

Proceeding of the Final Stakeholder Workshop “Exploring Options for Sustainable Water Management in the Malaprabha River Basin’

Introduction

A one day workshop was jointly organised by the Centre for Interdisciplinary Studies in Environment and Development (CISED) and the Norwegian Institute of Water Research (NIVA) at Belgaum on 5th November 2008 on ‘Exploring Options for Sustainable Water Management in the Malaprabha River Basin’. The workshop objective was to disseminate our synthesis of the issues related to land and water management and bring together shared understanding of the issues, concerns and assist in developing long term strategies at the various stakeholder levels.

Project Brief

CISED and NIVA came together 2 years ago to jointly collaborate on a research project to scientifically understand and document various dimensions of the reported water shortages in the sub-basin by exploring factors such as natural resource endowments in the basin various aspects of economic efficiency in resource management and equity through cross-sectoral analysis of institutional arrangements. The project examined these aspects and existing constraints in socio-economic, institutional and policy domains in a feasibility study to introduce quasi-market arrangements like Payment for Watershed Services (PWS) to address efficient and equitable use of scarce resources in the Malaprabha River Basin (MRB). Given the context of the semi arid/ arid climatic nature of the study area and the socio economic threads linked to the targeted watershed service, it was considered imperative to hold a stakeholder workshop to evaluate the project findings.

Participation of stakeholders

The workshop brought together a mix of representatives from policy formulating institutions at the regional level, non government organizations which work at institutional strengthening and existing institutions at the basin level and water/ land user groups at the consumer level. The participants also included members of the academic community who have research interests in the MRB. A list of participants and the organizations they represented are given in Annexure 1.2

Event report

(Refer Annexure 1.1) The stakeholder workshop was conducted in two sessions. Sri S.T. Patil, Ex-Director, Water and Land Management Institute and Dr A.M. Prakash,, Drought Monitoring Cell chaired the events in the forenoon session. The forenoon session comprised of presentations on the research findings and invited presentations. Presentations on research findings shared the project findings on

institutional feasibility in the command and catchment areas and the resource allocation scenarios for better water management in the catchment area of the Malaprabha River Basin. Of the two invited presentations made, Ms Elizabeth Heller, a visiting post graduation student from Mc Gill University presented the methodology adopted to arrive at the land use cover map for the MRB while Dr B.H. Purandara from the National Institute of Hydrology elaborated on the ground water resource condition in the upper catchment of the MRB. All presentations made in English were translated to Kannada to benefit the majority of the participants.

The post lunch session was dedicated to elicit stakeholders' feedback on the project findings. To ensure that work on both the command and the catchment areas received quality feedback, the participating stakeholders were grouped into two-one to discuss the command area findings and the other to discuss the catchment area findings. Focused Group Discussion (FGD) for the catchment area was moderated by Dr Sharacchandra Lele, Co-ordinator, CISED, whereas the FGD for the command area was moderated by Sri S.T. Patil and Sri R Doraiswamy of 'Jalaspandana' which has extensive field experience in the Tungabhadra River Basin. The FGD on the catchment area revisited and clarified the existence of actual water shortages in the catchment, reasons for felt irrigation water shortages, constraints for institutional performance in managing drinking water supply systems and possible conservation measures to improve dry season water availability. The FGD on the command area dwelt on the institutional constraints for PIM in the MRB and clarified on the methodological approach to determine Willingness-To-Pay (WTP) among the canal irrigation beneficiaries.

The following sections detail the recommendations and comments that were received on the project.

Outcomes of the workshop: Critique, Problem Identification and Recommendations

The MRB catchment

Critique

- Scarcity has been over-emphasised by the project.
- Unlike what has mentioned in the project, there have not been any changes to the reservoir inflows in the past 15 years
- Sugarcane irrigation is more groundwater dependent than stream water dependent, and hence changing land use under sugarcane cultivation may not affect dry season flows as predicted.
- Lack of detailed modeling of groundwater component.
- Sugarcane to paddy shift may not be a good idea as suggested. Water use efficiency measures should be addressed first.
- The number of minor irrigation tanks in the catchment and barrages along the river have not been captured in land use classification, SWAT nor MIKE Basin
- The study has not looked into the future basin scenario in the context of climate change.

Problems identified for policy intervention

- The catchment has 4 sugarcane plants. The existing plants have increased sugarcane area. Establishment of new plants would increase the demand for sugarcane production in the area.
- Drinking water:
 - Loss reduction
 - New water sources
 - Institutional reform
 - Differential pricing and price increases
 - Lands have been purchased in the upper catchment by outsiders and have been converted from rainfed grasslands to irrigated. JFM committees need to be activated
- water use efficiency will have to be improved for sugarcane cultivation. Feasibility of techniques like sprinkler irrigation for sugarcane will need to be checked for.
- The affects of borewell pumping on groundwater flow will have to be established.
- Future allocation recommendation; prioritise drinking water needs and then make a proportional distribution to upstream and command area irrigation proportionally
- Shoreline reservoir receding: farmers recommend building barrages/ tanks built along the shoreline of the reservoir.
- Building balance reservoirs in the command areas to capture return flows
- Upper catchment: Large number of minor irrigation tanks and barrages.
- The effectiveness of additional infrastructure proposals like the barrage to serve Bailhongal's water requirements is in question.
- Leakages from canals in upper catchment have led to water logging and salinity.
- Functioning of Lift Irrigation Schemes have been limited by electricity supply

Policy recommendations

- To reduce subsidies on water and electricity
- To attempt privatization of selected "pilot" villages' drinking water supply system and demonstrate the efficiency in terms of operation and maintenance
- Conduct research to study impacts of borewell pumping on groundwater.
- Prioritize allocation of drinking water needs and then make a proportional distribution to upstream and command area irrigation proportionally
- Build barrages and tanks to protect the reservoir shoreline from receding
- Building balance reservoirs in the command areas to capture return flows
- Protect the catchment forest cover

Malaprabha Command Area

Critique

- Generalisations of WTP cannot be made based on a small sample.

Problems Identified for policy intervention

- Cropping violations are all across the catchment, not only command area

- Water allocation to industrial sector and domestic sector? There is no allocation policy in Irrigation Department and KNNL
- 46 TMC design; 27 TMC revision by government; but they are still building of Malaprabha command area
- What should be done if a WUA doesn't work? Can anything else be done instead of Department taking over?
- The societies that are working well are in head reach and have black soil (less water requirements).

Policy Recommendations

To improve water use efficiency in the command area

- To avoid further development of any more command area and focus on proper maintenance and water supply and increase water use efficiency.
- Revert to the intermittent water release from the reservoir rather than the current continuous water release system that encourages sugarcane.
- Enforce 20%-40%-20% crop model originally designed for Malaprabha
- Shift from the current Supply based to Demand based water system
- Establish cooperation between sugarcane industries, the KNNL and WUCS to determine the optimum area for sugarcane cultivation based on water availability.

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To improve PIM in Malaprabha

- WUCS to be provided adequate information by KNNL about the water release dates.
- To give WUCS, entitlements to water with "bulk rate" charged by KNNL and provide WUCS legal powers to charge differential rates from farmers and improve payments.
- To make membership obligatory to all farmers falling within the jurisdiction of a particular WUCS, which could also reduce politicization of WUCS.
- A joint survey by KNNL and WUCS to assess the current status of the canals repair and maintenance and the actual crop water requirement.
- To establish an intermediate level body at the distributory level, between the WUCS and the Federation level.
- Provide the Irrigation Department with staff from other disciplinary backgrounds for a better understanding and addressing of the WUCS problems
- Showcase success stories of WUCS and study them

Annexure 1.1

Time	Programme	Presenters
09.30 – 10.00	Workshop Registration	
10.00 – 10.10	Welcome and Introductions	
Session-1: Research Findings and Invited Presentations		
Moderators: Sri S.T. Patil, Sri A.M. Prakash		
10.10 – 10.35	Project Overview and Framework	Dr. David Barton
	Urban Drinking Water Stress: Bailhongal Case	Ms. Smitha G
	Institutional and Stakeholder Analysis	Dr. Udaya Sekhar Nagothu
	Coffee Break	
	Land Use Change Options in the Malaprabha Catchment	Dr. Shrinivas Badiger
	Hydrologic and Allocation Modeling	Dr. Reshmidevi
	Water Markets and PES	Dr. David Barton
	Invited Presentations	
	Methodology to Develop Land Use Cover Map in the MRB	Ms. Elizabeth Heller, Mc Gill University
	Water Resources in the Upper Catchment of the MRB	Dr. B.H. Purandara, NIH
	Lunch	
Session-2: Focused Group Discussions (specific to select issues in Malaprabha catchment management that are useful in building scenarios or improving the report(s) outline/ composition)		
	Focused Group Discussion on Malaprabha Catchment	Moderator: Dr Sharacchandra Lele
	Focused Group Discussion on Malaprabha command area	Moderators: S.T. Patil, R. Doraiswamy
15.30 – 15.45	Coffee Break	
15.45 – 16.00	Plenary and Summing up	

Annexure 1.2: Participant details

Participant	Organisation	
Project Team		
Sri Chandrasahsa	CISED	
Dr David N. Barton	Project Incharge, NIVA	
Sri Iswargouda Patil	CISED	
Dr Reshmidevi T.V	CISED	
Dr Shrinivas Badiger	Project Co-ordinator, CISED	
Ms Smitha G	CISED	
Dr Uday Shekhar Nagothu	NIVA	
Water Users		
Sri Suresh Kulkarni	WUCS Chairman, Gumgol	
Sri Chandrashekhar S. Sadhunavar	Ex-President, Malaprabha Water User Co-operative Societies Federation,Amtur	
Sri Ashok Kulkarni	Chairman, Water User Co-operative Society, Hooli	
Sri Hemanna Kurligere	Chairman, Water User Co-operative Society, Tirlapura	
Sri Rachaiah Hiremath	Chairman, Water User Co-operative Society, Anigol	
Sri Baramanna	Secretary, Water User Co-operative Society, Anigol	
Agencies		
Sri Dixit	Bhageeratha NGO, Dharwad	
Sri B.R. Narasannavar	Executive Engineer,	

	KNNL, Navilutheertha	
Mr Sheshadri	AME Foundation, Branch Hubli	
Sri Lokaprakash	JD, Agriculture Department, Belgaum	
Sri A.M. Prakash	Drought Monitoring Cell, Bangalore	
Sri Sunagar	JE, Water and Sanitation Department, Bailhongal Municipal Town Council	
Dr Sanjay Tripathi	GM, Plantations, West Coast Paper Mills, Dandeli	
Sri R. Doraiswamy	Jalaspandana South India Farmers' Organisation for Water Management, Bangalore	
Sri S.R. Hiremath	Samaja Parivarthana Samudaya, Dharwad	
Sri Sharanappa	Ex JE, Water Supply and Sanitation Department, Bailhongal Municipal Town Council.	
Ms Durba Biswas	PhD Scholar, ISEC, Bangalore	
Prof S.T. Patil	Ex-Director, WALMI, Dharwad	
Sri Datta Ram Rawat	President, JFPM Shirol village	
Research		
Dr L. Venkatachalam	Associate Professor, Madras Institute of	

	Development Studies	
Dr Sharacchandra Lele	CISED, Bangalore	
Dr B.K.Purandara	NIH, Belgaum	
Dr.Venkatesh	NIH, Belgaum	
Dr. Nayantara Naik	CMDR, Dharwad	
Ms Elizabeth Heller	PG Scholar, Mc Gill University, Canada	