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ACHIEVEMENTS AND CHALLENGES FOR THE IWRM PROCESS OF IMPLEMENTATION IN BRAZIL

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Water Governance in Brazil

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I Introduction

After eight years of the National Water Resources Act - Law 9.433, the “Water Law”, coming into force in 1977, through which the integrated water resources management principles became part of Brazilian law, some achievements could be identified and many challenges and even opportunities are still available for cooperation among nations and communities. This Law establishes the National Water Resources Policy and the National Water Resources Management System.

The National Water Resources Policy is based on the following principles:

- water is a public good
- water is a limited natural resource and has economic value
- in situations of scarcity, priority goes to water use for human consumption and the watering of animals
- water resources management must always allow the multiple use of water
- the water basin is the territorial unit for the implementation of the National Water Resources Policy and for actions of the National Water Resources Management System
- water resources management shall be decentralized and shall involve the participation of government, users and communities.

These principles show the need for a decentralized organization that can assure equal access to water resources, and can negotiate with users and communities at the basin level. This represents a new approach and process for all involved. In the recent past, water resources management - especially at the federal level - was characterized by centralized and unilateral decision-making. The notion that social groups and individuals might effectively participate in management decisions, and assume partial responsibility for implementing national policy was unknown.

The National Water Resources Policy defines as its instruments:

- water resources plans
- classification of water bodies according to predominant uses
- granting of water use rights
- charging for water use
- compensation to municipalities
- information system on water resources

This report aims to present some perceptions and insights about the implementation of the principles of the integrated water resources management in Brazil for identification of achievements and challenges and prospective approach about opportunities to strengthening cooperation through water management.

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II Hydrological characteristics of Brazil

Brazil has a surface area of some 8.5 million km². Its rivers have an average total flow rate of 183,000 m³/s, which, for the current estimated population of around 174 million inhabitants, represents an average *per capita* availability of around 33,000 m³/year.

Brazil contains the Amazon River Basin, which accounts for 16% of all river flow on earth. When adding the rivers that enter from neighboring countries, the average availability reaches 272,000 m³/s.

The nation's groundwater reservoirs are estimated at around 112,000 km³, which, like the surface water, are unequally distributed around the country. However, availability varies widely by region. Water is abundant in the north, but there is notable scarcity in the northeastern semi-arid region.

Sanitation services have wildly different rates of availability. Water supply services reach 90% of the urban population, but only 18% of the population in the rural areas. Wastewater collection covers 56% of the urban population and 3% of the people in rural zones. Only 20% of the wastewater is treated, which in reality results in around 90% of untreated wastewater being discharged directly into water bodies

This situation, with a lot of water resources problems requiring action at the federal, state and municipal level, was an important reason for the creation of a national organization with the authority to find integrated solutions for such pressing problems as:

- Deterioration of water quality in the major urban centers caused by unplanned urban expansion and the low level of wastewater treatment, and,
- Lack of reliable water supply in the northeastern semi-arid zone, which regularly experiences periods of natural scarcity, thereby causing serious economic and social problems to the country.

III The establishment of the National Water Agency - ANA

The National Water Agency of Brazil - ANA was established in June 2000. The establishment of ANA was mandated by the National Water Resources Policy. The creation of ANA took only 15 months, a relatively short development period for such a complex process.

ANA was designed to fit into the political and institutional context of Brazil's water sector, a sector that has been evolving progressively from 1934, when the nation's Water Code was established as part of the Federal Constitution. The concept of Brazil's "water domain" was substantially modified in subsequent constitutions; in the last one, that of 1988, the water domain at the federal level was defined to include:

- lakes, rivers and streams that are located in more than one State, that serve as borders with other countries, or that extend to or come from a foreign territory
- ground or surface water courses and rainwater that does not belong to the Union (i.e. the federal system) belongs to the States. Thus, for instance, all rivers and all groundwater that is entirely contained within a state's boundaries belong to that State.

The Federal Constitution gives the Union authority to legislate on water and to administer the national water resources management system. It also provides the concession criteria for user rights.

The creation of the National Water Agency (ANA) marks the beginning of a new cycle of agencies addressing the regulation of public goods. ANA has administrative and financial autonomy, linked to the Ministry of Environment, run by a five-member Board of Directors, one of whom is the President-Director and is responsible for implementing the instruments of the National Water Resources Policy and coordinating the National Water Resources Management System.

IV Achievements for the IWRM implementation in Brazil

Some relevant outputs and steps towards the IWRM's implementation should be celebrated in Brazil.

1. Strengthening the civil society participation

Transparency in the electoral process and the increase of civil society representation in the National Water Resources Council are very important achievements.

After 2003, the Federal Administration increased the numbers of seats for civil society representatives in the National Water Resources Council – CNRH (Decree 4613, March, 2003) and it has implemented a transparent electoral process to elect the members of the civil society and its users. There are two NGO's elected representatives among a total of fifty-seven members of the CNRH.

The efforts to reach a balance between representation of the Federal Administration, States, Users and Civil Society Organization, itself can also be considered an achievement. Nowadays the presence of Federal Administration corresponds to more than fifty per cent of all seats of the CNRH.

The current status of CNRH composition could be taken as a step forward to a balanced composition. It should be considered as a new democratic practice of management sharing as provided by the National Water Resources Policy Act.

2. Financial support for the participation of civil society

The National Water Resources Act set up the principle of co-governance for water management, with the participation of the civil society and users together with public entities. Moving from the command and control management towards the shared governance has been an achievement.

Another important achievement for the civil society was the financial support to the participation of representatives of NGOs, technical societies and academia in the National Water Resources Council-CNRH meetings.

For the first time since the CNRH started its activities, these sectors of civil society are getting financial support to be present in the Plenary and Technical Committees' meeting, where the implementation of National Water Policy and the Integrated Water Resources Management-IWRM might be consolidated. The decision taken by the National Water Resources Council to support civil society participation has been replicated by other collective bodies of the National System for Water Resources Management, like the Paraíba do Sul River Basin Committee that is submitting to its Plenary the rules of financial support for the participation of NGOs and other vulnerable sectors of civil society in its Plenary and the Technical Committees meetings of this collective body.

Supporting NGOs and other vulnerable segments of civil society is an effective action to implement the principle of equity which is one of basic principles for sustainable development as stated in the 1992 United Nations Rio Declaration and it contributes to the effectiveness of the implementation of the IWRM principles.

3. Access to information on water quality

On May 4th,2005, the Decree 5.449 came into force. This Decree provides rules, administrative mechanisms and information tools to allow social control on water quality for human uses. It is mainly related to consumer rights.

From the publication of rule of law until its effective application, some time is required for the empowerment of civil society and other groups of interest dealing with the subject. Nevertheless, to have this legal framework is an achievement for civil society and each individual. It is a real gender issue which directly reflects on the human quality of life and on the right for all to the access to water in adequate quality and quantity.

V Strengthening the implementation of the national water policy and the national water resources management system.

1. Transparency in the decision-making process

The transparency of practices in the National Water Resources Management System is a clear achievement for the Democracy and enhancing the implementation of the National Water Policy Act and the IWRM principles.

The meetings are open to the public and all may voice opinions and demands. It is a very transparent and participatory procedure, in accordance of National Council Rules of Procedures. In these meetings, the public policies are built up and effective implementation of a participatory decision-making process is practiced.

This is a key moment for the IWRM implementation and though it is true, that is not the only place. The implementation must go through the National Water Management System, from the River Basin Committee up to the CNRH. However, it is not an easy task, since it must face up many difficulties to settle disputes, to deal with diverse interests of stockholders and to equilibrate the unbalanced situations mostly related to representation and legitimacy of interest. Therefore, those are the main reasons for the existence of these collective bodies which form the National Water Resources System.

The National Water Resources Council web site has all information related to the Plenary and the Technical Committee, including minutes of meetings, resolutions and other relevant information and data. In addition, other virtual sites, like the National Water Agency and River Basin Committees sites have strongly contributed for the implementation of the IWRM.

2. Participatory decision-making process as iwrn key principle

It has been a challenge to go from the public command/control to decentralized and participatory management of water.

As matter of fact, there is a space in the command and control procedures in respect to authorization issued by the National Water Agency at federal level and state organs dealing with water uses and related to administrative acts for inspections, surveillance and control.

However, those activities are submitted to co-governance practices by Governments, users and civil society. For the civil society, two key roles are played: to act in the surveillance and monitoring of all activities concerned – social control and the second and newest as the stakeholder in the implementation of the National Water Policy and the National Water Management System.

3. Water basin committees, state water resources councils and municipalities

From 1997 up to now, almost all of the 26 States and the Federal District of Brazil have established their legal framework on water management in accordance with the National Water Policy. This is an effective achievement for the implementation of the IWRM.

Recalling that Brazil is a very recently renewed Democracy, this picture shows that under this new regime, water is considered an important issue in all States' agendas . The states have jurisdiction on watercourses and ground water repositories within their limits and have participation in applying the principles of IWRM in the watercourses under federal jurisdiction which cross their territories.

At water basin level, municipalities in the boundaries of the basin have jurisdiction on the issues related to human settlements, land use management and human needs, such as sanitation, water supply and waste management. Forestation is under shared responsibility of Union, State and Municipalities. The municipalities have been participating in the water management at watershed and State Water Council levels.

4. National water resources plan

The Government of Brazil, by Presidential Decree, has instituted the Brazilian Decade of Water, as part of the World 'Water for Life' Decade, established by the United Nations in 2005. The aim of this initiative is to call attention to the importance of water, with a view to contributing toward attainment of the Millennium Development Goals, and consolidating the National Water Resources Policy, as it relates to themes such as health, children, women, reducing poverty, and combating hunger.

Furthermore, in order to fulfill the Millennium Development Goals, as they relate to the field of water resources, it will be necessary to implement management instruments that promote integrated water resources management through mechanisms for fostering sustainable development. One of the commitments assumed by countries that pledged to institute plans for attainment of goals, set at the Johannesburg World Summit on Sustainable Development, was preparation, by 2005, of integrated water resources management and efficient water-use plans.

Such international commitments must now be incorporated into the Brazilian legal framework, in view of the fact that Water Resources Plans are the first instrument of the National Water Resources Policy, instituted by Law 9.433/1997.

In the light of the legal responsibility and the challenges raised by the commitments assumed, the National Water Resources Plan (PNRH) was drawn up and approved by the National Water Resources Council, on January 30, 2006.

The question for governance, reflected by the participative and decentralized nature of the process of drafting of the PNRH, made it possible to establish, for the 2020 time horizon, guidelines, programs, and goals, with ample social and political consensus, by means of a comprehensive process of public discussion, with provision of consistent technical premises as inputs for deliberations and the establishment of proposals.

The nationwide scope of the PNRH and its imminently strategic nature must be underscored because, besides providing inputs upon which to base actions of the National Water Resources Management System in its capacity as an instrument of the National Water Resources Policy, it provides support for thematic orientation in line with the Multi-Year Action Plan (PPA), and seeks to promote coordination and convergence with actions of government on themes of significant interest for water resources management. Thus, aside from their focus on the area of water resources, programs of the PNRH were conceived from a cross-cutting perspective, in articulation with other public policies and programs of the various areas of government, with a view to promoting support for integrated water resources management.

The general aim of the National Water Resources Plan is: *to establish a national pact for the definition of guidelines and public policies targeted at improving the supply of water, in quality and quantity, and managing demands, considering water as an essential element for implementation of sector specific policies, from a sustainable-development and social-inclusion standpoint.*

5. Economic valuation of water and application of the user/payer principle

As provided by the National Water Policy, water is a public good with economic valuation (Act 9433/97). Socio-environmental justice can be implemented through the application of this principle, which is a corollary of the polluter payer principle: user / payer principle.

Paying for water use is a key principle for sustainable water management. This instrument of water management has been applied to the Paraíba do Sul River Basin, since 2003, and priority was given to the great users such as water supply and sanitation utilities, energy utilities and other users. That is an achievement for the IWRM.

The economic valuation of water imposed relevant and profitable changes in water management for many users such as industry. Re-use and better practices in water management are current subjects on the agenda of all users.

6. Capacity building: programme and networks

A new political environment to empower civil society and to promote its capacity to deal with IWRM has been detected in Brazil.

The revival of cooperation between the Minister of Environment and Minister of Education reaffirms the joint efforts to build capacity which reflects on the whole educational policy applied all over the Country. Social inclusion and new opportunities for income generation are in the background of this Programme.

Some key events like the National Environment Conference held in November/ December 2003 should be registered as an achievement to the implementation of IWRM.

It was an actual exercise of the democratic participatory mechanism. Indigenous people, water users, landless people, people living with water stress and others living on the water like Amazonians, and other stockholders were in plenary to practice dialogue, cooperation and to find common grounds to deal with environment issues and water related issues.

Inspired by this social and political environment, the representative of the Brazilian Forum of NGOs and Social Movements-FBOMS in the CNRH proposed to the CNRH to set up a Technical Committee dealing with Education, Capacity Building, Mobilization and Information. It was approved and this Technical Committee is working since the end of 2004.

International and regional networks dealing with education and capacity building, like CAPnet and LAWETnet, gather expert groups and promote synergies, common understanding, and the exchange of experiences like peer review procedures between their members and stockholders. Both CAPnet and LAWETnet might act as important partners to raise awareness in respect to IWRM implementation and to establish regional pacts in respect to IWRM mostly in the transboundary watercourses.

7. Gender mainstreaming in the IWRM

The Brazilian Government has been very committed to mainstream gender principle in the water management policy. Since March,2003, the Special Secretary on Women's Rights is a member of the CNRH.

At the international level, from the II World Water Forum/Conference in The Hague, the Brazilian delegation has been supporting the gender perspective in the IWRM. They have voiced for gender

mainstreaming in the Bonn Conference on Water for Poor, 2001, and in the III World Water Forum / Conference, 2003.

The gender perspective is a real key recommendation to dealing with IWRM since any paradigm change must go through gender involvement and commitment. Women as house holders and mothers play an extremely important role in this respect. However, it is not at private locus but at the public realm as well.

VI Challenges for the IWRM implementation in BRAZIL

After a quite significant list of outputs as relevant achievements, the challenges to face up to the effective implementation of the IWRM must be shown.

1. Balancing sustainable development goals and fiscal constraints

This is a crucial matter for developing countries, particularly those from Latin America. The international financing community and related organizations must look forward to a sustainable pact with balance between economic stability, social inclusion, poverty mitigation and income generation mostly to give opportunities to people who are looking for sustainable living conditions and dignity.

Balance between the socio and environmental priorities and the economic and fiscal constraints is crucial. It must be creative and take advantage of the environmental services provided by Nature, creating new jobs and economic activities.

2. Regional integration through waters

While water may causes struggles, it must actually be a vehicle for People's dialogue, cooperation, alliance and integration and for Peace.

One should recall that the word *rival* comes from the Latin word *rival* – *rivalis*, which is directly related to users of water at riverside.

Brazil shares seventy four (74) transboundary waters. This is a challenge for Brazilians and our Neighbors. International legal frameworks are in force, like the Treaty of Brasilia, (1978) which deals with the Amazonian Water Basin. It is a reference of international law about the application of the shared drainage basin principle as recommended by Helsinki Rules (ILA 1966). Historically, Brazil consolidated its boundaries through agreements with neighbors. Now, it is time to expand this cooperation beyond the frontiers and to gather the Countries and People living in the Latin America Region.

3. Building capacity and foster empowerment

Capacity Building Program should be tailored, respecting socio-economic diversity.

Certainly, the IWRM principles must be applied. However, in general, communities do not have any idea or feeling about the integrated water resources management. This assertive includes stakeholders in the decision-making process, government officials, users and civil society.

Dealing with paradigm changes, the target should be promoting the empowerment of weaker communities which does not mean poor people, and include indigenous people, “quilombolas” in the water management. The great challenge is to practice the participatory decision-making process and to redefine the role of state and civil society in respect to water management.

4. Setting up the culture of water security

Cultural changes to deal with water security, risk management related to water particularly the vulnerabilities from the climate changes, and environment misuses such as deforestation and water pollution, should be incorporated in the People's mind and soul since the earliest moment of human life.

Culture of water security embodies principles of prevention, mitigation and compensation in respect to the critical events, guarantee of water supply and water solidarity.

Social, environmental, economic, and political risks are in almost all of the cases related to water issues, such as lack or abundance of water, droughts and floods, besides climate changes which impose environmental risks at global level. Alert systems and emergency and preparedness should be part of the strategies to implement the IWRM.

5. Water and Sanitation

One of the critical challenges facing Brazil is to adopt a regulatory framework for water supply and sanitation. The current Federal Constitution set up provisions for the Union in respect to General Rules for water supply and sanitation. Implementation of the IWRM deserves key rules related to these more relevant water uses, mostly in a very urbanized Country, like Brazil.

Furthermore, market forces and multilateral financing entities, like The World Bank, directly involved in the State reforms, recommend more presence of the market forces in the infrastructure sector, including the water supply and sanitation sector.

A General Rule related to public and private partnership came into force last December, 30, 2004 (Act 11.079/2004). It has to be regulated by Decree of Federal Administration.

Considering failure cases experienced by neighboring countries about the privatization of water and sanitation utilities, the socio, political and economic environment is very critical to the public and private partnership in the water sectors.

6. Decade of water, Millennium Goals and Johannesburg implementation targets

The United Nations declared 2005-2015 the International Decade of Water. Following this, Brazil declared Brazilian Decade of Water, starting in 2005.

Pro-active environment to achieve Millennium Development Goals-MDG and Johannesburg Implementation Targets-JIT should be taken forward from Vision to Action. This is a challenge!

Poverty mitigation goes with hunger alleviation, food and nutrition security which embody water in adequate quality and quantity, sanitation, shelter and access to adequate education
To deal with this, IWRM must have those cross cutting issues in the agenda.

The first step is to have in the IWRM process the stakeholders who are not involved in the decision process on water matters in the developing countries, particularly financing sectors, insurers among others. Additionally, professionals of Law, like Judges, Attorneys, Lawyers and Legal Consultants, should be brought into the process. They deserve to build capacity about the IWRM.

Water has been a key issue for Mankind. However, it is not perceived as such. It is a key issue to develop a culture of water security as support for socio-economic and political sustainable development. It goes beyond the environmental concerns. It is directly related to political and social security.

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