

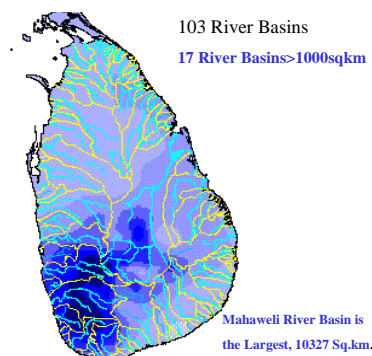
TRANSFORMATION TOWARDS MAHAWELI RIVER BASIN MANAGEMENT AUTHORITY AND SOUTH ASIA NETWORK OF RIVER BASIN ORGANIZATIONS (SASNET - RBO)

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INTRODUCTION

SRI LANKA - OVERVIEW

Sri Lanka is a tropical island situated in the Indian Ocean with a total land area of 65,525 km². Its rainfall feeds a radial network of rivers that begin in the highlands in the Central part. Some 103 distinct rivers cover about 59,217 Sq. km. of their basins. Large percentage of water resources in these basins are mainly used for irrigated agriculture and hydropower generation. Current population is estimated to be around 18 million and it is projected to be stabilized at 23 million by 2025.



HISTORICAL PERSPECTIVE OF WATER RESOURCE MANAGEMENT

Sri Lanka is a country with a long history of hydraulic civilization, which had been developed along the main river basins of the country. Early settlers began developing their network of irrigation systems in the main river basins around 5th Century B.C. Some of the major basins developed by them were; Malwathu, Mahaweli, Deduru, Kelani, Kalu, Walawe, Kirindi, Menik and Kumbukkan. Many of these rivers originate in the central highlands and flow towards plateaus in other parts of the country providing opportunities for irrigated agriculture. This geographical situation helped the early settlers to conserve the watersheds in the highlands and to develop plateaus in agriculture by storing water in a network of reservoirs.

This system of optimum use of water is well expressed in the popular dictum by the King Parakramabahu (AD 1153) that **"not a single drop of water received from the rain should be allowed to escape into the sea without being utilized for human benefit"**.

SECTORAL APPROACHES

During the early part of 20th Century, a programme for restoration of ancient irrigation works was launched. People were resettled in these areas with a view to developing agriculture basically to achieve the food security in the country. The responsibility of water resource management was fragmented and was entrusted to different government agencies.

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These institutions were established with single-purpose mandates, which could be seen as parts of highly fragmented sectoral approach with less attention on integrated water resource management.

MULTI-PURPOSE AREA BASED DEVELOPMENT

Having realized the limitations of sectoral approaches to development, the government of Sri Lanka introduced an area based, multipurpose Mahaweli Development Programme with an integrated approach to development. The Mahaweli Development Master Plan which was prepared for stepwise implementation over a period of 30 years, had been revised under the Accelerated Mahaweli Programme in 1977. The implementation period was reduced to 6 years. Major components of the programme are; providing irrigation facilities for dry zone agriculture, generation of hydro-electric power, settlement of displaced and landless families by providing required physical and social infrastructure for human habitation, providing marketing facilities for agricultural produce and providing facilities for sports, cultural and religious purposes.

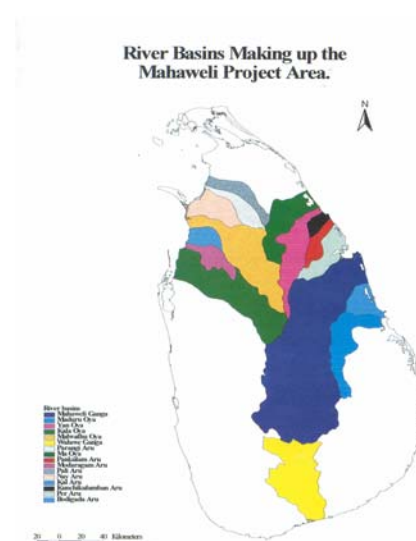
NOW MAHAWELI AUTHORITY OF SRI LANKA MOVING TOWARDS RIVER BASIN MANAGEMENT TO ADDRESS

- Inter-Sectoral Allocation of water resources among diverse users/uses.
- Management of Multi-Purpose Water Infrastructure.
- Watershed / Water Quality/ Riverine Management.
- Reliability of Water Availability to meet all demands.
- Demand Management through conservation measures.
- Impacts on Environmental and Health concerns.
- Institutional Development - Public - Private Sector Partnership, awareness creation and education.

RIVER BASIN PLANNING AND MANAGEMENT EXPERIENCES IN SRI LANKA

This concept was implemented in different time periods in Sri Lanka, since 1947, eg.

- GALOYA Valley Development Project.
(Eastern Province of Sri Lanka).
- WALAWE River Valley Development Project.
(South Eastern Part of Sri Lanka)
- KELANI Ganga - Hydro Power, Flood Control and Domestic Water Supply.
- GIN GANGA } Flood Control
- Nilwala Ganga } (Southern Part of the Island)
- Kirindi Oya - Irrigation/Fisheries & Wild Life Habitats
- WRS - Western River Sector Project (Five Basin Study)
- Kelani, Kalu, Atthanagalu Oya, Malwathu Oya, Bolgoda Lake (Current Study/WRS-Manik, Malwathu, Kirindi and Galoya)
- IWMI - Reference Basin Study (Walawe & Kirindi Oya)



ESTABLISHMENT OF "SASNET - RBO" IN SRI LANKA

The Global Water Partnership - South Asian Technical Advisory Committee (GWP - SASTAC) at the very inception, identified member countries in the Region to take the lead in certain activities each country was good at, by virtue of their interest in and experience. Accordingly, the following focal points were agreed to:

To promote the idea South Asia Regional Workshop on Sustainable Management of River Basins was held in, July 2000.

Bangladesh	- Flood Management
India	- Agriculture Water Use
Nepal	- Hydro Power
Pakistan	- Ground Water
Sri Lanka	- River Basin Management



One of the major out come of the workshop was the Ministry of Mahaweli Development will be the driver agency for this project, which will develop a network of RBOs in South Asia. SASTAC has a keen interest in promoting such networks which will eventually develop their own dynamism to be self sustaining and mutually useful.

National Water Partnerships have identified the collaborating institutions in the respective countries to promote this effort.

RECOMMENDATIONS OF THE REGIONAL WORKSHOP ON SUSTAINABLE MANAGEMENT OF RIVER BASINS IN JULY, 2000 ARE:

- The River Basin is the logical bio-physical unit for the management of natural resources; hence the RBO is an appropriate institution to translate the concepts of IWRM to action.
- There is no single model for RBM that can be applied in all circumstances; a range of models may be developed to suit the circumstances.
- The concept of 'subsidiarity' should be applied in RB Management. All decisions relating to the RB should be taken at the lowest appropriate level.
- River Basins should be analyzed through interdisciplinary approaches.
- The relationship between the RBO and the Political and Administrative Units should be recognized, as RBO cannot work in isolation.
- The entire drainage basin of a river should be taken into account in developing plans.
- RBM should take cognizance of dry season (minimum) flows and environmental flows.
- The value and 'real' cost of water should be recognized.
- RBO should promote emergence of a body of 'water professionals' capable of rising above individual disciplines and managing water through integrated approaches.
- New management styles should emerge: eg. Government to function as Regulator/Facilitator, promote Public - Private sector partnerships.
- The potential of using waterways for non-consumptive uses such as inland fisheries and Eco-tourism should be explored.

INTERNATIONAL CONFERENCE ON SUSTAINABLE DEVELOPMENT OF WATER RESOURCES - NOVEMBER, 2000, NEW DELHI

The outcome was presented to above Workshop and it was very well accepted and comments were given in there deliberations.

They are:

- There is need for creation of river basin organizations (RBOs). States should be encouraged to form river basin organizations and the affected people should be associated with these boards. In course of time, the water users associations could also be integrated with river basin organizations.
- Five phases of action might be taken for development of river basin organizations. These comprise of legal and regulatory framework, state level and inter-state organizations and implementation and monitoring plan.
- There is no single model for RBO which can be applied in all types of situations. Instead, a range of models may be developed to suit specific situations.
- To start with, in some cases, instead of the entire basin, it may be advisable to look into a compact part as a pilot area, so that the integration of social, technical and environmental aspects can become feasible.
- Projects pertaining to inter basin transfer of water should be entrusted to river basin organizations.

PARTNERS OF SASNET-RBO

- Bangladesh
- India
- Nepal
- Pakistan
- Sri Lanka



ROLE OF MAHAWELI IN SASNET-RBO

MAHAWELI AUTHORITY WILL

- Lead and manage the Network with the participation of Partners from all South Asian Countries.
- Link with other GWP Regions, Networks and Centres of Excellence

WHAT THE NETWORK WILL DO IN FUTURE

- Identify Partners in South Asia
- Workshops in Individual Countries to get their views and Commitments
- Identify Pilot River Basins
- Develop a Core group of Professionals in South Asia on River Basin Management
- Link with INBO and other Networks
- Twinning Arrangements
- Exchange of Information and Experiences/Best Practices
- Develop Different RBO Models

OUT COME OF THE SASNET - RBO REGIONAL PLANNING MEETING - KANDY, SRI LANKA, 10th - 12th January 2002

PROPOSED WORK PLAN, 2003 - 2005 (3 years)

OBJECTIVES

- To increase the understanding of river-basin management, including possible organizational design, management tools and processes leading to their definition and implementation.
- To support processes critical to effective river-basin management where there is felt need for improvement of river-basin organization.
- To support building of national and regional linkages between existing, incipient or embryo river-basin organizations.

EXPECTED RESULTS

The above objectives will be addressed through a programme which is designed to deliver three major results :

- A state-of-the-art synthesis of available knowledge and experience of river-basin management within the region and else where.
- A service of professional support for providing advice and assistance regarding exchange of experience and expertise from within and outside the region.
- A framework for networking water documentation systems.

ACTIVITIES

1 Identification of key members of the network

To ensure the effectiveness and geographic coverage of the subsequent activities, initial sets of members from each of the participating countries will be identified. These will be selected with a view to achieving the following characteristics in the network as a whole :

- strong motivation and activity towards the goals and objectives of the network ;
- representation of a variety of interests and disciplines ;
- representation of a variety of water-related organisations.

2 Identification of river basins

Criteria for inclusion of basins in the initial set will include :

- There should be some existing or intended development of integrated organisation of water management in the basin.
- There should be adequate basic data on the existing resources and uses of water in the basin.
- The basin should not be too large or too complex, and preferably should lie wholly within one political unit.
- Local water management organisations should be willing to participate in the programme, and to share existing data resources.
- There should be local capacity and motivation to accomplish the activities and outputs envisaged in this programme.
- Desirably, trans-national rivers should not be included in the initial set.

In each designated basin, at least one local professional person will be designated as principal contact with the regional network, to ensure the continuance of activities and achievement of objectives under this programme.

3 Monitoring

Within each of the designated basins, a monitoring programme will be established. This programme will combine :

- traditional technical monitoring of water flows, abstractions, and water quality, with
- institutional monitoring of events occurring in the system that reflect the state of water management in the basin. Such events may include pollution incidents, water shortages, major disputes or complaints, environmental damages, and any other similar relevant happenings. Monitoring will refer to the events themselves and the responses of the organisational system to these events.

4 Linkages and Partnerships

For each designated basin, partnerships will be established with various organisations, which may be governmental agencies, private sector businesses, local government authorities, non-governmental organisations, or semi-governmental entities such as universities. The purposes of such partnerships may include

- improving communication and raising awareness of the need and purposes of river-basin management;

- improving the flows of information about future needs and issues;
- improving the range and quality of data resources;
- improving the level of attention to special issues such as neglected groups or neglected environmental concerns; and other such matters.

5 Communication

The regional network will work to obtain maximum public awareness of the issues that it is addressing, as well as improved understanding within the relevant professional communities concerning the issues and options for their solutions.

For these purposes, the network will develop four main kinds of information :

- Regular *annual* reports on each of the designated basins, and national annual reports for each of the participating countries, describing the state of water management, the issues that are arising, and the organisational and institutional changes that are occurring to address these issues.
- An advisory service, based on the people involved in the designated study basins, which will provide information, advice and support, mainly to people in other basins who wish to improve their organisational base for water management.
- Documentation of key management aspects, including a review of best management practices, and a framework for water documentation systems.
- Opportunities for learning and training targeted towards specific groups.

Two actions are envisaged for ensuring adequate internal communication within the network:

- A network *website/electronic newsletter* will be established;
- There will be annual network workshops at which the state of progress will be considered. These will not be large events: a scale of about thirty participants is envisaged.

6. Continuity

The necessary reorientation of water management towards a river-basin system will require much longer than the present plan period of 3 1/2 years. Networking on these issues, and many of the above activities, should be expected to continue. However, the time-frame of 3 1/2 years is appropriate for establishing the network. Before the end of that period, a general review will be made of the network's modes of operation, and the success or otherwise of each component activity and output, with a view to renewing and continuing its operation, incorporating any changes that experience may have shown to be desirable.

Outputs

The project will produce three kinds of outputs: regular annual reports; special publications; and advisory services. Reports and publications will be available widely to users as well as managers of water.

Reports

- There will be *annual* reports on each study basin, based on the monitoring activity.

- There will be *annual* reports by each country. These will synthesize the findings of the study basins, and will also record other relevant happenings in basins other than those which are part of the monitoring programme.
- There will be a final report at the end of the project. Since it is envisaged that the network will continue indefinitely, beyond the end of this initial three-year project, the final report will also be the occasion for review of the structure and ways of functioning of the network as a whole.

Publications

In the first three years, the network will produce two principal publications:

- a framework for water documentation within a river-basin;
- guidelines for river-basin management.

Services

The network will aim to provide three principal services, available both to its members and to interested water managers or water users.

- Training modules will be developed, which will be oriented principally towards three groups : staff in water management agencies who are coming newly into the field of integrated water management; representatives of non-governmental organizations, especially those with focus on environment or poverty-alleviation aspects; representatives of major water-user organizations, in the private or public sectors.

In the three years of this project, *two* such training modules will be produced.

- An advisory service will be developed, which will make available a set of experienced professional of various disciplines, whose knowledge and experience can be made available to organizations requiring them. The mode of operation of this service will be developed in accordance with actual demands, which are not known initially. The service will be expected to focus primarily on assisting the extension of integrated river-basin management to new basins.
- A *website and electronic newsletter* will provide current information about the network's activities and its monitoring programme. This will be oriented primarily towards keeping network members informed.

Proposed time schedule

Activity ▶ Month ▼	1	2	3	4	5	6
1	x	x				
2	x	x		x		
3		x		x		
4				x		
5				x		
6			x	x		
7			x	x		
8			x	x		
9			x	x	x	
10			x	x	x	
11			x	x	x	
12			x	x	x	
13			x	x	x	
14			x	x	x	
15			x	x	x	
16			x	x	x	
17			x	x	x AMR1	
18			x	x	x ACR1	
19			x		x NW1	
20			x		x	
21			x		x WS	
22			x		x TO1	
23			x		x	
24			x		x	
25			x		x	
26			x		x	
27			x		x	
28			x		x FWD	
29			x		x AMR2	
30			x		x ACR2	
31			x		x NW2	
32			x		x	
33			x		x TO2	
34			x		x	
35			x		x G	
36			x		x	x
38			x		x	x
39			x		x NW3	x
40			x		x	x
41			x		x AMR3	x
42			x		x ACR3	x

Key :

Activity 1:	Identifying key participants
Activity 2:	Identifying initial basins
Activity 3:	Monitoring
Activity 4:	Building linkages
Activity 5:	Communications
Activity 6:	Preparing for continuation
x	On-going activity
AMR	Annual monitoring reports on each study basin
ACR	Annual country reports
TO	Training Opportunities
FWD	Framework for water documentation
G	Guidelines on key aspects of river-basin management
WS	Website establishment
NW	Network workshops
FR	Final report on the project