



Annual Report 2017: English Summary

The International Rainwater Harvesting Alliance (IRHA) is a Swiss NGO headquartered in Geneva. Founded in 2002, our mandate is to promote rainwater as a sustainable resource and to improve rainwater management, reducing the negative impacts of floods, droughts and water scarcity on ecosystems and human communities. IRHA are committed to evolving integrated, sustainable living practices. Cultivating resilient ecosystems and careful resource use assists communities in adapting to climate change.

8 % Of the World's Population Depends on Rainwater as a Drinking Water Resource

Rainwater is a valuable, widely- and freely-available drinking water resource. By enabling people to optimise their domestic and agricultural use of rainwater, we mitigate local depletion of water resources and flooding.

IRHA furthers UNs' Sustainable Development Goals 6A and B (ensuring affordable clean water and adequate sanitation in developing countries through water harvesting; and, expanding international cooperation to further this goal by 2030). It acts on 6.4 (sustainable water resource management), 13.1 (strengthening resilience and adaptive capacity to climate-related hazard and natural disasters) and 13.3 (improving awareness raising on climate change mitigation).

Our Expertise

-  *IRHA plan, develop and construct rainwater harvesting and management systems; we communicate this resource's practical uses in the field and at an international level.*
-  *We offer tools for local decision-makers, enabling them to maintain rainwater-harvesting installations over their lifetimes (circa twenty-five years).*
-  *Our training programmes reinforce the technical and management skills of local planners, technicians and students of civil engineering and architecture.*
-  *We assist our partners in developing local and regional water-resource conservation strategies, to reinforce their communities' resilience to climate change and other natural hazards.*

Our Five-Fold, Rainwater Harvesting Approach: Framing our working practice until 2020.

-  **Rainwater Harvesting, Hygiene and Sanitation** provides IRHA-designed Blue Schools, villages and rain communities. When creating a Blue School, rainwater-harvesting facilities supply children with clean drinking water. Meanwhile, grey water from WASH facilities can be reused to irrigate crops in school garden plots; additionally, organic matter from toilets can be composted and reused in the field.

This programme ensures that waterborne diseases do not compromise the health and well-being of the communities IRHA assists. It remains important, given that 843 million people lack access to a sustainable drinking water supply (JMP 2017).

-  **Rainwater Harvesting and Resilient Farming** involves teaching local communities about harvesting rainwater and using low-cost drip irrigation systems to cultivate plants and grow crops. This enables communities to develop agricultural methods that are more drought-tolerant. Within this programme, we also teach farmers how to produce organic composts, and assist local communities in setting up greenhouses, allowing them to cultivate crops during the dry season.

-  **Rainwater Harvesting for Resilient Ecosystems** focuses on cultivating fertile soils and thick vegetation cover to increase watersheds' water-retention capacity, making them more resilient to climate change.

IRHA's rainwater-fed agroforestry projects aligns with the UN target of restoring sustainable water-related ecosystems by 2020 (SDG 6.4). They also further SDG 13.1, as this programme restores soil fertility while conserving local water resources

Rainwater Harvesting for Urban Settings reinforces urban communities' capacities to respond to variations in water supply, by developing innovative rainwater management systems for use within urban contexts.



Capillary Action is an education and advocacy programme, promoting awareness of rainwater as a sustainable resource at national and international levels.

2017: Projects and Project Development

Rainwater Harvesting, Hygiene and Sanitation

Three Nepalese Blue Schools Constructed with *Kanchan Nepal*

Overview: since 2011, IRHA has collaborated with *Kanchan Nepal* to improve the sanitation and hygiene facilities within the country's schools, beginning with the establishment of four Blue Schools within the Kaski region, before creating a further four Blue Schools in the same mountain-region. In 2017, IRHA completed the construction of its sixth, seventh and eighth Blue Schools with *Kanchan Nepal*.

Beneficiaries: 757 children in the Kaski region.

Resource Provision: five rainwater reservoirs and water-treatment and distribution points (water kiosks) giving children access to drinking water and allowing them to wash their hands; 13 dry toilets with double composting pits, and two-hundred and fifty trees (regional reforestation).

Training: twenty workshops on WASH maintenance and best hygiene practice.

Funding Partners: *Services Industriels de Bagnes, de Genève, de Terre Sainte et Environs*, and the town councils of Wohlen, Bever, Meinier and Bernex.



Two Burundian Blue Schools Constructed with *Le Centre de Paix-Global Network*

Overview: since 2015, IRHA has been working with the Burundian NGO 'Le Centre de Paix-Global Network' to improve the sanitation and hygiene facilities within two schools in the Bubanza region. With political stability re-established in the region in 2017, we were able to complete this project with our local partner.

Beneficiaries: 1, 407

Resource Provision: five rainwater reservoirs and water-treatment and distribution points (water kiosks) giving children access to drinking water and WASH facilities; 52 dry toilets with double composting pits, and 14,000 trees (regional reforestation).

Training: twenty workshops on WASH maintenance and best hygiene practice.

Funding Partners: *Service de Solidarité internationale du Canton de Genève*.



Rain-Community, A Nepalese Disaster-Relief Project with Guthi

Overview: to improve the living conditions of peoples displaced by the 2015 earthquakes in Tripureshwor and Liwali, IRHA has collaborated with the Nepalese NGO Guthi to install rainwater harvesting and sanitation facilities in six disaster-relief camps (internally displaced people, IDP) and two schools in Bhaktapur and Kathmandu.

Beneficiaries: 8,600

Resource Provision: one rainwater reservoir, five water-treatment stations, and ten distribution points (water kiosks) giving access to drinking water and WASH facilities; eight dry toilets with double composting pits, and 1,000 trees (regional reforestation).

Training: sixty workshops on WASH maintenance, disaster risk reduction, menstrual hygiene management and best hygiene practices.

Advocacy: project reporting at the International Conference on Water Environment and Climate Change (WECC)

Funding Partners: Geneva's and Meyrin's town councils, Geneva's cantonal council.



Rainwater Harvesting and Resilient Farming

Nepali Mid-Hills Resilient Farming



Overview: in 2017, IRHA established a pilot project in the northeast Pokhara region to initiate its new 'Rainwater Harvesting and Resilient Farming' programme.

Beneficiaries: 757

Resource Provision: five rainwater reservoirs, five water-treatment stations, two greenhouses and 250 trees (regional reforestation).

Training: ten workshops on cultivating crops out-of-season, drip irrigation and making organic compost.

Funding Partners: Services Industriels de Bagnes, de Genève, de Terre Sainte et Environs, and the town councils of Wohlen, Bever, Meinier and Bernex.

Rainwater Harvesting for Resilient Ecosystems

'Rain, Forests, People': A Collaboration with APAF, Senegal

Overview: this recently initiated, integrated agroforestry project pilots an innovative approach to developing resilient communities and water-related ecosystems. Senegal has undergone extensive deforestation, and in certain areas intensive farming, leading to the impoverishment of the region's soils and a reduction in their agricultural productivity. By working with seventy Senegalese farming families, IRHA aims to cultivate a series of agroforestry islands. Collaborating with APAF (*Association de Promotion des Arbres Fertilitaires*), we will plant these agroforestry islands with trees, including specimens of the *Mimosaceae* family that enrich and stabilise soils; these plantations will be irrigated with harvested rainwater.

Funding Partners: Fondation Audemars Piguet, Geneva town council.



'Rainwater Harvesting for Urban Settings'

Rain-community: Kathmandu



Overview: as a pilot project for this programme, we collaborated with our Nepalese partner, Guthi, teaching inhabitants of Kathmandu's Bansighat district about personal hygiene and waterborne diseases through role-playing games, theatre and dance.

Training: twenty workshops

Capillary Action ACT

Pluie de Poésie

Overview: we developed this project in collaboration with Geneva's AM STRAM GRAM theatre and Geneva's town council. It communicated the environmental challenges associated with climate change. When it rained, eight rain-themed poems appeared on Geneva's pavements. An associated project website gives information about rainwater harvesting (www.pluiedepoesie.wordpress.com).



Funding Partners: Geneva town council (Agenda 21), Loterie Romande.

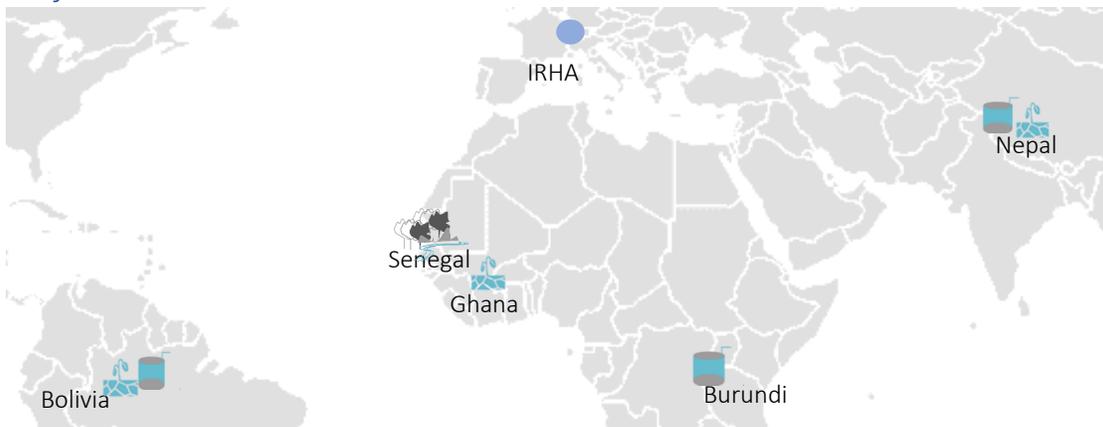
Rainwater and the City: A Series of Workshops for Schools



Overview: we present rainwater as a sustainable resource to children. This project raised children's awareness of urban ecologies and people's collective ecological responsibilities. In partnership with the *Groupement intercommunal pour l'animation parascolaire* and the Trembley and Contamines schools, we delivered four workshops on the water cycle, rainwater harvesting and rainwater in the city.

Funding Partners: Geneva's Service des Ecoles et de la petite Enfance

IRHA Projects in 2017



Projects Completed

- A Nepalese *Blue School*, & associated *Rainwater for Resilient Farming* project
- A Nepalese Disaster-Relief Water Supply
- A Burundian *Blue School*

Projects In Development

- 1 Senegalese *Rainwater for Resilient Ecosystems* projects
- A Bolivian *Blue School* project
- A Bolivian *Rainwater for Resilient Farming* project
- A Ghanaian *Rainwater for Resilient Ecosystems* project
- Our tenth Nepalese *Blue School*
- A Nepalese *Rainwater for Resilient Farming* project