



**Global Institute for Water
Environment and Health**

Leadership For Positive Change

**From the Millennium Development Goals to the Sustainable
Development Goals:**

**Report from the GIWEH and the development of its indicators on
Integrated Water Resources Management**

Summer 2017

GIWEH

10, Rue Chantepoulet
1201, Genève
E-mail: info@giweh.ch
www.giweh.ch
Tél : 022 73375 11

Table of Contents

1. About GIWEH	3
2. Pre 2015	3
2.1 Development of the MDGs	3
2.2 Involved actors	4
2.2.1.1 Global Water Monitoring Online Databases – Pre 2015	4
2.2.1.2 Examples of Global Water Monitoring Online Databases – Pre 2015	4
2.2.2.1 Global Water Indicators and Frameworks – Pre-2015	5
2.2.2.2 Examples of Global Water Indicators and Frameworks – Pre-2015	5
3. 2015	6
4. Post 2015	8
4.1 GIWEH and the post 2015 agenda	8
4.2 GIWEH's Indicators	9
4.3 Other actors involved in the elaboration of indicators	16

1. About GIWEH

The Global Institute for Water, Environment and Health (GIWEH) was founded in 2007. Having identified the maintenance of reliable water supplies and a healthy environment as some of the greatest challenges the planet faces, founder, Dr. Nidal Salim, saw the need for a new broad-based, research centred, and interdisciplinary initiative to respond more effectively to this challenge. The organization was founded by a group of scientists and academics from Swiss universities (such as Geneva University, EPFL Lausanne, and Neuchatel) and other professors from the Arab region. The goals were to highlight the water sector, enhance efficiency, and improve effective water resources management programs between the North and South. GIWEH is guided by an international Steering Board. Its Scientific Professionals Network of academics, scientists, and decision-makers from the North and the South enable the development of interactive, creative, and innovative ways of supporting the MDGs and the 2030 Sustainable Development Agenda (which includes the SDGs that replaced the MDGs in 2015).

GIWEH's vision - "To empower the most vulnerable societies to be able to live in a healthy environment with sustainable quantities of high-quality water."

GIWEH's mission - "To provide societies, individuals, and institutions with educational, research, technical, and scientific support to realize the effective and sustainable use and management of water."

2. Pre 2015

2.1 Development of the MDGs



Figure 1. The Millennium Development Goals.

In September 2010, world leaders agreed on the United Nations Millennium Declaration, setting targets for 2015. Water issues were included in the goal number 7 which projects to: *To halve the proportion of the universal population without sustainable access to clean and safe drinking water and basic sanitation by 2015.* Water related issues are divided into two main objectives which are the access to clean and safe drinking water and basic sanitation. Several actors were involved in the development of those targets.

2.2 Involved actors

2.2.1.1 Global Water Monitoring Online Databases – Pre 2015

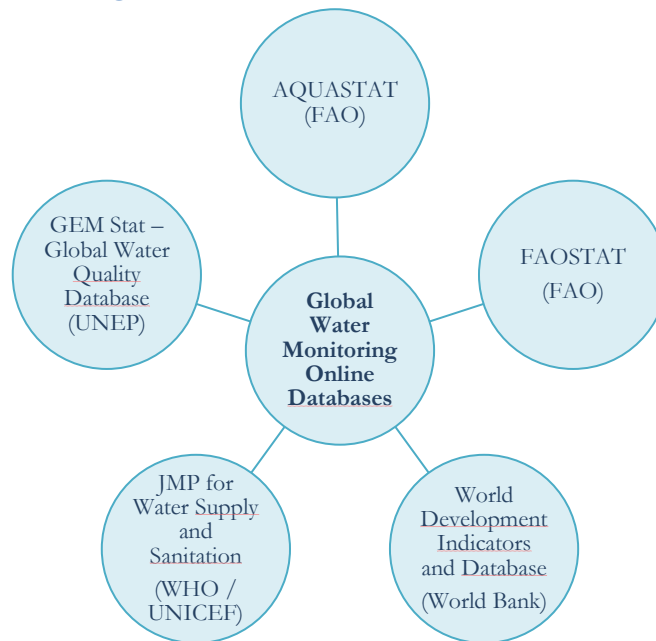


Figure 2. Actors involved with global water monitoring online databases prior 2015 (Non-exhaustive list).

2.2.1.2 Examples of Global Water Monitoring Online Databases – Pre 2015

AQUASTAT has implemented several projects such as the Federal Water Monitoring System (FWMS) and the Key Water Indicator Portal. It has also developed the UN-Water Water Country Briefs (WCB). Those projects have been used widely by a broad range of actors comprising from the World Resources Institute to Coca Cola. To give another example, UNEP has developed several indexes, like the Drinking Water Quality Index (DWQI), the Source Water Quality Index (SWQI), and the Acceptability Water Quality Index (AWQI).

2.2.2.1 Global Water Indicators and Frameworks – Pre-2015

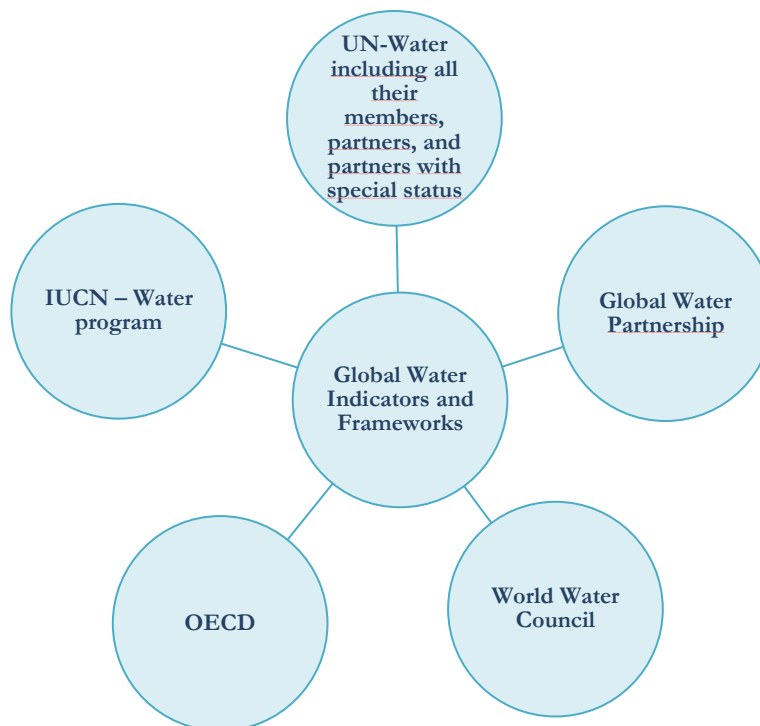


Figure 3. Actors involved with global water indicators and frameworks (Non-exhaustive list).

2.2.2.2 Examples of Global Water Indicators and Frameworks – Pre-2015

The UN-Water has developed an Expanded Water Monitoring Framework together with the United Nations Environment Programme (UNEP), the World Health Organization (WHO), United Nations Children’s Fund (UNICEF), and Swiss Agency for Development and Cooperation (SDC) funding to implement a global framework for monitoring progress on wastewater, water quality, and water resources management. The WHO has also for instance implemented the Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS), an UN-Water initiative, which provides a global update of policy framework, institutional arrangements, human resource base, and international and national finance streams in support of sanitation and drinking water. In addition, the Global Water Partnership (GWP) has aimed to initiate a program on IWRM country level review, and has, among other activities, published a technical brief on ‘Monitoring and evaluation indicators for IWRM strategies and plans’.

3. 2015



Figure 4. Signature of the Paris Agreement.

Following the UN Millennium Declaration involving goals for the period 2000-2015, 193 countries agreed on the 2030 Agenda for Sustainable Development, focusing on people, planet and prosperity. The Sustainable Development Goals adopted in New York in 2015 are directly part of this agenda and are shaped around the idea of inclusion, dignity and justice. The countries reached a consensus, and 17 sustainable development goals were signed. Those goals are much more comprehensive and ambitious than the MDGs. Looking at water, an entire goal is dedicated to it, namely the SDG 6 on ensuring availability and sustainable management of water and sanitation for all. This goal entails 6 targets plus 2 additional ones. Several other goals refer to water and sanitation issues.



Figure 5. The Sustainable Development Goals.

GIWEH participated as an observer at the 21st session of the Conference of the Parties (COP 21) in Paris, with four main objectives: networking, supporting the water agenda within the climate change discussion, enhancing the role of civil society, and exchanging ideas with civil society organizations and other delegations about the future challenges and possible solutions to global environmental problems.

SDG 6: Ensure availability and sustainable management of water and sanitation for all

- 1) By 2030, achieve universal and equitable access to safe and affordable drinking water for all*
- 2) By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations*
- 3) By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally*
- 4) By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity*
- 5) By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate*
- 6) By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes*
- A) By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies*
- B) Support and strengthen the participation of local communities in improving water and sanitation management*

Figure 6. The Sustainable Development Goal 6.

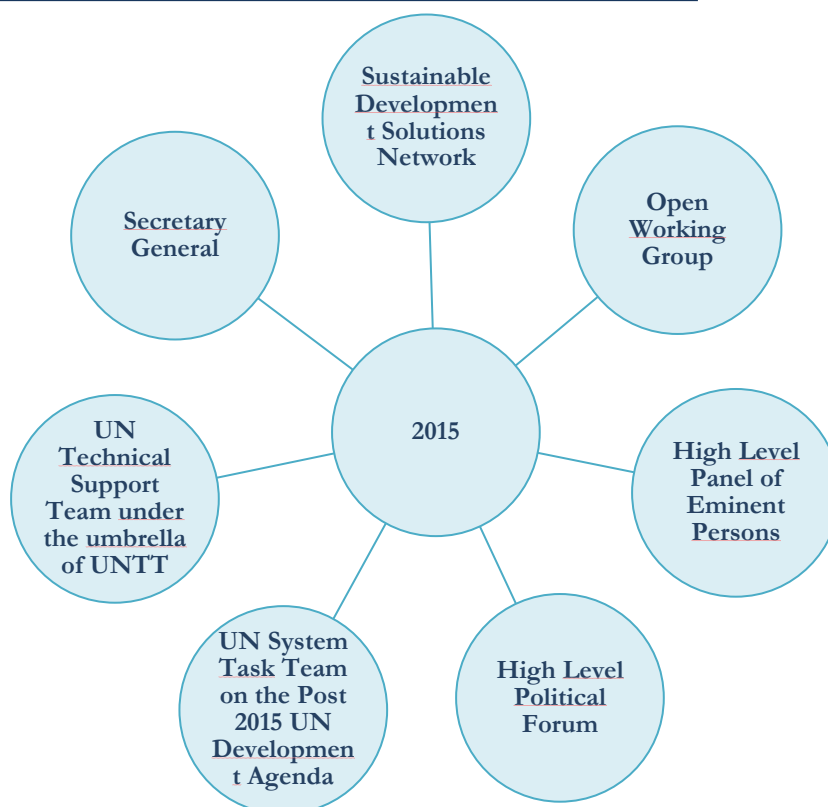


Figure 7. Actors involved in 2015 around the elaboration of the SDGs.

4. Post 2015

4.1 GIWEH and the post 2015 agenda

GIWEH participated at the 22nd session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP22), held in 2016 in Marrakech. Cross-sector stakeholders came together to build the future, draw roadmaps, and plan actions to implement the Paris Agreement. GIWEH is now preparing the 23rd session of the Conference of the Parties, in November 2017 in Bonn. GIWEH is focusing on working with vulnerable people and the impact of climate change.

Moreover, GIWEH participated as a member to the OECD Water Governance Initiative, World Water Forum, Stockholm International Water Week, Singapore International Water Week etc.

4.2 GIWEH's Indicators

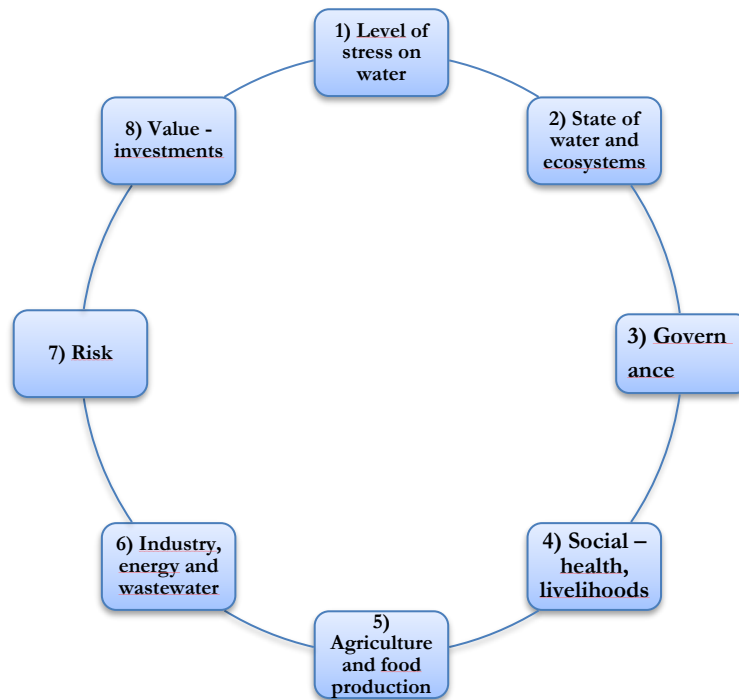


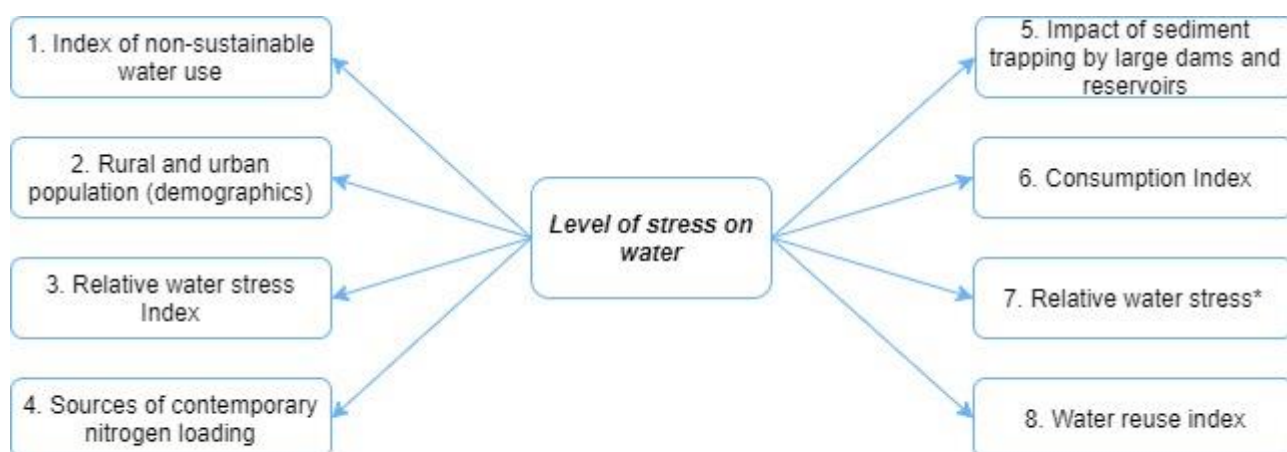
Figure 8. GIWEH's indicators for the Integrated Water Resources Management.

Following the Paris Agreement, the GIWEH focused on the SDG 6, especially on the Integrated Water Resources Management (IWRM). To develop this aspect, the organization developed indicators based on their analysis and research. The indicators are classified in 8 components, namely: the level of stress on water, the state of water and ecosystems, governance, social – health and livelihoods, agriculture and food production, industry, energy and wastewater, risk, and finally, value and investments. Each of those eight components is then developed into indicators that will be further explained in this section.

Several projects conducted by GIWEH are already implementing those indicators. For instance, GIWEH is active in Tunisia with a project working with small-scale farmers to adapt climate resilience throughout the agricultural sector. Besides the inclusion of other goals such as gender equality, this project puts an emphasis on IWRM. Another project involving IWRM is active in Kenya, as a water-scarce country, to support the SDG 6 together with the Kenyan government.

Moreover, those indicators have already been presented to the Budapest Water Summit on the 28-30 November 2016.

1) Level of stress



* Calculated as the sum of abstractions for 'consumptive' uses divided by net precipitation

Figure 9. Development of indicators for the level of stress on water

2) State of the water and ecosystems

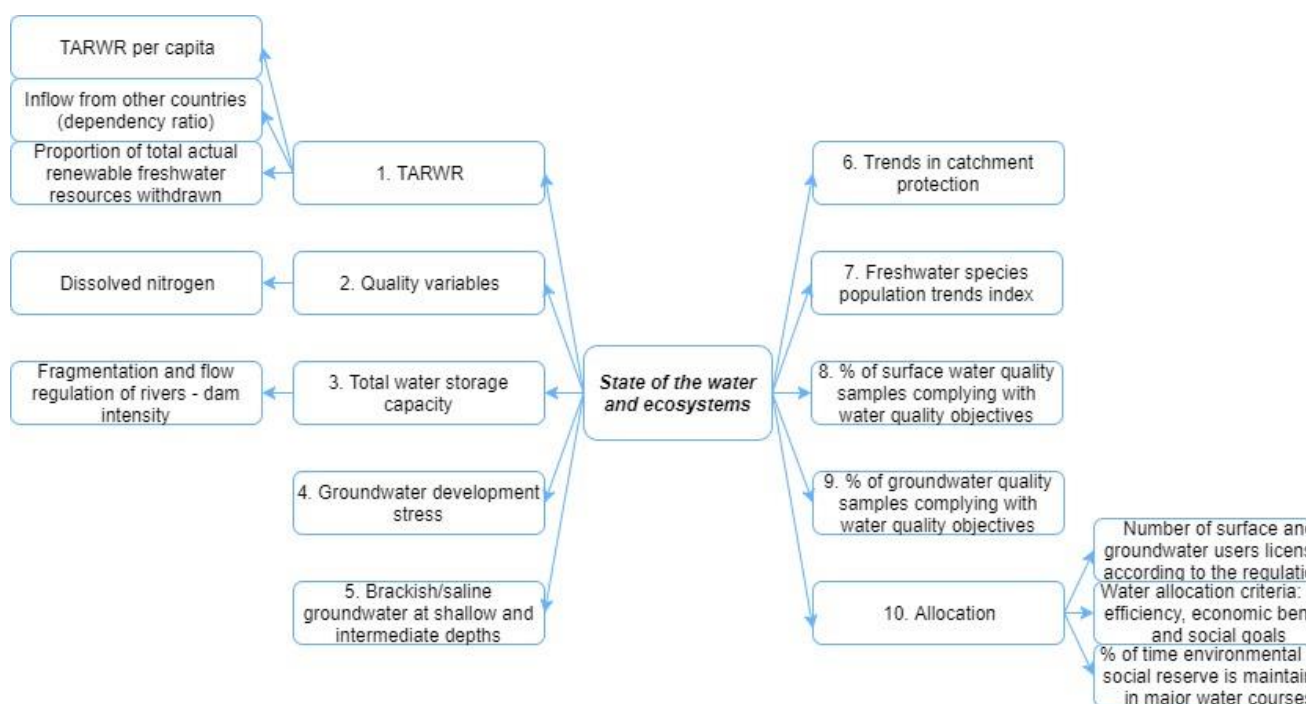


Figure 10. Development of indicators for the state of water and ecosystems

3) Governance

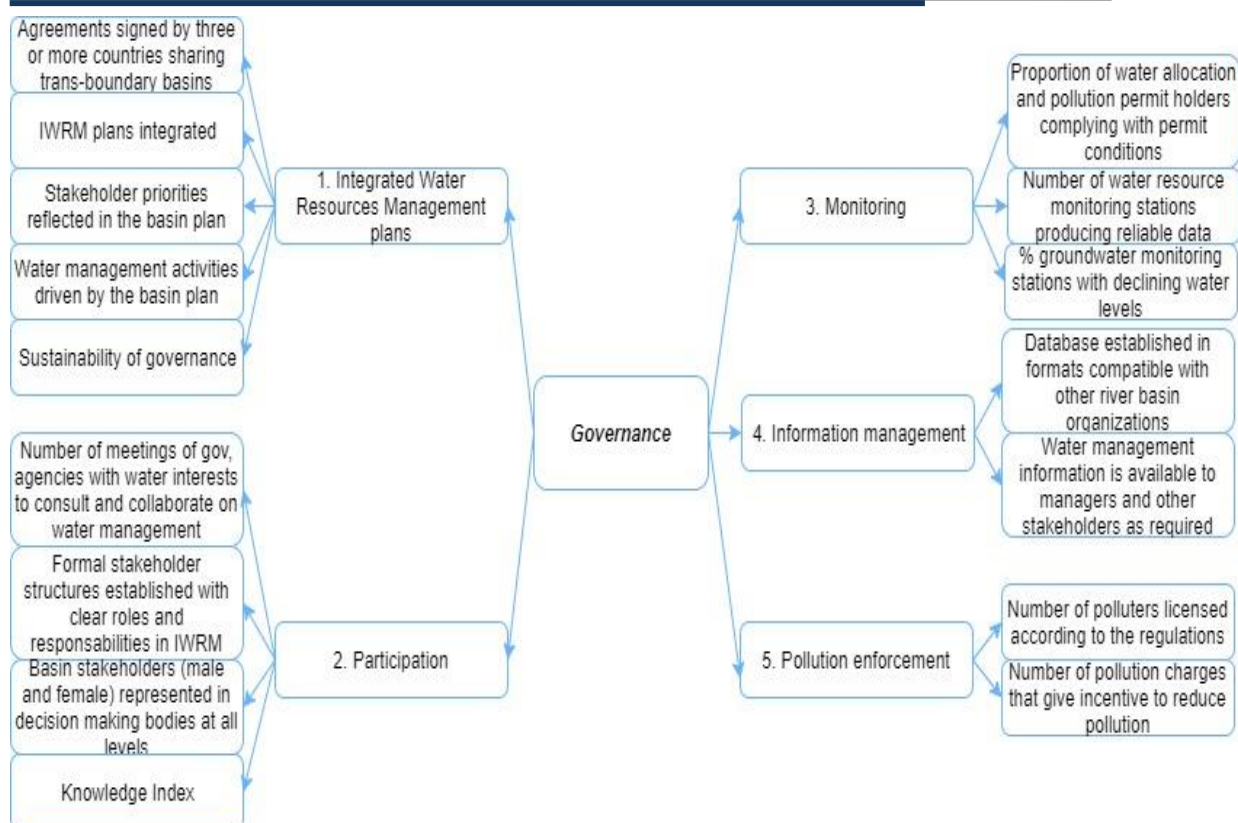


Figure 11. Development of indicators for the governance.

4) Social

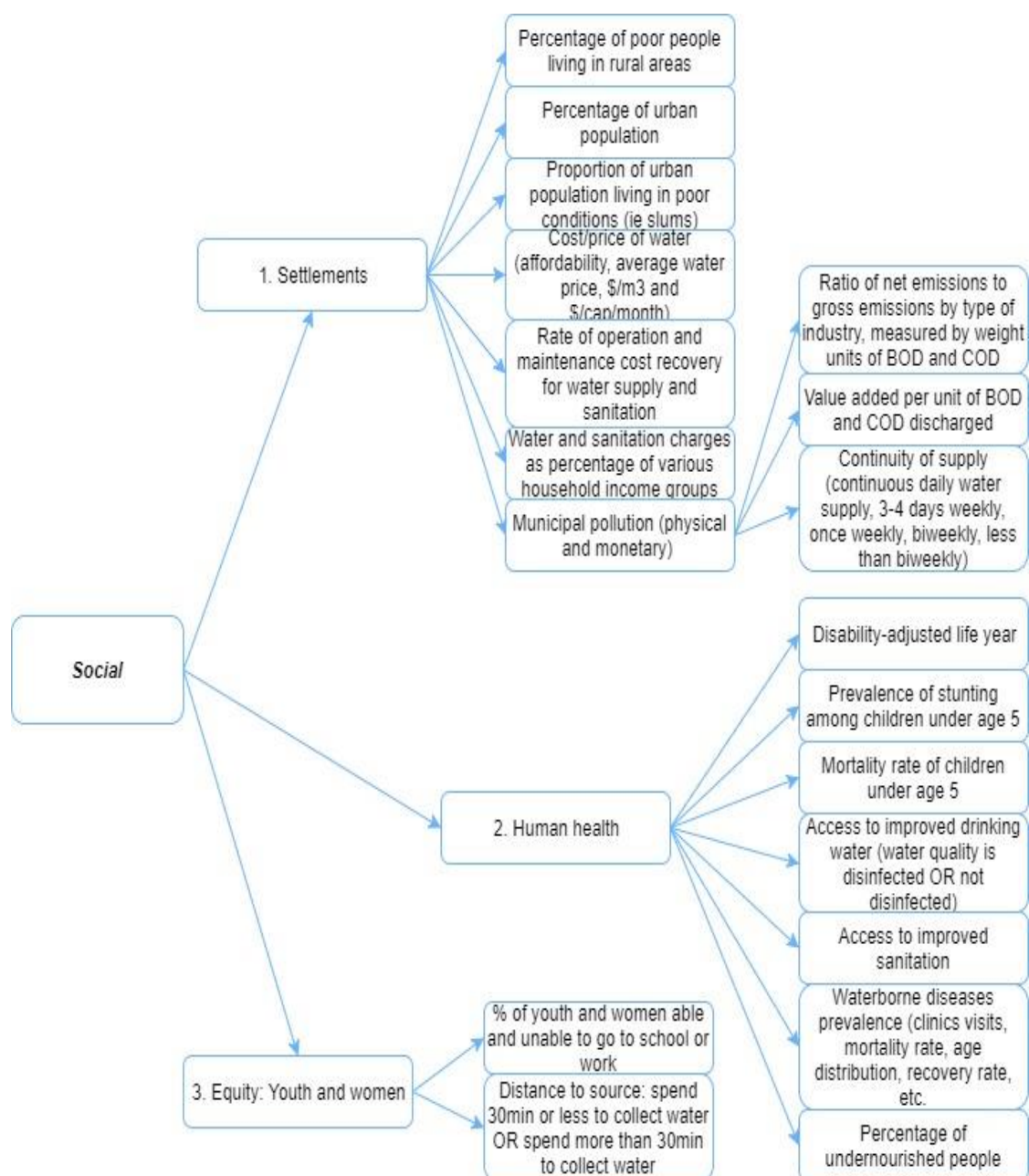


Figure 12. Development of indicators for the social aspect.

5) Food and agriculture

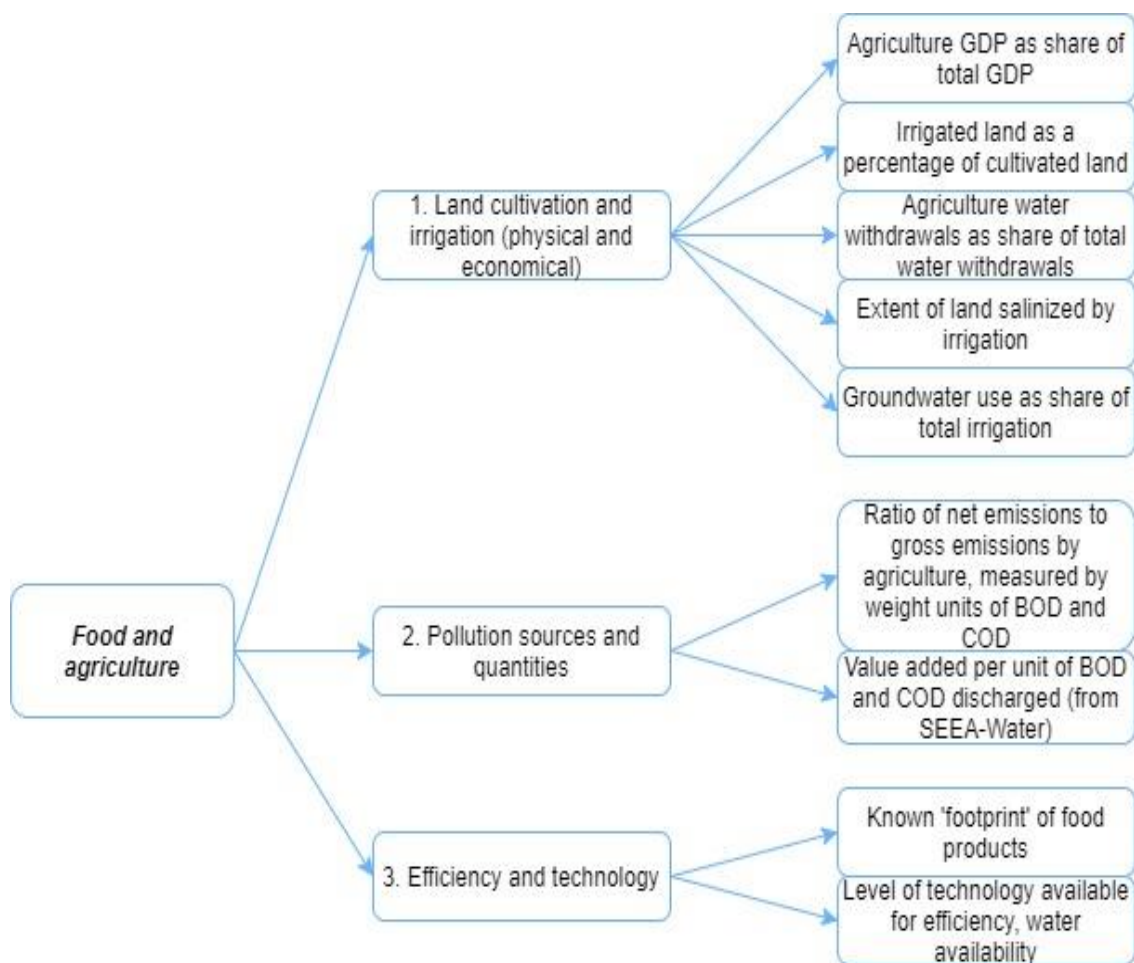


Figure 13. Development of indicators for the food and agriculture.

6) Industry and energy and wastewater treatment

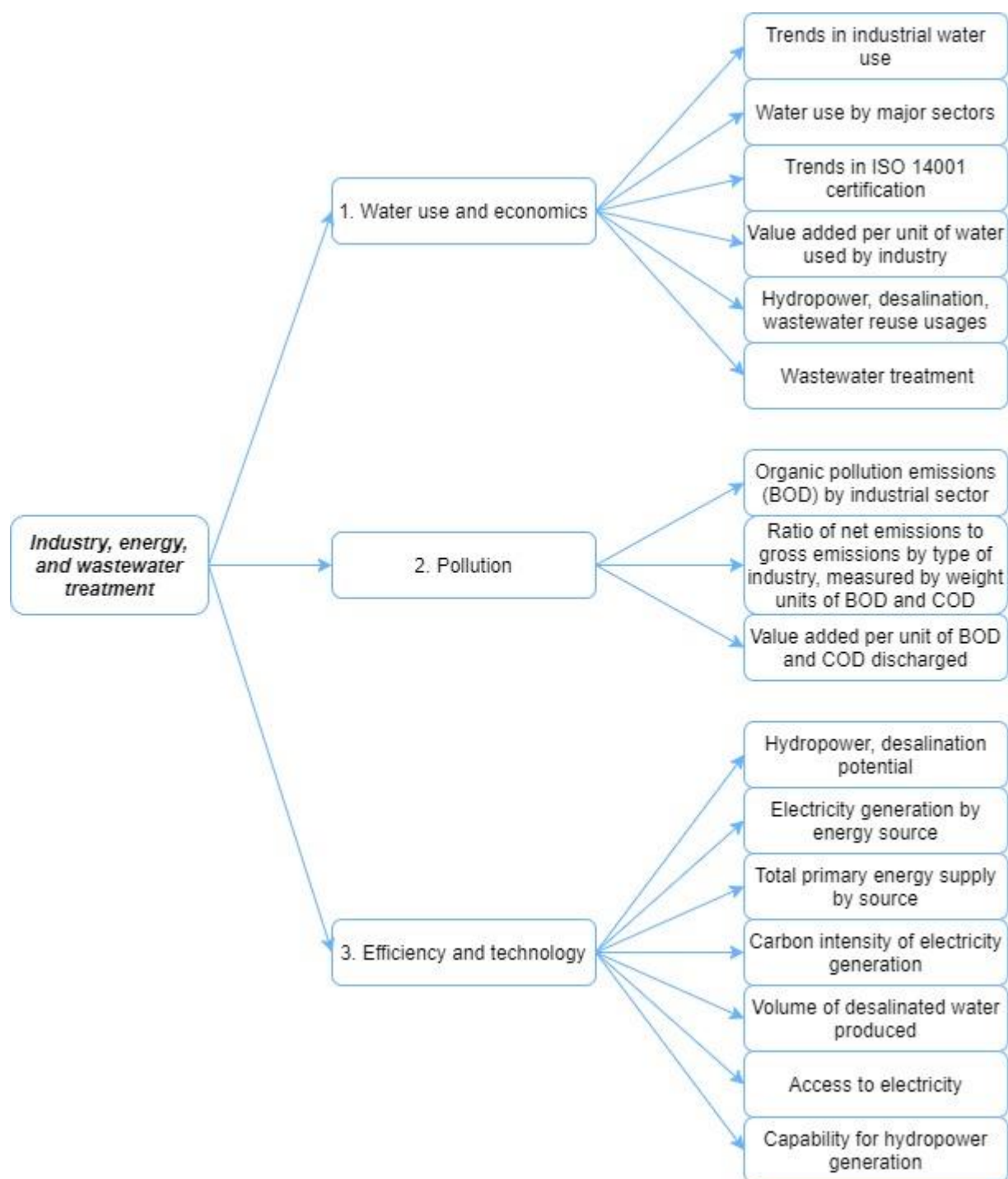


Figure 14. Development of indicators for industry, energy, and wastewater treatment

7) Risk

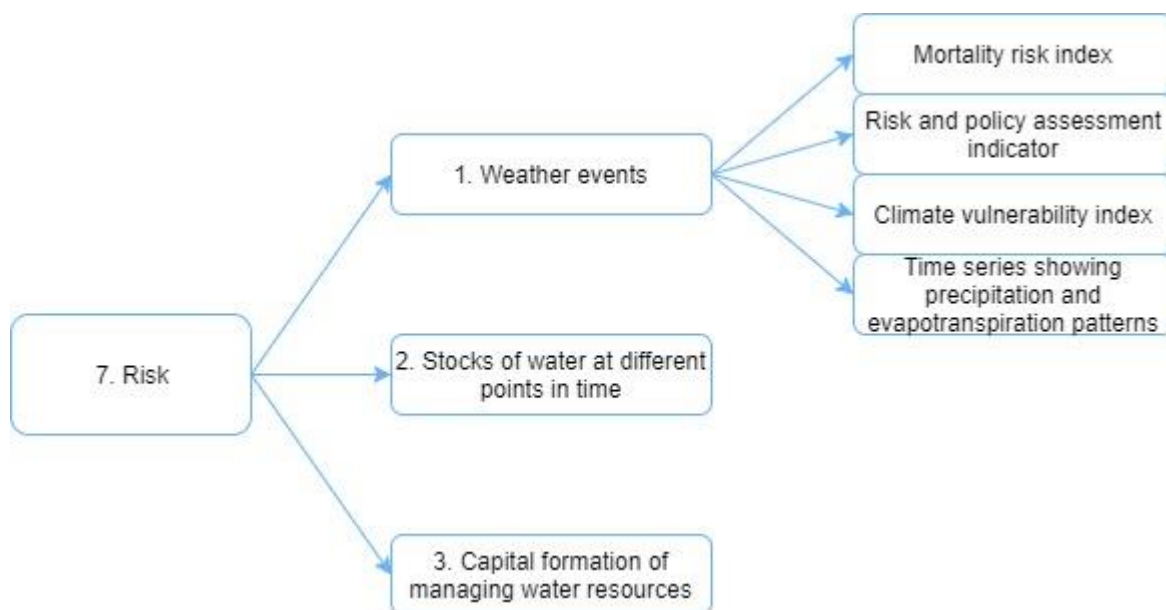


Figure 15. Development of indicators for the risk aspect.

8) Value – Investments

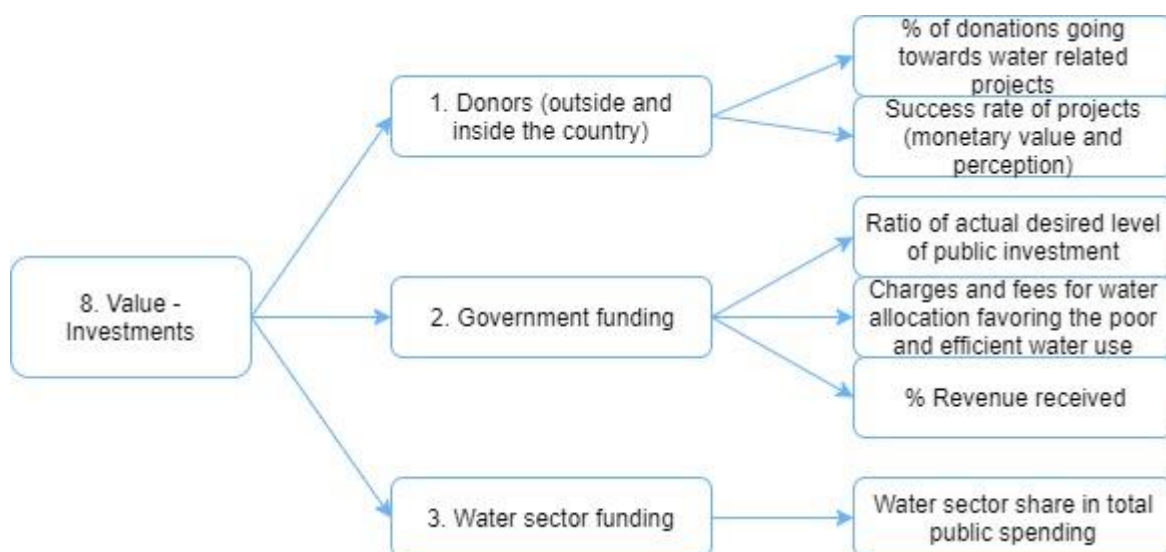


Figure 16. Development of indicators for the value and investments.

4.3 Other actors involved in the elaboration of indicators

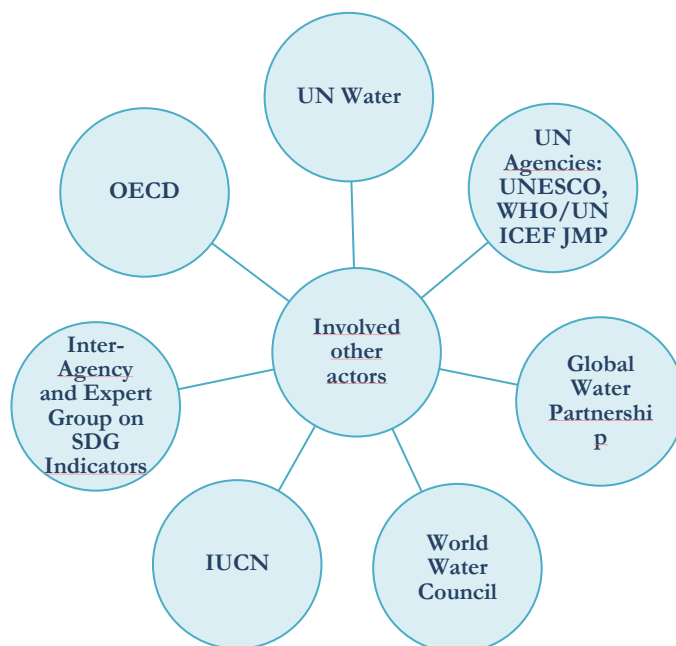


Figure 17. Actors involved in the elaboration of indicators post-2015

UN-Water contributes to the SDG review processes, and has for instance launched the Integrated Monitoring Initiative for SDG 6, which aims at building on and expanding the experience and lessons learned during the pre2015 period with the MDGs. Furthermore, the International Union for Conservation of Nature (IUCN) has developed its Programme 2017-2020 providing the framework for planning, implementing, monitoring, and evaluating the conservation work with three main objectives, namely: valuing and conserving nature, promoting and supporting effective and equitable governance of natural resources, and deploying nature-based solutions to societal challenges. Many other actors, like GIWEH, are active to support and help towards the achievement of the 2030 agenda.