

DRAFT WATER POLICY FOR JHARKHAND

PREFACE

I vividly remember the deliberations of the meeting of intellectuals, technical experts and social activists held at Ranchi on March 22, 2006 (on the eve of world water day) under the aegis of Damodar Bachao Andolan in which decision to conduct water awareness campaign was taken to draw the attention of the Govt., administrators, policy makers and planners towards the conservation, quality improvement and meaningful use of the water, a precious natural resource.

During the "Water Awareness Campaign 2006" a serious debates on various aspects of water policy for the state of Jharkhand took place. The views of cross-section of the society was taken. Also the views expressed by the 1st sub-committee of the 2nd Bihar State Irrigation Commission, which formulated the water policy of the erstwhile Bihar under the Chairmanship of Sri Saryu Roy, was taken into consideration. This in consonance with the National Water Policy 2002 formed the basis for drafting the Water Policy for the State of Jharkhand. This draft was circulated, discussed and adopted in a two days seminar held at Ranchi on May 31 June 1, 2006 under the aegis of Yugantar Bharati and inaugurated by Prof. V.L. Chopra, Member, Planning Commission, Govt. of India.

I am delighted that Yugantar Bharati is publishing this comprehensive document on "Water Policy for the state of Jharkhand" in the form of a monograph. It is hoped that the state govt. would take appropriate steps to adopt the salient features of this policy for development, management and quality control of its reach water resource and its optimum utilisation in various competitive uses.

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THE NEED FOR A STATE WATER POLICY

Water is one of the most crucial element in development planning of a Society. It is a prime natural resource, a basic human need and a precious asset of any nation. The planning and development of water resources therefore need to be governed in national perspective with due consideration to the requirements in the basin itself which should receive topmost priority.

The state of Jharkhand has a geographical area of 79.714 Lha, out of which hardly 10% area has irrigation through major and medium projects and minor irrigation schemes for surface as well as ground water exploitation.

Droughts affect some areas of the state. Some areas of the state is also flood prone where flood occur but not frequently. The state has to grapple with the menace of drought in some part or other of the state very frequently.

Water is one of the most crucial element in developmental planning. As water is a scarce and precious natural resource to be planned, developed and conserved as such on a integrated and environmentally sound basis, keeping in view the needs of the concerned state. The need for a National Water Policy was felt and, accordingly, the National Water Policy was formulated in the year 1987 and was revised and enlarged in 2002.

Considering the growing demand of water, the mounting conflicts in the day to day allocation of available water among its uses, such as irrigation, drinking and other uses, basin-wise, and finally, the need for improving the water policy and planning in the state, it is desired necessity that the state should recast the "National Water Policy" and formulate "State Water Policy" of its own, befitting the framework of the national policy.

The National Water Policy 2002 is accordingly, reaffirmed hereby and the following Water Policy is laid down for the State within the overall framework of the National Water Policy and the river basin plans of the state.

1.7 The 2nd Bihar State Irrigation Commission formulated a State Water Policy in 1993 keeping in view the need of the state in the erstwhile Bihar in which problems of the newly carved Jharkhand state was separately dealt with under a separate head of Chhotanagpur & Santhal Pargana. That policy is still relevant and its importance may be realised keeping in view the National Water Policy 2002 which has adopted most of the points raised in the Draft Bihar State Water Policy 1993.

Now that Jharkhand is a separate State there is need to analyse its own potential and priorities regarding the water needs in various sectors of development with special reference to and stress on the Vision of Development of Jharkhand State.

DATA COLLECTION AND INFORMATION SYSTEM

Long term hydrological and agro meteorological data are of utmost importance for realistic, economical and result-oriented project formulation for water resource development. Sufficient hydro meteorological stations shall be established in all river basins irrespective of the fact whether any project is coming up in the basin in near future or not.

A well-developed information system is a must for resource planning. It is, therefore, necessary to establish a standardized State information system with a network of data banks and data bases, integrating and strengthening the existing Central and State-level agencies and improving the quality of data and the processing capabilities. There will have to be a free exchange of data among the various agencies. Duplication in data collection shall be avoided. Apart from collection and processing, the data regarding water availability and actual water use, the system should also include comprehensive and reasonable projections of future demands for water for diverse purpose. The planning organization shall be strengthened with suitable, experienced and trained qualified personnel for observation, collection and processing of hydrological, meteorological and agronomical data. This organisation will publish water yearbooks of each river basin annually. Data obtained by other agencies in the basin should be incorporated in the Water Year Book.

MAXIMISING AVAILABILITY

The water resources available to the state shall be brought within the category of utilizable resources to the maximum possible extent. The resources shall be conserved and their availability augmented by appropriated measures for maximizing retention and minimizing losses.

Water resource planning shall be done for a hydrological unit, such as drainage basin in its totality or for a sub-basin. All individual projects should be formulated and considered within the framework of such an overall plan for a basin or sub-basin and the best possible options should be selected for execution and development of the available water resource that are utilizable.

Where water resources are being utilized in isolated patches in a basin or sub-basin by individual schemes, an overall comprehensive master plan for the optimum use of water of hydrological unit as a whole shall be formulated in such a manner that the existing, ongoing and new planned schemes are suitably integrated and developed in the best possible manner as far as practicable.

Suitable appropriate organizations shall be established for the planned development and management of a river basin as a whole.

Special multi-disciplinary team should be associated with such organisations to prepare comprehensive plans taking into account not only the needs of irrigation but also harmonizing various other water uses, so that the available water resources are determined and put to optimum use keeping in view the existing inter-state agreements.

What shall be first used in the river basin/sub-basin itself in which it is available and water, which is surplus to the requirements of the basin/sub-basin, may be made available to the water short or drought prone areas of the other basin/basins.

Recycling and re-use of water would be considered as an integral part of water use strategy in water short or drought prone areas of the other basin.

PROJECT PLANNING

The water resources development projects shall, as far as possible be planned and developed as multipurpose projects. Provision of drinking water shall receive topmost priority. Next to come in order of priority would be the conjunction use of surface and ground waters for irrigation, industrial & other uses flood mitigation, hydropower generation, navigation, pisciculture and recreation and so on, wherever possible.

The study of the impact of a project during the construction phase, as also later to it, on human lives,

settlements, occupations, economic and other activities shall be an essential component of project planning.

Preservation of the quality of the environment and the ecological balance shall be a primary consideration in the planning, implementation and operation of the projects. It shall be ensured that the adverse impact, if any, on the environment, is minimized and is offset by means of adequate compensatory measures.

There should be an integrated and multi disciplinary approach to the planning, formulation, clearance and implementation of the project, including catchments treatment and management, environment and ecological aspects, rehabilitation of the affected people and command area development. For this purpose the Master Planning Organisation and Project Preparation Cell of the State Water Resources Department, which formulate and examine the projects for clearance before implementation, shall be restructured to provide access for experts from all the relevant disciplines.

Investigation and formulation of projects in, or for the benefit of, areas inhabited by the Scheduled Castes and the Scheduled Tribes shall be given topmost priority. Carefull attention shall be given to the needs of the weaker sections of the society while planning projects in other areas also.

The need to provide assured drinking water and possibilities of hudropower development with due approach to irrigation in the hilly areas will be dully considered in the planning of projects in such areas, keeping in view the steep slopes, rapid runoff and the incidence of soil erosion.

It is generally observed that most of the irrigation/multipurpose projects are affected by cost overruns either due to lack of proper and detailed investigation before taking up for execution or for want of adequate fund for their timely completion. It is also observed that the benefits as envisaged while formulating the projects are not achieved on their completion. These deficiencies shall be overcome by upgrading the quality of project preparation of detailed design and working drawing of structures before taking up their execution, provision of adequate funds according to the schedule of completion and proper management. Adequate funds will be provided according to the requirements for the completion of all ongoing projects as well as for such special projects which are considered most essential to reduce regional imbalance.

MAINTENANCE & MODERNISATION

The assets, such as river structures and canal systems, created through massive investments, shall be maintained properly to derive maximum benefits out of them during their expected life-time. Adequate funds for maintenance of completed projects will be provided in the annual budget and it will be ensured that such assets are properly maintained in good health.

Conditions and functioning of the systems and structures of all the completed schemes shall be monitored level and a necessary rehabilitation and modernization programme will be undertaken and implemented wherever necessary at the earliest to avoid their further deterioration.

SAFETY OF STRUCTURES

There shall be proper organization and arrangement for ensuring the safety of the storage dams and other water-related structures in the State. Suitable guidelines for inspection and suitable measures to ensure the safety of such structures will be prepared and issued to all concerned. Such guidelines will be constantly reviewed and updated periodically and reformulated, if necessary. Continuous surveillance and regular visits by experts will be arranged according to the demand of the situation.

GROUND WATER DEVELOPMENT

The ground water potential of the State will be periodically reassessed on a scientific basis, taking into account the quality of water available and the economic viability of its exploitation.

Ground water exploitation shall not be allowed to exceed the recharging possibilities. If deemed necessary for ensuring social equity or any other reason, the ground water recharge projects will be

developed and implemented for augmenting the available supplies. Overexploitation of ground water will be prevented by appropriate measures, including legislation.

It will be ensured while formulating the projects the integrated and coordinated development of surface and ground water and their conjunctive use are duly incorporated as part of the project, subject to its technical and economic viability.

Private tube wells shall be encouraged and given priority over public tube wells.

WATER ALLOCATION PRIORITIES

In the planning and operation of the water resource development systems, the following water priorities, as laid down in the National Water Policy will be broadly enforced except minor modifications.

Drinking

Water Irrigation

Industrial and other uses

Hydropower

Navigation

The above priorities may, however, be shuffled, if necessary, in particular regions with reference to area-specific considerations, as suggested in the following paragraph:

DRINKING WATER

The drinking water needs of human beings and animals shall be first charge on any available water.

It shall be ensured that adequate drinking water facilities are provided to the entire population both in urban and rural areas at the earliest. Wherever there is any alternative sources of drinking water, such provision will invariably be made in the irrigation and multipurpose projects.

IRRIGATION

The fertility of land and the cost-effective irrigation options feasible from all available sources of water and appropriate irrigation techniques will be duly considered while planning for irrigation from either an individual project or in a basin as a whole. Consistent with the view favoring maximizing of production, the intensity of irrigation will be planned in such a manner as to extend the benefits to the largest possible number of farm families.

The water use and land use policies shall be closely integrated in order to reap optimal benefits from the available land and water resources.

Water shall be allocated in an irrigation system with due consideration of equity and social justice. It has to be ensured that there is no disparity in the supply of water between the head-reach farm and the tail end farm. In order to ensure to ensure this, the rotational system of water supply may be adopted. If necessary and practicable, water may be supplied on the volumetric basis, subject to a number of ceilings.

Construction, maintenance, and operation of the minor water courses and field channels will be entrusted to the beneficiaries or the water user's association by making them actual owners of the micro-system. Farmers will be involved progressively in various aspects of management of the irrigation systems, particularly in operation, water distribution, maintenance and encouraged to educate the farmers in efficient water use and water management.

All attempts shall be made to bridge the gap between the irrigation potential created and its actual utilization on a priority basis so that full use is made of the investment made. The command area development approach will be adopted in all projects, taking advantage of the experience gained so far in the existing organisations.

WATER RATES

The water rates will be fixed in such a manner as to convey the scarcity value of the resources to the users and to foster on their part the motivation for economy in water use. Water rates, in principle, should be adequate to cover the annual maintenance and operation charges together with a part of the fixed costs, such an ideal condition would be made effective over a suitable period, while ensuring adequate and timely supplies of irrigation water in accordance with the adopted crop pattern. Before this ideal condition is achieved, the water rates should be such as to cover at least the maintenance and operation charges of the irrigation system, including their collection charges.

The water rates for surface and lift irrigation will be rationalized with due regard to the interests of small and marginal farmers.

With rising costs of operation and maintenance of irrigation systems the water rates may be reviewed and revised at suitable intervals as frequently as possible.

Procedure of assessment and collection of water rates will have to be simple and less expensive. Involvement of the water users associations will be encouraged in assessment and collection of water charges.

WATER QUALITY

Both surface and ground water will be monitored regularly to improve quality and a phased programme will be undertaken for the purpose, as and when necessary. Check on pollution of waterbodies from various sources will be strictly implemented. Water quality observations at some suitable sites on the rivers such observations by other organization in the State. Such results would be incorporated in the water year books.

WATER ZONING

Economic, agriculture, industrial and urban development activities will be planned with due regard to the constraints imposed by the configuration of water availability. The State may be divided into various water zones as considered necessary and the economic activities be guided and regulated in accordance with such zones.

CONSERVATION OF WATER

People will be made aware of water as a scarce resource and the efficiency of utilization in all the diverse uses of water will be tried to improve. Conservation consciousness will be promoted through education, seminars and regulation, incentives and disincentives. The Water Resources Day will be celebrated up to the district level on March, 22 every year (on the eve of world water day) and water awareness campaign will be conducted during the month of April every year (when the water availability is minimum) to arouse awareness about scarcity of water amongst the people and to emphasize the need for conservation of such precious resource.

BANK STABILISATION AND ANTI EROSION MEASURES

Bank stabilization and anti-erosion measures are adopted to train the rivers so as to check their tendency to erode and damage new areas. The process is a natural phenomenon and results in loss of land at one location and gain at some other.

Anti-erosion works on rivers are expensive both in construction and maintenance. Such works change the direction and place of attack upstream or downstream that may affect either bank. These aspects should be carefully considered before taking up such anti-erosion work.

Anti-erosion works will be considered justified only for the protection of important industrial and commercial centers, towns or groups of highly dense population, communications like railway lines and roads, place of strategic and religious importance, and so on, where relocations are found to be not technically feasible or much too expensive. These can also be justified for protecting substantial

length of embankments, thereby protecting large area, which are threatened by river erosion. For smaller lengths of embankments, retirement will be more economical. On account of high cost of construction and maintenance of massive anti-erosion works, these would be uneconomical for protection of agricultural lands hence massive anti erosion works will be undertaken for agricultural lands only in very special cases by adopting suitable cost-effective measures.

DROUGHT MANAGEMENT

The needs of drought-prone areas shall be priority in planning the water resource development project. Such areas will be tried to be made less vulnerable to drought associated problems through soil-moisture conservation measure, water harvesting practices, minimization of evaporation losses, development of the ground water potential and transfer of surface water from surplus area where found feasible and appropriate, other modes of development, such as development of pastures, forestry, etc., which consume less water.

Relief works undertaken for providing employment to drought, stricken populations will be for drought/ flood proofing, such as digging of tanks and raising villages, etc. A number of such schemes would be investigated and kept ready on shelf to be undertaken during drought.

SCIENCE AND TECHNOLOGY

All endeavours will be made to intensify the research efforts in various areas, including the items indicated below to push forward the frontiers of existing knowledge in several directions for effective and economical management of the available water resources of the State.

Hydrometeorology

Assessment of water resources

Ground water hydrology and recharge

Water harvesting

Evaporation and seepage losses

Economical designs for water resources projects

Crops and cropping systems

Sedimentation of reservoirs

Safety of water related structures

River morphology and hydraulics

Soils and materials research

Use of underground reservoir for flood mitigation

Better water management practices and improvements in operational technology

Recycling and reuse of water

Economical design of anti-erosion measures for protection national assets, towns and village, etc.

RESEARCH AND DESIGN

Optimum use of water resources within the limits of economic viability calls for steps to investigate alternative options, plan, determine techno-economic feasibility, develop economical construction materials and construct selected structures with built in safety, durability and economy in shortest possible time. Research and design is the hub of this cycle. It helps one unravel the unknown, provide a cause effect relationship and helps remove the causes of inadequate performance, Research and design can open up unheard and undreamt of opportunities for the have-nots to try and become front liners. Research, design and standardization shall therefore be given priority they deserve in the water sector.

TRAINING

Training constantly helps in upgrading the methodology by introspection, by self-appraisal and studying the feed back. Full advantage of the revolution brought about by communication, computer, space science and new materials the world over, should be taken. For this a perspective plan for standardizing training should be an integral part of water resources development. It should cover training in the information system, sectoral planning, project planning and formulation, project

management, operation and maintenance of projects and their physical structures and systems and the management of the water distribution systems. The training shall, therefore, be extended to all categories of personnel involved in these activities as also the water users.

ACTION PROGRAMME

The following activities should be taken up immediately and completed within the fixed time-frame :
The expenditure focus be re-examined and new priorities based on economic viability and impact be developed.

An interim action plan to halt staff growth, provide adequate maintenance funding, curb leakages and introduce cost accounting be prepared and implemented.

A water management programme be prepared and implemented.

Monitoring and annual reporting of financial expenditure and cost accounting, a maintenance plan, budget review and a cost recovery status report be regularly carried out.

Periodical monitors of the water resource projects with regard to both financial and physical targets vis-a-vis achievements be carried out.

Restructuring of the Water Resources Department by inducting multi disciplinary experts, establishing the Management Information System (MIS), upgrading project preparation capabilities and funding research and training be considered and implemented.

A uniform rehabilitation policy for the entire State may be deliberated and notified.

Areas for private sector involvement be identified.

Specific commands where management can devolve to autonomous units be identified.

An extension programme to assist farmers to form the water users association, participate in scheme management, and construct, maintain and operate micro-networks of water distribution system be worked out and implemented.