

Water is precious. It is the source of life.

In most industrialized countries, clean water comes from the tap.

Many developing countries, however, have difficulties ensuring a solid supply of clean drinking water. This is a major obstacle to development.

But why is it so crucial to improve the water infrastructure in developing countries? In which areas does water play a special role? And what are the biggest problems?

The United Nations Development Programme (UNDP) states: "Clean water can make or break human development."

Access to clean fresh water has been given the status of a human right. Nevertheless, the water sector still has a relatively low political priority. Few developing countries have efficient water resource management.

Since 1997, the annual share of the global financial development aid spent for the water sector has fallen from eight to five percent.

Especially in developing countries, water plays an important role in many different areas.

To name the most important: Nutrition, health, conflicts and natural disasters.

These areas are interrelated and influence each other.

First: The availability of water is important for the agricultural sector, which provides the population with food and produces agricultural exports. Especially countries with little or very irregular rainfall often rely heavily on irrigation systems. Irrigated agriculture counts for 70% of total global water consumption.

Excessive irrigation can cause considerable damage. For example by the large-scale cultivation of water-intensive crops for the export markets.

An example: The Aral Sea was once the fourth largest freshwater lake worldwide. The countries Kazakhstan and Uzbekistan then started to take huge amounts of water from its tributary rivers in order to irrigate their cotton fields.

Since the 1960s, the Aral Sea has shrunk by nearly 75 percent. It has lost 90% of its water and become very salty due to the low water exchange. The remaining water is contaminated by pesticides that wash out of the cotton farms. The destruction of the Aral Sea is considered one of the largest man-made disasters in the world.

But even on a smaller scale, non-sustainable water management leads to the degradation of soil and affects food production.

Second: The supply of clean fresh water is very important for the health system. And what is often forgotten: A functioning sewage and sanitation system is crucial for acceptable

hygiene conditions. In the last few years progress has been made in this area. In the year 2000, one of the United Nations' Millennium Development Goals was reached: the number of people without access to safe drinking water was reduced by 50 percent.

But still: 900 million people do not have access to safe drinking water. And in other areas too, reality is still bad: 2.5 billion people have no access to sanitation. The World Health Organization estimates the 80 percent of diseases in developing countries can be traced back to inadequate water supply and sanitation. UNESCO estimates that about 5,000 children die every day as a result. Overall, about 3.5 million people die every year due to lack of clean drinking water.

Third: In regions where water is a scarce resource, it can lead to conflicts. Struggles over water resources can arise between villages and regions, between landowners and peasants, or even between different states.

An example is the conflict over the use of the Nile, one of the largest rivers in the world. The majority of the Nile water comes from the Blue Nile, which originates in Ethiopia. An old agreement from the colonial period allows Egypt and Sudan the use of most of the Nile's water. Ethiopia, a poor country with regular famines, wants to build an agricultural irrigation system. Egypt fears a decrease of Nile water and tries to prevent Ethiopia from doing so, even with military threats.

However, the example of the Nile conflict also shows opportunities for international cooperation in the water sector: the countries along the river have formed the Nile Basin Initiative in order to find ways to organize the use of its water without conflict.

Fourth: Water is not always a blessing. Three-quarters of all natural disasters are directly or indirectly related to water, such as floods and tsunamis. Human intervention, especially altering the natural landscape, is an important factor as well. Three important examples: the straightening of rivers. Deforestation, particularly of mangrove forests along the coast. And poor coastal protection.

Experts believe that such water-related natural disasters will intensify, due to climate change.

Problems in the water sector

Three main problems can be observed:

First: The overuse of water, through inefficient irrigation systems and waste, population growth, and changing consumer behavior of the world's population. People are eating more and more meat. Compared to vegetable products, animal products require much more

water to produce. 2,500 liters of water are required to grow a kilogram rice; one kilogram of beef requires 15,000 liters. Such water-intensive products are often exported from developing and emerging countries to industrialized countries.

Second: Water pollution: In industrialized countries, the main problem is agriculture. Groundwater quality can be reduced by inputting large quantities of pesticides and chemical fertilizers. In developing and emerging countries, the absence of any wastewater management is usually critical. In developing countries, 90 percent of urban wastewater pours untreated into rivers, lakes or the sea.

Third: Inadequate management: Problems in the water sector are rarely a political priority. At the national level, it is the lack of an efficient, integrated and sustainable water resources management. At the international level, there is often no effective instrument for cooperation to use water resources that cross borders sustainably.

We can see: The water sector is a complex system with very different areas of concern. Numerous problems add up to a significant obstacle to development, especially for the poorest countries. Its political priority on international and national level does not reflect the importance of this issue. This has to change, since the pressure on the world's water resources will only increase in the coming years with growing populations and intensification of use.