

Summary

Nicaragua Integrated Water Resource Management Action Plan (PAGIRH) (2022 – 2026)



1 Background

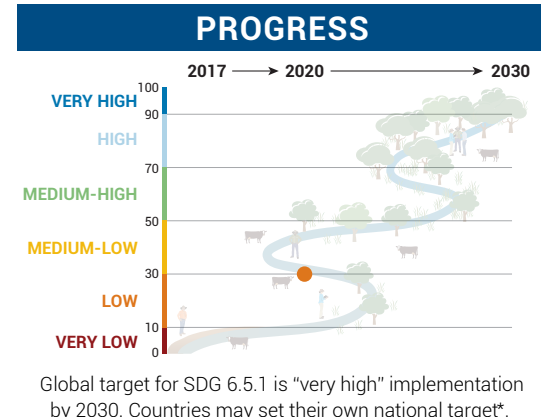
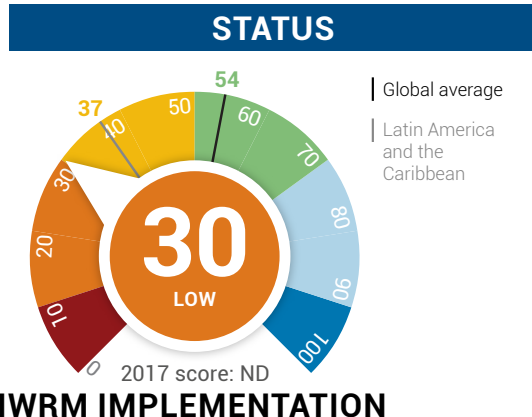
In 2020, in accordance and alignment with the 2030 Agenda, specifically Sustainable Development Goal (SDG) 6 - clean water and sanitation for all, the Government of Reconciliation and National Unity (GRUN) performed an assessment of the degree of integrated water resource management (IWRM) implementation (SDG 6.5.1) in Nicaragua. This was achieved through coordination by the Ministry of Environment and Natural Resources (MARENA), as indicator 6.5.1 focal point for The United Nations Environment Programme (UNEP), with support from institutions that make up the Integrated Water Resource Management (IWRM) sub-commission, and with technical support from Global Water Partnership

Central America (GWP CAM) through the SDG 6 IWRM Support Programme.

The assessment was conducted based on a broad participatory methodology involving 26 relevant public-private actors in the water sector. On a scale of 0 to 100 Nicaragua obtained a score of 30, i.e., a "Low" level of implementation, which means that implementation of elements of IWRM has begun, but with limited uptake across the country and potentially low engagement of stakeholder groups. At the regional level, Nicaragua is ranked fourth in terms of level of progress towards IWRM, after Costa Rica, Panama and the Dominican Republic. (GWP, 2021).

Nicaragua (2020)

REGION: Latin America and the Caribbean



Nicaragua's IWRM Action Plan (PAGIRH) formulates priority measures that respond to challenges in water resource management, based on sector needs and taking into account the results of the SDG 6.5.1 assessment in 2020, and in line with national water resources, environmental, forestry and climate change policies and strategies.

Challenging issues to improve IWRM implementation in the country include:

- Updating the 2011 National Water Resources Policy and the regulations for the reform of the General Water Law.
- Forming Basin Committees.
- Crafting and formalizing legal instruments for transboundary basin management.

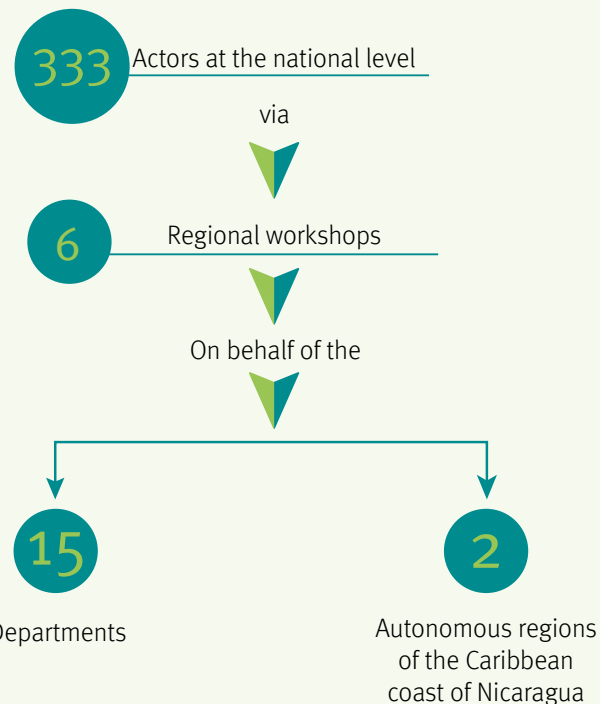
- Decentralizing water resources management.
- Sustainability of permanent multi-level and multi-stakeholder participation mechanisms.
- Strengthening knowledge management among actors.
- Updating the National Water Information System (SiAgua).
- Strengthening aquifer management.
- Controlling pollution of water bodies.
- Creating a specific expenditure category for IWRM elements.
- Approval of regulations for water use fees.
- Creating the National Water Fund.
- Establishing public-private partnerships to carry out IWRM projects.
- Securing investment projects focusing on IWRM.

2 Participatory Consultation Process

The strategic actions included in Nicaragua's IWRM Action Plan were identified through dialogue and consensus with various actors through six workshops attended by representatives

from all departments and from Autonomous Regions in the Nicaraguan Caribbean Coast. A socialisation workshop at the national level was also held.

The strategic **actions of the IWRM Action Plan** were identified through the **dialogue** and **consensus** of:



3 Objectives of the PAGIRH

3.1. Overall Objective

To promote implementation of priority actions as appropriate responses to challenges in integrated water resource management in Nicaragua, in harmony with sustainable development, the restitution of rights and care of our Mother Earth.

3.2. Specific Objectives

- To strengthen IWRM in transboundary basins.
- To contribute to implementation of regulations and public management instruments linked to IWRM.
- To contribute to climate change management through IWRM.
- To strengthen territorial governance and the restitution of rights within the framework of IWRM.
- To promote innovation processes and knowledge management for IWRM
- To support the securing of financial resources for implementation of actions linked to IWRM.

4 Actions Prioritized for the PAGIRH 2022 – 2026

The GRUN recognizes that IWRM will increase the resilience of communities and ecosystems - under a basin management framework that is inclusive and respectful of Mother Earth, and in line with the formulation of resilient, low-emission public investment programmes and projects in strategic partnership with the private sector - to conserve livelihoods, biodiversity and ecosystems.

The IWRM Action Plan (PAGIRH) contains 15 strategic actions with specific results for their implementation. In general, these actions are aimed at strengthening the creation of public policies on IWRM, addressing water

resource governance issues, monitoring, innovation, risk reduction, inclusion of gender and vulnerable groups, interculturality, transboundary management and financial leverage, to achieve sustainable development, reduce poverty, attain water security and the protection of water-related ecosystems.

The prioritised strategic actions presented below have been grouped according to IWRM dimensions (enabling environment, institutions and participation, management instruments and financing).

Table 1

Strategic Actions in Nicaragua's IWRM Action Plan 2022-2026

1.1. Enabling Environment			
Strategic Actions	Results Responsible Scale		
1.1 Develop public policy management instruments.	<p>Publish and socialize the Water Resource National Plan (PNRH)</p> <p>Update the Water Resource National Policy, linking it to the PNRH and the Poverty Reduction Plan for Human Development 2022-2026</p>	<p>Nicaraguan Company of Aqueducts and Sewers (ENACAL), National Water Authority (ANA), Ministry of Environment and Natural Resources (MARENA), National Assembly</p> <p>ANA, MARENA, Emergency Social Investment Fund (FISE), National Assembly, ENACAL, Regional Government of the South Caribbean Coast (GRACCN), Regional Government of the Southern Caribbean Coast (GRACCS), Secretariat for the Development of the Caribbean Coast and Upper Wangki Bocay (SDCC-AWB)</p>	<p>National</p> <p>National</p>
1.2 Establish IWRM transboundary agreements	<p>Carry out a transboundary assessment and a mapping of actors at the local level in the Negro River, considering the interculturality of native and Afro-descendant populations and their incorporation into local policies.</p> <p>Design a strategy for anchoring Nicaragua in bilateral cooperation initiatives for integrated management of transboundary water resources.</p> <p>Create and/or update 23 management plans for protected areas, ensuring environmental management with special attention to water recharge areas.</p>	<p>ANA, MARENA, Nicaraguan Institute for Municipal Development (INIFOM), Ministry of Foreign Affairs of Nicaragua (MINREX)</p> <p>ANA, MARENA, MINREX, National Assembly</p>	<p>Transboundary</p> <p>Transboundary</p>
1.3 Align territorial-level conservation initiatives with IWRM elements	<p>Prepare a diagnosis to identify protected areas that contain vulnerable ecosystems related to the water sector.</p> <p>Develop a methodology adapted to Nicaragua to determine minimum ecological flows that allows integrating environmental analysis and associated requirements into water management</p>	<p>MARENA, INIFOM, Collaborative Management Committees</p> <p>MARENA, National Forestry Institute (INAFOR), GRACCN, GRACCS, SDCC-AWB, Nicaraguan Territorial Studies Institute (INETER), ANA</p> <p>ANA, INETER, National Council of Universities (CNU), MARENA</p>	<p>National</p> <p>National</p> <p>National</p>

2. Institutions and Participation			
Strategic Actions	Results	Responsible	
		Scale	
2.1 Strengthen the Governance of the sector.	<p>Put the National Council for the Development of Water Resources - the water planning instance at the national level, according to Law 1046 art. 20 bis, into operation</p> <p>Put the Commission for the Sustainable Administration of Water Resources, for the coordination of the integrated management of water resources by basins, according to Law 1046 art. 20 quinquies, into operation.</p>	<p>Government of Reconciliation and National Unity (GRUN) / Office of the President</p> <p>Executive Secretariat for the Water Resource Development National Council</p>	National
2.2 Strengthen permanent spaces for coordination and cooperation between municipalities that share basins	<p>Promote the creation of basin committees, to promote participation and articulation of all the actors involved in IWRM at the local level.</p> <p>Design a consultation and participation mechanism, both physical and virtual, to gather input and monitor the IWRM Action Plan implementation process.</p>	<p>ANA, GRACCN, GRACCS, SDCC-AWB, INIFOM</p> <p>MARENA, ANA, INIFOM, GRACCN, GRACCS, SDCC-AWB</p>	Subnational
2.3 Develop subnational regulations for IWRM	<p>Promote municipal water policies for IWRM, in accordance with the heterogeneity of the territory, its environmental ordinances and its alignment with the National General Water Law.</p>	<p>ANA, MARENA, INIFOM, Municipalities, GRACCN, GRACCS, SDCC-AWB</p>	National
2.4 Strengthen women's leadership in IWRM at the community level.	<p>Include a gender approach in regulations for establishment and operation of basin committees, in management plans and in Water and Sanitation Committees (CAPs)</p> <p>Promote women's participation in technical trainings on water, sanitation and IWRM issues in communities.</p>	<p>ANA, MARENA, Ministry of Women (MINIM), INIFOM, GRACCN, GRACCS, SDCC-AWB</p> <p>ANA, INIFOM, MARENA, MINIM, FISE, INIFOM.</p>	National
2.5 Design strategies to include vulnerable groups in IWRM.	<p>Strengthen training on IWRM issues, monitoring tools and identification of vulnerability factors for technicians from regional and territorial governments of indigenous and Afro-descendant communities on the Nicaraguan Caribbean Coast.</p> <p>Design safeguard development guidelines and a mechanism to involve vulnerable populations in IWRM projects and action plans at the institutional level.</p>	<p>ANA, MARENA, INIFOM, GRACCN, GRACCS, SDCC-AWB</p> <p>GRACCN, GRACCS, SDCC-AWB</p>	Subnational



2. Institutions and Participation			
Strategic Actions	Results	Responsible	
		Scale	
2.5 <i>continues...</i>	Incorporate local and ancestral knowledge in the design of the guides to be used for developing IWRM plans at the basin level.	ANA, FISE, MARENA, INIFOM, GRACCN, GRACCS, SDCC-AWB	National
	Map training and awareness needs at the community, municipal and institutional levels.	ANA, MARENA, INETER, INIFOM, GRACCN, GRACCS, SDCC-AWB	National
	Train community managers of 23 protected areas, for capacity building through the field school - farmer/farmer methodology, supported with resources from projects currently under implementation.	GRACCN, GRACCS, SDCC-AWB, MARENA, INIFOM	National
2.6 Establish multi-level training programmes	Update the capacities of municipal officials, water users, NGOs and the private sector linked to IWRM: diploma courses, short courses	ANA, MARENA, GRACCN, GRACCS, SDCC-AWB, INETER, INIFOM, CNU	National
	Establish public-private collaboration agreements for design and implementation of academic offer (courses, diploma courses, master's degrees) on issues related to IWRM (hydraulics, hydrology, hydrogeology, among others) at technical and institutional levels.	ANA, MARENA, CNU, FISE, Inter-institutional and Sectoral Commission for Water, Sanitation and Hygiene (COMISASH), GRACCN, GRACCS, SDCC-AWB	National
3. Management Instruments			
Strategic Actions	Results	Responsible	
		Scale	
3.1 Create climate risk management instruments.	Prepare special drought and flood plans for prioritised basins (two basins in the Dry Corridor will be prioritised). Promote strengthening of community Early Warning Systems (EWS) within National System for Disaster Prevention, Mitigation and Response (SINAPRED), based on prioritization of drought- and flood-related hazards.	MARENA, Swedish Cooperative Center (SCC), ANA, INETER	National
	Prepare and publish a sectoral adaptation plan linked to IWRM.	MARENA, SCC	National

3. Management Instruments			
Strategic Actions	Results	Responsible	Scale
	Define a standardised risk and vulnerability assessment methodology based on local circumstances at the basin level.	INETER, MARENA, SCC	National
	Develop a concept note to design a system to monitor loss and damage linked to extreme hydrometeorological events, as part of special plans for leveraging resources through the Warsaw International Mechanism for Loss and Damage.	MARENA, INETER, SCC, Ministry of Finance and Public Credit (MHCP)	National
3.1 continues...	Prepare project proposals to modernise and strengthen the national hydrometeorological and hydrographic network.	INETER	National
	Through the National Water Resources Development Council, work on a proposal for irrigation districts with productive purposes for climate change management in the Nicaraguan Dry Corridor.	Ministry of Agriculture (MAG), MARENA, ANA, INETER, MHCP, SCC	National
	Update guidelines to prepare IWRM plans for basins.	ANA	National
3.2 Design territorial water management plans.	Prepare and/or update hydrological plans for two pilot basins for Nicaragua's Pacific, central and northern regions.	ANA, INETER, MARENA, GRACCN, GRACCS, SDCC-AWB	National
	Prepare, socialise and implement two pilot plans for municipal water resource management with local governments, counties, neighbourhoods, schools.	ANA, INIFOM, MARENA	National
	Update water balances at the basin level.	ANA, MARENA, INETER, GRACCN, GRACCS, SDCC-AWB	National
3.3 Strengthen water resources monitoring	Arrange for a census of specific discharges and non-point source pollution that indicates location and characterisation, including flows, of urban, agricultural and industrial discharges.	ANA, MARENA, MAG, ENACAL, Ministry of Health (MINSa).	National



3. Management Instruments			
Strategic Actions	Results	Responsible	
		Scale	
3.3 continues...	<p>Include water quality indicators and indexes in the National Water Information System (SiAgua) to know the state of water bodies.</p> <p>Standardise and define methodologies to assess the state of aquifers.</p> <p>Coordinate scientific research on the main aquifers between government institutions and academia.</p> <p>Promote research for development of modelling tools for aquifers in Nicaragua.</p> <p>Promote research on water ecosystem management in autonomous regions, with support from local universities (University of the Autonomous Regions of the Nicaraguan Caribbean Coast - URACCAN, and Bluefields Indian & Caribbean University - BICU).</p> <p>Strengthen SiAgua, for decision-making and finance management support.</p>	<p>ANA, MARENA, INETER, CNU, MINSa</p> <p>ANA, MARENA, INETER, CNU, MINSa</p> <p>ANA, MARENA, INETER, CNU</p> <p>ANA, MARENA, INETER, CNU</p> <p>ANA, MARENA, INETER, CNU, URACCAN, BICU, Secretariat of Natural Resources (SERENA)</p> <p>ANA, MARENA, INETER, CNU, GRACCN, GRACCS, SDCC-AWB</p>	<p>National</p> <p>National</p> <p>National</p> <p>National</p> <p>Subnational</p> <p>National</p>
3.4 Develop applied scientific research on IWRM-related issues			
4. Financing			
Strategic Actions	Results	Responsible	
		Scale	
4.1 Strengthen the shared responsibility model for investment in IWRM implementation.	<p>Put the funds associated with IWRM into operation.</p> <p>Establish strategic partnerships with the private sector, to develop conservation actions linked to IWRM.</p> <p>Advance the approval of the regulation to develop the already established legal framework for the payment of fees.</p> <p>Propose an expenditure classifier in the national budget that allows the financing allocated to implementation of IWRM actions to be visualised.</p>	<p>ANA, MHCP</p> <p>ANA, MARENA, INAFOR, MEM, INIFOM, private sector</p> <p>ANA, MHCP, National Assembly</p> <p>MHCP, MINREX, MHCP, SCC</p>	<p>National</p> <p>National</p> <p>National</p> <p>National</p>

4. Financing			
Strategic Actions	Results	Responsible	Scale
	Update a national methodology for environmental economic valuation of water resources by the various types of uses and users.	ANA, MARENA, MHCP	National
4.2 Create incentive mechanisms to promote forest and water recharge zone conservation and protection.	Implement payment mechanisms for ecosystem services for small and medium-sized farm owners who invest in conservation of water recharge zones.	ANA, MARENA	National
	Strengthen strategies for registering, keeping track of and measuring volumes used by different water users, in accordance with the National Water Resources Plan (PNRH).	ANA	National



5 Budget

The total budget for implementing the 15 strategic actions contained in the five-year Action Plan is US\$ 1,465,000, which is to be financed through resources from the country's

general budget, bilateral and multilateral cooperation, and engagement of the private sector through the establishment of strategic partnerships for development.

Table 2

Strategic Actions in the IWRM Action Plan

Strategic Actions in the IWRM Action Plan	Budget in USD
Enabling Environment:	
Develop public policy management instruments	45,000
Establish IWRM transboundary agreements	70,000
Align territorial-level conservation initiatives with IWRM elements	130,000
Institutions and Participation:	
Establish inter-institutional coordination mechanism to strengthen water governance	20,000
Strengthen permanent spaces for coordination and cooperation between municipalities that share basins	60,000
Develop subnational regulations for IWRM	30,000
Strengthen women's leadership in IWRM at the community level	40,000
Design strategies to include vulnerable groups in IWRM	50,000
Establish multi-level training programmes	140,000
Management Instruments:	
Create climate risk management instruments	140,000
Design territorial water management plans	100,000
Strengthen water resource monitoring	115,000
Develop applied scientific research on IWRM-related issues	85,000
Financing:	
Strengthen the shared responsibility model for investment in IWRM implementation	145,000
Create incentive mechanisms to promote forest and water recharge zone conservation and protection	75,000
Total (USD)	1,465,000

6 Monitoring and Evaluation Strategy

Until the Commission for Sustainable Water Resource Management is operationalised, Action Plan monitoring and evaluation will be conducted by an ad hoc team of specialists from the Inter-institutional and Sectoral Commission for Water, Sanitation and Hygiene (COMISASH) IWRM Sub-Commission. Monitoring and evaluation of

the implementation of the Action Plan will be carried out through monitoring of logframe matrix indicators, and visits to the sites where actions are being carried out where relevant. The annual workplan will be implemented based on budgetary resources availability.

ANA and MARENA will be responsible for the semi-annual and annual reports. These entities will coordinate their preparation with the parties involved through the Commission for Sustainable Water Resources Management. The progress achieved related to gender and vulnerable population action plans will be validated by the Ministry of Women and the Regional Governments, respectively.

The National Water Resources Development Council will meet every six months to assess progress of the implementation of the Action Plan, as well as identify bottlenecks, challenges and any need to adjust planned activities. The *ad hoc* team will prepare the reports based on progress towards logframe monitoring indicators.

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7 Implementation Structure

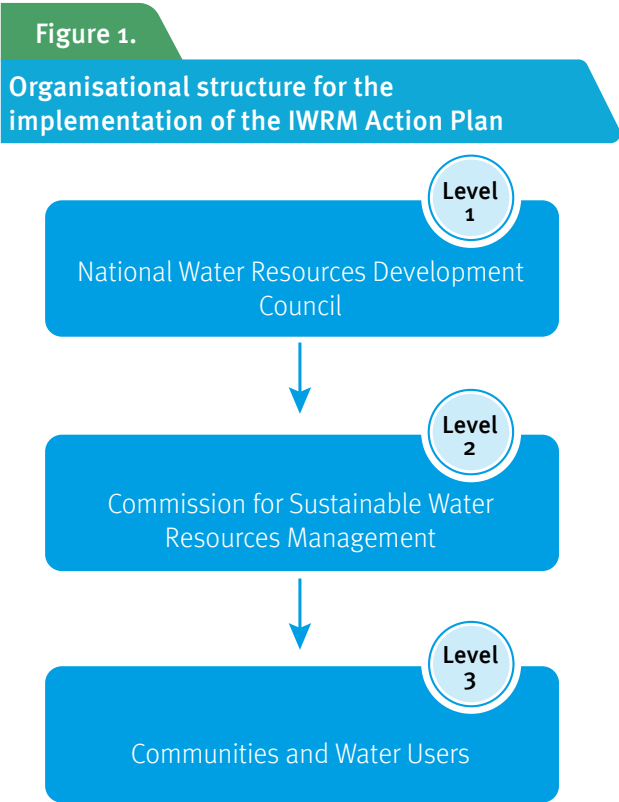
Nicaragua has a solid organisational structure that enables open dialogue to reach consensus on natural resources management instruments and actions at the national level. The IWRM Action Plan will be implemented under a three-tier governance model:

Level 1 is made up of National Water Resources Development Council members. This working group has strategic and political function necessary for approval of workplans and strategic actions and is made up of the following institutions: the National Council, MHCP, ENACAL, FISE, MEM, MARENA, INETER, BCN, MAG, ANA, Caribbean Coast Regional Councils, and INIFOM.

Level 2 is made up of specialists from the Commission for Sustainable Water Resources Management and the private sector. The fundamental role of this working group is to promote the activities proposed in the IWRM Action Plan at a technical level, as well as to ensure linkages between the strategic and the territorial levels.

Level 3 is made up of representatives of communities and water users at the national level, ensuring participation by

vulnerable populations. The main function of this level is the consultation and dialogue process with territorial actors, to achieve full participation by relevant stakeholders at the national level (see Figure 1).



8 Funds Management Mechanism

The financing structure established for Nicaragua's IWRM Action Plan articulates work axes of the National Plan for the Fight against Poverty and Human Development (PNLCP). It is therefore supported by the Government of Nicaragua's Financial Economic Programme implemented via the Financial Economic Plan (PEF) and the Public Investment Programme (PIP).

At the international level, bilateral and multilateral cooperation mechanisms were identified, such as the Adaptation Fund, the Green Climate Fund (GCF), the Global Environment Fund (GEF) and the Climate Investment Fund (CIF), and through international cooperation with Spain, Germany, Finland, Switzerland and the European Union, that could contribute directly to the fulfilment of objectives outlined in the IWRM Action Plan.

The Ministry of the Environment and Natural Resources currently has a project portfolio worth around US\$ 400

million, which represent an opportunity to leverage resources to strengthen governance, adaptation, climate change, protected areas and ecosystems, as well as emission reduction programmes at the national and subnational levels.

Creating the Fees Law and the National Water Fund (FONAGUA) (Law 620) provides an opportunity to raise funds to finance and promote actions related to Nicaragua's IWRM Action Plan and National Water Resources Plan (PNRH). Likewise, creating an investment registration mechanism, through a classifier of expenditures on IWRM actions at the national level, will allow aligning and highlighting the progress achieved in implementation of activities and their funding sources, as well as the financial gap that will help secure additional financing from the government and international cooperation.

