

## NICARAGUA - EVALUATION OF THE NATIONAL WATER ACTION PLAN CASE #12

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This case analyses why a ‘text book’ planning exercise in Nicaragua has failed to have any real impact.

### **Abstract**

The management of water resources in Nicaragua has traditionally been very fragmented among a number of State institutions, with mandates often unclear and overlapping. The Nicaragua Environmental Action Plan (1994) identified the urgent need to rectify the weaknesses in the management of water resources through the preparation of an Action Plan which would address the challenges of integrated water management within the existing institutional, legislative, economic, political and technical framework of the country.

The immediate principal objectives of the project were to develop proposals for an overall sector strategy based on a clear policy and an acceptable and feasible institutional, legal and regulatory framework, and outline a programme for short- and longer-term actions in relation to water resources. The achievement of these objectives to be through the establishment of increased capacity for decision-making and management of water resources within participating institutions, enabling them to take the initiatives that they themselves perceived for future development. The project commenced in October 1995 with the initial objective of finalizing the Plan within 15 months. An international consultant company was contracted to provide guidance to the project, while the involved institutions actively participated in the execution of the project activities and in the preparation of project reports.

Problems with programme slippage occurred frequently due, in part, to local misconceptions of the modality of the project execution and difficulties experienced in communication with key decision-makers. At the end of 29 months, the project issued its final reports, consisting of 13 volumes dealing with, *inter alia*, policy, legislation, institutional aspects, economic instruments, technical issues and the Action Plan recommendations themselves. Subsequent follow-up to these and the suggested actions to be taken has been minimal.

### **Main tools used**

- A1.1 Preparation of a National Water Resources Policy
- A2.1 Water Rights
- A2.2 Legislation for water quality
- B1.3 National apex bodies
- B2.2 Training to build capacity in water professionals
- C1.2 Water Resource Assessment
- C7.1 Pricing of water and water services
- C7.2 Pollution and environmental charges
- C8.1 Information management systems
- C8.2 Sharing data for IWRM

### **Importance of the case for IWRM**

The case describes the initiation of a process of change management within existing Nicaraguan state institutions involved in diverse and fragmented management of water resources. The Water Action Plan was devised as the start of a move towards integrated water management through the development of policies, legislation, institutional adjustments and technical solutions to identified problems. Despite the production of the expected project outputs, the actions identified in the Plan have not been taken up and there has been little follow-up to the recommendations.

### **Lessons learned**

- Greater emphasis on project preparation required;
- Need for better mechanisms to achieve local “ownership” and move away from the concept of a donor driven project;

- Choice of project anchorage important with respect to local institutional perceptions and the need for “neutrality”;
- Recipient governments and institutions should adopt a more pro-active approach and commit themselves to implementation of long-term measures;
- Establishment of effective follow-up mechanisms needed to ensure that momentum is not lost after project closure;
- Donors should adopt a more flexible approach to project execution that recognizes the dynamics of the local situation

## **MAIN TEXT**

### **1 The Problem**

#### **Water Resource Situation**

On a National scale, Nicaragua possesses an abundance of water resources but their distribution is uneven both in time and space, which brings about periods of restricted availability, particularly in the dry Central and Pacific regions. The high population density of these areas exacerbates the problems associated with this natural phenomenon, with approximately 60% of the population concentrated in the Pacific coastal strip. This situation leads to demand for water exceeding supply.

East of the Central Region the resources are abundant. However, significant seasonal variation in groundwater levels in the mountainous regions result in limited access during the dry season, necessitating recourse to surface water supplies, also limited during this season. The high population density in the coastal belt results in a correspondingly high level of industrial activity which impacts negatively on the quality of receiving waters. A significant percentage of Nicaraguan industry is antiquated and inefficient. Industrial processes use excessive amounts of water with little treatment to the vast quantities of liquid and solid wastes produced. Excessive use of agro-chemicals, (particularly during the 80’s), has contributed to the high levels of groundwater and surface water pollution.

The unchecked agricultural encroachment into the formerly densely wooded areas of the Central and Atlantic regions has resulted in serious deforestation. This encroachment, together with the implementation of subsequent inappropriate agricultural practices, has led to soil erosion and land degradation bringing with it the consequent negative impacts on river flows and water quality.

#### **Management Aspects**

Water resources management in Nicaragua has traditionally been fragmented among a number of state bodies, which often have unclear and overlapping mandates. With a view to rationalizing this situation, the National Water Resources Commission was created in 1968, but this organization remained moribund until its reactivation in the 90’s. The Commission has wide ranging powers, among them being the coordination of water resources planning, research and resource use management.

The Commission is comprised of 6 State institutions, whose Ministers are members of the Commission. These are:

MARENA	Ministry of Environment and Natural Resources
MAG	Ministry of Agriculture and Ranching
INAA	Nicaraguan Institute for Water Supply and Sanitation
INE	Nicaraguan Institute for Energy
INETER	Nicaraguan Institute for Territorial Studies
MINSALUD	Ministry of Health

## Legal Aspects

Nicaragua does not have a Water Law as such, management of water resources being effected through existing sectorally-based legal instruments. These instruments, brought into force at different times and with different objectives, do not provide the necessary coherent legislation for integrated water resources management.

The resource is primarily controlled from an institutional perspective, by means of the instruments contained in the different establishing and operational laws of the relevant public bodies. To this end, the instruments contained in existing legislation play an important role in the judicial system due to the absence of a Water Law.

## 2 **Actions taken**

Without doubt, one of the most significant initiatives that the Government of Nicaragua has taken towards the introduction of sustainable criteria in the use and management of natural resources has been that of the Environmental Action Plan of 1994. This Plan had as its central theme, the formulation of a policy and associated strategies for the rational development and management of water resources.

As a response to the previously identified problems, the Nicaraguan and Danish Governments entered into an agreement for the implementation of the Nicaraguan Water Action Plan, the overall objective of which was:

*“To contribute to the efficient management and sustainable development of water resources in their diverse uses, reflecting the national objectives of social and economic development together with the protection of the environment”*

The Project commenced in October of 1995 and had an expected duration of 15 months. The project was conceived as one of training and transfer of technology, within which, and by means of short inputs of international experts, the Action Plan would be developed by staff of national institutions aided by local consultants. In this way it was hoped to strengthen the concept of local project “ownership”.

The original programme of activities consisted of 5 phases:

1. General Project Planning;
2. Logistic Phase (acquisition of goods and contracting of staff);
3. Analysis at National level;
4. Analysis at Local level;
5. Action Plan formulation

The objectives of the Action Plan were as follows:

- To promote agreement among the relevant government agencies and other stakeholders on the main requirements for effective integrated management of water resources
- To develop proposals for an overall sector strategy based on a clear policy and an acceptable and feasible institutional, legal and regulatory framework.
- To establish effective consultative mechanisms involving all stakeholders.
- To develop a clear perspective and decision-making capacity in key sector institutions, enabling them to take direct control of further developments towards integrated water resources management
- To increase the capacity for water resources management of core staff within the institutions having responsibilities in the sector.
- To outline a programme for short and long-term actions in relation to water resources management

The concept of an Action Plan versus a Master Plan was a key element in the definition of the methodology of the project execution. As understood in the project, Master Plan provides a framework for water resources development, while an Action Plan contains specific actions to be taken to enable the elements of Master Plans to be effectively and sustainably executed.

A Danish Consortium of consultants was contracted to carry out the Nicaraguan Water Action Plan. The team consisted of experts in the technical aspects of water resources, its institutions, water legislation, sociology and economics, backed up by local experts in similar fields. In addition to this core team, and in accordance with the inter-government agreement between Nicaragua and Denmark, technical staff from national state institutions involved in water resource aspects was to augment this core working team. The total cost of the Water Action Plan financed by Danida, (technical assistance, operating costs, etc.) was in the order of US\$1.3 million, with additional local contribution in kind amounting to the equivalent of US\$140,000.

The project approach was based on the principles of integrated management of water resources in such a manner that a wide range of management tools were to be considered. In addition to basic technical solutions, other institutional, legal, sociological and economic components were identified as necessary to provide a sustainable solution to the problems encountered.

After 29 months, (a period which incorporated two extensions recommended by a Review Mission), some 13 documents in total were presented, covering the following topics:

- A proposal for a National Water Resources Policy;
- A Draft Water Law;
- A Rapid Water Resources Assessment at national level;
- Case studies of Rapid Water Resources Assessment at local level;
- Institutional Assessment;
- Recommendations for the use of economic instruments;
- An information system for water resources;
- Sociological studies at local level;
- An Action Plan (A list of actions to be taken in the short, medium and long term).

A key recommendation emerging from the project was the establishment of an independent and neutral water authority, recognising the continuing contribution of the National Water Resources Commission, and the need to harmonize and put into operation its functions. The Draft Water Law addressed the need for establishing a system of water rights and licences for water use, to be administered by the water authority.

### **3 Outcomes**

#### **Fluid institutional and legal context**

The Action Plan was conceived to be developed in a stable political and institutional environment. This was not the situation prevailing at the commencement of the project. After nearly 10 years of civil war, with only 5 years of an interim government, with national elections planned for the following year, the situation was very fluid.

In parallel, but independently, a new institutional framework for the State institutions was underway, which would establish, among others, the responsibilities for the management of water resources. Since one of the objectives of the Water Action Plan was the same definition of responsibilities for integrated water resources management, it was clear that there would be differences of opinion over their institutional location. This often led to conflicts between the recommendations of the Action Plan project and that of the State reform project.

Legal issues were also very controversial. The Environment Law was being developed concurrently and contained aspects of water resources management at a more general level. In addition, as previously noted, the whole institutional environment was very uncertain due to the influence of the State reform project.

The project envisaged a greater involvement of local personnel than expatriate, the latter contributing their wide experience and providing guidance in the relative fields. This concept was theoretically sound, but given the novelty of the project and its concepts, it would have

been better to assume a greater expatriate participation at project commencement, gradually reducing this level as the project progressed in accordance with the transfer of technology achieved.

## Failures and achievements

Judging the success of the project from the point of view of subsequent follow-up, it could be said that not all objectives were fully achieved. The principal reason for this can be attributed to the lack of the concept of local "ownership" of the project, which, at the same time, resulted in a lack of political will to implement the necessary changes. The fact that there has been little or no implementation of the Action Plan recommendations indicates the lack of ownership and driving force of the project at the national level.

It would be incorrect to say that the project totally failed in its objectives as the 13 documents identified previously were produced, in the main, by local personnel. This in itself is a clear indication of the existing local potential that should be exploited. In addition, the active participation of local staff from state institutions, particularly during the discussion of the Water Law, was a significant achievement for the project, given the weak participation in the initial phases.

In terms of the effective participation of local personnel, it could be said that this was the best that could be expected, given the circumstances surrounding the interest in the project at the political level. Local staff was assigned more on the basis of their availability than on their appropriateness for the tasks in hand. Only during the Consolidation Phase, (which started in July 1997, for 10 months), was a significantly active and positive response forthcoming. This may be attributed to the interest in the contents of the Water Law.

At the outset of the project it was assumed that the objectives would be reached within 15 months, but the difficulty in securing access to high-level government officers during the run-up to the elections in 1996, (which was not foreseen in the planning of the project), led to a decision to extend the contract by 4 months, within the same objective framework. Nevertheless, the project failed to establish the necessary coordination dynamics to enable sensible discussion of non-technical issues, (such as institutions, legislation and economics). Therefore a Review Mission in February 1997 recommended the implementation of a Consolidation Phase to establish better coordination among the project and the involved institutions.

Nonetheless, given the nature of the project, the programme and the donor's expectations could be considered as too ambitious. Projects of this type must recognise the need to overcome the strong resistance to change. These processes need time to come to fruition and it can often take years to achieve a suitable environment. In this respect, the project was too rigid in its concept.

## Obstacles

As noted previously, the project addressed the subject of changes in the existing situation at the time. Change management processes are not free of pitfalls and obstacles in their execution. Institutional adjustments and strengthening within the water resources sector faced a series of problems, among which the following were notable:

- Indecision and lack of political will to press on with institutional changes
- Budget and financial restrictions on the part of the institutions involved in water management processes.
- A weak institutional structure.
- Lack of definition of functions and responsibilities of involved organisations.
- Institutional coordination almost non-existent
- Scarcity of technological resources
- A notable lack of training of human resources in the sector
- Insufficient monitoring and control of water quality
- A notable lack of basic knowledge on the availability and condition of the resource

## Conclusions and Recommendations

The donor failed to follow-up the Action Plan after its conclusion, and this was a critical period in the establishment of the fundamental actions and in the maintenance of the interest of the participants. Since this follow-up was not forthcoming, staff returned to their institutions and the momentum of the project was lost.

The project objectives, (as originally conceived by the donor), were far too ambitious. To assume to make such fundamental changes, with corresponding institutional and legislative elements, showed a far too simplistic approach, failing to sufficiently take into account the prevailing situation of the country. A project of this type requires more time to establish the confidence of the institutions, (and its personnel), in order to demonstrate that the changes proposed would be of benefit to all and that there would be no winners or losers.

To carry out the recommendations of the Action Plan, Nicaragua must look to how to strengthen the institutional environment so there are fewer cases of institutional jealousy and a greater political will to carry out the proposed actions.

The project lacked a suitably strong anchor. The National Water Resources Commission was too remote to address necessary project issues and little or no delegation of decision-making precluded timely and adequate responses.

Should the project be repeated in Nicaragua, the following changes would be needed:

- A better project preparation, attempting to establish a more adequate resource base with the associated local recognition of the need for change;
- The selection of a National Project manager should consider the need for political influence rather than technical know-how. This person is the key to access at higher decision-making levels of government and institutions. He or she should be dynamic and influential;
- The establishment of a permanent secretariat to the National Water Resources Commission, empowered to monitor the project and follow-up on recommendations;
- The possibility of identifying and executing key projects prior to project termination would aid project credibility and contribute to providing incentives for participating institutions;
- Establish the neutrality of the project through its physical location. It should not be located within the confines of a participating institution.

## 4 Lessons Learned

- Projects that address mechanisms of institutional change should be implemented only when the political will to make necessary changes has been clearly established. This should be reflected in the recognition by the recipient that problems exist and for the need to make appropriate changes.
- There should be a much longer preparatory phase than that normally allocated for investment projects. Instead of sending an identification mission for some 15 days, a start-up project of perhaps one year should be contemplated, during which, the elements needed for personnel training and political lobbying could be established.
- Project of this nature require dynamism to flourish. Institutional anchorage should be within the confines of a neutral or non-user of water, ideally formed from the nucleus of any future water authority.
- Where this body does not yet exist, consideration should be given to the alternative of temporally channelling efforts through the strongest, (technically and influentially), existing institution, with a view to future transference to the water authority.
- Project physical location is very important. It is important that inter-institutional projects of this type are, and are seen to be, neutral and outside the influence, (explicit or implicit), of any participating institution,
- Donors should be prepared to follow up on projects of this nature and recognise the need for continued, (albeit reduced), external assistance;
- Recipient governments and institutions should move away from passive participation and begin to adopt a pro-active approach to institutional and legislative reform and be prepared to make substantial long-term commitments, rather than on a project-to-project basis;
- Donors should be prepared to adjust the modality of such change-oriented projects to reflect the need for flexibility and the recognition of the dynamics of the local situation.

## **5      *Contacts and References***

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