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Federal Department for Foreign Affairs FDFA
Swiss Agency for Development and Cooperation SDC
Corporate Domain Global Cooperation GC
Global Programme Water Initiatives GPWI

Swiss Contributions to Water Footprint Concept Development and Application

Pressure on global water resources, especially in developing countries, is recognized as a key issue in terms of sustainability. Reaching better water governance for equitable and sustainable access to safe drinking water, as well as to water for agriculture, industry and the maintenance of ecosystems is a fundamental challenge. This drives the need for a better understanding of water related impacts as a basis for improved water management at local, regional and global levels. The water footprint (WF) is a way of visualizing the direct and indirect impacts from water consumption and pollution, in order to tackle the major issues and prioritize efforts for better managing the related risks.

The issue of water use and management has become increasingly important in the global debate on sustainability. This interest has been driven by growing water demand, increasing water scarcity and degradation of water quality, as well as increasing water intensive uses such as food and energy production. In order to reduce pressure on water resources is necessary to understand one's water footprint, meaning the impacts related to water withdrawal, consumption and pollution.

A water footprint assessment identifies potential environmental impacts related to water, identifies quantity of water use and changes in water quality, includes relevant geographical and temporal dimensions, utilizes hydrological knowledge and is modular (referring to life cycle stages). (ISO 14'046, 2014)

The WF can be calculated for an individual, a business, a town or a country. For example, in Switzerland 82% of the water required to produce all the goods and services consumed in the country comes from abroad.

Thus, water is certainly rising to the top of companies' sustainability agendas because of the related risks and opportunities that affect their supply chains and operations. A good water stewardship strategy is relying on a good water footprint assessment to guide companies towards meaningful actions (Quantis, 2014).

Switzerland through its Swiss Agency for Development and Cooperation (SDC) within its Global Programme Water Initiatives (GPWI) is today at the forefront of WF development and application. It is engaged with research and governmental institutions and in various public-private partnerships in the following initiatives:

- Since 2009, SDC, the Federal Office for the Environment and the Federal Office for Agriculture actively supported work on a new ISO standard to ensure that water usage worldwide can be assessed according to uniform criteria. The ISO 14'046 for conducting a water footprint assessment was adopted by the organisation's member states in July 2014;
- SuizAgua Colombia, since 2010, improves water management by applying the WF with the business sector and with national and regional authorities in Colombia. 11 multinational companies and the Center for Cleaner Production are involved, as well as international and national research institutions. The developed tools and lessons learned are available for regional and global scaling up processes;
- SuizAgua Andina extends the WF concept and successes of Colombia to Peru and Chile. It will reduce the WF of the business sector, value the concept to serve as decision-making tool on policies to improve water management at national levels and facilitate the countries to become sources of learning and influence of the WF developments at the global level.
- In Vietnam, second largest coffee producer in the world, a public private partnership between SDC and Nestlé supports a project on efficient water use in coffee production. The project aims to ensure equitable and sufficient water availability for all water users in the Central Highlands of Vietnam, and obtain pivotal water savings through improved irrigation management in the coffee sector reaching out to a critical mass of farmers (50,000), and hence improving people's livelihoods in socio-economic terms and protecting the environment.

SuizAgua Colombia

Water Footprint put into practice

Country
Colombia

Partners
- National Institute of Hydrology, Meteorology and Environmental Studies (IDEAM)
- Clariant, Holcim, Nestlé, Argos, Haceb, Griffith Laboratories, Familia S.A, Uniban S.A, Agrícola Sarapalma, Mineros S.A and Syngenta.
- National Center for Cleaner Production (CNPML) , Quantis, Center of Science and Technology (CTA) and Good Stuff International (GSI)

Background information
Water risks are rapidly increasing because of water governance weaknesses, resulting in meagre water treatment, inefficient water use and competition among different water uses.

Project targets
Capacity building on the practical application of the WF. Partnership with the private sector for responsible water management. Apply the WF concept at the territorial level to improve public policy guidelines.

Target groups
Authorities, institutions, businesses, water practitioners and communities.

Costs
Total: CHF 5'763'828
SDC: CHF 1'816'250

Duration
06.2009 – 12.2015

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The project applies the water footprint (WF) indicator for assessing, monitoring and motivating investments for reducing impacts from water uses, both consumption and pollution. At the multi-sector and geographic level, the WF has contributed to visualize water uses within the country's 316 water basins, as part of the Colombian National Water Study.

From a pilot project to scaling-up of achievements

In a globalized economy, there is a strong interest for methods to assess, reduce and monitor impacts on water from the direct and indirect uses within the production of goods and services. This has led to a growing interest in the water footprint (WF) concept. Thus, SDC has forged **public-private partnerships** with multinational companies, as well as with research centers and governmental authorities, for the implementation of a pilot project on WF with global scaling perspectives. It has become a breeding ground for lessons learnt about WF application– a concept prior unknown to the local stakeholders. This experience has gain great interest and it has mobilized investments of private and public actors.

SDC's contribution supports capacity building and combines efforts to take further the WF application. The main objective is to enhance knowledge for a more integrated water management for the policy dialogue among sectors.

SDC also provided scientific support for the development of the international standard ISO 14046 on WF, based on the Life Cycle Assessment approach. As follows, the key methodological steps applied: 1) Water inventory, which includes supply chain, electricity, fuels, etc.; 2) Calculation of various impact indicators related to water consumption, water pollution and geographic water stress; 3) implementing measures to reduce the WF and; 4) monitoring. Companies have also implemented Corporate Social and Environmental Responsibility actions related to water issues in their water basin of influence.

Main results 2010 – 2015

- WF concept introduced a new set of indicators in Colombia's National Water Study, as a result of a joint effort with IDEAM, CTA and GSI. For the first time, green water is taken into account in this official national water study.
- 11 multinational companies are part of the initiative from diverse productive sectors, such as: food processing, paper, cement and concrete, chemical and electric appliances. A work team integrated also by research institutions such as Quantis, CNPML, CTA and GSI.
- Partner companies have invested about 2.5 million USD (2010 -2015) in monitoring and reducing their water footprints and implementing corporate social responsibility (CSR) actions related to improving water management in their area of influence.
- Guidelines for multisector WF assessment at the water basin level with the case study of the Porce River.
- Capacity building and knowledge development of WF methodologies: i) Life Cycle Assessment approach, and ii) Water Footprint Network
- Knowledge management to support the scaling up process and results communication at a national and international level.
- Development of a water online game. www.aventurayaku.com
- Scaling up of the project in Peru and Chile (2012).