STANDARDS AS TOOLS TO SUPPORT WATER SAFETY, ACCESS AND SUSTAINABILITY IN BOLIVIA

Currently, 3.6 billion people live in areas that are water scarce at least one month a year, and this is set to rise as the population approaches 10 billion and global temperatures increase. In addition, water distribution systems often lack and much of the world’s water is not properly treated before it is consumed or disposed. These global problems also apply to Bolivia, and standards can be part of the solution.

The importance of water safety, access and sustainability

Water is essential to all living organisms in the world and is a key element to a sustained biodiversity. Water is also an important input in many goods and services. Some examples where water serve as an important input are: Drinking water; Agriculture; Fishery & aquaculture; Goods (food, beverages, paper, textiles, cooling etc.); and Services (energy, tourism).

The failure of proper wastewater treatment and securing access to enough good quality water will hence lead to ecosystem, health, economic and livelihood problems. More specifically it could lead to:
• Accumulation and bioaccumulation of toxic substances, eutrophication and oxygen depletion in natural water bodies that can lead to the death of aquatic life. The cost of killing of species and ruining ecosystems is difficult to estimate, but there will be direct economic consequences on aquaculture, fishing and Bolivia’s 0.9 billion US dollar tourism sector, not to mention the costs for restoring lakes and rivers.

• Accumulation of toxic substances in natural water bodies that deteriorate ground water bodies which can no longer be used for drinking water production, or if so it can have severe negative impacts on people’s health, such as causing cancer and infertility, and be costly for the economy and the health care system.

• The spread of diseases in distribution of drinking water as well as in natural water bodies that could have severe negative impacts on people’s health and be costly for the economy and the health care system.

• Lack of water or the spread of diseases and contamination of soils by utilizing insufficiently treated wastewater for irrigation for the 5.6 billion US dollar agricultural sector.

• No access to water for water intensive industries such as the food industry.

Standards related to water safety, access and sustainability

To assure the access to clean water costs are involved. However, not all water needs to be treated perfectly and costs can be reduced through proper policies and strategies. Water treatment might also lead to valuable residual products such as phosphor that could be used as fertilizer.

As described above the price of not assuring access to clean water will be very costly. According to the World Bank just the lack of sewage systems and treatment of residual water, generates USD 1 278 millions in economic losses in Bolivia (4% of GDP).

To secure water safety, access and sustainability, proper laws and regulations, access to technology, know-how, investments and finance are long-term key elements. However, standards also play a key role.

Standards and the standardization process can also be useful in lawmaking.
As standards drive down costs, improve management and assure quality they may also help to secure finance and investments, and exchange of technology and know-how.

*Implementation of standards is of great help to secure water safety, access and sustainability longterm.*

Standards are jointly agreed solutions to recurrent problems and exist in all areas of society and industry. They help to, e.g., assure efficiency, quality, harmonization, safety, transparency and sustainability. Standards are developed by interested stakeholders and experts and, hence, are likely to be both practical, widely accepted and used.

Standards also exist in many areas related to water and are mainly being developed within the framework of the International Standardization Organization (ISO), in which three committees exist exclusively for water standards. These committees contain many working groups and there are also other ISO committees that relate to water in one way or another. Regions and countries also develop their own standards when needed.

*Examples of water standards*

There currently exist 350 developed ISO standards related directly to the three ISO committees on water, and another 63 are in development. Bolivia also has developed or is developing several national water standards.

E.g., to assure proper treatment and monitoring of water quality there are standards describing the monitoring and sampling in terms of chemical parameters, analytical methods as well as sampling methodology and handling of samples (ISO 5667 series). There also exist standards related to management of wastewater and drinking water utilities and assessment of wastewater and drinking water services (ISO 24512:2007 and ISO 24511:2007).

Also, the reuse of treated wastewater for irrigation is important when there is water scarcity. However, this comes with risks of potential contamination of groundwater bodies and soil, and spreading bacteria and viruses to the crops used for food production for humans or livestock. A standard for the adaptation of irrigation systems and practices to treated wastewater, as well as a standard for wastewater reuse in irrigation projects have therefore been developed (ISO 16075 series, ISO 20419).

To assure access and a sustainable use of water there are, e.g., standards that provide methods and tools to enable all organizations to assess and account for their water usage, and to identify, plan and implement measures to optimize water use through the systematic management of
water (ISO 24526 and ISO 46001). Standards also exist for companies to monitor their water footprint (ISO 14046) and that rates products according to their water efficiency (ISO/AWI 31600). In addition, there are standards that help establishing good practices for combatting land degradation and desertification (ISO 14055-1), on wastewater collection networks (ISO 24516-3) and for water loss reduction in urban supply systems (ISO/CD 24528).

Voluntary vs. mandatory standards

Using standards is voluntary. However, standards may also function as an obligatory reference, as in the regulatory and procurement processes adopted by public authorities. The broad participation of stakeholders in the development of standards could also form the basis of discussions around areas in laws and regulations normally not directly linked to standards, such as level of toxins etc.

“Swedish International Development Cooperation Agency and the Swedish Institute for Standards support the development and implementation of both national and international standards related to water safety, access and sustainability in Bolivia. The support is mainly provided to Bolivia’s Institute for Standards (IBNORCA) and amounts to 2 MEUR between 2018–2020”.

Even if those standards or discussions related to laws and regulations does not become mandatory they can still serve as tools for municipalities, companies and organizations that are supporting a sustainable water use.

IS YOUR ORGANISATION UP TO STANDARD?

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