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### **1** Introduction

The second national consultation workshop on water in the post-2015 development agenda was a useful forum for discussion between representatives of various sectors in the country (civil society, government agencies, private business, community organisational structures, etc.) at all levels (local, municipal, regional and national). 77 people participated, of which 36% were women and the remaining 64% were men.

Among the most relevant stakeholders participating in this forum were: UNDP, the National Water Authority (ANA), the Ministry of the Environment and Natural Resources (MARENA), the National Assembly's Environmental Committee, the United States Agency for International Development (USAID), and the National Network of Drinking Water and Sanitation Committees (RedCAPS). The latter come from western, central, northern and south-eastern Nicaragua.

Due to its relevance, this meeting managed to attract the attention of national and international mainstream media. It was covered by 4 TV stations, 8 radio stations, 2 print media and 2 independent magazines from national media, and ACAN-EFE, an international news organisation.

# 2 Comments regarding recommended goal and targets for water.

The global goal of "Securing sustainable water for all" was very well valued by all who participated during the national consultation process. It is considered that all targets and elements proposed in the document that synthesises key findings and recommendations from UN-Water, approved in its twentieth meeting on January 27, 2014, reflect the reality of the needs most felt by the most vulnerable populations and sectors at the national level.

All people who attended this consultation considered that the global goal needs to consider national targets, taking into account the contexts, realities, potentials and limitations presented by each country.

In the specific case of Nicaragua, it has a large number of technical and legal instruments that support the basis of targets proposed, however, it is necessary to establish clear mechanisms to effectively implement them. It is necessary, first of all, to guarantee that Government entities will have the political will to ensure the fulfilment of the mandates and roles established in these instruments.

Below are comments and suggestions for each target and element included, aiming to strengthen what the UN-Water document has thus far indicated.

#### 2.1 Target A.- Achieve universal access to safe drinking water, sanitation and hygiene.

One of the priorities identified by people attending the national consultation was the need to establish separate indicators for rural and urban areas, ensuring differentiated attention in terms of sanitation services. The reason is that if one single indicator is used to encompass all sectors at a general level, there is a risk that what happens with Millennium Development Goals will happen here as well, which is that global figures do not reflect the reality of the countries' most vulnerable populations: those located in rural areas. When monitoring the degree of fulfilment, the target appears to have been achieved, when in reality, and especially in Nicaragua, many governments prioritise projects established in urban areas, thus limiting the possibility of improving the living conditions of the populations that need it most.

New technologies should be promoted at the national level to reduce energy costs, taking into account the change in the energy matrix set out in the National Human Development Plan to 2017. Alternative energy sources could be used to significantly reduce the cost of this service that is so necessary to drinking water supply and sanitation services. In addition, Drinking Water and Sanitation Committees at the rural level need to be mentored and strengthened - through transfer of knowledge - as they are the guarantors of providing and managing community water supply and sanitation services at the community level. Standards for basic sanitation technologies must be drawn up, and indicators linked to the role of women, men, boys and girls in access to water and sanitation need to be established as well.

# 2.2 Target B.- Improve by (x%) the sustainable use and development of water resources in all countries.

This is one of the more complex targets. In order for it to be effectively fulfilled, it would be necessary to consider Element 2 - which talks about restoring and maintaining ecosystems to provide water-related services under a water basin approach. Furthermore, incorporating a fourth element is suggested, which would focus on strengthening the existing regulatory framework to contribute to the implementation of the other elements within this target. It is necessary to develop a baseline to monitor the quantity and quality of water sources by establishing control mechanisms that keep track of the volumes of water withdrawn and discharged at the national level

It is considered appropriate to harmonise the roles and responsibilities of the institutions setting the norms for, regulating and managing water resources at the national level and to incorporate an indicator to improve productivity in rain-fed agriculture, extensive grazing, forest management and household water use. This should consider efficient use of rainwater for productive purposes (crops, livestock, forestry) since only water from natural sources is used, or what is known as: "management of water in the soil".

# **2.3** Target C.- All countries strengthen equitable, participatory and accountable water governance.

National political will for water governance is needed to achieve the fulfilment of this target, as well as the political will at the international level to establish economic funding mechanisms. Furthermore, gender equality must be ensured at the level of public policy, implementation of plans with an integrated water basin approach and the strengthening of governance processes which not only prioritise the participation of right holders, but that of duty bearers as well

During the session, participants identified the need to include an indicator to measure the number of investments in improving existing infrastructure and systems. Regarding indicators 4 and 5 of this target's first element, participants considered that these should be incorporated into the disaster risk management target. As for results 6 and 7, the recommendation is that they should be transferred to the target related to wastewater and pollutant management.

# 2.4 Target D.- Reduce untreated wastewater by (x%), reduce nutrient pollution by (y%), and increase wastewater reused by (z%)

For this target, the recommendation is to include a fourth element to help improve the levels of communication in various sectors regarding the advantages of reusing wastewater for agriculture. In addition, it is necessary to develop efficient, on-going and continuous plans to monitor wastewater at the national level, ensuring compliance with the existing national legal framework. This would be supported by research studies conducted in universities and research centres.

Organic production must be promoted through technological innovation and by implementing good agro-ecological practices. An efficient urban planning system must be approved and applied in the main population centres nationwide.

For this target, it would be advisable to disaggregate indicator 1 by urban and rural populations, and for indicator 2 to include industrial wastewater flows collected by sewerage systems managed by government entities. Element 4 needs to also consider solids and sludge from these wastewater treatment systems as discharge residue.

# **2.5** Target E.- Reduce mortality by (x%) and economic loss by (y%) from natural and human-induced water-related disasters

To achieve this target, it is necessary to build the capacity of government institutions in order to establish mechanisms to evaluate Early Warning Systems (EWS) at the national level and identify communities with high levels of risk. It is also necessary to provide training spaces to these sectors on early warning systems created from locally available/lowcost materials, disaster risk reduction and community-level contingency plans.

It is necessary to articulate all structures within the National Disaster Prevention, Mitigation and Relief System:

 Departmental Commissions (CODEPRED), Municipal Commissions (COMUPRED), Local Commissions (COLOPRED), and Neighbourhood and District Commissions (COBAPRED). Local authorities need to include this topic within their budget priorities.

# 3 Key implications and implementation means identified to achieve 2015-2030 targets and goal

#### 3.1 Target A.- Achieve universal access to safe drinking water, sanitation and hygiene.

#### 3.1.1 Capacity

Government institutions have qualified technical personnel in this regard. There are a series of experiences which should be systematised and implemented to achieve this target, both for urban and for rural areas.

#### 3.1.2 Costs

In March of this year, the Nicaraguan National Assembly in full authorised the Presidency to contract an U\$ 81 million loan with the European Investment Bank (EIB) to develop a programme to improve and expand drinking water and sanitation systems in 19 cities across the country. While it is true that this is a very good initiative, funding mechanisms must be established that are able to become selfsustainable.

#### 3.1.3 Institutions

There is a wide range of government institutions at the national level created to ensure the sustainable development of drinking water supply and sanitation systems, among which are: the Nicaraguan Institute of Aqueducts and Sewage Systems (INAA); the Nicaraguan Aqueducts and Sewers Company (ENACAL), a State-owned operator of these services mainly in urban areas; the Emergency Social Investment Fund (new FISE), which has become the strong arm of the State in the fight to improve water supply and sanitation systems in rural areas; and in particular, the community-based organisational structures called Drinking Water and Sanitation Committees

(CAPS), which are present in more than 5,000 communities nationwide and have managed to work in areas where government institutions have a limited capacity to fulfil the human right to these basic services.

#### 3.1.4 Infrastructure

The current national drinking water supply infrastructure is obsolete. The sanitation system is one of the components which so far, in terms of investment, has not been a priority for the State of Nicaragua, despite the fact that it poses a risk to the quality of water sources intended for human consumption. Only the city of Managua has this type of system which is completely non-existent in rural areas in the country.

#### 3.1.5 Monitoring

The recommendation is to establish monitoring and tracking mechanisms as envisaged in national legal instruments.

#### 3.1.6 Public Policy

Nicaragua is one of the stronger countries in terms of public policy. It has a General National Waters Law, a General Drinking Water and Sewage Services Law, and a Law that supports the work conducted by Drinking Water and Sanitation Committees. Despite this great strength, however, the State of Nicaragua has lacked the political will to fully implement these and other legislation associated with ensuring the human right of all Nicaraguans to water.

# **3.2** Target B.- Improve by (x%) the sustainable use and development of water resources in all countries.

#### 3.2.1 Capacity

The State of Nicaragua does not have a detailed baseline showing water resource supply and demand at the national level. It lacks a monitoring system that allows knowing the volumes of water withdrawn from various bodies of water for various uses. During the consultation, however, all participants indicated that if the Government had the political will to carry out concrete actions which contributed to IWRM at the national level, it would have the technical capacity - through its institutions - to develop it more effectively.

#### 3.2.2 Costs

Nicaragua has the potential to establish a self-sustainable funding mechanism for water resource management by drafting, approving and implementing a Special Levy (Canon) Act for water use and discharge contemplated in the General National Waters Law. This law would generate a National Water Fund, which would make it possible to contribute to financing programmes related to the Policy, the National Water Resource Plan, hydrological plans for basins and their restoration.

Furthermore, the establishment of water-based environmental services has already been mandated in Nicaragua, which will help to ensure appropriate management of the water recharge areas, aquifers and microsystems most at risk. This is a system that must be implemented through mechanisms for charging and paying for these services. The latter serves as an incentive for the conservation, protection and rational use of water and of other natural resources in water basins.

#### 3.2.3 Institutions

The institution authorised to fulfil this target is the National Water Authority (ANA), which must coordinate the National Water Resource Commission which in turn is made up of government institutions related to the topic. It is necessary to strengthen this Commission and ensure greater presence of ANA technical teams in territories. Inter-agency and multisector efforts are required to secure this target, ensuring that commitments and responsibilities included in legal instruments are consistent with municipal, regional and national development plans.

As established by national legislation, Basin Agencies and Basin, Sub-basin and Micro-basin Committees need to be created to contribute to effective water basin planning, defining the priorities for using and exploiting all natural resources contained in these areas.

#### 3.2.4 Infrastructure

Several actors in Nicaragua have carried out programmes and projects aimed at sustainable soil management with an emphasis on integrated water resource management. It is necessary that these systematised experiences are used to carry out actions that contribute to improving the productivity of rain-fed agriculture, establishing agroforestry systems, forest management and implementing rainwater collection methods for agricultural, livestock and forestry purposes.

#### 3.2.5 Monitoring

Nicaragua has an ANA-managed monitoring system for water resource issues: the National Water Rights Registry (RNDA); however, this instrument lacks effective implementation. This will allow knowing the number and magnitude of water use concessions, authorisations, licenses and allocations, as well as of wastewater discharge permits, in addition to information regarding infraestruture and facilities to use and exploit national, surface, subsurface, or waste waters. Closed, protection and reserve areas will be registered, as well as the lists of users in Irrigation Districts and Units, determinations of national water body classifications and the classification of flood areas. Institutional territorialisation needs to be strengthened to establish better monitoring at the local level.

# **3.3** Target C.- All countries strengthen equitable, participatory and accountable water governance.

#### 3.3.1 Capacity

There are laws and regulations at the national level that support the active participation of the various sectors and actors in the field of water resources. However, the level of openness of local, regional and national authorities has significantly limited this action. Basin, sub-basin and microbasin committees have yet to be formed, and decisionmaking spaces do not take into account either the opinions or the assessments of the most sensitive sectors of society.

#### 3.3.2 Costs

The actors that have most influenced this topic at the country level have been civil society organisations, which have strengthened the capacity of community organisations to become agents of change, and to use advocacy processes aimed at key targets at the territorial level to request the opening of spaces for dialogue and consultation. It is established, at the governmental level, that the National Water Fund should cover these types of actions in order to ensure integrated water resource management with a view to basins. Achieving this will require active inter-agency, multi-sector involvement with a generational approach.

#### 3.3.3 Institutions

The National Water Resource Council is the body responsible for coordinating this process at the country level through the National Water Authority, Basin Agencies and, in particular, Municipal Governments, as the highest authorities at the local level.

#### 3.3.4 Infrastructure

It is necessary to comply with provisions of the Access to Public Information Law by setting up special offices in all government institutions and entities, since this is the first step towards ensuring effective participation by all sectors. An uninformed person is unable to propose alternatives or join in dialogue and monitoring processes for integrated water resource and basin management.

## **3.4** Target D.- Reduce untreated wastewater by (x%), reduce nutrient pollution by (y%), and increase wastewater reused by (z%)

#### 3.4.1 Capacity

There is a great institutional weakness in terms of this target, as there is no continuous and on-going monitoring of the wastewater volumes produced by the various sectors, mainly industry and agroindustry. Moreover, the information that Government institutions have comes from water analyses conducted by the companies themselves. Public entities do not have analyses done in independent laboratories to determine the load of pollutants deposited mainly in natural water sources.

Nicaragua has several research centres within universities considered national and regional benchmark institutions with which agreements could be established to ensure the credibility of the data being stored in databases used by regulatory institutions.

#### 3.4.2 Costs

These actions are very high-cost; however, if the Levy (Canon) Act is applied and therefore the National Water Fund, it would be possible to in some way ensure the implementation of some programmes that contribute to reducing point and diffuse pollution sources. It would also be possible to draw up practical guides or manuals for implementing systems to reuse these wastewaters for certain specific uses.

#### 3.4.3 Institutions

As the General National Waters Law establishes, the regulatory institution in this field is the Ministry of the Environment and Natural Resources (MARENA). Support from the now Ministry of Agriculture and Livestock (MAG) and the Nicaraguan Agricultural Technology Institute (INTA) is very important in order to systematise and mentor processes to establish good environmental practices, taking into account experiences in the country in this regard.

#### 3.4.4 Infrastructure

This component should be borne by the private sector. Given that public institutions give their consent for wastewater discharges, the private sector is obliged to fully comply with specific environmental technical standards in the country, especially with what is indicated in Decree 33-95.

#### 3.4.5 Monitoring

Technical instruments at the national level establish clear mechanisms for tracking and monitoring this component. They just need to be effectively applied by the relevant authorities in this field.

# **3.5** Target E.- Reduce mortality by (x%) and economic loss by (y%) from natural and human-induced water-related disasters

#### 3.5.1 Capacity

There is extensive experience in the subject here, since a series of extreme situations due to Nicaragua's geographical location have forced it to strengthen institutional capacity for before, during and after the occurrence of extreme hydrometeorological events.

#### 3.5.2 Costs

The investment is very high; however, an appeal can be made to international efforts that allocate financial resources to carry out concrete mitigation and disaster relief action. Some civil society organisations in Nicaragua working in humanitarian issues and disaster risk management have set up early warning systems built from elements and resources from the community itself. This is a very low-cost yet very effective action to reduce risk levels in vulnerable populations.

#### 3.5.3 Institutions

Government institutions responsible for this issue are the Nicaraguan Institute for Territorial Studies (INETER) and the National Disaster Prevention, Mitigation and Relief System (SINAPRED). In the case of INETER, it is recommended to strengthen its technical capacity to analyse climate change simulation models at the local level, so as to have timely information for decision-making. In addition, there are organisational structures at the local level which possess a good level of response to emergency situations.

#### 3.5.4 Infrastructure

It is necessary to establish Early Warning Systems (EWS) at the community level and to work with families so that they, with support from local authorities, are the ones that set up and monitor these systems, systematising, through certain formats, the behaviour of some specific variables associated with extreme hydro-meteorological events.

#### 3.5.5 Monitoring

A Risk Management Information System exists managed by SINAPRED, and there is a methodology at the national level to measure risk management indicators at the municipal level which was developed in 2005 based on the methodology used by the Inter-American Development Bank (IDB). This system of indicators reflects the institutional level of organisation, capacity for development and actions to reduce disaster risk levels.

### 4 Concluding comments at the country level

Overall, this second national consultation in Nicaragua served to show the country's potential - with regard to legal regulations underpinning aspects incorporated into elements, targets and global goal - to ensure sustainable water. However, it is recognised that the biggest weakness at the national level is the lack of effective enforcement of these provisions. There needs to be a political discourse that is coherent with the provisions in these instruments, and especially in municipal, regional and

national development plans. This is the only way to achieve true integrated water resource and basin management and, therefore, optimal management of drinking water supply and sanitation services for all sectors at all levels.

If this requirement were met, we would be able to have a funding mechanism at the national level that would ensure self-sustainable IWRM by applying the Levy (Canon) Act established by the General National Waters Law for exploitation and discharge, and by establishing compensation or stimulus systems through the Payment for Environmental Services Law. This instrument would strengthen Government efforts in protecting, conserving and managing the country's key water recharge areas.

### Annex 1: List of Participants

Organisation		
Acción Agua		
AFODENIC		
Agua para la Vida en Nicaragua		
Asamblea Nacional / Comisión de Medio Ambiente y los Recursos Naturales		
Asociación de Educación y Comunicación La Cuculmeca		
Asociación Nicaragüense de Acuicultores (ANDA)		
Asociación Nicaragüense de Ingenieros Sanitarios y Ambientales (ANISA)		
Autoridad Nacional del Agua (ANA)		
BIOMAR Cotholic Poliof Services (CPS)		
Catholic Relief Services (CRS) Centro Agronómico Tropical de Investigación y Enseñanza (CATIE)		
Centro Alexander von Humboldt		
Centro Para la Investigación en Recursos Acuáticos de Nicaragua (CIRA-UNAN)		
Consultores Independientes		
DECENIO		
El Centro de Investigaciones y Estudios de la Salud (CIES-UNAN)		
Empresa Nicaragüense de Electricidad (ENEL)		
Entro Jurídico Ambiental y Social		
Escuela Internacional de Agricultura y Ganadería		
Farallón Aquaculture S.A		
FESIC		
Fundación para la Conservación y el Desarrollo del Suroeste de Nicaragua		
Gasolinera UNO Ticomo		
Instituto Nicaragüense de Capacitación y Estudios Juveniles (INCEJU)		
tituto Nicaragüense de Estudios Territoriales (INETER)		
ISAREC		
Joven Siglo XXI		
Jóvenes Ambientalistas		
KEPA-Nicaragua		
Mesa Nacional de Gestión de Riesgos (MNGR)		
Ministerio del Ambiente y los Recursos Naturales (MARENA)		
NICAMBIENTAL		
Observatorio de la Sostenibilidad - Red Latinoamericana SUSWATCH		
Programa de las Naciones Unidas para el Desarrollo		
Red de Comités de Agua Potable y Saneamiento /REDCAPS)		
Red Nacional de Organizaciones de Cuencas (RENOC)		
SEAJOY		
TORRECILLAS		
U.S. Agency for International Development (USAID)		
Universidad Nacional Agraria (UNA)		

Organisation

Universidad Nacional Autónoma de Nicaragua (UNAN-Managua)

### Annex 2: Media Organisations

Organisation
Canal 2
Canal 6
Canal 12
Canal 14
Radio 800 AM
Radio Corporación
Radio El Pensamiento
Radio La Primerísima
Radio Maranatha
Radio Mundial
Radio Ondas de Luz
Radio Restauración
Diario La Prensa
El Nuevo Diario
Revista Nicaragua CEPAD
Noticiero Enfoque

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