

Water Resources Management



Government of Tripura

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Water Management in Tripura

A. Introduction

Tripura is a part of Himalayan Ecosystem. Climate change impact on this fragile ecosystem has its fallout in Tripura as well. The likely consequences of climate change on the water front in Tripura are (i) decrease in total annual rainfall, (ii) change in rainfall pattern resulting in crop failure for not getting the rain when required and (iii) sudden bursts of rain over a small period of time which may cause floods. Urgent action is required on the fronts of (i) rainfall monitoring, (ii) river conservation (iii) restoration of water bodies (iv) use of ground water and (v) proper drainage system. The challenge of river conservation needs to be addressed at basin level from source to end with institutional arrangements of judicious governance being in place at the level of settlement, watershed, aquifers and river basin.

B. Forest

B.1. Background

Tripura has 6294.29 sq km of recorded forest area, and the overall forest cover of the State is 74.49% as per State of Forest Report 2015. The State has 0.32% of the total geographical area of the country and 1.2% of the total forest cover of the country. The State is extremely rich in bio-diversity with 379 species of trees, 320 shrubs, 581 herbs, 165 climbers, 16 climbing shrubs, 35 ferns, 45 epiphytes and 4 parasites identified so far. There are 24 species of orchids and 266 species of medicinal plants found in the State. Maximum value of Plant-Diversity Index reported is 5.23, which generally ranges from 3-4, indicating a uniform presence of a variety of species. There are 90 mammal species in Tripura from 65 genera and 10 orders. Seven primate species have been documented in Tripura out of a total 15 found in India. Of these primates, slow loris and stumped tailed macaques have become rare. Spectacled monkey has a very restricted distribution in India, and is found in Tripura. Birds comprise 342 reported species in the State, of which about 58 are migratory species.

Forestry administrative boundaries have been recently re-arranged to make them coterminous with revenue administration and RD Blocks with the aim of bringing the forestry administration closer to the people. There are now 8 Forests Districts, 17 Forest Sub-divisions, 4 functional Forest Divisions, 59 Ranges and 283 Beats. The State has 4 Wildlife Sanctuaries and 2 National Parks. The present arrangement has proved to be very effective.

B.2. Forest Management

B.2.1. Afforestation

Besides the normal afforestation activities, roadside and river bank plantations are also taken up regularly every year. During 2016-17, a total of 488 km roadside plantation, 292 km riverbank

plantation and 51 km of railway embankment plantation were carried out with tall polybag saplings and effective plant guards under various Sub-divisions in convergence with MGNREGA. Survival reported so far has been very impressive due to regular and special care taken by the local staff and awareness of citizens. To create further awareness, and to achieve greater involvement of people especially school children in planting and protecting trees, every year Vanamahotsavas are held at various levels including the State level Vanamahotsava attended by Chief Minister.

B.2.2. Forest Protection

The State has 19 forest units deployed at strategic locations to carry out round the clock protection duty and detect forest offences leading to arrest of offenders and seizure of timber and vehicles used for illegal transport of timber.

B.2.3. Participatory Forest Management

Tripura has been one of the pioneering States to implement participatory forest management in the country. Joint Forest Management (JFM), as it is called, started in Tripura in the year 1991 with notification of Government Resolution which was later revised in 2001. As on date, there are more than 2.67 lakh families residing in and around forests are members of more than 1000 JFM Committees and are actively involved in management of forest in partnership with Forest Deptt. They are entitled to share usufruct as per the State JFM guidelines. These JFMCs have emerged as specialized institutions at the grass root level in close coordination with PRI bodies. These grass root level organizations have become an essential feature of most programmes of the Department.

B.2.4. Management of Forest Rights vested land

Tripura has been the pioneering State to implement Forest Rights Act for the scheduled and other traditional forest dwellers. Under the Act, forest rights have been recognized over a total amount of forest land of 1.76 lakh ha, and forest right pattas have been awarded to 1.25 lakh traditional forest dwellers under the Act. Various assistances in convergence mode are being provided to these beneficiaries for creation of productive land based assets.

B.3. Success in implementation of Externally-Aided Projects:

Tripura has successfully implemented two Externally Aided Projects in the forestry, livelihood and natural resources sector.

B.3.1. Tripura Japan International Cooperation Agency (JICA) Project

It was launched in 2007-08 and the project in ending in 2017-18. The project has been implemented mainly through 417 JFMCs, 30 EDCs and 16 re-grouped villages with a total budget outlay of Rs 365 crore spread over 10 years. The project has fully achieved its target. A total of 62,527 ha of afforestation have been carried out and 2523 soil conservation structures have been created for environmental improvement. For enhancement of livelihood, 1541 SHGs were created and 90485

persons were provided skill other trainings. A number of successful agro-forestry models has emerged from implementation of the project, which may be replicated in future. Total water area 1452 ha has been created in the check dams in forest areas, thus creating an annual fishery production potential of 2802 MT. A number of NTFP value addition models have also been developed especially in broom grass, bamboo and other non-timber forest produce.

B.3.2. Indo-German Development Corporation (IGDC) Project

Under Indo-German Development Corporation (IGDC) Project, started in the year 2009-10 with a budget outlay of Rs.87.20 crore, a total of 9198 ha of new plantations has been created and re-stocking of 1411 ha plantations has been carried out, besides other significant interventions in the livelihood sector. The project is implemented through Village Development Planning and Implementation Committees of Village Councils in 70 tribal villages.

B.4. A Case for Conservation and development of River catchment for sustainable management of Water Resources- JICA Phase-II Project (Japan Official Development Loan (ODA):

JICA Phase-II Project focuses on the unique strengths of the State, favourable social atmosphere and experience gained in implementation externally aided projects to create assets and jobs through massive drive for improvement of quality of forest cover in the forest area of the catchments of the 11 major rivers, streamside filter strip development, site specific soil and moisture conservation works tested and perfected in the State, bio-diversity conservations, NTFP-based livelihood development, sustainable management of RoFR areas, an enabling infrastructure and capacity building for improved delivery, capacity and boosting up eco-tourism through development of infrastructure and study of forest hydrology of the State. An outlay of Rs. 1150 crore has been proposed for implementation of the Project over a period of 8 years commencing from 2017-25 to be implemented mainly by State Forest Department. State Finance Department has approved an outlay of Rs 800 crore for the Proposed Project.

B.4.1. Objective of the Project

The overall objective of the Project is to enhance the quality of forest cover in the catchments of major rivers of the State through afforestation, soil and moisture conservation and development of sustainable livelihood, thereby improving ecology and environment and economic upliftment of local people. The following shall be the Project objectives:

- (i) To improve the quality of forest cover including enhancement of biodiversity in the river catchments by afforestation activities to accelerate transition of open and degraded forests in the catchment into moderately dense category.
- (ii) To address the economic vulnerability of forest dependent people especially jhumias as a result of climate change by providing sustainable alternative livelihoods and gradually

engaging them in settled cultivation and other income generating activities including eco-tourism services.

- (iii) To strengthen the participatory institutions such as joint forest management institutions for sustainable forest management and enable them to take up entrepreneurship and climb to the next level of skill.
- (iv) To reduce soil loss in the catchment forests by taking up site-appropriate soil and moisture conservation measures, develop appropriate forest hydrological models and compilation of best practices in streamside management to reduce sedimentation of river beds

B.4.2. Action Plan of the Project:

Under the proposed Phase-II Project, among major benefits, forest cover will be enriched over a total area of 42,000 ha of open and degraded forests. Vegetation cover will be created and maintained over an area of the filter strips equivalent to 25,600 ha. NTFP plantations will be created over an additional area of 10,500 ha. 20,000 ha of RoFR land and jhum land will be brought under plantation and other management. This will enable carbon sequestration as a means of climate change adaptation. Sedimentation of river beds will reduce significantly. The Project is expected to generate at least 2.44 crore (24.4 million) mandays through plantation and other activities. Creation of 4,760 ha water area in 2380 check dams will provide opportunities for improved moisture leading to better vegetation growth, round the year availability of water for irrigation and pisciculture, duckery, poultry, etc providing direct income support to 11,900 families. Around 13,000 families will be weaned away from harmful practice of Jhum thereby providing rest to abandoned jhum patches. This will lead to enrichment of biodiversity. Better availability of NTFPs will be over an area of 10,500 ha of forests at the end of the project period. 3,000 families will be covered under 12 clusters of NTFP value addition and other forest-based enterprises. Enhanced revenue through Eco-tourism in wilderness camps, protected areas, Eco-Parks and new Eco-tourism destinations and adventure sports activities will be through aggressive promotional activities and capacity building. Capacity building and exposure trip for 42,000 persons will be an enabling factor enhancing the motivation level and remove the entry barriers.

B.4.3. Concluding remarks:

Considerable investment is required in forestry sector- for afforestation, sustainable management of RoFR lands, soil & moisture conservation and rehabilitation of shifting cultivators- which alone would create conditions for flood mitigation, groundwater recharge, etc.

Water Resource Department

C. Irrigation

Total geographical area of Tripura is 10, 49,169.00 ha. and the cultivable area is 2,55,241 ha. Out of that 1,15, 845 ha. of agricultural land could be brought under irrigation as on 31st March, 2017. The area brought under irrigation is estimated as 45.39% of total cultivable land. In order to bring more area under irrigation the department have planned to cover another 29642.00 ha. by the next 5(five) years, i.e. 2017-2018 to 2021-2022 by constructing 18 LI, 2 HPLI, 420 DTW, 7 Diversion, 128 Pick-up-Weir and 75 MI Storage schemes.

The Status of the existing Irrigation schemes in the State is:

1. Medium Irrigation Projects	: 3
2. Lift irrigation Schemes	: 1592
3. High Power Lift irrigation Schemes	: 7
4. Deep Tube Well Schemes	: 257.
5. Diversion Schemes	: 47
6. Low height Pick-up weir	: 4

C.1. Vision (2017-2022)

- To provide irrigation to 60% area of cultivable land.
- To make self sufficient in agricultural product by providing assured irrigation.
- To save property from soil erosion of rivers and streams.

C.1.2. Mission

- To expand irrigation facility of different corps.
- To ensure sustainable irrigation facility to the remaining irrigable area.
- To ensure safety to the people by anti-erosion works and embankments.

C.1.3. Objective:

- To bring balance irrigable area under assured irrigation.
- To facilitate fulfillment of crop water requirement by the conjunctive use of rain water, surface water and ground water.
- To store rain water at sustainable locations for the purpose of irrigation, recharge of ground water and to minimize inundation by floods.
- Transfer of minor irrigation scheme to the PRI bodies for management operation and maintenance.
- To provide bank revetment structures in all major rivers and its tributaries.

C.1.4. Schemes

- AIBP Medium & Minor Irrigation
- PMKSY (Hor Khet ko Pani)
- NABARD Loan (RIDF)
- Special Development Scheme (State resource)
- Special Central Assistance (through the fund of NITI Aayog) in TTAADC areas

C.1.5. Constraints

The state of Tripura have 3(three) Medium Irrigation Projects out of which 2(two) projects, namely Gomati Medium Irrigation Project and Khowai Medium Irrigation Project have been completed leaving some residual works of field channel. These two projects are suffering badly during the last few years from fund constrain. The sanctioned balanced fund under Accelerated Irrigation Benefits Programme (AIBP) of Rs. 4.763 crore for Khowai Medium Irrigation Project and Rs. 6.06 crore for Gomati Medium Irrigation Project has not yet been released by Government of India. 1221 Nos. of Minor Irrigation schemes have been considered for funding under AIBP. Except 25 Minor Irrigation. schemes and 4 Diversion schemes all other schemes have already been completed. These incomplete 29 Minor Irrigation schemes are suffering from acute shortage of fund due to non release of sanctioned balanced fund of Rs. 39.37131 crore under AIBP.

As the Irrigation development in relation to dry month's surface discharge available is nearing optimum, there is minimum scope of further utilization of surface flow for increasing irrigation coverage. Future emphasis would be on the storage of rain water and deep tube wells.

Water Resource Department has planned to bring around 29,642 ha. of more area under irrigation in the next 5 (five) years by constructing 18 LI schemes, 2 High Power L.I. schemes, 420 DTW schemes, 7 Diversion schemes, 75 MI storage schemes, 128 Pick-up Weirs and by extension of distribution system of old schemes

C.2. Flood Control (2017-22)

C.2.1 Back Ground

High precipitation in rainy season often causes floods while meandering nature of rivers cause bank erosion. So far PWD (WR) has constructed 154.41 Km of embankment and 98.00 Km of anti erosion works as on 31.03.2017 to protect 28000 ha. of land from flood submergence and secure important towns, habitations, public utilities and important agricultural land from river erosion respectively. The State Government has planned to construct around 150.00km. of bank revetment works among 831 rivers and streams in different parts of Tripura during the next 5 (five).

C.5.2. Schemes

- National Hydrology project (CASP/Central Sector)

- River management activities & works related to Border Areas
- Rationalization of Minor Irrigation statistics

C.5.3 Constraints

3(three) numbers projects under Flood Management Programme (FMP) in XII Plan (2012-2017) period were sanctioned for taking up protection work in all the vulnerable locations of 3(three) rivers of Tripura namely, **Howrah, Gomati and Khowai for Rs. 42.9565 crore, Rs. 54.9958 crore and Rs. 91.0261 crore respectively.** In anticipation of release of first installment of Central Share the state Government started implementing those projects, but it could not proceed further due to non release of Central Share and consequently compelled to discontinue. The recent flood would not have damaged so much of properties, if those protection works could have been done in time. It is apprehended that if such devastating flood recurs in future situation will become unmanageable.

Implementation of the above 3 (three) numbers very important Flood Management Projects have now become essential, specially after those devastating several floods in the State of Tripura during the month of June to October, 2017. The State Government is unable to implement those projects if Central Share of sanctioned fund is not released by the Government of India.

D. Hydel Power

D.1. Hydel Project on Gomati river

D.1.1. Background

There is a small Hydel power station in south Tripura named Gumati Hydel project having only 3 x 5 MW capacities.

D.1.2. Present Status

Gumati HE Project was installed in 1976 and is over 41 years old & out of installed capacity of 3x5 MW , the station can generate only 6 MW at present due to following constraints.

- Non-operation of Governor, Excitation System, Turbine Control in Auto Mode.
- Erosion of Under Water Guide Apparatus, Sheer Pin Contacts, Spiral Casing and Sealing Arrangements.
- Hydrological Constraints
- Restriction in Flow of Water in Channel From Reservoir to Turbine.
- Lack of OEM spares support (being obsolete).

In view of above a DPR has been submitted in September 2015 to the Ministry of DONER, Government of India for sanction of fund for Renovation and Modernization & Life Extension of Gumti Hydel Project for availing loan from JICA-Official Development Assistance (ODA).

Synopsis of R & M of Gumti HE Project is as follows:

- i. Project Cost: **Rs. 109.60 Crore**
- ii. Per Unit cost of Generation of Gumti HE Project after R & M for life Extn. **Rs.1.12 per unit.**

Proposal Status:

The DPR is presently under examination by Central Electricity Authority ,Hydro Engineering and Renovation & Modernization(HE & RM) Division, New Delhi for technical clearance. All queries of CEA on the DPR have been attended.

D.2. Maharani Micro-Hydel Project

Installed Capacity: 2x500 KW (1MW)

D.2.1. Background:

The Units were installed in 1986-87 by FLOVEN INDIA LIMITED. The power plant was out of generation since 1997 due high vibration, and problems in water conducting systems. Revival of the project requires a detail feasibility study and technical analysis from expert agencies.

D.2.2. Objective of the project

Since commissioning of the project there were problems like abnormal vibration including hunting of the machines apart from silt entering the turbine from tail pool. As the tailrace water is released through siphoning action to the downstream pier of the Barrage, probably there was a back pressure which had caused abnormal behaviour of the turbine. Subsequently unit # 2 was out of service due to failure of turbine guide bearing from Dec, 1989 followed by unit # 1 from April, 1997 due to abnormal vibration of the turbine. The scheme is irrigation cum power generation project designed to run during lean period from September to February by closing gates of the barrage thereby creating a small head for operation of the hydro turbine. After revival of the project, additional 1 MW of cheapest power will be available and will be benefited by the people of Maharani and its surrounding areas as well as the people of Tripura.

E. Waterways

E.1. Inland water Transport on Gomati river and Howrah river

E.1.1. Background

- The Gomati-Meghna system and the usage of Ashuganj port Bangladesh and water linkage from Haldia and other ports of mainland are being considered for connectivity tying up with various Bodies associated with such movements.
- Ministry of Shipping (MoS) has been requested to include the Gumti-Sonamura-Meghna-Haldia IWT route in the India Bangladesh. Protocol of Inland Water Transit & Trade (PIWTT) on **23.06.2016**
- State Govt. has also requested the Ministry of Shipping on **4th May, 2017** for arranging inclusion of Maharani-Sonamura-Daudkandi river route in the protocol of Inland Water Transit & Trade (PIWTT) with Bangladesh. In turn, it has been informed by the Ministry that

the proposal for inclusion of Maharani-Sonamura-Daudkandi river route connecting Gumti river in Tripura to Meghna river system in Bangladesh in the Protocol on Inland Water Transit & trade (PIWTT) between India and Bangladesh may be taken up after the completion of Gumti project.

- On 17.07.2017, Ministry of Shipping has also been requested by the State Govt. to declare Gumti Inland Waterway as National Water way

E.1.2. Current Status

State Govt. has submitted 2(two) DPRs for development of Inland water Transport on Gomati river and Howrah river with a view to setting up linkage with Meghna river in Bangladesh at an estimated cost of Rs. 12,58,78,300 /- & Rs. 11,19,15,000/- respectively to the Ministry of Shipping, GOI for sanction under Central Sector Scheme.

The DPR in its present form may not be suitable to implement the project. There may be a need to recast the project to include outsourcing of dredging operations rather than procurement of Dredger and taking up in house. Land acquisition cost also needs to be brought in the DPR. Accordingly, General Manager, RITES Ltd. Gurgaon has been requested to recast the DPR or prepare a fresh DPR. This has also been informed to Advisor, Ministry of Shipping on 14th March 2017 requesting IWAI officials to come Tripura and intervene in the matter for a solution. The State Government has also brought the issue to the Chief Engineer, IWAI, Ministry of Shipping on 17th May 2017 about the issue to recast the DPR by RITES. It was requested to coordinate the issue with RITES and to visit Tripura for resolving the issue in a holistic manner.

E.1.3. Issue

Response from RITES Ltd, Gurgaon, and Ministry of Shipping has not been received.

Projects pending with Government of India

Sector	Name of Projects	Cost (Rs. in crores)
Forest Sector	Conservation and development of River catchment for sustainable management of Water Resources under JICA (Japan Official Development Assistance (ODA)).	1150.00
Flood Management	Anti-erosion work along bank of river Khowai for protection of vulnerable location from Netajinagar to Banglahour under Teliamura sub-division and from South L.N.Pur to Paharmura Bridge under Khowai sub-division	91.03
	Anti-erosion work along bank of Gumti for protection of vulnerable location from Dalak Samatal Para to Durgapur under Amarpur, Udiapur and Sonamura sub-divisions	54.99
	Anti-erosion work along bank of Haora for protection of vulnerable location from Champaknagar to Baldakhal under Sadar Sub-division, West Tripura	42.96
	Note: All 3 projects under FM were sanctioned by the then Planning Commission (Water Resource Division) on 14 th February 2014	
Power	Renovation and Modernization & Life Extension of Gumti Hydel Project for availing loan from JICA (Japan Official Development Assistance (ODA)).	109.60
	Total	1448.58

Balance Fund not released for projects

Sector	Name of Projects	Balance Fund (Rs. in crores)
Irrigation	Khowai Medium Irrigation Project	4.76
	Gomati Medium Irrigation Project	6.06
	29 Minor Irrigation schemes	39.37
	Total	50.19

Rivers in Tripura

SI No	Name of River	Origin of flow	Approx length in km	Catchment area (ha)	No of tributaries	Total length of tributaries (km)
1	Longai	Jampui Hill,	98	24,136	12	157.08
2	Deo	Jampui Hill	98	94,722	38	508.39
3	Manu	Sakhan range	167	1,27,612	45	594.81
4	Juri	Jampui Hill	79	46,873	20	265.42
5	Dhalai	Longtharai range	117	60,867	32	351.06
6	Khowai	Longtharai range	70	1,34,341	50	771.49
7	Howrah	Baramura range	53	65,474	30	331.32
8	Burima		51	52,662	18	184.68
9	Gomati	Longtharai and Atharamura	135	2,41,424	99	1192.96
10	Muhuri	Deotamura range	64	97,496	35	357.49
11	Fenny	Asalong	44	55,017	20	294.94
	Total		976	10,00,625	399	4959.43

Flow Characteristics of Rivers

SI No	Name of River	Annual flow (in thousand cubic meter)	% of flow of total flow
1	Longai	9166	1.18
2	Deo	42261	5.42
3	Manu	127773	16.40
4	Juri	15709	2.02
5	Dhalai	42778	5.49
6	Khowai	115854	14.87
7	Howrah	36032	4.62

8	Burima	13428	1.72
9	Gomati	249399	32.01
10	Muhuri	76247	9.79
11	Fenny	50433	6.47
	Total	779080	100.00

Catchment wise breakup of the open forest area

Sl No	Catchment	Total Forest Area (ha)	Open Forest Area (ha)
1	Longai	23,194	5,179
2	Deo	84,003	10,690
3	Manu	1,01,433	13,166
4	Juri	35,317	5,866
5	Dhalai	44,558	5,753
6	Khowai	1,06,241	9,816
7	Howrah	39,091	10,515
8	Burima	52,662	5,817
9	Gomati	1,87,739	18,458
10	Muhuri	56,920	11,024
11	Fenny	44,425	7,170
	Total	7,75,582	1,03,454

Project Components of Conservation and development of River catchment for sustainable management of Water Resources

Sl No	Intervention	Unit	Total	
			Physical (units)	Financial (Rs lakh)
1	Improving the quality of forest cover & conservation of Biodiversity in the upper catchments			18375.00
1.1	Management of Teak coppice area	ha	14000	4200.00
1.2	Restocking older plantations/ gap planting /ANR	ha	17500	7875.00
1.3	Closure by fencing for enriching biodiversity in blocks of atleast 20 ha each	No of Blocks	525	6300.00
2	Filter strip development on the streamside (2x 50 ft wide strip)			8400.00
2.1	Development of vegetative cover	km	8400	5040.00
2.2	Vegetative fencing	km	8400	3360.00
3	Soil & Moisture Conservation through engineering/ vegetative structures			18795.00
3.1	Check dams (Model I)	Nos	105	2520.00
3.2	Check dams (Model II)	Nos	700	7000.00
3.3	Check dams (Model III)	Nos	525	2625.00
3.4	Earthen checkdams	Nos	1050	2625.00

3.5	Brushwood checkdams & other minor structures	Nos	1400	700.00
3.6	Gully plugging	Nos	700	2100.00
3.7	Staggered trenches (in contours) for planting in hill tops and steep slopes	ha	4900	1225.00
4	NTFP Development & Livelihood Opportunities			7500.00
4.1	Plantation of NTFP species	ha	10500	6300.00
4.2	Cluster-based livelihood activities including NTFP value addition	No of clusters	12	1200.00
5	QPM Development			2750.00
5.1	Revival/ creation of central nurseries	No	10	500.00
5.2	Decentralized People's Nursery	lakh No.	150	2250.00
6	Landscape-based Ecotourism Activities			16825.00
6.1	Creation of wilderness camp grounds/ cottages	No	60	2400.00
6.2	Development of infrastructure in existing eco-parks in Protected Areas	No	10	1000.00
6.3	Training & capacity building for ecotourism	No	500	625.00
6.4	Establishment of ethno-botanic & Biodiversity Park at Agartala	No	0	2000.00
6.5	Development of new ecotourism sites at identified locations	No	5	2500.00
6.6	Development of housing & other modern amenities by host households	No	60	2400.00
6.7	Development of a comprehensive landscape-based Ecotourism/ Travel Circuits	LS	0	500.00
6.8	PPP for development of adventure tourism in consonance with Eco-tourism (Govt equity of 49%)	LS	0	5000.00
6.9	Self-employment through Eco-tourism	LS	0	400.00
7	Sustainable management of RoFR areas in catchments			20100.00
7.1	Village-wise sustainability Plan including awareness creation (IGDC Model) for convergence	No of villages	200	100.00
7.2	Project-based support for agro/ horti-forestry, animal husbandry & other activities	ha	20000	20000.00
8	Enabling infrastructure			9200.00
8.1	Geo-ICT and consultancy		0	1000.00
8.2	Communication & mobility		0	800.00
8.3	Staff quarters/ Building		0	2000.00
8.4	Infrastructure for strengthening JFMCs	No of JFMC	900	5400.00
9	Capacity building & exposure trips			5275.00
9.1	Vocational skill development & entrepreneurship training	No of persons	20000	1600.00
9.2	Distribution of tools & equipments	No of persons	20000	3000.00
9.3	Domestic exposure visits	No of persons	2000	500.00
9.4	Foreign exposure visits and compilation of best practices	No of persons	50	175.00
10	Creation of Landscape Development Authority of Tripura			300.00
11	Total (1 to 10)			107520.00
12	Monitoring & evaluation (2%)			2150.40
13	Overheads & Contingencies (5%)			5376.00
	Grand Total (10 to 12)			115046.40