

Technology for Sustainable Water Resource Governance & the 2030 Agenda: This project's contribution towards the Sustainable Development Goals:



5 GENDER EQUALITY



Ending all forms of discrimination against women and girls is not only a basic human right, but it also crucial to accelerating sustainable development. It has been proven time and again, that empowering women and girls has a multiplier effect, and helps drive up economic growth and development across the board.

Sustainable Development Goals*:

- Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life
- Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women
- Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

- Enhanced equitable and inclusive participation in democratic decision-making processes, especially by women and marginalized groups, through the use of technology in Nicaragua.
- Increased use of science and technology by people, especially women and marginalized groups, in Nicaragua to hold their governments to account.
- Increased responsiveness of public institutions to the diverse needs and rights of people, especially women and marginalized in Nicaragua, through use of tech.
- Improved technical and managerial capacity of CWCs and their networks to facilitate gender equitable and inclusive democratic participation in the delivery of sustainable WASH services in NW Nicaragua.
- Improved capacity of drought stricken NW Nicaraguan communities, particularly women and marginalized groups to advocate for their rights to water using technological platforms.
- Improved capacity of people, especially women and marginalized groups, to use technology to monitor and report to local, regional and national governments on water status and the extent to which water rights are realized by users and improved capacity to demand their rights to locally and efficiently managed potable water systems.
- Increased capacity of stakeholders to collaborate in delivering WASH services and water rights to Nicaragua's population, particularly women and marginalized groups, at local, regional, and national levels

6 CLEAN WATER AND SANITATION



Ensuring universal access to safe and affordable drinking water for all by 2030 requires we invest in adequate infrastructure... More international cooperation is also needed to encourage water efficiency and support treatment technologies in developing countries.

Sustainable Development Goals*:

- By 2030, achieve universal and equitable access to safe and affordable drinking water for all;
- 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;
- By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate;
- 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;
- Support and strengthen the participation of local communities in improving water and sanitation management.

- Improved technical and managerial capacity of CWCs and their networks to facilitate gender equitable and inclusive democratic participation in the delivery of sustainable WASH services in NW Nicaragua.
- Increased capacity of municipal decision makers to use technological platforms to respond to the demands of local populations for transparent and efficient management of water systems and compliance with Nicaragua's water laws;
- Increased capacity of stakeholders to collaborate in delivering WASH services and water rights to Nicaragua's population, particularly women and marginalized groups, at local, regional, and national levels.
- A Community Water Committee (CWC) technological platform (application) is developed and distributed to support and assist CWCs in water management and administration, sharing lessons learned and best practices, and in advancing the cause for water rights nationally.
- Technical tools and training provided to CWCs to improve water management and advocacy for water rights.
- Construction and re-habilitation of water systems to improve access to water.
- Community Water Committee networks organized at the local and regional level to follow standardized management and administration protocols.
- Advocacy campaigns conducted to promote accountability from local officials on WASH investments, future WASH investment plans and how they plan to realize the population's rights to water, particularly the rights of women and marginalized groups.
- Cooperative initiatives undertaken between CWCs, municipalities and NGOs to co-finance and provide water systems that demonstrate best practices to targeted communities and improve access to water.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Investment in infrastructure and innovation are crucial drivers of economic growth and development. Technological progress is also key to finding lasting solutions to both economic and environmental challenges. More than 4 billion people still do not have access to the Internet, and 90 percent are from the developing world. Bridging this digital divide is crucial to ensure equal access to information and knowledge, as well as foster innovation and entrepreneurship.

Sustainable Development Goals*:

- Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all;
- By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities;
- Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States;
- Support domestic technology development, research and innovation in developing countries:
- Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.

- Water system infrastructure will be of high quality, reliable, sustainable and resilient to support economic development and human well-being, and will focus on affordable and equitable access for all;
- Apps and Technical platforms will be developed locally in Nicaragua;
- Appropriate technology (smart phones or tablets) will be provided to CWCs along with sustainable plans for internet access;
- Technological and Technical support will be offered to CWCs and local municipalities to promote sustainable water management.
- Workshops conducted for CWC members, CWC networks and municipal officials to enable them to use technology to monitor and report to local, regional and national governments about water status and the rights of water users

10 REDUCED INEQUALITIES



The adoption of sound policies to empower the bottom percentile of income earners, and promote economic inclusion of all regardless of sex, race or ethnicity are required to stop widening disparities that exist between rich and poor. This involves improving the regulation and monitoring of financial markets and institutions, encouraging development assistance and foreign direct investment to regions where the need is greatest.

Sustainable Development Goals*:

- By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status;
- Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, Small Island developing States and landlocked developing countries, in accordance with their national plans and programs.

- Increased empowerment of women and men, girls and boys, and marginalized groups, to engage in democratic processes, and enjoy and exercise their human rights.
- Enhanced equitable and inclusive participation in democratic decision-making processes, especially by women and marginalized groups, through the use of technology in Nicaragua.
- Increased capacity of municipal decision makers to use technological platforms to respond to the demands of local populations for transparent and efficient management of water systems and compliance with Nicaragua's water laws.

13 CLIMATE ACTION



There is no country in the world that is not experiencing first-hand the drastic effects of climate change. Helping more vulnerable regions, such as land locked countries and island states, adapt to climate change must go hand in hand with efforts to integrate disaster risk measures into national strategies.

Sustainable Development Goals*:

- Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries;
- Integrate climate change measures into national policies, strategies and planning;
- Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
- Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities

- Training provided to municipal staff (engineers and technical and legal advisors) on how to use technology to inform decision making related to sustainable water management, watershed preservation and water rights under Nicaragua's water laws 620 and 722.
- Sustainable and integrated regional watershed management is essential in this region due to the increasingly sever effects of climate change on aquifers.
- National forum for CWCs, government officials, CSO and aid organizations held to analyze Nicaragua's potable water crisis and the roles of stakeholders in solving it.

15 LIFE ON LAND



Today we are seeing unprecedented land degradation, and the loss of arable land at 30 to 35 times the historical rate. Drought and desertification is also on the rise each year, amounting to the loss of 12 million hectares and affects poor communities globally.

The SDGs aim to conserve and restore the use of terrestrial ecosystems such as forests, wetlands, drylands and mountains by 2020. Halting deforestation is also vital to mitigating the impact of climate change.

Sustainable Development Goals*:

- By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements;
- By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world
- By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts

- Training provided to municipal staff (engineers and technical and legal advisors) on how to use technology to inform decision making related to sustainable water management, watershed preservation and water rights under Nicaragua's water laws 620 and 722.
- Sustainable land management and preservation of soils and aquifers through re-forestation and irrigation is essential in this area.
- National forum for CWCs, government officials, CSO and aid organizations held to analyze Nicaragua's potable water crisis and the roles of stakeholders in solving it.

PEACE, JUSTICE AND STRONG INSTITUTIONS

Without peace, stability, human rights and effective governance, based on the rule of law - we cannot hope for sustainable development.

The SDGs aim to significantly reduce all forms of violence, and work with governments and communities to find lasting solutions to conflict and insecurity. Strengthening the rule of law and promoting human rights is key to this process, as is reducing the flow of illicit arms and strengthening the participation of developing countries in the institutions of global governance.

Sustainable Development Goals*:

- Substantially reduce corruption and bribery in all their forms
- Develop effective, accountable and transparent institutions at all levels
- Ensure responsive, inclusive, participatory and representative decision-making at all levels
- Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements
- Promote and enforce non-discriminatory laws and policies for sustainable development

- Increased use of science and technology by people, especially women and marginalized groups, in Nicaragua to hold their governments to account.
- Increased responsiveness of public institutions to the diverse needs and rights of people, especially women and marginalized groups in Nicaragua, through the use of technology.
- Improved capacity of people, especially women and marginalized groups, to use technology to monitor and report to local, regional and national governments on water status and the extent to which water rights are realized by users.
- Increased capacity of municipal decision makers to use technological platforms to respond to the demands of local populations for transparent and efficient management of water systems and compliance with Nicaragua's water laws.
- Advocacy campaigns conducted to promote accountability from local officials on WASH investments, future WASH investment plans and how they plan to realize the population's rights to water, particularly the rights of women and marginalized groups.
- Social audit process developed and implemented that tracks municipal investments in WASH.
- Results of social audit disseminated to regional population using information technology, particularly social media and CWC technological platform (application).
- Training provided to municipal staff (engineers and technical and legal advisors) on how to use technology to inform decision making related to sustainable water management, watershed preservation and water rights under Nicaragua's water laws 620 and 722.
- Workshops conducted for CWC members and CWC networks to enable them to use technology to monitor and report to local, regional and national governments about water status and the rights of water users.

- Regional meetings between CWCs, municipal staff and officials and CSO held to analyze and plan gendersensitive and environmentally sustainable rural WASH investments and cost-sharing arrangements.
- Municipal forums held to disseminate results of social audit process to government officials and their electorate in all Nicaraguan departments.
- Technical and legal support provided to regional authorities and elected officials to ensure that they facilitate legal recognition and capacity building for CWCs (as per Law 722).

17 PARTNERSHIPS FOR THE GOALS



The SDGs can only be realized with a strong commitment to global partnership and cooperation.

The world today is more interconnected than ever before. Improving access to technology and knowledge is an important way to share ideas and foster

Sustainable Development Goals*:

- Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection
- Mobilize additional financial resources for developing countries from multiple sources
- Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism
- Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favorable terms, including on concessional and preferential terms, as mutually agreed
- Fully operationalize the technology bank and science, technology and innovation

- Increased capacity of stakeholders to collaborate in delivering WASH services and water rights to Nicaragua's population, particularly women and marginalized groups, at local, regional, and national levels.
- National forum for CWCs, government officials, CSO and aid organizations held to analyze Nicaragua's potable water crisis and the roles of stakeholders in solving it.
- A public engagement campaign is conducted using social media and technological platforms to educate Nicaragua's population particularly women and marginalized groups, at the local, regional and national level about their rights to water.
- Cooperative initiatives undertaken between CWCs, municipalities and NGOs to co-finance and provide water systems that demonstrate best practices to targeted communities.
- In Canada, public engagement campaigns conducted that advocate for rights to water on an international scale.

innovation. Coordinating policies to help developing countries manage their debt, as well as promoting investment for the least developed, is vital to achieve sustainable growth and development.

The goals aim to enhance North-South and South-South cooperation by supporting national plans to achieve all the targets.

- capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology
- Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation
- Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries
- Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships
- By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts

^{*}Relevant to this project's anticipated results.