



Araya Hadish waters his vegetable fields at the water harvesting pond, Ethiopia © Helvetas/Christian Bopst

## CLIMATE-RESILIENT WATER MANAGEMENT

As the world strives to achieve the goal of ensuring the availability and sustainable management of water and sanitation for all by 2030 (SDG 6), water security is affected by climate change, which acts in concert with land use changes and important demographic and economic changes. With global warming of 2-4°C, the number of people facing physical water scarcity could be between 3 and 4 billion.

The drivers of reduced water availability at critical times and places include the deterioration of water quality by wastewater, ecosystem degradation and climate change, which is marked by increasingly variable patterns of rainfall, warming and loss of glaciers. To address water availability, quality and equity, principles of integrated water resources management need to be put into practice. This is a difficult and slow but fundamental process for sustainable, climate-resilient development.

At Helvetas, we support people – particularly the most vulnerable – in becoming more water and food secure and in forging a pathway to climate and disaster resilience and sustainably managed natural resources.

## ABOUT HELVETAS

Helvetas is committed to a just world in which all men and women determine the course of their lives in dignity and security, using environmental resources in a sustainable manner. Helvetas supports poor and disadvantaged women, men and communities in over 35 low and middle-income countries in Africa, Asia, Latin America and Eastern Europe.

Helvetas is an independent non-profit organization for development and humanitarian action based in Switzerland with affiliated organizations in Germany and the United States. In 2023, Helvetas had an annual turnover of CHF 175 million.

## HOW WE WORK

Helvetas adopts a partnership approach to development, based on a solid understanding of the local context and collaboration with stakeholders to find sustainable solutions. We implement projects, provide thematic and methodological advice, and engage in policy dialogue as appropriate at local, regional and international levels.

We are convinced that the vulnerable people who contribute least to climate change deserve a safe and secure future, and are committed to building capacities for [locally led adaptation](#). Helvetas contributes to climate-resilient development in alignment with existing global agreements and national commitments and plans.

## MAKING WATER MANAGEMENT AND USE CLIMATE-RESILIENT

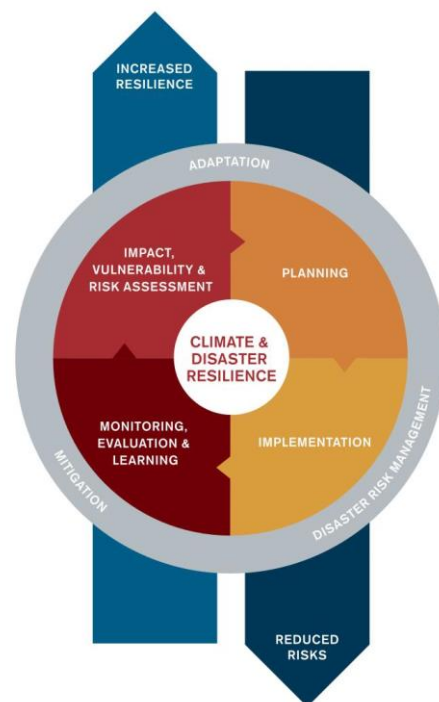
Helvetas supports disadvantaged people in enhancing their water and food security, while strengthening their resilience to climate and disaster risks, in rural and urban contexts. The resilience of people and ecosystems is strengthened through locally led actions, improved competence, the accountability of public, civic and private actors, and more global cooperation premised on climate justice. In our WASH and water governance work, we support public, civic and private actors in enhancing capacities needed to contribute to sustainable, resilient and equitable WASH and irrigation services, as well as to practice integrated water resources management. Ensuring climate and disaster resilience in water management and water-related services is key for sustainable development.

### Achievements

From 2021-2024, over 2.5 million people (60% women) gained access to water from a new or rehabilitated source. Over this period, 6,800 local authorities were supported to increase their capacities for WASH service delivery. Over 122,000 farmers enhanced their productivity through more efficient water use. Over 550,000 people enhanced their capacity to adapt to climate change and reduce disaster risks. These actions include water storage and basin planning in Tajikistan, solar-powered sand filter systems for saline drinking water in Bangladesh, and water conservation efforts in Peru.

### Our approach

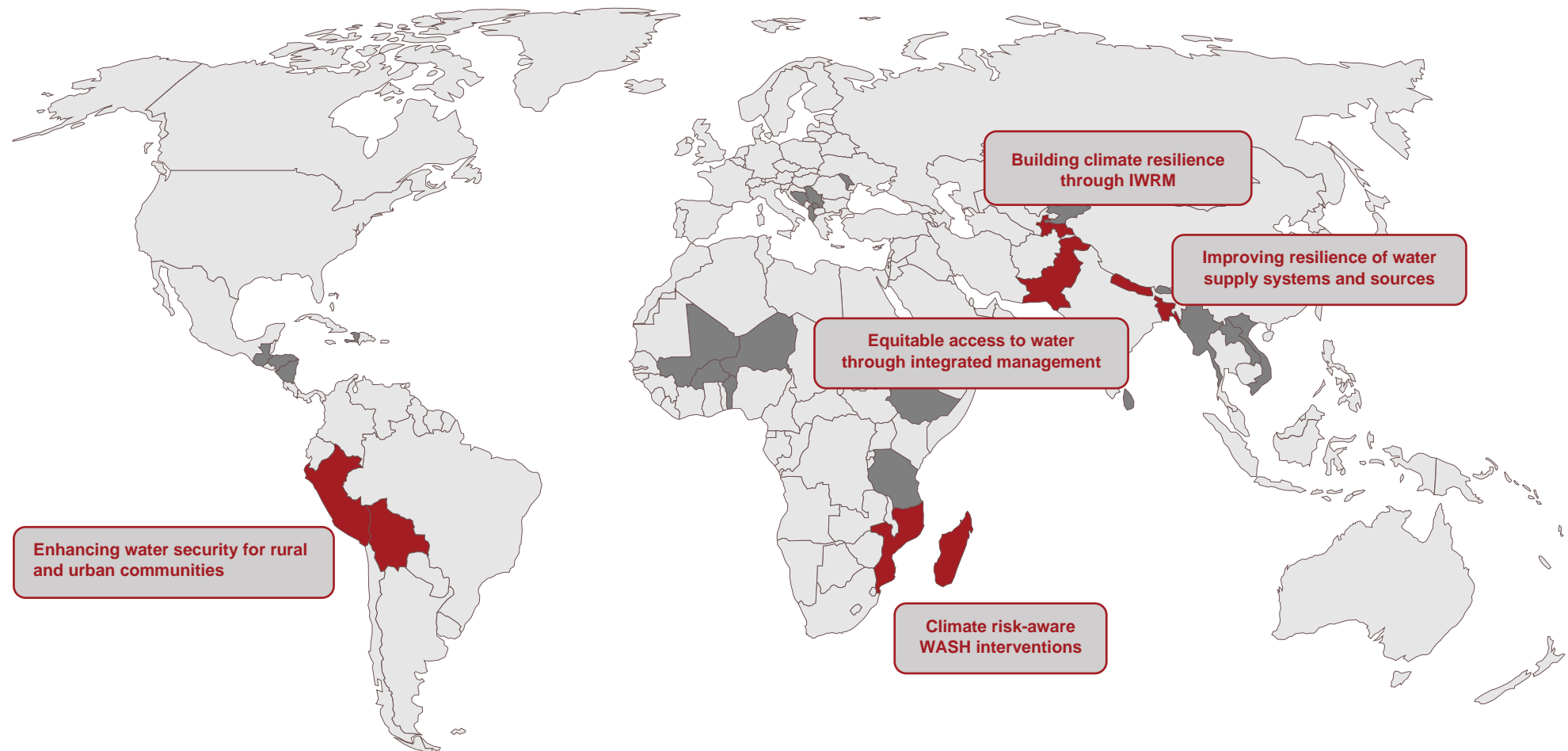
Helvetas' projects follow the main steps of the **adaptation cycle** (see figure to right), a process involving the assessment of climate risks, the participative planning and implementation of adaptation measures, and the monitoring and evaluation of progress to inform future improvements. Where possible, our projects also contribute to mitigation, and overall are geared toward climate-resilient development.



## WHERE WE WORK ON CLIMATE-RESILIENT WATER MANAGEMENT

■ Selected countries where projects on climate-resilient water management were implemented between 2011-2025

■ Helvetas partner country





## STEP 1 – IMPACT, VULNERABILITY AND RISK ASSESSMENT

Our first step towards climate-resilient water management starts with an understanding of how climate change is affecting or will affect water resources. Assessing climate and disaster risk forms the basis for identifying the scope of measures to implement.

### Assessing future water-related risks in Pakistan

The Water for Livelihood (W4L) project was initiated in 2011 in the aftermath of Pakistan's devastating floods in 2010. It aimed at equitable access to water for enhanced rural economies through integrated water management in semi-arid, ecologically fragile, and poor districts of Khyber Pakhtunkhwa province. A climate baseline (1981-2010) and scenarios (2040) were developed to understand and identify climate projections' implications for longer-term planning and preparedness. Overall findings indicated that the annual average rainfall is expected to increase until 2030, then decline by 4-6% between 2031-2040. Future spring and summer rainfall may pose risks to human lives (floods) and crops (e.g., wheat harvesting). Projected fall and winter rainfall present a severe drought threat, especially in low rainfall zones. The assessment was instrumental in identifying disaster risk reduction measures tailored to different rainfall zones.



Water retention structure to protect people from flash floods in Pakistan's D.I. Khan district. @AndreaPeterhans

### Hazard and vulnerability assessment for the Tajik Syr Darya River Basin in Tajikistan

Tajikistan is highly vulnerable to climate change, and frequent floods and mudflows threaten agriculture and livelihoods. In support of the Tajikistan's water sector reform, the [National Water Resources Management](#) (NWRM) project in the Syr Darya basin promotes putting integrated water resources management into practice, which is needed as a pillar for climate resilience. The assessment and forecast of water resources availability and use per sector until 2030 shows current and prospective areas of water deficits due to growing water demand. In this context, the basin plan 2021-2025 addressed five major issues: water scarcity, sectoral water management, unsustainable reservoir operation, degradation of water quality, and increasing risks of water-related disasters. At the sub-basin level, comprehensive watershed assessments used a hazard and vulnerability assessment data collection tool to identify the main disaster risks faced by the population at the community level. Findings were translated into scenarios and GIS maps to visualize the risks and support preparedness for disasters and the development of integrated watershed management plans focusing on the reduction of disaster risks related to water.



Tajik and Kyrgyz stakeholder representatives exchanging on disaster risk in the Aksu watershed @Helvetas

### Climate risk-aware WASH interventions in Mozambique

Helvetas is strengthening the sustainability of its Mozambique WASH projects by including climate risk assessment and the identification and implementation of appropriate adaptation measures. A study assessed climate and disaster risks for WASH infrastructure in the district of Moma, using the [How Tough is WASH framework](#). A follow-up study in collaboration with Rovuma University identified alternative designs, technologies and practices to make WASH infrastructure and services more resilient to climate change in the Larde and Moma districts. The study covered hazards such as floods, erosion, cyclones and saline intrusion, and assessed their intensity and frequency. A vulnerability and exposure score was defined for all WASH infrastructure and the adaptive capacities of the districts was assessed. Based on the findings, adapted measures and technologies have been chosen, such as wood-lined latrines in coastal areas, elevated latrines in inland areas with firm soils, and flood protection systems.

## STEP 2 – PLANNING

A sound understanding of the causes and effects of climate change is required to identify appropriate and effective solutions. Based on the climate and disaster risk assessment, Helvetas assists stakeholders at all levels in developing tailored adaptation plans. This involves identifying and prioritizing the best-fitting adaptation measures based on the local context and mobilizing funding to support these efforts in adaptation and risk management.

### From a Local Adaptation Plan of Action to a state-level IWRM strategy in Pakistan

At the **sub-district level**, the Water for Livelihood (W4L) project supported the preparation of nine Water Use Management Plans (WUMP) in four districts, involving about 408 revenue villages and 88 settlements with 208,153 households. The [WUMP](#) is a participatory and inclusive water management planning methodology developed by Helvetas Nepal. It is based on IWRM principles and used for planning at the local level and building on local knowledge. Communities, which are represented through Water Users Associations (WUAs), are at the center of the plan. The project facilitated the WUMP process and built the institutional capacity of WUAs in the project districts. Moreover, the WUMP process was instrumental for disaster risk reduction by mapping local vulnerabilities.



New irrigation channel in Chitral @AndreaPeterhans

At the **district level**, the project contributed to the first-ever Local Adaptation Plan of Action (LAPA) for the Chitral district, providing an outline for coordinated adaptation and mitigation efforts. The LAPA process brought all the stakeholders to a common understanding that risks emerging from climate change need to be considered, particularly in water and agriculture. At the **provincial level**, the project assisted the Khyber Pakhtunkhwa (KP) government to formulate its IWRM strategy in line with national water policy and provincial priorities. It consisted of 13 sub-sector reports to analyze the water context of KP, including the climate analysis.

### Advancing the Plurinational Water Resources Plan in Bolivia

The project [Gestion Integral del Agua](#) (GIA) played a key role in the development of the Plurinational Water Resources Plan (PPRH) 2021-2025 in Bolivia, ensuring continuity of the National Watershed Plan. The PPRH establishes strategies to strengthen water management in a context of climate change, prioritizing water security. Policies include i) sustainable watershed planning; addressing climate variability and water stress through storage and control infrastructure; ii) modernization of irrigation with technological innovation to optimize water use in agricultural production; iii) reducing vulnerability to droughts and extreme rains. These strategies are aligned with the Plurinational Climate Change Policy, integrating structural and non-structural measures that strengthen the adaptation of the water sector to climate impacts and ensuring equitable access to water.



The Mamami family with their water tank, which is part of their rainwater harvesting system. @FranzThiel.

### Developing a risk-aware Watershed Management Plan in Tajikistan

The Aksu Watershed Management Plan, facilitated under the NWRM project, was developed through an integrated watershed management approach involving disaster risk reduction actions in transboundary watersheds. To develop this plan, representatives of the watershed gathered in the Small Basin Council Working Group, together with experts, identified the main issues of the watershed and defined adapted measures to achieve the following objectives: i) reduction of water-related disaster risks; ii) efficient use of water resources; iii) reduction of land erosion and degradation; iv) and watershed management and governance that integrates water, land and DRR across sectors and administrative levels. This plan is both a result of this participatory process and a tool for effective management. To reduce the risk of disasters, the watershed population will be trained on the immediate response to disasters and will strengthen its preparedness before their occurrence. This includes undertaking risk mitigation work to reduce impact on lives and assets, such as retention structures for flood protection.



## STEP 3 – IMPLEMENTATION

Helvetas puts into practice the principles of integrated water resources management, a fundamental process needed as a basis for climate-resilient development. To increase access to climate-resilient WASH services, we strengthen the capacities (institutional, technical, organizational and financial) of the institutions that are responsible for service delivery, from the local to the national level. From a basin and watershed perspective, we simultaneously address water and land issues, promote nature-based solutions to secure water quantity and quality, and reduce water-related risks for people and infrastructure.

### Nature-based solutions to ensure water availability

Well-functioning ecosystem services are a good starting point for increasing the resilience of people to climate change. In Peru, the project [Water for Abancay and Communities](#) contributed to ensuring the long-term availability of water, equitable access and sustainable use in the face of climate variability in the Abancay valley. Water supply was enhanced through storage infrastructure such as q'ochas (small water reservoirs with earthen and gabion dams that hold up to 47,000m<sup>3</sup>). Meanwhile, nature-based efforts restored grassland and conserved high-Andean Queñua forests, benefiting both upstream and downstream users, particularly during dry seasons. These measures were enabled through the mechanism of retribution for ecosystem services, an economic instrument to compensate communities for the provision of ecosystem services, based on urban water users' payments.



A q'ocha, or small reservoir, that allows rainwater to be stored and infiltrated. @Helvetas

### Ensuring equity in water supply and efficiency in demand

Our projects seek to ensure that water is supplied to all users when needed, in the amounts needed and at the quality needed, while considering efficiency and responsible uses.

In **Bangladesh**, people are faced with high levels of salinity in groundwater, soils and drinking water due to sea level rise, saline intrusion and increased flooding. The Panii Jibon project diversified water sources and technology by implementing pond sand filter systems with solar-powered pumps and rainwater harvesting systems to cope with climate change-induced water scarcity.



Water supply operator serving a customer in Madagascar. @FelanaRajaonarivelo

In the [National Water Resources Management](#) project in **Tajikistan**, improvements in water use efficiency in irrigated agriculture are promoted. Tajikistan's water security suffers from glacier melting, which will ultimately lead to reduced low-season flows. Water losses were reduced at the farmer and Water User Association levels through awareness-raising, the adoption of improved practices and technologies at the plot level, and the rehabilitation of irrigation systems.

Under the [Water for Abancay and Communities](#) project in **Peru**, Helvetas has supported the water utility to understand the urban water demand within the water available at the watershed level, to monitor and control unbilled water, and to identify ways to motivate city dwellers to reduce water waste and allow cover of the city's growing population.

### Reduce water-related risks for people and infrastructure

Climate change brings higher risks of floods and droughts, leading to interrupted services and damage or loss of water infrastructure and livelihoods.

In **Pakistan**, the Water for Livelihood (W4L) project contributed to reducing water-related risks for communities, with the implementation of 37 village disaster risk reduction structures, such as flood protection walls and spurs, protecting over 4,300 households.

In the [National Water Resources Management](#) project in **Tajikistan**, a wide range of measures addressed disasters and their root causes. These included preparing the population through trainings for floods and mudflows, building small drainage canals to protect exposed villages, promoting nature-

based solutions like passive reforestation, and planting fast-growing willows to produce wood. The choice between infrastructure and nature-based solutions was guided by the comparison of their respective economic, social, and environmental costs and benefits.

In the disaster-prone areas of South-West **Bangladesh**, the Panii Jibon project found an effective solution to protect groundwater from contamination and guarantee continuous access even during floods: A deep tubewell with a double platform for pumping. Once a flood risk is announced, trained local caretakers move the manual handpump to the more elevated platform.



Local caretakers of the deep tubewell using the elevated platform during a flood in Bangladesh. @JakirHossain

## STEP 4 – MONITORING, EVALUATION AND LEARNING

Helvetas measures and evaluates progress in adaptation, mitigation and mainstreaming in projects across scales. Knowledge acquired through project experiences is then fed into the process to ensure learning serves future efforts.

### Measuring water security in Peru

The [Water for Abancay and Communities](#) project worked with the National Superintendence of Sanitation Services, a public institution that regulates the quality of service provided by drinking water companies, to develop the [Service Provider Water Supply Security Index](#). The index measures the capacity of the provider to guarantee a safe water supply to the population and to manage the risks associated with an increased demand for water, climate variability. The index assesses water supply security through a set of indicators, such as the capacity of the water utility to manage risks from extreme events and the projected future water availability per capita. These indicators capture both physical aspects of water and management factors related to access and use, helping to identify the key drivers of water security changes. So far the index has been applied in two Andean cities, Abancay and Ayacucho; other cities across Peru will follow. Drought and conflicts over access to water are the most common threats to water security in these cities.



Employee of the water utility presenting the Laguna de Rontoccocha @Helvetas

### Ex-post evaluation of flood risk reduction measures in Bolivia

The project [Gestión Integral del Agua](#) (GIA) contributed to a [guide](#) for the ex-post evaluation of flood risk reduction measures. The guide serves as a tool for municipal, departmental and national technicians to evaluate measures implemented to reduce flood risks. It includes a five-step evaluation process: collecting general information, classifying threats, defining the area affected, categorizing measures, and conducting evaluations. The guide emphasizes assessing both structural (e.g., dikes) and non-structural measures (e.g., early warning systems) based on relevance, effectiveness, equity, sustainability and economic efficiency. The methodology includes economic evaluations, considering costs, rates of return and depreciation periods. By focusing on comprehensive and long-term evaluations, the tool aims to optimize decision-making and resource management, enhancing resilience to floods and climate-related risks in Bolivia.



## WATER IS LIFE - BANGLADESH

<b>Client/Funding Source</b>	Climate Justice Resilience Fund, Helvetas
<b>Key Partners</b>	DORP, BDPC, OKUP and ICCCAD
<b>Duration</b>	2012-2015   2016-2020
<b>Volume</b>	2 Mio. CHF

### Improving resilience of water supply systems and sources

Climate change, deforestation and shrimp farming are increasing the salinity of the soil and ground-water in southern Bangladesh. The Panii Jibon project supported climate-vulnerable communities, service providers, governmental institutions and civil societies to increase their resilience by adapting and transforming their capacities in the food and water sectors. The project promoted climate-resilient livelihoods, implemented innovative technologies and supported market linkages in both sectors.



Pond sand filter systems with solar pumps @ShamimHassan

### Results

- 62,000 people from 15,400 households have increased access to resilient water supplies year-round through construction and rehabilitation of water facilities, reducing the risk of climate change impacts and frequent disasters.
- Trained 20,000 people to use water-efficient and climate-resilient technologies for irrigation and water management at the household and community levels.

### Key Insights

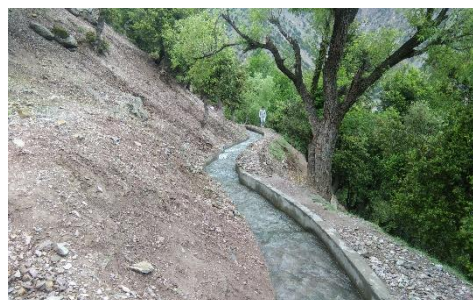
- The projects' innovative Mothers' Parliaments approach won the [Water Change Maker People's Choice Award 2021](#) at CAS2021, organized by the Global Water Partnership.
- Pond sand filters were suitable for restoration and conservation of surface water, which also has some co-benefits like biodiversity restoration and soil health improvement, but its effectiveness is constrained when the pond goes dry in the pre-monsoon summer season.

## WATER FOR LIVELIHOODS - PAKISTAN

<b>Client/Funding Source</b>	Swiss Agency for Development and Cooperation (SDC)
<b>Key Partners</b>	Planning and Development Department, Government of Khyber Pakhtunkhwa
<b>Duration</b>	2011-2020 (three phases)
<b>Volume</b>	12 Mio. CHF

### Equitable access to water through integrated management

The Water for Livelihood (W4L) project was initiated in 2011 in the aftermath of Pakistan's devastating floods in 2010. It aimed at equitable access to water through integrated management in ecologically fragile, semi-arid and poor districts of Khyber Pakhtunkhwa to enhance rural economies. The project operated in three different phases and gradually expanded from a district to provincial level project. It operated in 408 revenue villages and 88 settlements with 208,153 households engaged in Integrated Water Resource Management processes and activities.



Irrigation channel in Chitral @AndreaPeterhans

### Results

- 9 Water Use Management Plans (WUMP) piloted in four districts serving 1,773,356 people and 224,921 households.
- 165 initiatives prioritized in WUMPs were implemented (78 drinking water supply schemes, 60 irrigation, 13 disaster risk reduction and 14 sanitation).
- 17 Water User Associations were trained on climate adaptation, water use efficiency in agriculture, and cropping patterns in a changing climate scenario.

### Key Insights

- Installation of automated weather stations further strengthened the capacity of Pakistan's Meteorological Department to closely monitor and disseminate forecasts for the communities.
- Partnering with local NGOs was instrumental in dealing with the fragile security situation as they monitored the security context and ensured close liaison with the district authorities for support.



## NATIONAL WATER RESOURCES MANAGEMENT - TAJIKISTAN

<b>Client/Funding Source</b>	Swiss Agency for Development and Cooperation (SDC)
<b>Key Partners</b>	Acted, GIZ-Ins (2014-2022)
<b>Duration</b>	2014-2026 (three phases)
<b>Volume</b>	18.7 Mio. CHF

### Towards integrated water resources management and disaster risk reduction

In Tajikistan, most of the water resources were managed along administrative boundaries, leading to inefficiencies in (irrigation) water use, poor coordination among water users and sectors, and constrained development of climate and disaster resilience. In this context, the NWRM project supports the shift of water management and governance along water-related boundaries and across sectors in the Tajik Syr Darya basin, under the scope of the national Water Sector Reform. The ultimate goal of NWRM is to improve the livelihoods of rural populations through integrated water and land management in watersheds, and increased water use efficiency at the levels of farm plots, water users associations and irrigation systems.



Agroforestry for slope protection in Spitamen district: water users from Langar village setting up orchards @NWRM

### Results

- Produced the first River Basin Management Plan (2021-2025) in Tajikistan: The Tajik Syr Darya River Basin Management Plan was adopted in 2022 by the Ministry of Energy and Water Resources.
- Designed and piloted the first DRR Watershed Management Plan in Aksu. This plan fostered long-term green measures through the valuation of nature-based solutions and the implementation of ecosystem-based adaptation measures.
- Increased water use efficiency by 30% in irrigated farms through the use of water-saving techniques and improved monitoring of water flows by farmers and WUAs.

### Key Insights

- Economic, social and environmental cost-benefit analyses have better informed decision-making and prioritization of the most effective ecosystem-based adaptation measures.
- Reliable water monitoring is critical for IWRM. The improvement of water monitoring and integration of surface and groundwater monitoring, both in terms of quantity and quality will be continued in Phase 3.

## WATER FOR ABANCAY AND COMMUNITIES – PERU

<b>Client/Funding Source</b>	EUROCLIMA+, French Development Agency
<b>Key Partners</b>	SUNASS, EMUSAP Abancay, CEDES Apurimac
<b>Duration</b>	2020-2023
<b>Volume</b>	1 Mio. CHF

### Enhancing water security for rural and urban communities

The [Water for Abancay and communities](#) project focused on ensuring long-term water availability, equitable access, and sustainable use amid climate variability. It contributed to ensuring the future availability of water for the population of the city of Abancay and the rural communities of the Mariño micro-watershed, which supplies 100% of the water used by the Abancay service provider. Its specific objective is to increase local capacities for resilient water use and management through a sustainable mechanism of investment in natural infrastructure, optimized water demand, a consolidated multi-stakeholder governance structure and generating lessons learned that can be replicated in other cities in the country, to ensure long-term comprehensive adaptation of sanitation services.

### Results

- Expanded water storage capacity in q'ochas, holding up to 47,000 m<sup>3</sup>, benefiting upstream and downstream users.
- Updated hydrological balance for the Mariño micro-watershed, providing crucial information for water allocation, minimizing conflicts between different users.
- Quantified the volume of non-revenue water and used the results for EMUSAP Abancay to develop its Optimized Master Plan for the 2025-2029 period.
- Applied the Service Provider Water Security Index in two cities to identify the dimensions with the greatest impact on water security.



An awareness raising session on the importance of safe water and its conservation in Abancay @GiovannaArias



Restoration of native forests in the watershed plays an important role for water retention and flood protection @MauricioPanozo

## Key Insights

- The successes and lessons from Water for Abancay and Communities have shaped a broader project: Water for Andean Cities. This scaling-up aims to secure sustainable water management for urban and rural populations alike, ensuring that communities in the Andes can continue to thrive in an era of climate uncertainty.
- Downstream farmers have become aware of the work being done by the upstream communities to ensure water supply and now contribute to the construction of q'ochas upstream.

## GESTION INTEGRAL DEL AGUA – BOLIVIA

<b>Client/Funding Source</b>	Swiss Agency for Development and Cooperation (SDC)
<b>Key Partners</b>	Ministry of Environment and Water of Bolivia
<b>Duration</b>	2014-2018   2019 - 2022
<b>Volume</b>	3.7 Mio. CHF

### Strengthening water governance

The project [Gestion Integral del Agua](#) (GIA) supported the consolidation of Bolivia's National Basin Plan, which since 2022 has been structured as the Plurinational Water Resources Plan. At the request of the Bolivian government, GIA focused on the strategic Suches and Cotagaita river basins, which suffer severe contamination from mining activities. These basins are crucial both nationally and regionally. Actions in the Suches basin align with agreements between Bolivia and Peru to mitigate pollution in Lake Titicaca. The Cotagaita basin impacts the Pilcomayo basin, which extends into Paraguay and Argentina.

## Results

- Contributed to the formulation, official approval and start-up of the Plurinational Water Resources Plan 2021-2025.
- 8,200 families have improved their water security.
- 10,000 families in Suches and Cotagaita (50,000 people) improved their resilience to climate change through various watershed management actions.
- Strengthened the early warning systems of the Suches and Cotagaita watersheds.
- Developed disaster risk reduction tools to propose, design, implement and evaluate measures for the preservation of water sources and ecosystems.

## Key Insights

- The integration of Conflict Sensitive Program Management (CSPM) in the project activities provides a more holistic response to water-related conflicts. A typology of water-related conflicts was established and the National River Basin Plan incorporated training materials to disseminate CSPM in other strategic basins.



## CLEAN DRINKING WATER AND HYGIENE MAKE FOR GOOD HEALTH - MADAGASCAR

<b>Client/Funding Source</b>	charity: water, OneDrop, SDC and Helvetas
<b>Key Partners</b>	Diana: ONG Santatra et bureau d'étude CRADES ; Menabe: ONG AIM
<b>Duration</b>	2015 – 2021   2022-2026
<b>Volume</b>	27 Mio. CHF

### For a sustainable drinking water service

Ensuring the availability and safety of water is a growing concern in many parts of Madagascar. The Ratsantanana program supports rural municipalities in preparing for and adapting to climate change, as well as adopting innovative solutions such as: solar-powered water pumps; the management of drinking water systems by private services to ensure the sustainability of operations; and the promotion of the "Blue Schools" approach, which includes water, sanitation and hygiene, as well as environmental protection and a gender component. Protective measures are implemented to reduce the risks associated with extreme weather events and to promote the renewal of groundwater resources.



Water reservoir for a piped system in Madagascar © charity:water

### Results

- Constructed 65 drinking water supply systems in 26 communes.
- Provides access to improved drinking water services for more than 130,000 people.
- More than 10,000 pupils, including 5,500 girls, have seen their hygiene and sanitation conditions improved.

### Key Insights

- Installation of groundwater monitoring sensors in boreholes across a drought-prone region in Madagascar enables real-time tracking of aquifer levels. Data collected by private operators is analyzed by a university partner, then

aggregated with inputs from other actors, including UNICEF, and published in a quarterly bulletin to support informed regional water management.

- The Clara technology has allowed production of chlorine onsite and directly into the water systems by just adding salt. The technology greatly reduces supply chain risks of getting chlorine to rural areas and provides remote monitoring to ensure the water is being treated at all times.

## OUR EXPERTS

Our team consists of highly professional, committed and multilingual advisors with many years of experience working in international development cooperation across the globe. Meet the Climate and Disaster Resilience team [here](#), and the WASH and Water Governance team [here](#).



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## WHAT WE CAN OFFER

- Broad-based expertise and advice on water management and governance that supports climate change adaptation and mitigation, resilient WASH systems and services, water-use efficiency in agriculture and water-related disaster risk management, and humanitarian response.
- Application of nexus and systems approaches, including the practice of IWRM and integrated natural resources management principles and the promotion of nature-based solutions, from basin, watershed, landscape and irrigation system scales to local and community-based scales.
- Longstanding experience in mainstreaming climate and disaster-resilient water management in governance frameworks and coordinating water governance across sectors.
- Ability to work across levels, from the local to national, regional and international level – combining science, policy, and practice in linking field activities to policy dialogue.
- Advocacy on people-centered climate and development policies, water, land and other resources rights, biodiversity conservation and disaster risk management.
- Expert facilitation of multi-stakeholder partnerships and platforms, including public, civic and private actors.
- Development of context-specific analytical tools and methods and delivery of tailor-made training.
- Assisting clients in designing programs and projects including project formulation, strategic planning, monitoring and evaluation.