

NAGALAND WATER POLICY-2016

FINAL VERSION

SUBMITTED BY



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NAGALAND WATER POLICY (2016)

1. PREAMBLE

1.1 Water is a prime natural resource and fundamental to life on Earth. Water is also invaluable and scarce national resource in the context of growing scarcity of fresh water resources in the country. In Nagaland, water is a critical natural asset as it is fundamental to ensuring food security, integrity and health of ecosystems, maintenance of ecosystem services, religious and cultural life of Naga people. It will continue to play a decisive and multifaceted role in the developmental planning of the state. In order to lead the state of Nagaland on to sustainable developmental pathways it is necessary to initiate measures for ensuring economic, judicious and equitable use of water resources in the state. Owing to the unique hydrological, social and legal context of Nagaland, a state specific water policy is necessitated which is responsive to its existing and future needs encompassing a long-term water resource management program.

2. OVERVIEW OF WATER RESOURCES OF THE STATE

2.1 Rainfall

The state receives an average annual rainfall of 1715 mm. Eighty percent of the rainfall is received during the pre-monsoons and monsoons. The heavy rains during the monsoons, coupled with the hilly topography of the state leads to high surface runoff.

2.2 Surface Water

The predominant sources of water in Nagaland are surface water in rivers, streams, ponds and natural springs and subsurface water occurring as ground water. Nagaland has four main rivers, namely, Doyang, Dhansiri, Dhiku and Tizu. Of these, the first three flows towards west through Assam plains to join the mighty Brahmaputra, while Tizu river system flows towards the east and southeast and pours into the Irrawaddy in Myanmar. The Barak River also drains a small area, in Peren district, of Nagaland. The catchment area of Brahmaputra Basin in the state is 10,881 sq. km, which is 65.6% of the total geographical area leading to a total water yield of 14282 MCM. The catchment area of Barak Basin is 814 sq. km, which is around 4.9 % of the total area and has water yield of 738 MCM. The catchment area of Tizu Basin covers 4884 sq.km, which is 29.5% of the total area and has water yield of 4463 MCM.

2.3 Groundwater

Geologically the State is covered by rocks ranging in age from Pre-Cretaceous to Recent. The rock sequence comprises the geosynclinal facies, represented by the Disang Group, Barail Group, Surma Group, Tipam Group, Namsang Formation and the Dihing Group. Hydro-geologically, two distinct groups of rocks i.e. semi consolidated and valley fill deposits underlie the state where ground water occurs under water table to confined conditions. The water-bearing formations are identified as unconsolidated alluvial deposits, Upper Tertiary formations of Dihing and Tipam Groups and fractured zones of semi-consolidated & consolidated formations. Groundwater occurs both under water table and semi-confined to confined conditions. The major part of the State is covered by hilly terrains having more than 20% slope comprising of semi-consolidated/consolidated rocks and act primarily as run-off zone. The ground water resource potential of the State has been computed as 0.36 BCM as on 2009. For domestic utilisation, most of the populations depend upon spring water and the ground water draft for domestic use as such is meagre viz. 0.008 BCM. The water level varies from 1.4 meters to 16.4 meters bgl in valley areas and 2.2 meters to 54.5 meters bgl in hilly terrain.

3. EMERGING CONCERNS AND CHALLENGES

The present scenario of water resources and their fragmented management through a variety of institutions at the state level with overlapping mandates has given rise to several water related concerns and challenges that need immediate attention, most significant are as follows:-

- (i) Villages in Nagaland are located at the hilltops and their population has been increasing since their establishment. Once sufficient, the existing locally available water resources are unable to meet existing water demand in the villages for drinking and sanitation purposes. Additional sources of water supply in the villages therefore need to be augmented.
- (ii) The existing system of community water storage structure in the villages aimed at meeting domestic water requirements of the inhabitants need improvement for ensuring water quality, whereas quantity of water needs to be seen in the context of increasing potable water use in the villages.
- (iii) After the formation of state of Nagaland, water resource development has not received required attention and priority resulting in fragmented institutional framework and skewed water governance.
- (iv) Due to a wide temporal and spatial variation in availability of water, likely to exacerbate due to a number of variable factors including climate change impacts resulting in incidences of water related disasters such as loss of soil fertility, flash floods and river meandering, the water crisis in the state is likely to deepen.

- (v) Access to water for drinking and other domestic needs is an emerging challenge in many urban areas, towns and villages in the state. The potential for inter-village water transfer with the payment for ecosystem services mechanism needs exploration.
- (vi) The scenario of groundwater in Nagaland is rather oblique. Groundwater being part of hydrological cycle is sufficiently not addressed in the water resource planning in the state whereas instances of groundwater exploitation are increasing with an alarming rate.
- (vii) Development of water resources through multi-disciplinary approach involving all stakeholders through their local customary institutions for optimum utilization of available water resources, ensuring integrity of ecosystems and leading to the development of progressive regime on ecosystem services has not received adequate policy consideration in the past. The development of water resources projects in Nagaland needs to be done within the framework of community participation by involving village level institutions.
- (viii) Development of irrigation infrastructure is critical to ensuring food sustainability in the state.
- (ix) Natural water bodies, streams and springs that form core of natural water infrastructure in the state are being increasingly polluted. Springs that are the main source of drinking water supply are however protected by traditional institutional regime at the village level, which needs to be further strengthened with scientific inputs.
- (x) However, communities value water as per customs and sanctions, consciousness pertaining to existing water stress that is likely to result in water scarcity needs to be created at the Village Council level.
- (xi) Scientific capacity building of institutions for the integrated water resource management in the state needs to be undertaken on an urgent basis.
- (xii) Spring and stream mapping and characteristic of catchment areas, recharge zones and flood plains needs to be better understood towards planning for any likely change caused due to climatic variations and incidents of natural disasters.

4. OBJECTIVES

The overall objective of the Nagaland Water Policy is to create an integrated vision, policy and institutional framework. The framework that takes cognizance of existing water scenario in the state to outline policy initiatives and interventions as well as a plan of action that would aim at improving water resource planning and management in the state. In view of the concerns highlighted herein above, the

following broad water resources development and management objectives are conceived:

- (i) To ensure conservation, protection, safeguard restoration and rejuvenation of water resources in the state of Nagaland to optimize their utilization.
- (ii) To ensure fulfilment of basic right to water of present and future generations.
- (iii) To launch a statewide campaign to spread “*conservation consciousness*” and water sensitization through education, regulation, incentives and disincentives.
- (iv) Adoption of an integrated and multi-disciplinary approach to planning and implementation of water resources projects within the framework of community participatory eco-development model by involving traditional village institutions.
- (v) Development of all utilizable water resources including surface water, sub-surface water, groundwater and wastewater, to the maximum possible extent for food security, economic development and social well-being.
- (vi) Equitable and judicious allocation of all utilizable water resources with drinking water and domestic water use as the first priority.
- (vii) Maintenance of water quality at prevailing standards and reduction of water resources' pollution by urban sewage and industrial effluents.
- (viii) Mainstream basin and sub-basin level planning by notifying river basins and involving traditional and customary institutions in this process.
- (ix) Development of institutional capacity for promoting optimization and conjunctive use of available surface and ground water in the state through training and education. Creating scientific capacity for water and land use planning at the Village Council level including Village Land Use Committee.
- (x) Encouraging efforts to create infrastructure for water supplies in urban and rural areas and raise the level of reliability of water supplies by water resource exploitation.
- (xi) Development of robust infrastructure for flood protection, flood plain zoning, prevention of soil erosion and to mitigate and deal with impacts of river meandering. Use of existing traditional