



**IRRIGATION AND FLOOD CONTROL DEPARTMENT
GOVERNMENT OF SIKKIM
GANGTOK**

NO. 11(192) Irri&FCD/355

Dated : 19.08.09

NOTIFICATION

With a view to ensure proper water resources planning and co-ordination in relation to diverse use of water resources in the State of Sikkim, the State Government constituted the Standing Committee vide Notification No.89/Home/97 dated 22.02.1997 which was reconstituted vide Notification No.01/Home/2007 dated 03.01.2007 read with Notification No.79/Irri/07 dated 08.05.2007 and Notification No.80/Irri/07 dated 08.05.2007 to frame the State Water Policy. The State Government is hereby pleased to notify the State Water Policy framed in line of the National Water Policy to guide in formulating policies and programmes for water resources development and its management in the State .

1. NEED FOR A STATE WATER POLICY

- 1.1 Water is a prime natural resource and it is necessary for human and all forms of life's survival. It is scarce compared its usefulness and its planning, development and management need to be governed by state perspectives.
- 1.2 Floods and droughts affect certain areas of the State. The South and West Districts of Sikkim have more drought prone areas. The management of drought and flood require proper coordination between the districts and the state level administration.
- 1.3 State level planning and implementation of individual irrigation or multipurpose projects involve a number of aspects and issues such as environmental protection, rehabilitation of project affected areas, people and livestock, public health consequences of water impoundment, dam safety etc. The complex problems involve in the implementation of projects need to be tackled on the basis of policies and strategies adopted by the State in view of the central guidelines.
- 1.4 The principal conjunctive use of water has been for irrigation. Further the growth process and the expansion of the economic activities in the State is leading to the increasing demands for diverse purpose namely: domestic, hydropower, agriculture, industrial, recreation etc. The agricultural production has increased since the State became part of the Indian Union. And a further development in a substantial order is necessary to meet the food and fibre needs of the growing population of the state.
- 1.5 Water quality is one of the important aspects of the State Water Policy. Improvements in existing strategies, innovation of new techniques resting on a strong science and technology base are needed to eliminate the pollution of surface and ground water resources. Science and Technology has important role to play in imparting training on water resource development. Our State is a landlocked state and especially during monsoon the entire state is affected by landslides and soil erosion due to excessive precipitation and as a result lot of damages are caused to the lives and properties. Their should be adequate provisions to meet the contingencies in the budget to meet such challenges.

2. INFORMATION SYSTEM

- 2.1. The State should provide adequate infrastructure for assessing hydrological data and availability of water from all water bodies such as snow melting, glacier, lakes, jhoras, streams, rivers and ground water. The infrastructure for assessing the quality and discharge of water from all available sources should also be developed as well as to assess the quantum of discharge available in the State during dry and also in summer.
- 2.2. A well developed information system is the prime requisite for resource planning. A standardized state information system should be established with a network of data banks and data bases. There should be a free exchange of data among the various users agencies. Apart from the data regarding water availability and actual water use, the system should also include comprehensive and reasonably reliable projections of future demand of water for diverse purposes.

3. MAXIMIZING WATER AVAILABILITY

- 3.1. The water availability in the State should be brought within the category of utilization resources to the maximum possible extent. The resources should be conserved and the availability augmented by measures for maximizing retention and minimizing losses.
- 3.2. Resource planning has to be done within the framework of the State Water Policy so that optimum use of the resources can be achieved.
- 3.3. Water should be made available to water scarce areas by transfer from available areas based on the state perspective and on the basis of requirements of the particular scheme.
- 3.4. Recycling and re-use of water should be an integral part of water resource development and to be encouraged at every level.
- 3.5. Rooftop and run-off water harvesting should be encouraged to conserve the water to use it for various purposes.

4. PROJECT PLANNING

- 4.1. Water resource development projects should be planned and developed for multipurpose projects. Provision for drinking water should be a primary consideration. The projects should include for irrigation, hydro electric power generation, flood mitigation, industrial purpose, pisciculture and recreation wherever possible for tourism purposes etc.
- 4.2. There should be an integrated and multi-disciplinary approach to the planning, formulation, clearance and implementation of projects including catchments area treatment and management, environmental and ecological aspects, rehabilitation of affected people and command area development etc.
- 4.3. Special efforts should be made to investigate and formulate projects either in or for the benefit of area inhabited by tribal or other specially disadvantaged groups such as Scheduled Castes and Scheduled Tribes. In other areas also, project planning should pay special attention to the needs of Scheduled Castes and Scheduled Tribes and other weaker sections of the society.
- 4.4. The planning of projects in hilly areas should take into account the need to provide assured drinking water, possibilities of hydro power development and the proper approach to irrigation in such areas in the context of physical features and constraints such as steep slopes, rapid run-off and the incidence of soil erosion and landslide.
- 4.5. Integrated and coordinated development of surface water, ground water and their conjunctive use should be envisaged in the project planning stage and should form an essential part of the project.

- 4.6 The study of the impact of a project during construction and later on human lives, settlement, occupations, economic and other aspects should be an essential component of project planning.
- 4.7 In the planning implementation and operation of projects, preservation of the quality of environment and the ecological balance should be a primary consideration. The adverse impact on the environment if any, should be minimized and should be off-set by adequate compensatory measures.

5. MAINTENANCE AND MODERNISATION

- 5.1 Structures and systems created through massive investments should be properly maintained in good health. Appropriate annual provisions should be made for this purpose in the budget.
- 5.2 There should be a regular monitoring of structures and systems and necessary rehabilitation and modernization programmes should be undertaken.
- 5.3 There should be beneficiaries associations registered with the Government and the projects on completion should be taken over by the associations for maintaining the same.

6. SAFETY OF STRUCTURES

There should be proper organizational arrangements at the State Level for ensuring the safety of storage dams and other water related structures. The State should keep in mind the central guidelines for the subject in regard to safety of structures. There should be a system of continuous surveillance and regular visit by experts.

7. GROUND WATER DEVELOPMENT

- 7.1 There should be a periodical reassessment on a scientific basis of the ground water potential taking into consideration the quality of the water available and economic viability.
- 7.2 Exploitation of ground water resources should be so regulated as not to exceed the recharging possibilities as also to ensure social equity. Ground water recharge projects should be developed and implemented for augmenting the available supplies.

8. WATER SHARING/DISTRIBUTION OF WATERS OF INTER STATE RIVERS AMONGST THE STATES

- 8.1 The State should commit for sharing of its water only in term of excess quantum after meeting the need of water users and all water related developmental activities of the State.

9. WATER ALLOCATION PRIORITIES

In the planning and operation of systems, water allocation priorities are broadly classified as follows: (a) Drinking Water, (b) Hydro power (c) Irrigation (d) Ecology (e) Industries (f) Recreation and (g) other uses.

However, these priorities can be modified if necessary in particular regions with reference to area specific considerations.

10. DRINKING WATER

Adequate safe drinking water facilities should be provided to the entire population both in urban and in rural areas. Irrigation and multipurpose projects should invariably include a drinking water component. Wherever there is no alternative source of drinking water, priorities should be given to the needs of human beings and animals on any available water.

11. HYDRO POWER

That the State Government shall develop Hydro Electricity based on water availability and topography features for not only to fulfill the energy needs of the people of the State but also to generate income by selling the surplus power. The emphasis should be given to develop hydro project for maximum power generation keeping in view of environmental conservation, catchments area treatment and water needs of not only human beings and animals but also of flora and fauna of the downstream of the project site.

12. IRRIGATION

- 12.1 Irrigation planning either in an individual project in a basin as a whole should be taken into account the irrigability of land, cost effective irrigation options possible from all available sources of water and appropriate irrigation techniques. The irrigation intensity should be such as to extend the benefits of irrigation to a large number of farm families as far as possible keeping in view the need to maximize production.
- 12.2 There should be a close integration of water use and land use policies.
- 12.3 Water allocation in an irrigation system has to be done with due regard to equity and social justice. Disparities in the availability of water between head-reach and tail-end farms and between large and small farms should be obviated by adoption of a rotational water distribution system and supply of water on a volumetric basis subject to certain ceilings.
- 12.4 Concerted efforts are to be made to ensure that the irrigation potential created is fully utilized and the gap between the potential created and its utilization is removed. For this purpose, the command area development approach should be adopted in all irrigation projects.

13. INDUSTRIAL, RECREATIONAL AND OTHER USES

Emphasis should be given for development of water based industries, recreation and other activities based on water depending upon the availability of the water. However, adequate care should be taken not to pollute the water bodies by such activities and effluents from industries etc.

14. WATER RATES

Water rates should be such as to convey the scarcity value or the resource to the users and to foster the motivation for economy in water use. It should be adequate to cover the annual maintenance and operation charges and to cover up a part of the fixed costs. The water rates for surface water and ground water should be rationalized with due regard to the interests of small and marginal farmers.

15. PARTICIPATION OF FARMERS AND VOLUNTARY AGENCIES

Efforts should be made to involve farmers progressively in various aspect of management of irrigation systems, particularly in water distribution and collection of water rates. Assistance of voluntary agencies and NGO's should be enlisted in educating the farmers in efficient water use and water management.

16. WATER ZONING

Economic development activities including agriculture, industrial and urban development, should be planned with due regard to the constraints imposed by the configuration of water availability. There should be a water zoning within the state and the economic activities should be guided and regulated in accordance with such zoning.

17. CONSERVATION OF WATER

The efficiency of utilization in all the diverse uses of water should be improved and an awareness of water as a scarce resource should be fostered. Conservation consciousness should be promoted through education, regulation, incentives and disincentives. Further there should be a proper co-ordination between the departments connected with the implementation of the project for the conservation of water in the area.

18. LANDSLIDE, SOIL EROSION AND FLOOD CONTROL MANAGEMENT

There should be a master plan for landslide, soil erosion and flood control management for landslide and soil erosion prone area and flood prone basin. Sound watershed management through extensive soil conservation, catchments area treatment, preservation of check-dams and rain water harvesting structures should be promoted to reduce the intensity of floods. Adequate flood cushion should be provided in water storage projects wherever feasible to facilitate better flood management. An extensive network for flood forecasting should be established for timely warning to the settlements in the river banks along with the regulation of settlements and economic activity in the river bank zone to minimize the loss of life and property on account of floods while physical flood protection work like embankments and dykes will continue to be necessary. The emphasis should be on non-structural measures for the minimization of losses, such as flood forecasting and warning and river bank zoning so as to reduce the recurring expenditure on flood relief. Further the State should also undertake the requisite steps to discourage river bank occupation and economic activities in the adjacent areas of the river bank to be regulated. The soil erosion and landslide should be minimized by suitable cost effective measures.

19. DROUGHT MANAGEMENT

- 19.1 Drought prone area should be made less vulnerable to drought associated problems through soil moisture conservation measures, roof water harvesting practices, minimization of evaporation losses, development of the ground water potential and transfer of surface water from surplus areas where feasible and appropriate. Pastures, forestry, or other modes of development which are relatively less water demanding should be encouraged. In planning of water resource development projects, the needs of drought prone area should be given priority.
- 19.2 Relief works undertaken for providing employment to drought-stricken populations should preferably be for drought proofing.

20. SCIENCE & TECHNOLOGY

For effective and economical management of our water resources the frontiers of knowledge need to be pushed forward in several directions by intensifying research efforts in various areas, including the following:

- Hydrometeorology ;
- Assessment of Water resources ;
- Snow and Lake hydrology ;
- Water harvesting ;
- Crops and cropping system ;
- The safety and longevity of water related structures ;
- River morphology and hydraulics ;
- Soil and materials research ;
- Better water management practices and improvements in operational technology;
- Recycling and re-use
- Economical designs for water resource projects.

21. TRAINING

A perspective plan for standardized training should be an integral part of water resources development. It should cover training in information system, sectoral planning, projects planning and formulation, project management, operation of projects and their physical structures and systems and the management of the water distribution system. The training should extend to all the categories of personnel involved in these activities as also the farmers.

22. CONCLUSION

In view of the necessity of water resource for human and animal life, proper planning and management of this scarce resource to its optimum, economical and equitable use by maintaining ecological balance for the development of economic activities of all kind has become very important. The success of the State Water Policy depends on its commitments to its underlying principles and objectives. The State Government has declared the Department of Irrigation and Flood Control as nodal Department vide Notification No. 82/Home/2004 dated 10/09/2004 and since then this Department has been in active engagement in the development of water resources of the State.

BY ORDER

(B.K. Pradhan)
PCE cum Secretary
Irrigation and Flood Control Department
File No : 11(192)Irri & FC Deptt/2006-07

Copy for kind information to:

1. Principal Secretary to HCM
2. P.S. to HM, Irrigation & FC Department
3. P.S. to Chief Secretary, Government of Sikkim.
4. ACS cum Dev. Commissioner, DPER&NECA Department
5. Principal Secretary, Finance, Revenue & Exp. Department
6. Commissioner Cum Secretary Commerce & Industries Department
7. PCE cum Secretary, Water Security & PHE Department
8. PCCF cum Secretary, Forest, Wildlife & Env. Management Department
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