

## CHAPTER –IV

### WATER RESOURCES, IRRIGATION AND FLOOD CONTROL

#### 4.1 INTEGRATED WATER RESOURCE MANAGEMENT PROGRAMME

4.1.1. There is an acute water shortage in many parts of the State during the dry season despite the State receiving the maximum rainfall in the world. Deterioration of the quality of water due to large scale mining of coal, limestone, etc. including deforestation is one of the major issues which will have to be tackled during the Twelfth Five Year Plan. The strategy for water sector involves around promoting Integrated Water Resource Management which in turn will seek to:-

- Encourage planning and management of natural water systems through a dynamic process.
- Balances competing uses of water through efficient allocation that addresses social values, cost effectiveness, and environmental benefits and costs;
- Requires the participation of all units of government and stakeholders in decision-making through a process of coordination and conflict resolution;
- Promotes water conservation, reuse, source protection, and supply development to enhance water quality and quantity; and
- Fosters public health, safety, and community goodwill.

4.1.2. During Annual Plan 2011-12, an amount of Rs. 2300.00 lakhs is anticipated to be utilized for Integrated Water Resources Management.

4.1.3. **The proposed outlay for the Twelfth Plan for this Programme is Rs. 13000.00 lakhs. During 2012-13, an allocation of Rs. 8000.00 lakhs has been proposed for this purpose.**

#### 4.2 MEDIUM IRRIGATION

4.2.1 The projected outlay for Medium Irrigation for the Eleventh Plan 2007-2012 is ` 1000.00 lakh. No expenditure has been incurred for this sector during the 11<sup>th</sup> Plan .The Tentative outlay for the year 2012-2013 which is the 1<sup>st</sup> year of the 12<sup>th</sup> Plan is ` 55.00 lakh,

4.2.2. The outlay and expenditure during the 11<sup>th</sup> Plan and the proposed outlay for the 12<sup>th</sup> Plan and Annual Plan 2012-13 is indicated in the table below:-

(` in lakhs)

Name of the scheme	Eleventh Plan (2007-2012) Projected Outlay	Actual Expenditure (2007-2011)	Annual Plan 2011-2012		12 <sup>th</sup> Plan Proposed Outlay	Tentative Outlay during 2012-2013
			Approved Outlay	Anticipated Expenditure		
Medium	1000.00	0.00	55.00	0.00	350	55.00

Irrigation						
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4.2.3 During the 8<sup>th</sup> Plan, the execution of Rongai Valley Medium Irrigation Project was taken up at an estimated cost of ` .1630.00lakhs. The project provides for construction of 10.50m high barrage across river Rongai and 34.177 Km length Canal. The work for construction of barrage is 95% completed. The work is now suspended.

The Working Group of the Planning Commission held on 05.02.09 had decided to abandon the Rongai Valley Medium Irrigation Project and all accounts of the Project are to be closed. The Working Group also suggested that for the residual payment, the State Govt. will set a committee which will work out the payment, and also explore the project use in terms of Drinking Water Supply, Food storage, Pisciculture and recreation.

Again, the Working Group of the Planning Commission which held on 19.05.2010 suggested that the outlay of Medium Irrigation have to be shifted to Minor Irrigation since the State Government decided to abandon the project.

The Govt. of Meghalaya has closed the project in its present form however, its desired that the assets already created have to be utilized.

### 4.3 MINOR IRRIGATION

4.3.1 The approved outlay during the Eleventh Plan (2007-2012) is ` 17172.00 lakhs which includes ` 4940.00 lakhs as Central Assistance for Accelerated Irrigation Benefit Programme (AIBP) with a target of 16500 Hectares to be brought under Irrigation.

4.3.2. During the 11<sup>th</sup> Plan period, 13297 hectares of agricultural land was brought under irrigation while 2273 hectares were covered through renovation and improvement of projects.

4.3.3. As against the identified ultimate irrigation potential of 2.18 lakh hectare in the State, the irrigation potential created up to the end of 2010-11 is about 34,768.57 hectares which is 15.95 % of the ultimate potential.

The year wise expenditure during the first four years of the 11<sup>th</sup> Plan is as indicated below:-

( ` . In lakh)		
SI No.	Year	Expenditure
1.	2007-08	1194.41
2.	2008-09	4077.69
3.	2009-10	4306.20
4.	2010-11	8704.00
	<b>Total</b>	<b>18282.30</b>

4.3.4 The approved outlay of ` 9655.00 lakh during 2011-12 is anticipated to be utilised in full. The anticipated expenditure includes ` 6500.00 lakh under AIBP. With this

investment, it is anticipated that 6527 hectares of agricultural land will be covered under irrigation.

4.3.5. The proposed outlay for the Twelfth Plan period is ` **76000.00 lakh** which includes ` 50000.00 lakh of Additional Central Assistance under A.I.B.P. and ` **3568.00 lakh of NABARD Loan.**

4.3.6. **The proposed outlay for Annual Plan 2012-13 is ` 10700.00 lakh** with a physical target of 5250 Hectares. The thrust areas during the 12<sup>th</sup> Plan period includes (i) increasing the area under irrigation to 30,000 hectares and (ii) construction of Jalkunds, Small Multipurpose Reservoirs and Water Harvesting structures which will be implemented in jhum cultivation areas, areas on the fringes of irrigation command and areas with no water sources.

4.3.7. The proposed outlay of ` 10700.00 lakh includes ` 7500.00 lakh for A.I.B.P., ` 850.00 lakhs of NABARD Loan, ` 150.00 lakh for Command Area activities under State Plan and ` 250.00 lakh for construction of office building of Chief Engineer, Water Resources.

#### **4.4 COMMAND AREA DEVELOPMENT**

4.4.1 As against the outlay of ` 500.00 lakhs for Command Area Development sector during the Eleventh Five Year Plan (2007-2012), an amount of ` 14.37 lakhs has been utilized during the first four years of the 11<sup>th</sup> Plan. An allocation of ` 55.00 lakh was provided for CAD during 2011-12 which is anticipated to be utilized in full.

4.4.2. A gap exists between the irrigation potential created and the potential utilized. This is due to various reasons like inadequate provision of field channels, necessity for land shaping / land leveling, etc. In order to bridge this gap, the State Government is implementing a Centrally Sponsored Scheme, viz. Command Area Development which is funded on 50:50 (Central share: State share) basis. The State Government is committed to meet the State's share of Centrally Sponsored Schemes, as far as possible, so as to leverage more funds that are available under such Centrally Sponsored Schemes.

4.4.3 The proposed outlay for this sector during the Twelfth Plan period is ` **350.00 lakh. During 2012-13, an amount of ` 100.00 lakhs is proposed for CAD.**

#### **4.5 FLOOD CONTROL**

4.5.1. Every year during monsoon, flood creates havoc especially in different parts of the state including Garo Hills, Khasi Hills, Jaintia Hills and Ri-Bhoi District. The flash flood damages the standing crops by inundating vast areas of paddy fields, snap road communication by washing away the road formation and semi permanent timber bridges. To restore the road communication, the State Government annually incurs heavy non-plan expenditure for repairing and restoration of the damaged roads and bridges. Permanent measures for protection of roads and bridges, paddy fields, cultivation lands and habitats are therefore necessary.

4.5.2 The approved outlay for Flood Control during the Eleventh Plan is ` 3300.00 lakh. An expenditure of ` 1257.81 lakh is anticipated to be incurred during the 11<sup>th</sup> Plan. The approved outlay for the year 2011-2012 is ` 275.00 lakh and the anticipated expenditure is ` 275.00 lakh. This will be utilized for on going schemes and also for a few new schemes. **The projected outlay for the Twelfth Five Year Plan is ` 2100.00 lakhs. Pending finalization of the Annual Plan 2012-13, the tentative budget of ` 310.00 lakh has been provided.**

4.5.3. The outlay and expenditure during the 11<sup>th</sup> Plan and the proposed outlay for the 12<sup>th</sup> Plan and Annual Plan 2012-13 is indicated in the table below:-

(` in lakhs)

Name of Scheme	11 <sup>th</sup> Plan Outlay.	Anticipated Expenditure (2007-2012)	Annual Plan 2011-12		12 <sup>th</sup> Plan Proposed Outlay	Annual Plan 2012-13 proposed Outlay
			Outlay	Anticipated Expenditure		
Flood Control including Flood Protection Works.	3300.00	1207.81	275.00	275.00	2100.00	310.00

4.5.4. The Physical targets and achievements during the 11<sup>th</sup> Plan Period and proposed target during the 12<sup>th</sup> Plan and Annual Plan 2012-13 is as indicated in the table below:-

Item	Unit	11 <sup>th</sup> Plan (2007-12)		12 <sup>th</sup> Plan Proposed Target	Annual Plan 2012-13 Proposed Target
		Target	Anticipated Expenditure		
Flood Control (including flood protection works).	Nos.	82	78	50	9

#### 4.5.4. Centrally Sponsored Schemes: -

The Ministry of Water Resources under the Flood Management Programme sanctioned 2(two) nos. of schemes at a total cost of ` 820.39 Lakhs during the 11<sup>th</sup> Plan Period and the works have already been completed. The total Fund released by the Ministry of Water Resources upto March, 2011 is ` 644.92 Lakhs. The expenditure up to 30.06.2011 is ` 732.18 Lakhs. The pattern of funding is 90:10 (Central Share: State Share).

## 4.6 REPAIR, RENOVATION AND RESTORATION OF WATER BODIES

4.6.1 The Ministry of Water Resources, Government of India has launched the scheme of Repair, Renovation and Restoration (RRR) of Water Bodies as a State Sector scheme.

4.6.2 The main objectives of the scheme are:

- (i) Comprehensive improvement of selected tank systems including restoration.
- (ii) Improvement of catchment areas of tank.
- (iii) Community participation and self-supporting system for sustainable management for water bodies covered by the programme.
- (iv) Ground Water Recharge.
- (v) CapacityBuilding of communities, user groups standing committee for Panchayats and State Government/Central Government Agencies concerned with the planning, implementation and monitoring of the project.
- (vi) Increase in storage capacity of water bodies.
- (vii) Improvement in agriculture/horticulture productivity and increase in recharge of ground water in downstream areas of water bodies.
- (viii) Environmental benefits through improved water use efficiency; irrigation benefits through restoration of water bodies, supplementation of the groundwater use and promotion of conjunctive use of surface and ground water.
- (ix) Development of tourism, cultural activities, etc.
- (x) Increased availability of drinking water.

4.6.3 During 2011-12, ` 500.00 lakh is anticipated to be utilized for this programme. During the Twelfth Plan period, the proposed outlay for this sector is ` **7000.00 lakh. A provision of ` 560.00 lakh is proposed for this programme during 2012-13.**

## **4.7. WATER HARVESTING**

4.7.1. Water is a key component for the successful implementation of the State flagship programme, the Integrated Basin Development and Livelihood Promotion Programme. In this connection, the State Government has set up the Meghalaya State Water Resources Agency which will ensure the protection and conservation of the water sources as well the recharge of ground water, etc.

4.7.2. A provision of ` 5000.00 lakh is proposed for construction and maintenance of water harvesting structures during the Twelfth Plan period.