilities.

6.6 Stakeholder engagement for inclusive water utilities

Given the fragmentation of the water sector, the impacts of and on other sectors and the wide variety of actors involved in water utilities, stakeholder engagement becomes key for the coordination of these actors and their interests. This approach promotes transparency and accountability of water utilities, aligns the water services with stakeholder needs and, therefore, increases trust and confidence.

NOTE It is important to differentiate between “public participation” and “stakeholder engagement”. According to Smith^[12], public participation encompasses a group of procedures designed to consult, involve and inform the public to allow those affected by a decision to have an input into that decision. Stakeholder engagement has been defined by the OECD as the process through which individuals, groups and organizations have the opportunity to take part in the decision-making that will affect them, or in which they have an interest,^[10] meaning it opens a broader perspective including different actors, not only the public (essentially civil society and customers).

Stakeholder engagement mechanisms should be tailored to relevant contexts, stakeholder categories, policy goals and local needs. However, setting up an enabling environment for result-oriented stakeholder engagement should follow some general principles,^[10] including:

- inclusiveness and equity;
- clarity of goals, transparency and accountability;
- capacity and information;
- efficiency and effectiveness;

- institutionalization, structuring and integration;
- adaptiveness.

6.7 Encourage the development of capacity building and sharing of information

Fostering capacity building should be an essential part of effective and efficient corporate water governance of water utilities, since limited capacity and expertise of internal actors of water utilities can hinder the implementation of water policies, which can lead to a non-efficient provision of the water services.

Information, education, awareness and communication programmes should be an integral part of the strategic planning of water utilities, being accurate, trustworthy and accessible. A lack of information can affect decision-making processes among internal actors of water utilities and trigger a lack of trust and confidence among other stakeholders related to water utilities.

6.8 Adoption of monitoring and evaluation

Corporate governance of water utilities should be regularly monitored and assessed, and adjusted and improved accordingly, given that without proper monitoring and evaluation, corporate governance cannot be improved.

Monitoring and evaluation should concern both the process (considering its different stages) and the outcomes of corporate governance of water utilities, allowing for a comprehensive picture of the process and assessing its effectiveness.

The results of the evaluation of the corporate governance should be reported to the stakeholders in a transparent way, to build trust and support.

7 Influencing factors

7.1 General

There are many influencing factors that can impact corporate governance of a water utility and which should be considered when defining it, including:

- legal aspects (by lawmakers): laws, regulations, policy;
- guidelines (by professional associations): national and international standards, professional associations;
- business models;
- users: levels of service (existing versus expected), tariffs, sustainability, industries;
- other stakeholders: government entities, regulators, funding agencies, media, NGOs, other utilities;
- overall system operation: planning (long and short term), construction, operations (including crisis, technology, people), capacity.

7.2 Legal aspects

7.2.1 General

The list of applicable legal requirements should be identified and their impacts or requirements for the water service well understood. Those usually include legislative framework (see [7.2.2](#)) and water policy (see [7.2.3](#)).

7.2.2 Legislative framework

The legislative framework usually includes supranational, national, state, regional and municipal levels, covering different aspects with an impact on the provision of water service, including, but not limited to, public health, environmental protection, right of way for public infrastructure, public procurement, contracting, labour laws, agriculture and industry.

7.2.3 Water policy

Where a public water policy is developed, it aims at sustainable water management, addressing in a holistic approach the following aspects:

- water resource protection;
- water quality management and pollution control;
- water rights and allocation among users;
- water supply, sanitation and stormwater services;
- water pricing and economic instruments;
- operations and maintenance of water management systems;
- stakeholder engagement and decision-making;
- environmental regulation, planning, biodiversity conservation and protected area management.

7.3 Guidelines

Beyond legislation and policies, there are also numerous guidelines and standards that are consolidated and updated by professional associations.

While water services are pursuing similar goals everywhere, contexts and challenges can be specific. Hence, a pragmatic application of guidelines and standards is preferred.

7.4 Business model

In most cases, the legal framework defines that the infrastructure assets belong to a public body (national, regional and local-level authority). The asset owner is in charge of organizing the water utility within the legal framework.

The legal status of the operator can vary depending on the legal framework and on political choices.

To achieve sustainable performance of water services, the appropriate model can vary over the time. Hence the model should be revised periodically and updated if required.

The most common business models adopted for water utilities are presented in [Table 2](#). For all of them, regulation is needed to promote the service efficiency and set the quality standards and performance requirements.

In cases where the service is provided by a public operator, the services of private third parties are generally ruled by public procurement or contracting regulations. Apart from procurement of goods and services (e.g. consultancy), other options of public-private partnership (PPP) can be considered.

In cases where the service is provided by a private operator, the use and selection of third-party partners can be usually determined by the local responsible body in the respect of local regulation. The private operator is accountable to the responsible body and/or regulator, depending on the local context.

Table 2 — Most common business models adopted by water utilities

Status of water utility	Infrastructure ownership	Management structure of the utility	Possible attributes
Public management			
Public administration department	Public authority	Department of water supply is managed by the public authority	— 100 % public ownership and management — Possible integration with other public services, such as power — Absence of dedicated budget — Coordination required with several departments — The regulation can be ensured by an independent regulatory body
Publicly owned company	Public authority	Board of representatives of the municipality served Shareholders are representatives of the municipalities served (municipalities or association of municipalities)	— Financial gains dedicated to water service, with board of directors and performance objectives adopted — Monopolistic activity without competition — Self-determined management and performance standards — Subject to political interference — The regulation can be ensured by an independent regulatory body
Private management under PPP			
Private operator with concession contract	Public authority	Representatives of public authorities or mixed representation of public and private	— 100 % public infrastructure ownership — The responsible body delegates the majority of risks and operational responsibilities to an operator — Concession contract is generally signed after a call for tender but some exceptions exist — The concession contract defines the level of service required and the tariff structure — The asset management roles and responsibilities are set by the contract — Reporting and transparency mechanisms set by contract — The competition is part of the regulation mechanism
Joint venture with private operator	Mix of public authority and private entity	Mixed representation	— Time-constrained operational contracts — The regulation can be ensured by an independent regulatory body

Table 2 (continued)

Status of water utility	Infrastructure ownership	Management structure of the utility	Possible attributes
Lease operational contract with private operator	Public authority	Representatives of public authorities or mixed representation of public and private	— Efficiency focused — Time-limited operational contracts — The asset management is shared between the private operator and the public authority — The public authority delegates part of its responsibilities to the operator — Owner-led decisions for control
Privatization			
Privately owned company	Private entity	Board of shareholders of private company Assets are permanently transferred or sold to private companies	— Operational efficiency focused — Mechanisms generally allow the regulatory bodies to verify and ensure that the sale of private shares will not impact the control by the responsible body — The regulation is usually ensured by an independent regulatory body

7.5 Users

Primarily, users receive water services and are subsequently charged a tariff for the service, either directly via billing or indirectly via taxes. Therefore, it is essential to understand user expectations in terms of:

- level of service: existing versus expected;
- price of the water services (affordability, i.e. how much they can pay for the service).

Once user expectations are understood, the water utility can communicate its commitment to achieve the objectives of the services. The water utility should also regularly inform users about strategy and service quality, as well as the availability of the service, such as sustainability of resources and assets. See ISO 24510 for additional information.

The water utility should also pay attention to the diversity of their users and to any impacts on their level of service, such as large industry which can have differing service requirements, e.g. high consumption or non-domestic wastewater generation. This can influence the strategic objectives as well as the operational management.

7.6 Other stakeholders

In addition to users, the water utility needs to map and measure other stakeholders' expectations, including but not limited to:

- funding agencies;
- government entities, including regulators;
- other utilities;
- NGOs;
- media.

7.7 Overall system operation

The system operation results in the proper organization and governance of the operations and requires the minimum key aspects given in [Table 3](#) to be considered.

Table 3 — Key aspects for system operation

Key aspects	Description
Planning (master or long and short term)	Defining long-term strategic objectives for the service is essential to ensure its sustainability (see Clause 6).
Operations (including crisis)	As ensuring continuity is mandatory, operations should be organized in such a way that they enable continuous availability of staff and assets.
Construction works	Managing a water service requires construction activities to build new assets or perform maintenance and replacement works on existing assets, to ensure the sustainability and continuity of the service. It is essential to define the policy and organization structures to enable such works to happen in a timely fashion following relevant standards. Coordination with other stakeholders, such as public administration and other utilities, is key. This can involve consideration of the outsourcing of activities.
People (capacity)	Ensuring capacity building should be a priority in the management of water utilities (see Clause 6).
Technologies	Water management involves technologies and therefore related skills are essential. The operator of water services should have a policy related to technologies, where a small operator may rely more on vendors or consultancy, a large operator may invest in research and development (R&D) and develop its own technologies.
Innovation	Innovation is key to improving efficiency. It should not only be linked to technological innovation (see Clause 5) but also to soft skills (including sociology and cultural change).

8 Implementation

8.1 Purpose of water services

The purpose of drinking water supply services is to provide safe and affordable drinking water to users with the aim of contributing to the improvement of public health and the living environment and to the protection and preservation of water resources in coordination with other water users.

The purpose of wastewater services is to organize collection and treatment of wastewater produced by domestic activities, before being discharged into water bodies. Some services may also treat industrial wastewater mixed with domestic wastewater. The aim is to protect public health from water diseases and to protect the environment, as well as allowing the use of water bodies for different purposes: drinking water supply, recreational activities, agriculture and industrial activities.

The purpose of stormwater services is to manage the flow of stormwater, both pluvial and fluvial, and to prevent damage to property and the environment. The stormwater flows retained can be used later for other purposes.

All these services should be sustainable in order to be secured for future generation.

8.2 Objectives of water services

The objectives of water services are as follows:

- Supply of safe water for every user.
- Treatment of wastewater prior to discharge.

- Continuous supply of service.
- Compliance with quality standards.
- Affordability, with mechanisms that provide affordable and equitable provision of water to all consumers.

Cost recovery is a general principle for water services.

NOTE Depending on local conditions, wastewater is collected in a sewer and treated collectively in a wastewater treatment plant (WWTP) or treated continuously onsite. Stormwater can be transported to wastewater treatment plants for treatment or held in stormwater ponds (wetlands) for biological treatment, or simply diverted to surface water systems.

8.3 Viewpoint of system to ensure publicity

8.3.1 General

Water utilities should build their corporate governance, monitoring system, corporate social responsibility (CSR) promotion system and internal control system from the viewpoints in this subclause in order to fulfil their management philosophy and their role and responsibility as a water utility.

8.3.2 Reliable achievement of required level

Water utilities should establish their own monitoring system with the aim of achieving the required service levels.

8.3.3 Implementation of corporate social responsibility

Water utilities should regard CSR as an important objective of management that helps ensure a positive contribution from the businesses to the community that it serves.

8.3.4 Enhancement of user service

Establish a customer service quality assessment and monitoring system to enhance services and improve customer satisfaction.

8.3.5 Effective governance system and internal control system

In order to gain the trust of customers, water utilities should establish effective, efficient and transparent governance systems and internal control systems.

8.3.6 Response in the event of a disaster

Water utilities are key stakeholders for sustainable development of societies. As such, they should design measures and action plans to respond promptly and adequately to cases of natural disaster.

Disasters can include the effects of climate change or the impacts of terrorism (cyber and otherwise) in terms of incapacitating or destroying infrastructural capacity or destroying operational control and management.

8.3.7 United Nations Sustainable Development Goals

Most of the 17 UN SDGs are water related and can be taken into consideration locally by water services to set specific targets relating to water saving, water reuse or water rights.

8.4 Organizational functions

8.4.1 General

The principles of good corporate governance include legitimacy, transparency, accountability and inclusiveness, as indicated in [Clause 5](#). The essential functions of governance should ensure that:

- all roles and responsibilities are covered, managed and integrated;
- decisions are explicitly taken and implemented;
- stakeholders can articulate their interests and have their concerns considered;
- decision-makers are held accountable.

An illustration of roles and functions essential to corporate governance is given in [Figure 1](#).

Subclauses [8.4.1](#) to [8.4.4](#) describe the essential organizational functions corresponding to the functions identified in the [Figure 1](#) and to the majority of cases.

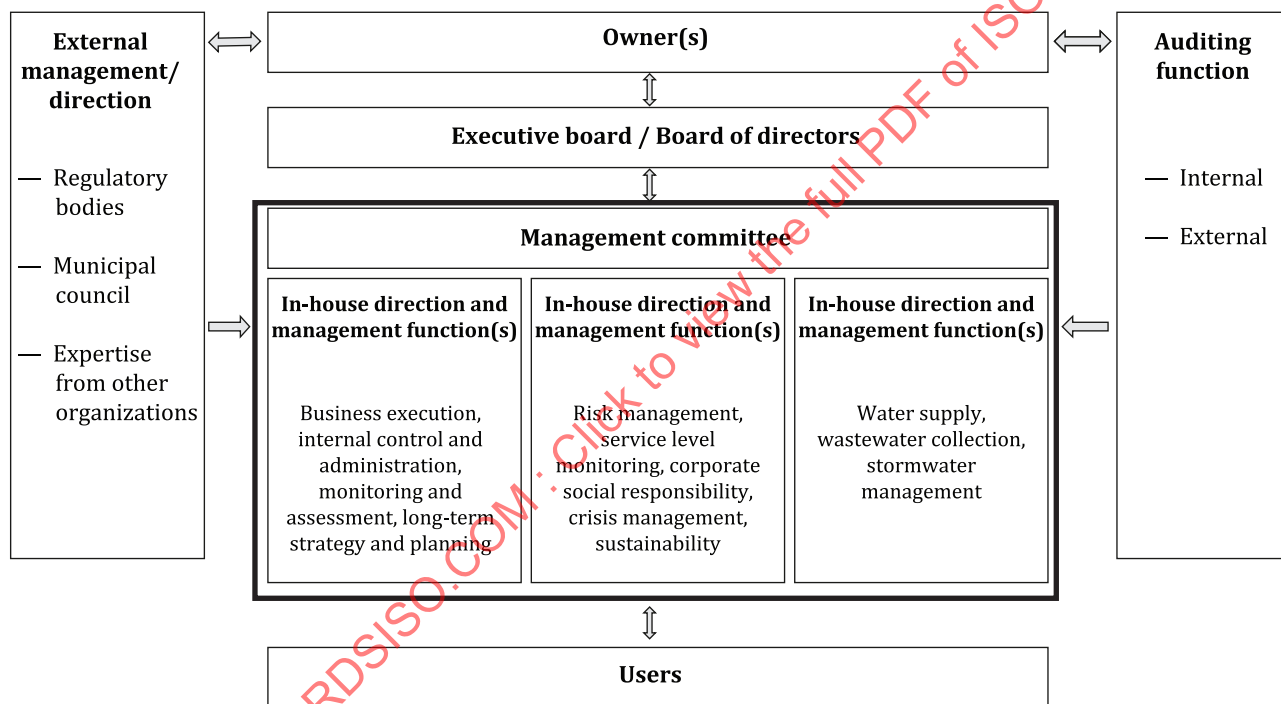


Figure 1 — Illustration of roles and functions essential to corporate governance

8.4.2 Executive board, board of directors or municipal council committee

The executive board, board of directors or municipal council committee (where applicable) is responsible for:

- the recruitment, supervision, retention, evaluation and compensation of the chief executive or director general;
- providing strategic direction, including vision, mission and goals;
- the establishment and monitoring of an overarching governance system for the organization;
- monitoring and control through appointment of the auditor;
- protecting the organization's assets and investment.

These responsibilities are dependent on the public, private or political nature of the organization.

8.4.3 Management committee

A management committee comprising the executives and heads of major departments should be established to speed up decision-making and streamline business operations.

The executive functions should be transparent, accountable and inclusive. They should be deliberate, cover all important business and operational matters and oversee the execution of business and operational decisions and matters.

The following three organizational functions and related positions can be required:

- in-house executives responsible for business execution, internal control and administration, along with monitoring and assessment (e.g. chief executive or director general);
- in-house executives responsible for risk management, service-level monitoring and CSR [e.g. assistant chief executive officer (CEO) or deputy director general];
- in-house executives and management responsible for the operational functions of the organization such as water supply, wastewater collection or stormwater management (e.g. director or manager of the designated service function).

In addition, multiple outside executive functions are likely to exist to reinforce governance by utilizing expertise and knowledge outside the water utilities, ensuring transparency in the decision-making process and supervision of management.

8.4.4 Auditing

The auditing function should be established to monitor the state of governance and operational status of the organization in accordance with audit policies and implementation plans established. This function shall be transparent and public to ensure stakeholder confidence.

The auditing function can be internal or external, and audits the operational and financial performance of the service. Ideally, where the essential function is internal, there should be a third-party auditing function.

8.5 Monitoring the implementation

8.5.1 Overview

Water supply and wastewater system are essential lifelines and service is provided under monopoly. Thus, monitoring should be carried out as appropriate to maintain a safe service level and ensure business sustainability.

8.5.2 Monitoring body

In conducting the monitoring, from the viewpoint of encouraging independent and autonomous business management, the water utilities should monitor themselves as a basis to confirm the achievement of the required level. Auditing can also be done by external organizations. A monitoring scheme is given in [Figure 2](#).

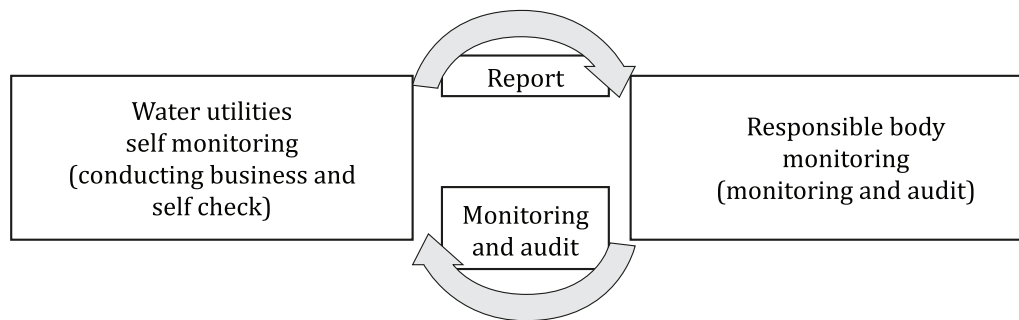


Figure 2 — Monitoring

9 Monitoring or assessment of corporate governance

9.1 General

There cannot be a single, uniform policy response to water challenges worldwide, given the diversity of situations within and across countries in terms of legal and institutional frameworks, cultural practices, and climatic, geographic and economic conditions at the origin.

Water utilities should develop performance indicators specific to their needs for assessing and monitoring their corporate governance.

Such performance indicator targets, along with the monitoring frequency, should be set and clearly defined by the relevant decision-maker within the water utility.

Furthermore, independent auditing and reporting of the results can be disclosed to stakeholders in a transparent and understandable way.

9.2 Assessing the corporate governance of water utilities

9.2.1 General

The monitoring requirements should be designed to improve the operations and corporate governance of the water utility. They should help to identify the gaps and fields for improvement of the water utility in a specific context.

Effective and efficient corporate governance performance indicators for water utilities should cover different aspects, including the key areas in [9.2.2](#) to [9.2.7](#).

9.2.2 Vision, mission and strategic objectives

Check if the vision, mission and strategic objectives of the water utility's corporate governance are set according to:

- a) identified needs and expectations of the customers or stakeholders;
- b) objectives and overall ownership framework, such as level of service, service objective, tariff settings, asset management, sustainability, broader societal objectives, SDGs and CSR.

9.2.3 Basic organizational decisions

Identify corporate governance gaps and key coordination mechanisms through:

- a) checking how all roles and responsibilities have been defined and communicated;

- b) checking if the decision of the organization model of the water utility has been decided with the appropriate transparency;
- c) checking if all necessary connections have been established with external entities at local, regional and national levels.

9.2.4 Preparation of day-to-day activities

Establish the decision-making process by:

- a) checking how the list of decisions to be made is elaborated;
- b) checking how this list of decisions is regularly updated;
- c) checking how the decision-making process has been communicated within the water utility.

9.2.5 Responsibilities matrix — Who does what

Map and define the following:

- a) The allocation of roles and responsibilities according to the following three levels:
 - 1) the responsible body decides on the expected levels of services, the means to allocate these (e.g. infrastructure, human resources, funding) and strategic organization (e.g. in-house, public management, PPP);
 - 2) the owner (if different from the responsible body) is in charge of organizing the services according to objectives and guidelines set by the responsible body;
 - 3) the operator of the water utility should apply what is decided by the responsible body according to the organization put in place.
- b) The responsibilities for each role, covering internal matters and external relationships with:
 - 1) appropriate industrial networks, e.g. international or national;
 - 2) national, regional and local administrative bodies;
 - 3) customers in urban, industrial and rural areas;
 - 4) suppliers;
 - 5) other public domain users.

9.2.6 Stakeholder mapping and engagement

The stakeholder management by a water utility in its operating environment is assessed by:

- a) checking how stakeholders are identified;
- b) checking how stakeholder engagements are listed and taken into account;
- c) checking how stakeholders are involved (e.g. enquiries, questionnaires, complaints and requests registered).

9.2.7 Outcomes of corporate governance of water utilities

Identification of the expected outcomes builds trust and support within the water utility and ensures that:

- a) the vision and objectives set by the responsible body, with performance indicators, are reported to stakeholders;

- b) levels of service are reported to the responsible body and to stakeholders;
- c) achievements of corporate and social responsibility are monitored and reported to stakeholders;
- d) overall compliance of the water utility is reported to stakeholders;
- e) continuous improvement mechanisms are implemented, evaluated and regularly reviewed.

[Annex C](#) includes a list of specific performance indicators that can be considered to monitor and assess the corporate governance of water utilities.

10 Recommendations of corporate governance

10.1 General

This clause lists typical operational recommendations to achieve good corporate governance.

The recommendations can be used as a checklist for ensuring good corporate governance, taking into account the national, regional and local political, institutional and administrative context. The recommendations should be adapted to local places and changing circumstances.

The first recommendations focus on the cooperation and relationship between owner, responsible body and operator of the water utility. The remaining recommendations are based on user expectations, stakeholder engagement (see [Annex B](#)) and operational performance indicators.

A schematic illustration of the relationship between the water utilities, the responsible body, the owner and the responsible authorities is given in [Figure 3](#).

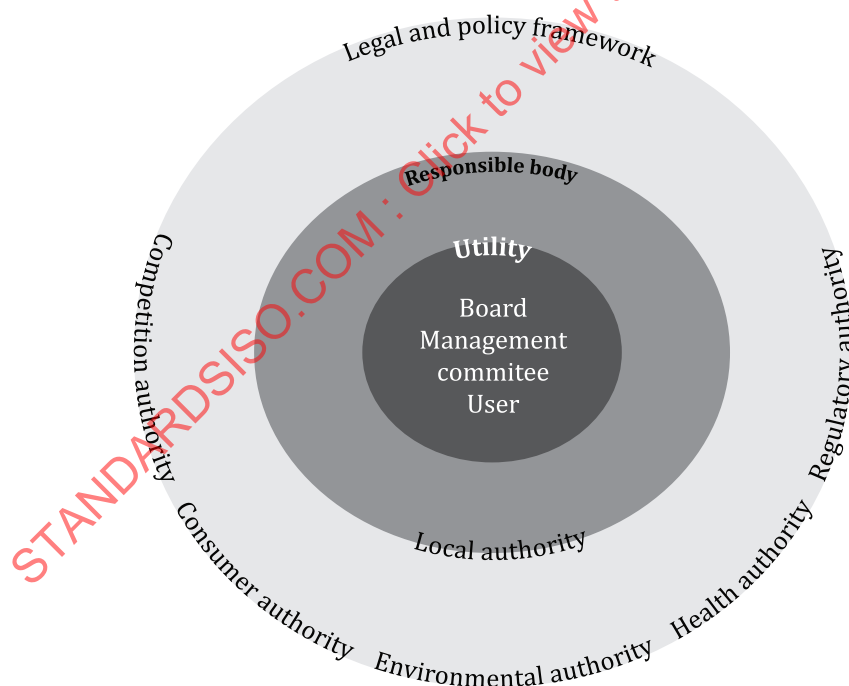


Figure 3 — General scheme illustrating the ecosystem of stakeholders

10.2 Cooperation and relationship between key players

10.2.1 Ownership

10.2.1.1 General

The owner may have several roles, e.g. ownership, authority, user and supplier. The owner organizes the running of the water utility according to the different business models presented in [Table 2](#).

10.2.1.2 Recommendation 1: Owner strategy

It is recommended that the owner draws up a strategy that summarizes its approach to the rationale, objectives and overall framework of water services, e.g. level of service, service objective, tariff settings, asset management, sustainability, broader societal objectives, SDGs and CSR.

This strategy should be made publicly available and become the basis for the monitoring of the water utility by the owner and should be continually developed and updated.

10.2.1.3 Recommendation 2: Roles of the owner

It is recommended that the owner's roles and responsibilities are clearly defined, and that actions planned and communications between the owner and the water utility are elaborated.

To ensure clear roles and avoid conflicts of interest within the organization, different matters relating to the infrastructure ownership of the water utility are typically addressed in different departments, e.g. administrative departments that exercise authority and departments that are in a customer/supplier relationship with the water utility.

The overall policy-related service levels and objectives should, as a rule, be addressed by sector authority plans (e.g. water supply plans, wastewater plans, stormwater plans).

10.2.1.4 Recommendation 3: Interplay and communication between owner and water utility

It is recommended that a set of guidelines is drawn up for communication and interplay in the following cases:

- between the owner and the water utilities, based on the division of responsibilities between owner, responsible body and operator;
- between the responsible authority and the water utilities, covering the operation and authority-related areas;
- between the owner and the water utilities, if the owner also is a user and/or supplier.

In addition, the responsible body of the water utility should define specific goals for the strategic development of the water utility, based on a reconciliation of expectations with the owner strategy.

10.2.2 Responsible body

10.2.2.1 General

According to the local organization, the responsible body should act upon its responsibility according to [Table 1](#).

10.2.2.2 Recommendation 4: Composition of the executive board or board of directors

It is recommended that the chair of the executive board or board of directors (board) takes the initiative to draw up a comprehensive overview of the board's expertise requirements and establishes a dialogue with the owner if there is a need for supplementary competencies on the board.

The board should include a balance of gender and demonstrate suitable diversity and inclusiveness consistent with the expectations and norms of the local community.

It is recommended that clear information is provided on any dependencies that each board member or management committee member has and that the information is made available to the general public on the water utility website.

It is recommended that, at least once every two years, the board conducts an external evaluation in order to ensure good cooperation and focus.

It is recommended that transparency is created regarding payments that are made to the board, e.g. by means of a publicly available remuneration policy.

It is recommended that the board implement rules of procedure regarding their responsibilities, including planning and expectation of monitoring reporting, audits and evaluation.

10.2.3 Operator of water utility

10.2.3.1 General

The board carries out the overall and strategic management of the water utility. The management committee carries out the general management and operation of the water utility.

10.2.3.2 Recommendation 5: interplay between board and management committee

It is recommended that, at least once a year, the board evaluates the work and results of the management committee in accordance with pre-established criteria.

It is recommended that management procedures for the role and responsibility of the management committee are elaborated and approved by the board.

It is recommended that the board and the management committee continually discuss the most significant risks and developments within the most important risk areas, including measures and action plans.

It is recommended that the board and the management committee ensure that external audits regarding economy, quality and environmental performance, customer or consumer satisfaction and stakeholder communication are performed in a timely manner.

It is recommended that the board and the management committee draft the mission, vision and global strategies of the water utility and define the long-term strategic objectives and goals.

10.3 Openness and transparency

10.3.1 General

Users' trust and engagement in operation and corporate governance of the water utilities are essential. Openness and transparency are key to building confidence and ensuring the inclusiveness of stakeholders.

10.3.2 Recommendation 6: openness and transparency

It is recommended that the water utility provides a report of good corporate governance every year and publishes this account, e.g. in conjunction with the submission of their annual reports or on their website.

It is recommended that the board includes in the management report the most significant strategic and business risks and the company's risk management strategies.

It is recommended that the water utility website, as a minimum, ensures access to the most recent annual report, the owner strategy, the water utility strategy and the achieved performance related to these strategies.

It is recommended that the water utility makes publicly available its work regarding environmental and social aspects, sustainability, code of conduct, risks of corruption, social responsibility and stakeholder engagement.

10.4 Stakeholder engagement

10.4.1 General

Stakeholder engagement is essential in order to develop an effective and efficient water utility. Proper internal and external communication is needed to achieve confidence and engagement of all stakeholders. Stakeholder engagement gives key stakeholders the opportunity to take part in and contribute to the decision-making process.

10.4.2 Recommendation 7: Stakeholder engagement

It is recommended that roles and responsibilities among stakeholders are mapped and continuously updated.

It is recommended that multi-level and multi-stakeholder engagement are promoted, implemented and reported to the board.

It is recommended that a communication plan is established for how to inform all internal and external stakeholders of governance, service-level expectation and achievement.

It is recommended that the water utility establishes a customer service quality assessment and monitoring system to enhance services and improve customer service.

It is recommended that the water utility reports yearly on inclusiveness and equity.

10.5 Monitoring of operational improvement

10.5.1 General

Good corporate governance needs to be adaptive to the current operating environment; therefore, there should be a suitable mechanism within the framework to facilitate continuous improvement. Water utilities should periodically reflect on the level of service requirements, service achievements, adequate skills, capacity and asset management and make appropriate improvements.

10.5.2 Recommendation 8: Operations

It is recommended that the water utility develops specific performance indicators and makes the performance achievement publicly available.

Specific performance indicators should be monitored and reported on annually and may include:

- annual sustainable and resilience indicators;
- CSR;
- capacity-building activities;
- technological and non-technological innovation;
- crisis management activities, including water utility design measures and action plans in response to natural disasters or terror situations.