THIRD INTERNATIONAL WORKSHOP ON REGIONAL APPROACHES TO RESERVOIR DEVELOPMENT AND MANAGEMENT IN THE LA PLATA RIVER BASIN:

"Informed Decision Processes for Sustainable Development of Reservoirs"

Conclusions and Recommendations of the III Workshop

General Conclusion

The participants of the Third International Workshop on Regional Approaches to Reservoir Development and Management in the La Plata River Basin, as a result from the papers, recommendations and discussions held during the Plenary, Seminar and Special Sessions and in the Short Training Activities on Water Quality Monitoring and Ecological Modeling of Lakes and Reservoirs, agree on the need of renewing efforts towards the achievement of an integrated management and sustainable development of water resources at the watershed level, the present paradigms concerning water management.

They recognize the need to promote the sustainable development of the enormous potential offered by those resources all over the Basin, appropriately incorporating the technical, economical, social and environmental considerations which guarantee the acknowledgement of the economic, social and environmental value of water.

They agreed on that reservoirs, due to their capacity of addressing simultaneously various water uses, constitute a valid option[1], amongst other possible ones to be compared in equal conditions within the set of structural and non structural measures available to society, to achieve said sustainable development, in accordance with the legal arrangements existing in each jurisdiction. While recognizing that said projects, particularly those of larger dimensions, imply a significant intervention in the natural and socioeconomic system, comprising the whole basin. Therefore, they consider a must to ensure that the decision making process of these kind of undertakings, should attend the criteria of participatory planning and adaptive management, in the context of an integrated management of water resources with an ecosystem approach at watershed level within each of the countries in the La Plata River Basin.

To this end the participants consider as appropriate to take in account the strategic priorities and guidelines recommended in the Final Report[2] of the World Commission on Dams, to which purpose said recommendations should be analyzed more in depth and be determined the best ways for their effective implementation in the reservoirs presently in operation or under planning.

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[1] The representatives of two NGOs, namely Ms Ana Petra Roge (Eco La Paz) and Mr Roberto A Ríos, (Asociación Ecologista "Yvy Marané'y") did not agree with this statement in what refers to dams as a valid option for development of water resources.

[2] Dams and Environment: A New Framework for Decision-Making, World Commission on Dams, November 2000.

Within said general framework, in order to make viable the implementation of informed and participated decision processes for reservoir development and management in the La Plata River basin, and in relation with the specific themes of this III Workshop, they recommend:

Specific Recommendations on the III International Workshop Focus Topic**s:**

a) Data, Information and Understanding

Sustainability of Monitoring Networks

Availability of data (hydro meteorological, physical-chemical and biological) in digital format, good quality and adequate quantity is essential for the realization of any study or project related to water resources use and management. This cannot be achieved without the commitment of the Governments of the countries to perform a continuous monitoring by means of the agencies involved in the collection, storage, processing and dissemination of information.
The functioning (implementation, operation and maintenance) of monitoring networks demand the availability of sufficient funding. Charging a price to water users (including discharge of effluents as a water use) has proved to be an effective tool. A recommended measure is to establish, through proper legal arrangements, that such economic resources should be allotted to the agencies in charge of water resources monitoring and management; part of it should be reinvested in the basin where they come from and the remainder be used in those regions where monitoring and management is needed but no funds are available for such purpose.

Given the leading role of biological communities in the metabolism of ecosystems, as descriptors which conspicuously reflect the environmental impacts of the interventions made, qualitative and quantitative aspects of biodiversity, community structure and bioindicators, among others, should be monitored.

Access to Information

Monitoring information of water and environmental variables collected and validated by public organizations should be accessible, free and of public domain (only reproduction costs should be charged); as regards organizations undergoing concession or privatization processes, necessary care should be taken to ensure that the information collected by organizations once said processes are completed, continues to be of public domain.

It is recommended that RIGA elaborates a Data Book of Reservoirs in the La Plata River Basin as a regional contribution to ILEC World Data Book

Network Auditing

It is a commendable practice to carry out audits of the existing networks, as a means to guarantee the quality of the data.

Standardization of sampling methodologies

It is fundamental to standardize methodologies for quantitative and qualitative monitoring. Elaboration or adaptation of common methodological guidelines at the regional level is an indispensable activity.

Monitoring networks and watershed management

Proper planning, implementation and operation of monitoring networks is imperative to achieve an adequate management of watersheds.

Small reservoirs

Extrapolation of data from monitoring networks of large extension to address problems in watershed of small dimensions less than 500 sq km, may lead to inadequate results. Establishment of monitoring plans (quantity and quality) in small watershed would contribute to cope with this situation. Users of said projects should collaborate according to their possibilities, as a means to minimize costs associated to monitoring activities.

Diffused loads

Due to the scarce monitoring of diffused loads contribution existing in the region, either urban or rural, it is recommended to increase the collection of this kind of information as a way to contribute to a representative evaluation and control of the various processes which take place within the watershed. To this end, the study of bed sediments in reservoirs may provide relevant information.

Final Considerations

It is recommended that a Working Group be created in the framework of RIGA, to develop an Action Plan to carry out the recommendations issued in this meeting.
It is urged that these recommendations be formally communicated to the Governments of the country members of the La Plata River Basin asking them to devote their best efforts to secure their accomplishment.

b) Technologies for Prediction and Assessment of Impacts

It is recommended the use of technological tools for the systematic assessment of environmental consequences, during the planning, construction and operation of reservoirs, in the context of the watershed, as a task prior to decision making, accompanying the process of evaluation of alternatives leading to execution and definition of operating practices.

The results obtained through the application of said tools should be made available to the public with the endorsement of the scientific community in order to provide objective analysis tools as an approximation to reality within the corresponding limitations arising from the database and assumptions adopted.

As a step previous to the implementation of technological tools it should be paid attention to the aspects of cooperation, training, transference and adoption of technology, equipment, capacity of interpreting results and funding of the technical organizations of the region which are in charge of developing the utilization of said tools.

It is proposed that within the institutional framework of the La Plata River Basin, the technical component be integrated in a more effective way with a view to develop an effective interchange of information about problems, experiences and solutions.

There exists in the region an adequate technological level for the development and implementation of prediction and management tools for the problems related to reservoir development. It is envisaged as highly useful the conformation of regional centers for the adaptation and validation of said tools making use of the existing institutions.

As a further step in technology development, efforts should be devoted to the development of management tools (holistic models) for decision making incorporating social and economic variables that take in account the new paradigms on integrated watershed management.

It is recommended the integration of the use of these technological tools, to elaborate diagnosis of reservoirs in operation and its use in the environmental assessment of new projects.

It is considered a need the definition and complementation of water quality and sediment guideline criteria at watershed level, in the light of acquired experiences and on the basis of the technical requirements of the developed assessment tools. Diagnostic situations leading to the planning of mitigation and/or remediation measures at the regional level in the medium term should be evaluated within said framework.

The integration at watershed level of basic information for the implementation and optimization of models addressing hidrosedimentological and contaminant transport aspects, is considered a must.

Mechanisms of international coordination to allow the development of contingency plans at watershed level available in the short term, should be established.

c) Informed Decision Processes – Public Participation
Organizations in charge of planning, building, managing and/or dismantling reservoirs should made available and disseminate the information to the public.

Organizations responsible for water resources management, in coordination with other competent sectors of the public administration, should implement participation processes including all involved stakeholders.

The countries of the region should adopt regulatory frameworks to promote and ensure the effective participation of all sectors.

The participation process should start with the initial project idea and accompany it along all its stages.