REPORT

Water Governance Processes: Examples Across Four Countries

Cases from Cambodia, Laos, Jordan and Bosnia and Herzegovina

GOAL WATERS

WATER GOVERNANCE FACILITY

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Introduction

The Governance, Accountability and Learning for Water Sustainability programme (GoAL-WaterS) started in 2019, with the aim of supporting sustainable planning, allocation, use, and protection of water, through stronger governance and management frameworks and processes. GoAL-WaterS has supported national policies and priorities and was strategically managed by the UNDP-SIWI Water Governance Facility, hosted by the Stockholm International Water Institute.

The quality of a water governance process sets the basis for the quality of its outcomes, and GoAL-WaterS has provided means to invest in governance. The programme has engaged stakeholders in priority-setting, development of plans, policies, laws and regulation, and in implementation.

GoAL-WaterS ended in 2022 and has been implemented in 11 countries. This publication provides examples of achievements in four of these countries – Cambodia, Laos, Jodan and Bosnia and Herzegovina.

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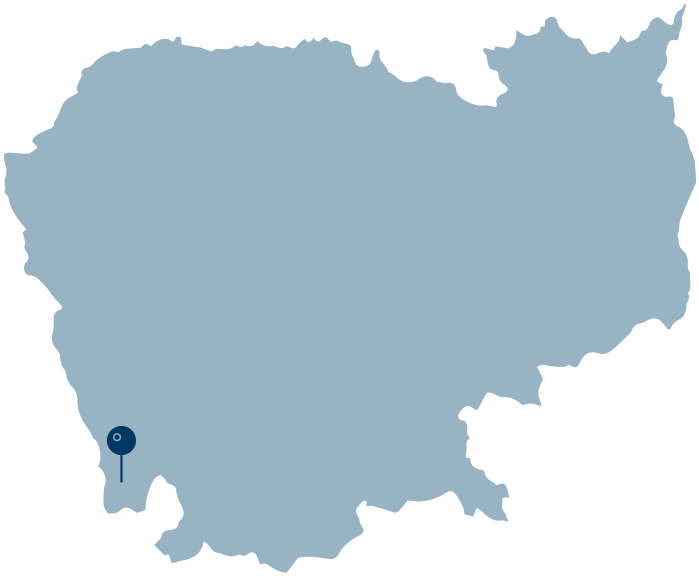
Cambodia

Climate change is a major challenge for reaching national development goals in Cambodia. The country is highly vulnerable to the impact of climate change due to exposure to multiple climate stressors coupled with limited adaptive capacity. Ensuring long-term access to fresh water is crucial for the population, and an important adaptation action.



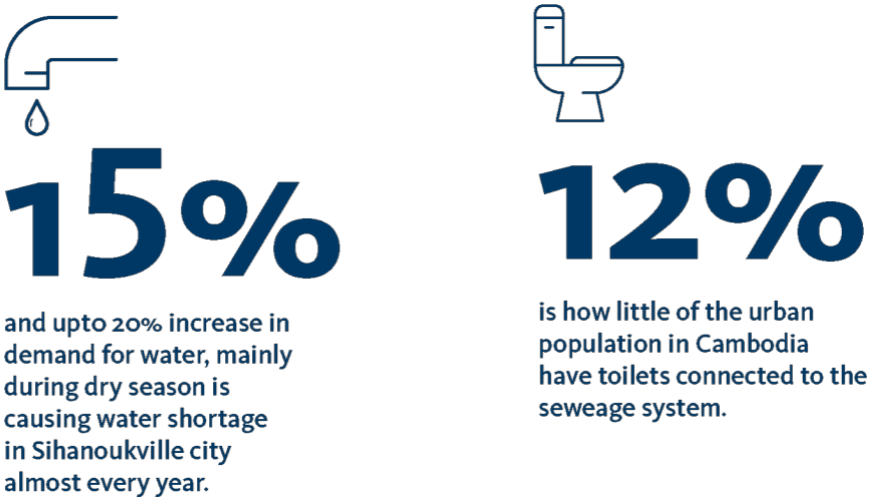
Problem

Coastal zones are amongst the most vulnerable by climate change impacts and rapid development in the country and have been declared as a priority area for strengthening ecosystems and adaptation action. The most populated areas of the country outside of Phnom Penh are the urban areas along the coast, mainly in the cities of Sihanoukville, Kampot and Kep. The demands from these locations create pressure on local resources, including availability and access to water, reductions in ecosystem services provision, and increased risks of coastal water pollution.

The Kbal Chhay Multiple Use Area (KCMUA) was established in 2016 with the total area of 5,520 hectares in Sihanouk province in order to protect water resources. The area provides several ecosystem services including

fresh water, carbon sequestration, non-timber forest products, and recreation. The KCMUA is the main source of freshwater supply to Preah Sihanouk provincial town, providing approximately 10 to 12 million cubic meters of water per year.

The main threats to these ecosystems come from rapid population growth in the vicinity, forestland encroachment and limited resources for effective management of the watershed. Kbal Chhay was thus the site of recent work supported by, UNDP, and the UNDP-SIWI Water Governance Facility, including reserve management and the potential for adopting alternative means for raising funds for management purposes, such as a Payment for Ecosystem Services scheme.



Sihanoukville has grown rapidly along with increasing development such as the Preah Sihanouk sea ports, Special Economic Zone, tourism, an international airport and coal power plants. However, the city has been experiencing water shortages almost every year due to the sharp increase of water demand (around 15-20% per year), mainly in the dry season. Studies from this project indicated that the water supply that the KCMUA can provide will reach its capacity by 2023. Thus, there is an urgent need to properly manage the water catchment area and mobilize enough resources through innovative solutions to support the protection of its ecosystem. In addition to water shortages, studies noted that inadequate uptake of wastewater services also presented a risk to the coastal zones, and more effort to increase connections to wastewater services was required.

Pathways

Given the current scenario, two strong needs have been identified: First, the improvement of wastewater and solid waste management in coastal areas of Cambodia to reduce the vulnerability of the communities and enhance their resilience. Second, community engagement to contribute to effective climate adaptation strategies and environmental conservation including activities that would lead to an increased rate of connection to wastewater services and therefore reduced risks of pollution in the coastal zone.

In response to the two needs, a policy and strategy review for wastewater management was prepared, which was followed by guidelines on wastewater management for national and sub-national governments. This would enable sub-national governments to better advocate for the benefits of wastewater management within their respective communities.

The guidelines document was approved by the Minister of Environment, and a total of 106 national and sub-national governments officers took part in a workshop that increased their understanding on planning and engaging communities in wastewater management. More than 100 people from different communities in Sihanoukville are fully aware of the wastewater guideline.

Following its success, the government counterpart requested UN-Habitat to disseminate the guidelines not only in Sihanoukville but also in the cities of Battambang and Siem Reap.

In addition, a full assessment of Kbal Chhay water system was prepared. A water monitoring and management plan for the area were Id, in consultation with stakeholders and agreed upon with the Ministry of Environment. A draft legal framework to establish a multi stakeholder working group on watershed management in the Kbal Chhay Multiple Use Area was also prepared, together with a workplan, drafted by the Department of Biodiversity. The purpose of this was to initiate a Payment for Ecosystem Service in the area that would help to raise funds.

Key products

A water assessment for Kbal Chhay Multiple Use Area was created for monitoring and improved water governance and monitoring of the area. Guidelines on wastewater management planning and community engagement were developed to assist national and sub-national officials.

106

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100

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Partners

UN-Habitat, Ministry of Public Works, Ministry of Environment, national and sub-national officials

Ongoing challenges

- Further implementing the Wastewater guidelines may require more support to local governments, whether capacity building, additional resources, or public support.

- Multi stakeholder working group on watershed management in the Kbal Chhay Multiple Use Area has been initiated, which needs further work to be operationalised.

Laos

Despite its relevance for multiple spatial or governance levels, Integrated Water Resources Management (IWRM) initiatives often remain at the national level or potentially at river basin scale, with limited knowledge, measures or benefits reaching vulnerable communities or households. The current approach to water resources management in Laos tends is based on top-down decision-making and technical approaches but water-related functions are fragmented across many actors. This has resulted in poor services and unsustainable resource use, especially at local levels. There is an urgent need to initiate and support IWRM as a community-based and cross-sectoral processes.

GoAL-WaterS worked with UN-Habitat to develop material intended to improve the management of water resources and foster IWRM at the local level in Laos. These guidelines aimed to build understanding of IWRM and it benefits as well as the necessary conditions that support implementation. This included strategies for deal with knowledge limitations that are used to understand local challenges and vulnerabilities. GoAL-WaterS furthermore supported the development and delivery training material and activities on IWRM, designed for local communities and sub-national governmental actors.

Problem

Global monitoring indicate that rural populations persistently have less access to water and sanitation than urban populations, but informal urban communities are also affected. In Laos, this difference is exacerbated by a geographical component: while one-third of the population in upland areas is still below the poverty line, in lowland areas the number drops to one-fifth. This is often linked to food insecurity and lack of access to infrastructure and services.

In the past 20 years, there have been increasing instances of natural hazards that cause severe damage to infrastructure and livelihoods.

For example, in October 2020, nine districts in Saravane, Savannakhet and Sekong were affected by floods. In 2018, Tropical Storm Son-Tinh caused heavy rains and flooding in 55 districts across 13 provinces in the country, resulting in damage estimated at US$164 million. In 2010, extreme droughts during the typical rainy months between May and October severely affected the year's harvest and created life-threatening food shortages in southern Laos, affecting around 85,000 people and was responsible for 28 deaths and an economic loss of US$58 million. Looking to the future, climate change projections show trends of consistent warming and an increase in the intensity of heavy precipitation periods and extreme events.

Pathways

Laos is progressing towards effective land use planning that considers a range of challenges, and knowledge of climate change impacts on water resources. It also recognised that there is an urgent need for actions that strengthen community participation and vertical integration for improving resources management and supporting decentralization.

Guidelines for improving water resources management were developed that offered step-by-step guidance for fostering IWRM in Laos, with an emphasis on responding to climate change. They provide guidance on the most suitable climate change-resilient strategies to improve water resources management, as well as the importance of increased participation by communities. It included basic procedures for engaging water users (including more marginalised communities) and helped to show the linkages between different water demand activities, water supply, water resources management and climate change. The key audience was national and sub-national officials and technical staff from relevant ministries in charge of environmental management in Laos who would be responsible for implementation.

In the current context of rapid urbanisation and vulnerability to the effects of climate change, improving the use of IWRM processes will help maximise the sustainable use of water resources for local socio-economic development while protecting and preserving the environment to mitigate climate change events and disaster risks, whether in rural or urban areas. The guidance material was built based upon literature reviews and lessons learned from Laos and around the world and will strengthen the knowledge and capacity of decision-makers at national, provincial and district levels to better inform future activities and interventions, build accountability and better include communities in water resource management.

As well as the IWRM guidance, specific guidance on community-based vulnerability assessment and action planning was prepared. This also built on lessons from recent experiences in Laos and the wider region to address adaptation planning gaps. With an aim to strengthen local capacities, the target audience of the guide comprised personnel from ministries and officials from provinces, especially those involved with climate change, infrastructure planning, and natural resources management and will be used to better plan climate-resilient actions at national regional and local levels.

Key products

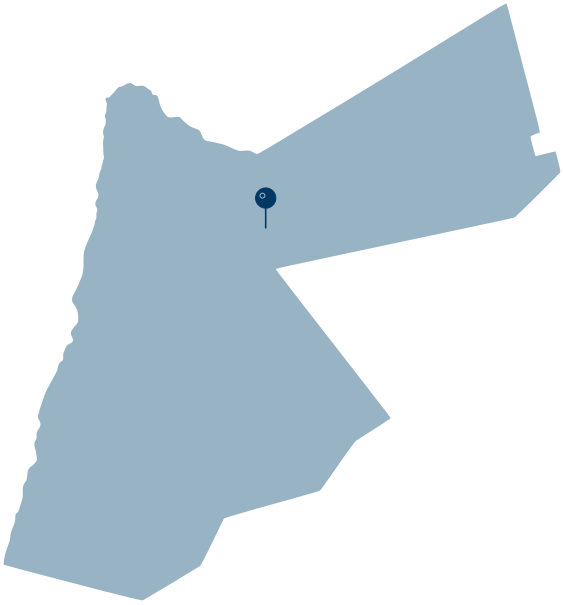
- Guidelines for improving Water Resources Management at community level
- Guidelines on community-based vulnerability assessment and action planning

Partners

UN-Habitat, Ministry of Natural Resources and Environment, Sub-national Government

Jordan

A new water harvesting approach and infrastructure brings greater hope than simply preventing future droughts. It symbolises the role of water to achieve multi-level governance, support reconnections with nature, and help support increased numbers of refugees in Jordan that rely on 14% of its water resources.



Problem

Jordan is one of the most water scarce countries in the world, and current trends imply that by 2025, it could fall in the absolute worst category of countries facing water shortage. In 2019, a drought vulnerability assessment, conducted under the GoAL-WaterS programme, found that 15% of farming lands may be abandoned by farmers in the most drought vulnerable governorates of Ajloun, Irbid and Jerash, where 2.5 million people live. Future droughts are likely to drive the most exposed people towards the capital city of Amman.

Amman's population already heavily relies on the Azraq groundwater basin, which additionally supports its own people, agriculture, wetlands and biodiversity. The Azraq basin is an important socio-ecological basin that support the Azraq Wetlands and the abundant natural farming and rangelands.

An associated concern is that recurring droughts could exasperate ongoing regional political unrest and slow down climate action.

Pathways

In 2016, the government of Jordan, with support of the GoAL WaSH programme, took important steps to strengthen drought management preparedness. A drought management unit was established within the Ministry of Water and a National Technical team representing all drought concerned institutions were formed and trained on drought monitoring. Furthermore, a national drought management policy in the water sector was endorsed by the Government.

In 2020 the Ministry of Water and Irrigation with support of the GoAL-WaaterS programme, the Inter-Islamic Network on Water Resources Development and Management, and the Azraq municipality developed a collaborative framework to create nature-based-solutions in response to the drought impacts on the natural recharge of the Azraq Basin.

The Ministry of Water and Irrigation prioritized measures to enhance the natural recharge in the basin to sustain freshwater resources. The concept of enhancing the natural recharge is reviving traditional water harvesting techniques as well as enhancing the infiltration of surface water into the underground system.
Nature-based-solutions are sourced and enhanced from an existing environment to restore ecosystems that benefit both society and biodiversity. The Managed Aquifer Recharge (MAR) approach is used, capturing and draining rainfall water coming from the highlands into the groundwater system before it gets evaporated in low lying flooded wadis. The MAR also controls the saline water intrusion from the mudflat.

The groundwater recharge in the mudflat area was about 3 percent owing to physical properties that hinder flood water from seeping through mud layers. The MAR increased the rates to more than 55 percent in 2021.

The role of local communities is integral to the success of the MAR project and drought preparedness. Water harvesting, and management are centralized in Jordan, the MAR project represents an opportunity and demonstration of the effectiveness of local administrations and municipalities in the planning and management of natural water resources.

Bosnia and Herzegovina

In Bosnia and Herzegovina GoAL-WaterS has promoted the use of the water services tariff methodology application, to decrease water abstraction and reduce pressure on existing water resources in Bosnia and Herzegovina.

The project underlined the need to increase wastewater treatment and preservation of river water quality, connecting these to the costs of providing water services and their inclusion in water tariffs.

The application of the full tariff methodology means a faster increase of wastewater treated since it aims to unlock potential investments into the construction of wastewater treatment plants in the country, planned and needed for the European Union accession roadmap.

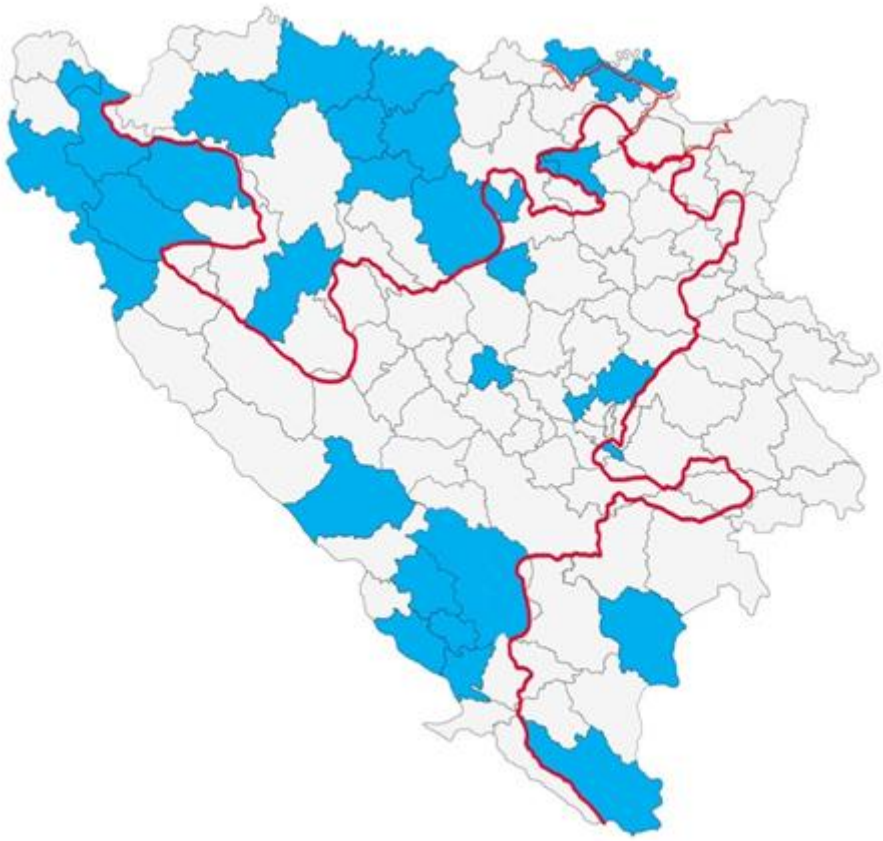


Figure 1:BiH Municipalities participating in MEG II project (committed to implementing tariff methodology)

Problem

A long-term challenge in Bosnia and Herzegovina is the lack of financial sustainability of water utilities. There is a need for additional investments in water and sanitation, but operational costs for planning sanitation infrastructure pose a heavy burden on consumers.

Operations of water services are supported by inappropriate water tariffs that are mostly covering only basic operational costs, but not enabling needed investment maintenance which leads to infrastructure deterioration and lack of financial sustainability of service operators. Subsidized services are rarely provided for the most vulnerable segments of the population, instead politized decisions on lower water tariffs practically subsidy all, but on expense of increasing costs caused by high non-revenue water and thus consequently also increased water abstraction.

Several wastewater treatment plants constructed over the past years were only partly functional as operation and maintenance costs were not addressed as part of local planning. This resulted in the reduction of investments from international financial institutions, and donors specifically requesting reforms that would build financial sustainability of all existing and planned wastewater treatment plants in Bosnia and Herzegovina.

Pathways

To further improve the sustainability of the water sector, the Government of Federation of Bosnia and Herzegovina asked the GoAL-WaterS programme to support the drafting of a Federation of Bosnia and Herzegovina Decree on Tariff Methodology.

In 2020, the Government of Federation of Bosnia & Herzegovina made the official decision that the Ministry of Agriculture, Water Management and Forestry should prepare a Decree for Tariff Setting Methodology with regard to Water Supply and Wastewater Management. Further supporting documents for the Decree were developed, including Regulatory Impact Assessment, Compliance with EU legislation reports and guidelines for implementation. Public consultations on the Decree were also held.

The Tariff Methodology, was adopted by the Government of Federation of Bosnia and Herzegovina in February 2022, and is also adopted by the Association of the Water Utilities of Republika Srpska in February 2023. The Decree represents an important step towards effective regulation of the water supply and wastewater treatment sector.

Besides the Municipal Environmental and Economic Governance (MEG) Project, run by UNDP, that introduced the methodology for 31 utilities in its second phase of implementation, entity associations of water utilities are providing specific trainings for all water utilities around Bosnia and Herzegovina for tariff methodology implementation. Experience suggests that it takes several years of internal work before the utilities can reach the needed water tariff level, depending on the level of difference of present tariffs and those evaluated by the methodology.

The adoption of the Tariff Methodology is expected to increase the amount of wastewater treated in Bosnia and Herzegovina by unlocking potential investments in the construction of new urban wastewater treatment plants.

It is also expected to lead to decreased water abstraction and thus reduce pressure on existing water resources in Bosnia and Herzegovina.
In parallel, Federation of Bosnia and Herzegovina and Republika Srpska launched a comprehensive programme for improvement of water services in 2022. This Programme also advised for drafting a new Law on Water services that will include the tariff methodology.

In parallel, the Association of Water Utilities of Republika Srpska adopted the tariff methodology as its own act and advised water utilities to use it, also providing training for its implementation and enabling future inclusion of the methodology into incoming entity Law on Water Services.

Following interventions by GoAL-WaterS and the Municipal Environmental and Economic Governance (MEG) Project, the SIWI-UNDP Water Governance Facility (WGF) has helped strengthen municipalities and water utilities in finding economic sustainability while providing equitable and impartial water services. To achieve economic efficiency, WGF proposed to develop a methodology that would enable the local trainers in guiding the water utilities though a change process. The change process, which was initiated in 2022, was based on an assessment of water utilities' business model. 22 water utilities were trained and enabled to develop an action plan that would improve their economic efficiency. The utilities were allowed to identify their major business operation and financial risks, identify the priority areas of improvements, and go homewards with the skeleton of an action plan with identified and prioritized actions to be enforced in immediate future. After training, and building on the trainers, a mentoring program was rolled out.

Partners

BiH Ministry of Foreign Trade and Economic Relations, Associations of Cities and Municipalities of RS, Associations of Cities and Municipalities of FBIH, Association of Water Utilities of Republika Srpska, Association of Communal Enterprises of FBiH, Ministry of Agriculture, Water Management and Forestry of Federation of Bosnia and Herzegovina, Ministry of Agriculture, Forestry and Water Management of Republika Srpska

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