IWRM Action Hub

CASE STUDY

# Brazil: Progress towards the integration of water resources management

The water resources of Brazil are subjected to pollution and mismanagement. Furthermore, it is susceptible to urban flooding and landslides. To address these issues, action was taken to increase funding to the National Water Agency. In terms of IWRM, the key lesson learnt is the need for strong and well-funded executive agencies capable of putting laws into practice.

**Background**

The water resources of Brazil are generally plentiful but unevenly distributed. Water is essential to the economy for hydropower generation, agriculture (both rain-fed and irrigated), domestic and industrial consumption, and river navigation, and one of two main issues is to reconcile the demands of these sectors. Reconciliation is vital both for the nation's economy and the well-being of Brazilian society, and has been achieved by consensus.

The second issue arises from the fact that Brazil’s population is concentrated in rapidly-growing cities, often without adequate infra-structure for water supply, sanitary disposal, and protection against urban flooding and land-slides on steep slopes where there are irregular settlements. Pollution from both domestic and industrial waste, and from sediment and solid waste, is a serious problem in metropolitan areas. The approach has been to establish river basin committees, but there can be some conflict of interest between committees where rivers flow through several States.

It was necessary to set up Legislation was passed to provide mechanisms for funding a National Water Agency - ANA which has worked well since its inception. However a serious problem at present is that government-imposed restrictions on public spending limit access to funds legally earmarked for water resources development and for training the professionals needed for IWRM.

**Actions taken**

With the reforms in the 1990s, a Secretariat for Water Resources (Secretaria de Recursos Hídricos: SRH) was created in 1995. Working together with Congress, it was possible to draw up a law which contained the principal technical elements of what had been discussed, although some points of conflict remained. In 1997, the law on water resources was finally approved after lengthy negotiation amongst the sectors involved. Having approved the legislation, the next step was to was to put it into practice. Within government, a second reform was being drawn up, leading to the creation of agencies for the control of sector development, once the ministries had defined their policies. This

agency of control was the National Water Agency ANA (Agência Nacional de Águas), created on 17 July 2000. The main responsibilities of ANA include: granting concessions for water use in Federal rivers; flood and drought prevention; accounting for water use in Federal rivers; stimulating creation of committees for drainage basin management. As regards hydropower, the National Agency for Electrical Energy (Agência Nacional de Energia Elétrica –ANEEL) works together with ANA to ensure that reserves defined for energy production are maintained. With the creation of ANA, the law concerning compensation for flooded land was changed to provide funds for the sector, with ANA receiving 6.75% of the value of energy generated. Science and Technology applied to water resources received 3.67% of the compensation funds.

These are considerable sums for a sector which, before the passing of legislation, had been funded by budget oddments. It can be said that the construction of the first phase (here termed Phase I) of institutional development of Brazil’s water resources is now concluded. In it, legal elements have been established at Federal level for management, and institutions for governance have been set up. At State level, almost all States have passed legislation, and some have set up agencies for development, although at present these are rather few in number.

**Outcomes**

The Federal Constitution of 1988 defines a river in the Federal domain as any river which flows through more than one State or which possesses an international reach. But the law 9.433 defines the entire drainage basin as the appropriate planning unit. This has generated different interpretations in the case of basins in which the river’s headwaters are within a State, but reaches downstream lie within the Federal responsibility. In practice, ANA has drawn up agreements with the States to set up a basin committee and State management for each sub-basin of a Federal river that lies wholly within one State.

**Lessons Learned**

The main lesson learned from Brazilian experience is that the changes to water industry structure, and progress towards IWRM, have been achieved through non-partisan discussions between professionals, able to express views freely within a democracy that is approaching maturity.

Brazil's process towards IWRM evolved within a technical framework, without political pressures in the forums for discussion. The ABRH was an important forum because it is an association of professionals who adopted important ethical principles.

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Instituto de Pesquisas Hidraulicas Brazil - IPH

**Year**
2013

**Country**
Brazil

**Region**
Americas

**Keywords**
Stakeholder engagement Water Pollution urban flooding Landslides

**Thematic Tagging**
Climate Gender Private Sector Transboundary Urban Water services Youth Ecosystems/Nature-based solutions
Language English

**Supporting Materials**
GWP South America
Brazil: Progress towards the integration of water resources management

**Related IWRM Tools**
National Apex Bodies
Basin Organisations
Pollution Charges
The Rights of Rivers

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