Background Paper[1] for the National Consultative Group Meeting on

Water Governance Programme[2]: A Programme to Develop Practicable Scientific Approaches to Water Governance and Livelihoods and to Contribute to Policy Dialogue on Basin Issues

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Executive Summary

The background paper elaborates the context, goal, approach, objectives and methodology of the programme. In the Indian context where water is generally accepted as a key to improve livelihoods of a large number of poor people, the issue of Water Governance is one of building social support for equitable and sustainable development of the resource, based on comprehensive participatory planning. In India, water, especially surface water in rivers, streams and dams, is governed by the state. Water governance concerns the formal and informal institutions through which authority is exercised to allocate and regulate the resource. Water is required to be harnessed and used for maximum societal good. Concerns have been raised regarding water scarcity, pollution of water bodies, deterioration of water infrastructure, and lack of social justice in access to water. The need for an adaptive framework for Integrated Water Resource Management (IWRM) is being voiced at various levels. Of late there has been an increased interest on water governance as a result of perceived change in the role of state to one of a minimal facilitator. Critical questions have been raised about this new paradigm of governance, especially on accountability and depoliticisation of public spaces. There is a need to critically examine the theories and practices underpinning the new governance paradigm especially from the angularity of the poor and marginalized sections of society. While policies, organisational structures and public regulatory systems like the Farmers Managed Irrigation Systems Acts and Water Regulatory Authorities have been brought into effect in a few states, in the absence of a clear strategy the concept of IWRM has not been translated into practice on the ground. SPWD's aim in this programme on Water Governance and Livelihoods is to develop a methodology for taking into account the particularities of the livelihood systems, agrarian structure and institutions in the various regions (basins) for (a) planning for water in a sub-basin assuring minimum livelihoods for all (b) building capacities of CSOs/CBOs on water governance and (c) contributing to policy dialogue. The last section of the paper deals with the specific methodology of the sub-basin level projects as regards (a) hydrological analysis, water use and livelihoods (b) analysis of social structure/ groups and its impact on water and natural resource access and (c) institutional analysis and capacity building.

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[2] The programme is being implemented by SPWD, New Delhi in partnership with SOPPECOM, Pune; Dharamitra, Wardha; SAKTI, Hyderabad; Krushi Samstha, Chittoor; Samavesh Foundation, Bhopal; Dhas Gramin Vikas Kendra, Indore. It is being implemented with support from Sir Dorabji Tata Trust, Mumbai

I Context

In the Indian context where water is generally accepted as a key to improve livelihoods of a large number of poor people, the issue of Water Governance is one of building social support for equitable and sustainable development of the resource, based on comprehensive participatory planning. For this to happen it is necessary to create spaces where concerned individuals and organizations develop capacities to understand issues related to water governance in their various dimensions and interact among themselves and with the state in an effective manner.

Water governance concerns the formal and informal institutions through which authority is exercised to allocate and regulate the resource. Water is required to be harnessed and used for maximum societal good. The moot question is one of determining the societal good. If the societal good could be defined singularly by the "value" produced per unit of water the matter would have been much simpler. Streams/ rivers could have been auctioned to the highest bidder. Fundamentally and trans-historically, water has a life support function. Therefore the first important issue in water governance is one of prioritizing its use.

The need for an adaptive framework for Integrated Water Resource Management (IWRM) is being voiced at various levels. A necessity is being felt of taking the following types of integration in Water Resource Management into account: between (a) different sectoral uses and environmental requirement (b) rainfall, surface water and ground water (c) structures [larger/smaller] (d) institutions, and (e) different land uses. Amita Shah and Anjal Prakash[3] (2007) have divided the contemporary discourse on IWRM into three broad streams; one, rejecting the approach for being politically maligned and using IWRM as a pretext for pushing the neo-liberal agenda [Jairath, 2006]; second, questioning the suitability in the context of developing countries that predominated by informal water economies while accepting its relevance to the developing countries [Shah and Koppen, 2006]; and third, accepting the notion of IWRM as politically benign, hence, trying to explore alternative variants, particularly by trying to integrate formal and informal mechanisms that are multi-layered and pluralistic in nature [Saravanan, 2006]. Peter Mollinga (2006) does not consider the multifarious meanings of IWRM as a weakness and says that IWRM should be understood as a 'boundary concept' "that allows different constituencies attaching different meanings or emphases to the concept to interact with each other and negotiate the operationalisation of these different meanings and their combinations"[4].

Institutional approaches to water management have been limited to making laws, setting up of regulatory organisations, turning over management of irrigation systems to users, and specifying water rights. Institutions are viewed as static, functionalist and formal. Critiquing this, it is suggested that institutions should be viewed as arising from social interaction and processes. The term 'social interaction' obfuscates the fact that the interacting parties are neither horizontally located nor do they equally contribute to the emergence of institutions. Jasveen Jairath (2006) writes, "…the issue of governance is not politically neutral. It is not merely a question of replacing one set of institutions with another as often presented in popular fora. Rather it is an issue of displacing one set of power structure by another…"[5]. The displacement is sought to be brought about by countering the popular discourse that "legitimizes the political agenda of prevalent governance mechanisms". The countering of discourse requires critiquing of categories that have been deployed for establishing the necessity of replacing the old institutions with the new. This demands locating the institutional crisis that necessitated institutional renovation in the contradictory development

[3] Amita Shah and Anjal Prakash, IWRM in India: From Critique to Constructive Engagement

[4] Peter Mollinga, IWRM in South Asia: Global theory, Emerging Practice and Local Needs, Sage publications, 2006

[5] Seminar Papers of Bradford Centre for International Development, accessed at http://brad.ac.uk/acad/dpcc/seminar/water/Seminar_3.pdf

of social reproduction. Michael Burawoy explains the institutional renovation as a response to a felt crisis in terms of effectiveness of existing institutions for reproducing conditions of social production. He locates the opportunity for the displacement in these institutional renovations as he considers these institutions inherently unstable.

Of late there has been an increased interest on water governance as a result of perceived change in the role of state to one of a minimal facilitator. Accordingly, Rogers and Hall[6] define water governance as the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society. Governance has come to mean something much less state-centric and more market-like. Government is looked at as one of the institutions of governance. Instead of involving the citizens in decision making and implementation, the thrust is on community groups to take on some of the functions that were once delivered by the state. Critical questions have been raised about this new paradigm of governance, especially on accountability and depoliticisation of public spaces. There is a need to critically examine the theories and practices underpinning the new governance paradigm especially from the angularity of the poor and marginalized sections of society.

There is a general agreement reflected in National Water Policy (both 1987 and 2002) that the first priority is to be given to domestic use (drinking, washing and cooking) including needs of livestock. The rest of the priorities have to be set with reference to the life support system of the local area giving preference to subsistence over commerce. A majority of poor households in rural India are dependent not only on agriculture but also on various other livelihood strategies dependent on natural resources, including water.

In the main, water, especially surface water in rivers, streams and dams, is governed by the state. As of groundwater, the ownership of land effectively carries with it the ownership over groundwater, subject to regulation and control by the state. Under Indian Constitution, water is a State subject, though the Centre has been assigned an important role in inter-State rivers and river valleys. Also, under the 73rd and 74th Amendments, a third tier has been constituted in the Constitutional structure whereby drinking water, water management, watershed development and sanitation have been devolved to panchayats and nagarpalikas. Of late, concerns have been raised regarding water scarcity, pollution of water bodies, deterioration of water infrastructure, and lack of social justice in access to water. On the face of it the problem of inefficient use and mismanagement of water appears one of mismanagement at farm level and/or of poor upkeep of water infrastructure like dams and watercourses. This has led to implementation of programmes on command area development, subsidized sprinklers/ drips and renovation of tank structures. Though beneficent and essential, these programmes are not sufficient for effective water management. These programmes focus on efficient use of the allocated part of water by an individual or a group of users, and hence view water(s) in a disaggregated manner and ignore another important aspect of water i.e. of its being an aggregated category at both surface and groundwater basin level. Ramaswamy Iyer (2007)[7] has redefined the projected water crisis as one of mismanagement more than scarcity and has called for a shift from supply-side engineering to restraining the increase in demand, for conservation and more equitable management. The need to look at water as a part of basin is being increasingly felt. The specific challenges in the Indian context have been studied by IWMI[8]. Its review of the problems in transferring successful river basin management models to the developing countries like India suggests that the problems here are different: (a) providing access to water for drinking and growing food, (b) eradicating poverty, and (c) stopping groundwater overexploitation. It also points to the need for "facilitation of dialogue

[6] In Tom Franks (2006), Seminar Papers of Bradford Centre for International Development, accessed at http://brad.ac.uk/acad/dpcc/seminar/water/Seminar_3.pdf

[7] Towards Water Wisdom: Limits, Justice, Harmony, Sage Publication, 2007

[8] The Challenges of Integrated River Basin Management in India, http://www.iwmi.cgiar.org/home/integrated_river_basin.html

and negotiation on resource allocation among organized stakeholders and representative bodies (such as national or state governments sharing a river basin)". It is increasingly felt that formation of basin level organizations through redesigning and adaptation of the institutional models used in the west is necessary though not sufficient. While policies, organisational structures and public regulatory systems like the Farmers Managed Irrigation Systems Acts and Water Regulatory Authorities have been brought into effect in a few states, in the absence of a clear strategy the concept of IWRM has not been translated into practice on the ground.

SPWD's aim in this programme on Water Governance and Livelihoods is to develop a methodology for taking into account the particularities of the livelihood systems, agrarian structure and institutions in the various regions (basins) for (a) planning for water in a sub-basin assuring minimum livelihoods for all (b) building capacities of CSOs/CBOs on water governance and (c) contributing to policy dialogue.

The rest of the note elaborates the goal, approach, objectives and methodology of the programme.

II Programme

2.1 Project Goal

Informed social action for contributing to efficient, equitable and ecologically secure water governance.

2.2 Aims and Objectives

a) Develop a methodology for planning for assured minimum livelihoods at sub-basin level for six project locations

b) Ground approaches to using governance principles/IWRM in the projects with active participation of CSOs/ CBOs

c) Contribute to policy dialogue on water governance at various levels

2.3 Project Approach

- To develop a participatory understanding of modes of natural resource use and occupational structures at the sub-basin level, in the given regime of resource access, production and institutions.
- To critically examine the design and implementation of existing water related development programmes' in participation with the marginalized sections and to suggest appropriate changes.
- To critically examine the new development paradigm wherein " the state plays a minimal 'facilitator role', civil society is given a major development role and private sector of unbridled market competition plays the role of economic engine"[9].
- To accept IWRM as a 'boundary concept'[10].
- To locate the mismatch between democratic water governance principles and practices on the ground: in social structure, awareness and the polity.
- To collectively develop the capacities of civil society organizations to understand water governance issues.
- To create spaces where civil society actors interact among themselves and with the state in a systematic and meaningful manner.
- To review policy analysis carried out at various levels[11] (1) political analysis of nature of the state (2) empirical institutional analysis and (3) analysis at pragmatic every-day level.
- Advocacy for public policies and institutional frameworks that are inclusive.

2.4 Programme Deliverables

- To contribute to the review of Water Governance arrangements at various levels (State/ Circle/ District/ Mandal/ Watershed/ Village) and assess whether the existing governance systems are meeting the current livelihood and resource sustainability requirements.
- To contribute to the use of the IWRM framework and governance principles at a small sub-basin level.

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[9] V. Anil Kumar in "Policy Processes and Policy Advocacy", GAPS Series, Working Paper: 7, 2006.

[10] Peter Mollinga, IWRM: Global Theory, Emerging Practice and Local Needs, Sage Publications, 2006

[11] V. Anil Kumar in "Policy Processes and Policy Advocacy", GAPS Series, Working Paper: 7, 2006.

- To contribute to the development of a practicable scientific approach for preparation of a sub-basin perspective plan.
- To contribute to the development of a training manual to build the capacities of stakeholders like CSOs and CBOs on usage of governance tools for integrated management of surface and ground-water at sub-basin level.
- To contribute to the development of Fora at both National and State Levels on Water Governance Issues.
- To contribute to the development of documented literature and dialogue (regular newsletter, policy updates /briefs, website) on the subject.

2.5 Overall Methodology

The programme intends to develop a network of practitioners/ policy makers at national, state and sub-basin levels, with improved capacities to deal with Water Governance issues. The programme will focus not on fresh research but on drawing from and internalizing present research, debates and field experiences amongst CSOs/ CBOs to have a more informed policy dialogue with the state. The programme would contribute to policy dialogue at the national level through (a) Evaluation of acts, policies and programmes in different States (b) Documented experiences emerging from the States, which will be disseminated in the form of Working Papers, Workshop Reports, Training Manual and Other Reports (c) Desk Studies/ Research (d) Website (e) A regular Newsletter and (f) National Level Consultations. Three states (Andhra Pradesh, Madhya Pradesh and Maharashtra) will be taken up for more intensive work on development of State Level Fora dealing with the issue in question. The Forum would contribute to the policy dialogue at the State/ Inter-State level through (a) desk studies, (b) training manual/ guidelines and (c) Sub-Basin Level Perspective Planning to be conducted in two basins in each of the three States.

Andhra Pradesh	**Maharashtra**	**Madhya Pradesh**
Bahuda sub-basin of Pennar river, Chittoor; *Lead partner:* Krushi Samstha, Madanapalle	Kukadi sub-basin of Krishna river basin, Ahmednagar *Lead partner:* SOPPECOM, Pune	Machak sub-basin of Narmada river, Harda, *Lead partner:* Samavesh Foundation, Bhopal
Seethapally vagu sub-basin of Godavari river, East Godavari, *Lead partner:* SAKTI, Hyderabad	Pimpri Hatgaon sub-basin of Wardha river basin, Yavatmal, *Lead partner:* Dharamitra, Wardha	Maan sub-basin of Narmada river basin, Dhar, *Lead partner:* Dhas Gramin Vikas Kendra, Indore

At the State level a forum on water governance will be developed to (a) share experiences emanating from the sub-basin projects and other similar projects, (b) prepare a State level situational analysis of water governance, (c) prepare a training manual/ guidelines and advocacy material related to water governance for training of activists/ CSOs, (d) undertake concurrent evaluation of existing programmes (like, for e.g., the World Bank Tank Improvement and Management Programme in Andhra Pradesh) (e) take up case studies on water governance related aspects across the various agro-ecological zones of the state and hydronomic units (f) Analyse the acts, policies, rules and administration related to water and the emergent changes (like for e.g., the setting up of a Water Regulatory Authority in Maharashtra). The forum will use the methods listed above for discussion, and to influence policy debates.

III Methodology: Sub-basin Projects

The section below delineates the specific methodology of the Sub-basin level projects as regards (a) hydrological analysis, water use and livelihoods (b) analysis of social structure/ groups and its impact on water and natural resource access and (c) institutional analysis and capacity building.

3.1 Hydrological Analysis: Water Availability and Demand

For the exploration of IWRM issues in the sub-basin, the domain of work will be a sub-basin based hydronomic unit to cover issues of inter-sectoral allocation and water use prioritization. While the sub-basin will continue to be the base for studying the catchment area issues, the command below the sub-basin will be included to study the system level issues intensively. This approach will be adapted according to the hydrological characteristics[12] of the various sub-basins. Water use and quality issues across the various sectoral uses of water like industries, agriculture, drinking and domestic sector (human and livestock) will be studied. The aim of the hydrological analysis will be to develop a people-based water use plan for the sub-basin based on water saving potential, the means for improving the water productivity and above all, for distributing the water equitably. This plan will be prepared alongwith mass organisations[13]/ CSOs and will be become a point for mobilisation for democratic water governance. The analysis of water availability will be done by evaluating the seasonal (monthly) and geographical pattern of water supply whose availability is in turn dependent on the quantum of precipitation, variation in rainfall distribution, importation from other basins, storage within the basin for capturing runoff for later use. The project will try to work out the overall irrigation demand and entitlements based on the basic livelihood needs of the people. The availability of water will be worked out by defining the hydrological parameters appropriately and by using simple water balance models, which could be modified to reflect the varying hydrologic conditions across the six sub-basins. This exercise[14] will also classify outflows from a water balance domain into various categories to provide information on the quantity of water depleted by various uses[15], and the amount available for further use.

Irrigation water requirement and scheduling and the actual practice on the ground will be studied for the command of tanks/ canals. This will be done through matching the water availability from different sources viz. rainfall, surface irrigation and groundwater in millimeters throughout the year for the period matching rotation period of canal irrigation through an analysis of (a) daily rainfall from meteorological department, (b) surface irrigation from Patwari/MRO records and crosscheck with individual landholders and (c) groundwater and the purpose for which used from individual landholders. Water demands for different uses viz. domestic, livestock, agriculture and others in millimeters throughout the year will be

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[12] Under this project while determining the water balance, groundwater will be worked out as a residual. Apart from this, the groundwater endowment in the project area (presence of aquifers, their type etc), trends in groundwater development and its causes will be studied.

[13] Such as the Agricultural Workers Union promoted by Krushi Samstha in three mandals of Chittoor district.

[14] A quick literature review will be undertaken, of the methodologies available for various levels of analysis ranging from a micro level such as a household/ farm, to a macro level such as a complete water basin. However, the problem lies in defining the depth of detail to which one can go without losing feasibility within the practical constraints of data availability in using a water balance approach. SOPPECOM, Pune is preparing a draft of methodology options for determination of water balance for the six sub-basin level projects. This will be discussed thoroughly with all the CSOs partners in a consultation in October 2007. An appropriate model will be worked out where groundwater may be worked out as a residual since groundwater estimation can be problematic.

[15] Ecological issues related to the basin will be studied like the problem of sandmining, fluorine contamination etc.

studied through (a) Domestic demand estimation for each household from number of individuals in them (b) Livestock demand from the livestock-holdings (c) Agricultural demand from the cropping pattern and area under each crop and (b) Other demand from householders. Storage and conveyance losses and farm application losses through evaporation & percolation will be studied. In the case of Bahuda irrigation project, since the project was taken up for an experiment to shift from crop-area to volumetric basis, this particular aspect will be studied.

3.2 Analysis of Social Structure/ Groups and its Impacts on Water and Natural Resource Access

Social structure/groups reflecting differentiation in a community emerge in the production process. In rural areas differential access to natural resources, especially water, accentuates the social differentiation further. Therefore any understanding of social conflict and institutions requires understanding of this differentiation. The methodology for dealing with the social structure/groups and its impact on water and natural resource access would include both qualitative and quantitative techniques (using both primary and secondary data). The exercise would be conducted in both the catchment and the command areas.

In the case of select samples (in various reaches of watersheds, tank and canal catchments/ commands) the livelihood base – forest, land (agriculture), water, and others will be studied. For instance, in the case of Bahuda sub-basin (Chittoor district, Andhra Pradesh) intensive studies will be done of sample households situating them within a tank/ watershed/ urban water management system in (a) Angallu cheruvu tank catchment-command (b) three territorial constituencies in the Bahuda irrigation project representative of the head/ middle and tail end (c) spring channels (d) a tank fed by a spring channel (e) a rainfed village in the head and middle reach of the catchment and (f) one ward of Madanapally municipality/ one Rural Water Supply Scheme. The livelihood pattern across the social categories, gender, marginalised sections, will be analysed through the use of scientific typologies to understand water use and access issues across various sections of society.

Household survey will be done of sample households, to study aspects like quantity of and quality of water availability at the farm and household levels. The value of input and gross output will be studied for the small, marginal and relatively rich peasants. Trends of intensification of agriculture (including livestock rearing) and their impact on social differentiation would be studied. The relationship of the input/output to occupational holdings and access to water/other natural resources will be analysed separately to determine the basis for categorization of peasants in place of land-holding based classification alone. Occupational trends and water resource needs and access to water of non-farming communities (potters, shepherds, wage labourers etc) will also be studied. A mix of quantitative methodologies through interviews based on questionnaires, and qualitative methods like focus group discussions and direct observation will be used.

3.3 Institutional Analysis and Capacity Building

CSOs/CBOs' active participation is central to the project for working towards assured minimum livelihoods and ecologically secure water governance. Resource use is being governed by the state through various government departments under various laws. These state institutions have further promoted various user groups for users' participation in management of the resources. Other than users' groups there are Panchayati Raj Institutions (PRIs) that are supposed to govern the resources at local level. Many States or state promoted institutions/groups have come up in response to social/ecological crisis in contradictory development of resource-use-for-economic growth approach. Civil society organizations have been playing a role of support /oversight organization vis-à-vis new institutions. As support organizations, these have critiqued the shortcomings of various programmes though their focus in the main has been on a particular project without any integrated perspective. Oversight organizations have highlighted the need for public institutions to be more

accountable and serve the social function. There are gaps in knowledge and difference in orientations within CSOs, between CSOs and CBOs and within CBOs. These gaps and the differences are bound to be there as each individual experiences social conflicts differently. Institutional analysis that starts with institutions/groups as a given and looks at these for their functional efficacy makes individuals into objects. Moreover, inter-subjectivity without referring to the social structure and the process of alienation cannot explain the phenomenon of (lack of) participation. Functional efficacy itself can be for a short run and may turn out to be an entirely subjective notion. For institutions to be democratic wherein people participate effectively, the participative space needs to provide for a play of subject-object dialectics whereby each participant asserts against others' attempt to objectify him/ her. Serious deliberations on every aspect of the issue based on sustained progressive gathering and assorting of facts in a participatory manner can help in creating such a space.

The methodology will be for looking at material and relational aspects of resource use both from the secondary literature and through primary data collection. Broadly the project will work for -

1. Identification and classification of institutions/groups (formal/informal) directly mediating human interventions to meet social water needs.
2. Scientific understanding on material (ecological/productive-consumptive) aspects of water.
3. Understanding of relational aspects determining access to water for different category of people in social production-consumption.
4. Understanding the perspectives crystallized in the identified institutions/groups on material, socio-economic and political dimensions of water
5. Understanding the nature of interaction among these institutions
6. Assessing the present status of water-use as to efficiency, equity and ecological soundness.

Based on the above and on analysis of the existing programmes/ acts/ policies and administration which impacts on water availability-use-access, an 'ideal type for governance' with equity and sustainability of water use in mind will be developed. This would incorporate planning for a minimum livelihood basket at the sub-basin level. The above analysis will be shared with select stakeholders to get their feedback. This will be further fed into the (a) District Planning Committees (b) Water Resources Department/ RWS Department/ any other concerned agency and (c) Civil Society Fora. The project will create fora where various sections and groups can represent their views (interests) and also have a dialogue. These include – farmers and their organisations from the Upper/ Middle and Lower Catchment; Command Area farmers; WUAs, Watershed Associations and other CBOs working on NRM, CSOs working on urban water supply and allied issues, Municipalities, the various Government Departments, Associations of Irrigation (Allied) Department Employees, Engineers Associations and others.

A major aim of the project is to focus on capacity building of the communities, involve them in governance and to create fora at ground level for dialoguing. The training and capacity building component of the project will be based on the specific requirements of various categories of people that will be identified through the process of cross-learning of CSOs, CBOs, water users of command/ catchment area, government officials[16] etc. The focus will be training on water governance tools by developing an understanding of acts, policies, rules, development administration and water management aspects like irrigation scheduling. Select participants from all the above will be involved in training on policy aspects though they may be addressed at various levels. The interactions between the various set of actors will yield insights into the information gaps of a particular segment of actors and also on the processes

[16] On the technical choices they make and their meanings

for addressing these information gaps. Based on these findings, training and capacity building modules will be designed for developing knowledge and skills. The training manuals will be developed drawing relevant contents from existing manuals and incorporating specific components for suiting the training needs of each sub-basin project. Besides, an attempt will be made to come up with some common guidelines on training on water governance.