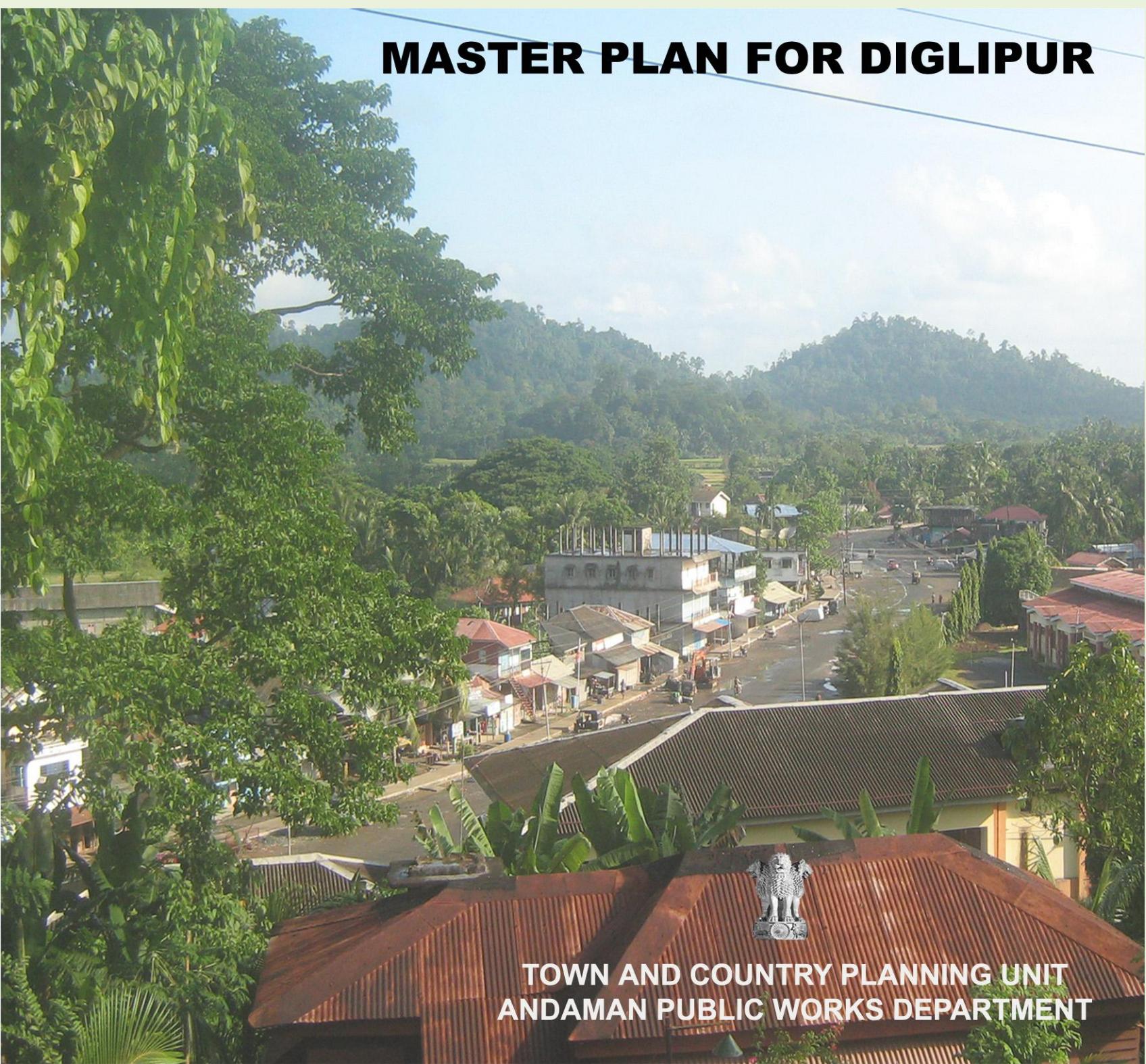


MASTER PLAN FOR DIGLIPUR



**DELINERATION
AND
CONCEPT**



**TOWN AND COUNTRY PLANNING UNIT
ANDAMAN PUBLIC WORKS DEPARTMENT**

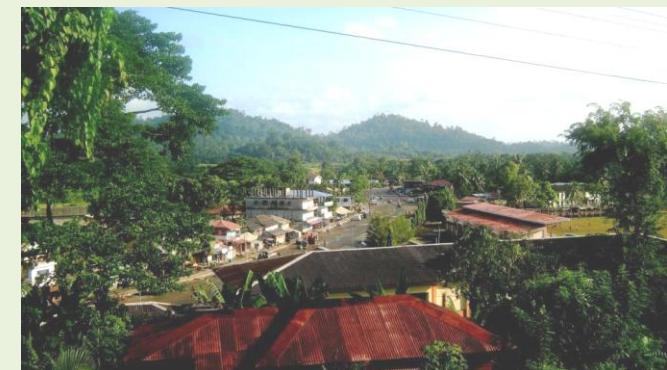
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1.0 DIGLIPUR IN BRIEF

Diglipur is the tehsil headquarter settlement in the Middle & North Andaman District of the Union Territory (UT) of Andaman & Nicobar. Located at a distance of 290 km., north of Port Blair, the headquarter town of the UT, it is one of the earliest settlements in the Andaman & Nicobar group of islands. This settlement was first established at Chatham Island in Andaman, and then shifted to Diglipur but had to be abandoned due to inhospitable climate and sickness in 1796. The population growth of 80 % during 1991-2001 at Diglipur tehsil is incomparable even with the most urbanised tehsil of Port Blair, which showed a growth of little less than 30 % during the same period. The population of Diglipur tehsil is 42,877 as per the 2001 census. This tehsil accounts for 14 % of the population of the Andaman Islands. Illiteracy rate among the tehsils in Andaman Islands is highest at Diglipur. About 43 % of the population are illiterates, and the gender gap between the male and female literacy is also highest here standing at 14 % as of 2001. The sex ratio of 896 (2001) at Diglipur is the highest among the tehsils in Andaman Islands. Nearly 70 % of the workers at Diglipur are involved in agricultural activities, which is the highest for any tehsil in the Union Territory of Andaman & Nicobar.

Farmers were encouraged to settle in Andamans by providing allotments of 5 acres of hilly land and 5 acres of paddy land to each family from 1942. South, Middle and North Andamans were opened up for settlement by the refugees from erstwhile East Pakistan in the 1950s. Majority of the settlement in the Diglipur area took place during this period between 1955-59.

Diglipur also provides rich experience for the tourists. In Andaman tourism, Diglipur offers a special place for those who wish to enjoy the nature in its serenity. Opportunity to enjoy the natural beauties and discover the underwater life is abundant. The Water Sports Centre is present here. There are number of tourists' locations in and around Diglipur. Diglipur is one among the famous places for eco-tourism in the islands. The flora and fauna, bird varieties, and the pristine beaches provide fascinating experience for the tourists. The tallest peak (732 m) of the Andaman, Saddle Peak is located close by. Other important attractions around Diglipur are Ross & Smith islands, Rampur beach and Kalipur beach.



2.0 MASTER PLAN FOR DIGLIPUR

The surge in population growth in Diglipur and its environs create implications over the social, economical and physical environments which are complex in nature. The various departments of the administration and the local governments have initiated several development initiatives in the past and the present within their scope and perspectives. However, the issues need to be addressed are interrelated in nature and in many case merit spatial connotation. Therefore, a systematic and comprehensive planning approach is required to resolve the current issues and promote a sustainable development in the environmentally sensitive areas of the island. Taking cognizance of this, the Town & Country Planning Unit of the Andaman Public Works Department has taken the initiative of preparing a 'Master Plan' for the planned development of Diglipur & its environs.

In general, preparation of Master Plan will be an attempt to understand the developmental issues in its present form, and propose appropriate strategies which can take care of the present needs and future requirements. The Master Plan is a perspective plan with 20 year time horizon, identifying critical infrastructure for development, deriving a plan for provision of basic amenities & utilities and also the rules & regulation for physical development. Thus, the Master Plan for Diglipur and its environs in general will be regulating developments both in terms of control and promote. Master Plan will lay down the space requirements for the coming years and judiciously allocate the land for the use of various purposes such as residential, commercial, public/semi-public etc.. It will also propose for the road network required at the macro level for an efficient & comfortable movement of people and commodities in the Diglipur region.

The scope of the Master Plan cuts across all sectors and ultimately it aims to improve the quality of life of the residents, through all round development in every sphere of life, which is more durable and sustainable in the long run.

Identification of critical issues confronting the development of Diglipur and its environs is the preliminary task undertaken following the decision to prepare Master Plan for Diglipur and its environs. The public / official consultation

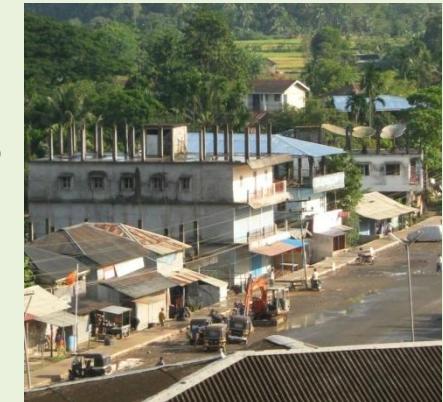


meetings helped in the process and the development issues identified along with the potentials of the settlements and the people formed the basis for setting up the objectives for the Master Plan.

3.0 DEVELOPMENT ISSUES

Neither the development prospects nor the bottlenecks confine to the administrative boundaries of the town. The life and the function of the people extend beyond the settlements and generally guided by the requirements and aspirations. Further, effective and efficient management of developmental issues require a broad based approach in terms of space and scope. In order to deliver such an opportunity in the exercise of Master Plan preparation for Diglipur, an analysis of the demographic and settlement characteristics of 19 revenue villages (Map No.1) spread contiguously from Diglipur is analysed and the following development issues are noted.

A major constraint in development of Diglipur and its environs is the location. Discontinuity in land form and challenges in topography extends the travel time. It requires about 10 to 12 hours of travel by road to cover the distance of 290 km., from Port Blair which includes crossing over of the straits at two locations. Terrain, public transport system and weather conditions do not help in anyway improving the comfort of journey to the commuters. The alternative form of transport by sea is not so reliable and does not serve well in reducing the travel time. The other issues posing challenges for development are mentioned hereunder.



Diglipur and its environs are bestowed with ample opportunities for development of the tourism sector, which can substantially boost the economy in the region. Absolute lack of infrastructure acts as a deterrent for the tourists. Apart from infrastructure, the image of the town and the surroundings are required to be improved upon through conscious attempts leading towards improvements in aesthetics and order in development. Actions in this regard at present are minimum and even the sporadic attempts like widening of roads, have been confined to the limits of Diglipur only.

There are several locations of tourists' interest in and around Diglipur. The arrival of tourists to these places has been limited in view of accessibility constraints to Diglipur and the tourists' locations apart from inadequacies in tourism infrastructure. For instance, the



condition of the road connectivity is unsatisfactory even to Saddle Peak, the important and unique tourist location in the islands in terms of its altitude.

One of the important economic activities in the environs of Diglipur is fishing. In fact, the population supported through fishing livelihoods is the highest in this part of the Islands. More than 3000 population is directly benefited through fishing activities. However, this sector is not flourishing well, as the domestic market is very limited and not adequate infrastructure for processing and export of the catch.

Diglipur environs are rich in agriculture, serving as a ‘rice bowl’ for the entire islands. The natural features such as topography, soil fertility and water availability strongly help the agriculture practice, though the support facilities for intensification and extensification of agriculture are generally inadequate. Also, the economic optimization of agriculture has not been achieved due to lack of storage and marketing strategies.

Another constraint for development is the vulnerability of the settlements in the region to the natural disasters like Earthquake, Tsunami, Cyclone, etc.. The Andaman & Nicobar Islands have been regarded as one of the most active seismic regions in India. They are placed in most severe seismic zone V of the Indian Seismic Zone map. On 14 September 2002 earthquake struck the Northern Andaman Island region of the Andaman & Nicobar Islands. The maximum intensity of shaking was observed in Shibpur, Aerial Bay jetty and Keralapuram in the neighbourhood of Diglipur town. The fear of disasters discourages the tourists and prevents capital investments from the private sector. During the years 2006 & 2007 alone 62 earthquakes of varying intensities have threatened the settlements in the Andaman group of islands.



Inter and Intra village linkages play an important role in balanced and uniform development of the settlements. The physical connectivity between the revenue villages and from villages to the higher order service towns are absolute essentialities for economic growth. Diglipur and its environs is found to be poor in this regard. Khudirampur, Ravindrapally, Krishnapuri and Deshbandhugram are the

revenue villages, which do not have access to any major road. Also the existing roads in all villages are in poor condition. The travel in the region is also hampered by infrequent ferry and bus services.

Generally, higher order facilities are absent in almost every sector. Diglipur and the revenue villages in the tehsil depend heavily on Port Blair for higher order administrative, commercial and social services. The district headquarter town for Diglipur is Mayabunder, which itself is designated as district headquarter only in the recent years and facilities have not yet been developed to the level of the headquarter town. For instance, for the entire 40,000 people in the tehsil there is not even a single multi speciality hospital and the nearest hospital is available only at Mayabunder, which is 48 k.m., away from Diglipur. The highest order of health facility available in Diglipur tehsil is only a Primary Health Centre, which is located at Subhasgram with 32 bed inpatient facility.

Analysis of the demographic characteristics of the people at Diglipur and in the surrounding 19 villages, indicate that the average percentage of illiterates is 32%, and Durgapur records the 45 %, the highest percentage in this region. The total population in these villages exceed 23,000 and the higher secondary school facilities are concentrated only at Diglipur.

Energy is an important issue to be concerned. The rural electrification and the supply require strengthening. The electricity generation from the Kalpong river project may not serve the requirement of the region in the future.

Kalpong River which begins at Saddle Peak, the highest peak of the islands, traverses Diglipur and is in danger of pollution, and the Nallahs which are identified as potential irrigation sources are getting eroded. There are encroachments in river bank and indiscriminate dumping of solid & liquid wastes into river pollutes all components of environment. It is the only perennial river of the entire Andaman Islands and the first hydro electric project of the islands is commissioned at the Kalpong reservoir.



4.0 STRENGTHS, WEAKNESS, OPPORTUNITIES AND THREATS

The Master Plan strategies will attempt to overcome the above development issues by evolving suitable strategies. Understanding of the strengths, weakness, opportunities and threats of the settlements are to be understood in clear terms while attempting to resolve the developmental issues. A summary of these are presented in the following section.

Strength	Weakness	Opportunities	Threats
<ul style="list-style-type: none"> The only perennial river of Andaman, the Kalpong flows here; the first hydroelectricity generation plant is established across the river. Famous for oranges, rice & marine life. A potential tourist destination with quite a number of tourist places around Diglipur. Saddle Peak, the highest of Andaman Islands is located close by and ideal for nature trail and trekking. 	<ul style="list-style-type: none"> Absence of high order facilities. Limited employment opportunities High illiteracy rate (43%) High percentage (21%) of population Below poverty line Lack of basic tourism infrastructure. Limited domestic fish demand Poor inter and intra connectivity Non-availability of trained/ specialized local manpower. Shortage of indigenous building materials and lack of local skilled expertise. 	<ul style="list-style-type: none"> Surrounded by unique tourist spots not available on the mainland, Scope for Promotion of adventure sea sports. Large number of good, sandy and safe beaches, beautiful meandering mangrove creeks, lush green forests. Aerial Bay, becoming the second entry point for Andaman 	<ul style="list-style-type: none"> Encroachments in forest lands. Absence of clear cut policy, strategies, development objectives, legal frame work and programmes. Vulnerability to Natural disasters (Earthquake, Tsunami, Cyclone) Kalpong river is in danger of getting polluted

5.0 VISION & OBJECTIVES

The vision statement serves as a guide in evolving the development strategies and shows the ultimate destination in the development process. The vision statement emerges from understanding of the potentials and problems and proposes a state of welfare to be achieved through the planning exercise. It is an important statement to communicate effectively the direction for development to the various stakeholders of the town. It is envisioned that the Master Plan proposals as well the other plan and non-plan initiatives of the development agencies will help Diglipur and its environs to develop in the following means -

- To be a favourite destination for tourism, providing a high quality experience that emphasizes the unique beauty of the natural environment;
- To be an economically and environmentally sustainable habitation nestled in a natural setting, offering unmatched quality of life experience to the residents;
- To be a socially rich community, well integrated with values of all caste, religion and language and served with high quality of urban infrastructure;

Further, the following objectives are set for channelizing the plan efforts towards realization of the vision.

- Developing Diglipur as the Second entry for Andamans. (Aerial Bay)
- Accommodation of the present & future demand for housing
- Protection of agricultural lands and water bodies from pressures of urbanization
- Strengthen the inter-village road connectivity for transportation of people & commodities
- Generation of adequate employment for the resident population
- Provision of basic services & amenities, considering the special nature of settlements



- Attract, promote and provide for rustic, nature based tourism
- Protect mangrove communities

6.0 DELINEATION OF PLANNING AREA

The spatial planning exercise commence with specifying a geographical area which can sufficiently and efficiently hold its population in the future period and offer them the services at a desired level. Over the period of settlement evolution, the development issues and the implications of the core town extend to the adjoining areas and it may be required to include these areas into planning, so as the issues could be comprehensively handled and also the adjoining areas may facilitate the physical development by offering required lands for development which may otherwise not be available within the core town. Therefore, it becomes necessary in planning to look beyond the town, and carve out an area including more settlements on the basis of the existing developments and the potential for growth, which is commonly referred as “Delineation of Planning Area” in the Planning Dictionary.

The 19 revenue villages contiguous to Diglipur have been considered for the delineation exercise. The details of the villages are shown Table No. 1 (Map No. 1). The core settlement/town acts as a catalyst for the development of other villages in its surroundings. The development status of the villages in the region will be an indicator of their intensity of functional interactions with the core settlement. The villages establishing a higher development status will have strong reasons for inclusion in the planning area. In order to understand the existing situation of the adjoining villages, four key dimensions along with related indicators of development have been considered and the same are furnished below.

DIMENSIONS	Physical	Demographic	Economy	Infrastructure & Communication
INDICATORS	Developed area	Size of the population	Work Participation Rate	Education Facilities
	Land under forest & water	Growth Rate	Non-agriculture Workers	Health Facilities
	Land under hills	Density	Change in agri. workers	Communication Facilities

	Literacy		Transport facilities
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Table No. 1 Details of Revenue Villages considered in Delineation of Planning Area

Sl. No.	Name of Revenue Village	Total Population (2001)	Area (sq.km)	Growth Rate (%)	Density (p/sq.km)
1	Diglipur	3662	1.00	17.90	3651
2	Subhasgram	1872	3.56	40.65	524
3	Madhupur	2008	7.14	44.67	281
4	Sitanagar	2066	9.93	30.02	208
5	Ramkrishnagram	2691	6.95	35.84	387
6	Aerial Bay	840	0.81	19.66	1026
7	Shyam Nagar	471	7.24	103.90	65
8	Vidayasagarpally	900	2.63	36.36	341
9	Keralapuram	656	6.24	10.07	105
10	Lakshmipur	1001	7.04	11.97	142
11	Deshbandhugram	615	3.72	20.59	165
12	Khudirampur	1064	8.11	9.13	131
13	Milangram	866	7.05	11.17	123
14	Durgapur	1146	4.15	31.12	276
15	Shibpur	716	5.18	16.05	138
16	Swarajgram	968	7.62	27.20	127
17	Ravindrapally	221	1.21	18.18	182
18	Kalipur	531	5.46	20.68	97

19	Krishnapuri	329	4.89	13.84	67
20	Radha Nagar	715	9.25	-26.44	77
		23338	109.28	24.63	406

Every settlement is weighed to a maximum of 5 points in every indicator chosen. The total points the settlements score over all the indicators in a particular dimension is converted to maximum of 100. Thus, the settlements have been weighed for 100 per cent under each of the above said four dimensions. The detail of scores obtained by the settlements under each dimension is presented below in Table No.2.

Table No. 2 Summary of Scores (in Percentage)

Sl.No	Name of Revenue Villages	Demography	Economic	Physical	Infrastructure	Total
1	Diglipur	85	73	93	75	82
2	Aerial Bay	65	47	80	60	63
3	Sitanagar	70	53	47	65	59
4	Subhash Gram	85	73	40	30	57
5	Lakshmipur	45	60	47	70	55
6	Ramakrishnagram	75	53	33	45	52
7	Durgapur	45	67	80	10	50
8	Radha Nagar	15	67	60	55	49
9	Swarajgram	35	40	60	55	48
10	Keralapuram	50	47	53	35	46
11	Milangram	40	40	60	45	46
12	Shibpur	40	40	53	40	43
13	Shyam Nagar	50	20	73	25	42
14	Madhupur	75	40	20	30	41
15	Vidyasagarpalli	60	33	40	25	40
16	Khudirampur	45	40	47	25	39
17	Kalipur	35	33	67	10	36

18	Deshbandhugram	45	27	40	20	33
19	Krishnapuri	30	20	53	15	30
20	Rabindrapalli	35	40	7	20	25

The analysis of the 20 revenue villages including Diglipur, show that seven of them scoring more than 50 per cent and presenting a strong case for inclusion in the planning area. These villages include – Diglipur, Aerial Bay, Sitanagar, Subhasgram, Lakshmipur, Ramkrishnagram and Durgapur. There exists a physical discontinuity in location of these villages as can be seen from Map No. 2.

The planning area requires to be contiguous, for effective implementation of the plan proposals. Also, discontinuity in planning area will result in proliferation unregulated development in the intermediate settlements. Therefore, in order to have continuity in the planning area, other settlements which do not qualify for inclusion through the analytical study of the development status, are considered individually and proposed for inclusion/non-inclusion in the planning area.

The four revenue villages to the north of the Lakshmipur namely Milangram, Swarajgram, Radha Nagar and Shyam Nagar, may not be required for inclusion in the planning area as none of these villages record a score of more than 50 per cent, and these are located in a continuous stretch and the distance to the farthest settlement of these group of settlements is more than 23 km.

Among the other settlements under consideration, Khudirampur is an adjoining village to Diglipur which is expected to bear the development pressures of Diglipur in the long run. It is a settlement in the environs, where the work participation rate is the highest (47 %) and agriculture is the dominant workforce showing positive signs of growth, with Kalpong river, providing the irrigational support. This village thrives mainly with the infrastructure available at Diglipur, which is just 1 km., away. Inclusion of this village in the planning area is imperative in view of its proximity to Diglipur and it's exclusion will erode the agriculture base and lead towards unsustainable development in the environs.

With the inclusion of Khudirampur, the five settlements namely Ramkrishnagram, Diglipur, Subhasgram, Sitanagar and Khudirampur forms contiguous planning area. To the north east of this group of settlements lies Aerial Bay and Durgapur for inclusion in the planning area with Vidayasagarpally and Keralapuram as intermediate settlements. Of these two villages, Vidayasagarpally is already showing signs of absorbing the population growth in the environs with more than 36 % of growth rate during 1991-2001. The high rate of growth as seen in this settlement can lead to unmindful conversion of agriculture lands, which constitutes nearly 40 per cent of the total area. Keralapuram, small in terms of population (656) and big in terms of area (6 sq.km), has recorded a minimal growth of 10 % during 1991-2001. However, the primary occupation in this village is on

decline, the settlement appears to be set for functional transition. Thus, it will be wise to include both Vidayasagarpally and Keralapuram in the planning area, so that the developments could be regulated and be in order in a continuous manner.



With this, nine contiguous revenue villages are proposed to be included in the planning area starting from Sitanagar in the west to Aerial Bay/Durgapur in the east in addition to Lakshmipur in the north. Madhupur is a revenue village with sizable population (2008) and a very high growth of population (45 %) requires inclusion in the planning area, as it is the settlement along with Subhasgram accommodating growth to the north-west of Diglipur. Consequently, Krishnapuri to the west, Ravindrapally to the south and Deshbandhugram to the east of Madhupur justifies inclusion in the planning area to form spatial contiguity for the planning purpose. These are small villages in terms of population and the total population of these three villages is just over 1000.

Further, there remain two revenue villages, Shibpur and Kalipur for consideration. Kalipur is the settlement with enormous potential for promotion of tourism activities. Kalipur is important as three important tourists spots viz., Kalipur beach, Lamya beach and Saddle Peak are linked to this settlement. Absence of regulation at this settlement can be taken advantage of, for disorderly development causing damage to the very potential of the settlement. Therefore it is proposed to include Kalipur to the planning area along with Shibpur, to form a compact and contiguous planning area of 16 revenue villages. The detail of revenue villages thus, proposed to be included as part of 'Diglipur Planning Area' is presented in Table No. 3. (Map No. 3)

7.0 POPULATION FORECAST FOR THE PROPOSED DIGLIPUR PLANNING AREA

The proposed planning area has recorded a decadal growth rate of about 26 % during 1991-2001. Of the 16 revenue villages in the proposed planning area, Khudirampur recorded the lowest growth of 9 % and Madhupur recorded the highest growth of 44 % during the same period. The Master Plan will propose for required development in the entire planning area and consequently the future development is expected to be more balanced development. Though, it is generally observed that the population growth rate is on decline in the islands in view of limitations in physical connectivity and public policies, thrust on planned development with the preparation Master Plan should activate the growth, and the annual population growth rate is also expected to increase from the level of 2.1 %. Assuming a growth rate of 2.5 % per annum, the population in the proposed planning area will be around 32000 – 41000 by the end of plan period, i.e., by 2029. The increase in the



population will lead to increase in the density in the range of 410 – 525 persons/sq.km.. The extent of proposed planning area will be sufficient to accommodate the projected population as well to offer them the required physical and social infrastructure.

Table No. 3 List of Revenue Villages proposed to form Diglipur Planning Area

Sl.No	Name of Revenue Village	Distance to Diglipur (km.)	Area (sq.km)	Total Population 2001
1	Deshbandhugram	4	3.72	615
2	Madhupur	1	7.15	2008
3	Krishnapuri	6	4.90	329
4	Ravindrapally	4.5	1.21	221
5	Subhasgram	1	3.57	1872
6	Sitanagar	5	9.94	2066
7	Khudirampur	1	8.12	1064
8	Diglipur	0	1.00	3662
9	Ramkrishnagram	1	6.95	2691
10	Vidayasagarpally	5	2.64	900
11	Keralapuram	7	6.24	656
12	Aerial bay	9	0.82	840
13	Durgapur	12	4.15	1146
14	Shibpur	18	5.19	716
15	Kalipur	20	5.47	531
16	Lakshmipur	6	7.04	1001
Total			78.11	20318



8.0 DEVELOPMENT STRATEGY

The delineation of the planning area has provided the physical space for resolving the developmental issues confronted in the present context and also to create the required built environment for the next 20 years. The development issues identified earlier in the report as well as the SWOT analysis of the settlements in the Diglipur environs have led to formation of certain development strategies, which are presented below:

- Diglipur is connected to the mainland only through Port Blair, which is situated at about 290 km., away and requires 10 – 12 hours of travel time to reach. A direct connectivity to the mainland for transportation of people and commodities can bring tremendous changes to the life and economy of Diglipur and its environs. Developing a second entry to the Andaman Islands or a direct entry from the mainland to the North Andaman will be a key strategy in development of this region.
- Tourism and Fisheries are the only two sectors which may be optimally used for employment generation and economic growth. However, the infrastructure present does not commensurate the requirement and there is an urgent need for augmentation and creation of quality infrastructure especially in the tourism sector. The potential for tourism is still untapped and requires infrastructure upgradation in terms of accommodation and improving the road connectivity apart from undertaking specific improvement works in the tourists' locations.
- Creation of direct entry to North Andamans in the environs of Diglipur is also expected to boost the fishery sector activities. Strategies for



enlargement of fish catch, creation of storage, processing and export facilities are to be supported. There are nearly 3000 population directly benefited through fishing activities in the Tehsil and an equal or more number of indirect employment opportunities could be created through such strategies.

- Environmental sensitivity prevailing over the islands enunciates the importance of primary sector activities and particularly agriculture. The entire Andaman & Nicobar Islands are vulnerable for manufacturing activities involving discharge of effluents and waste. The reliance on agriculture involving bio-farming options can be the eco-friendly measures, towards the agricultural sustainability. Appropriate strategies to protect the agricultural lands from conversion, enhancing the productivity of the agricultural sector through support activities will be the approach towards development. Encouragement for establishing small scale food processing industries will help to ease unemployment, and also promote entrepreneurship in the region.
- The vulnerability to the natural disasters, of the settlements in the environs of Diglipur is known; though, the occurrence of disasters may be more frequent to other places, the toll has been extremely limited, but for the Tsunami in the recent years, which need to be propagated for bringing in more tourists and investments. As well, developing all infrastructure in the planning area for meeting the challenges of disaster will be required as part of development strategy for the region.
- Transportation and Communication is the key for development. Development strategies in this direction are absolutely essential for sustainable economy in the environs of Diglipur. Many of the villages in the proposed planning area do not score appreciably in this dimension, and the lack of road connectivity also acts as a deterrent for development. For instance, Kalipur and Shibpur are connected by road to tehsil headquarters Diglipur via Aerial Bay and the distance is about 20 km.,



which can be reduced by half by forming direct road connectivity. Also, the revenue villages like Khudirampur, Ravindrapally, Krishnapuri and Deshbandhugram can develop better by efficiently linking them to the Andaman Trunk Road. The Andaman Trunk Road itself will require substantial improvements in terms of widening and surfacing.

- Education and Health are the two important social sector infrastructures, which are required to be strengthened through appropriate strategies. A quick appraisal of the education facilities indicates that the education facilities are fully made available at the level of primary, and to a large extent at the level middle school. However, the facilities for secondary and senior secondary appear to be inadequate in terms of spatial distribution. Creation of required higher learning institutions to be a strategy to develop the skills of the youth to create employment opportunities in the region and also to make them employable elsewhere.
- Health facilities in the environs of Diglipur are absolutely inadequate which not only impacts the quality of life of the residents but also discourages the tourists. Facilities to attend patients on emergency are available only at Port Blair at present, that too only to a certain extent. However, the physical barriers and the transportation system available do not permit transfer of patients easily. Suitable strategies are to be evolved to create a good level of medical facilities in the proposed planning area and as well for transfer of patients for medical attention.
- Energy and Environment are crucial for sustainable development in every case of habitation. Meeting the energy demands is to be attempted through eco-friendly and economical measures. Further, the pollution of the natural environment is to be prevented through suitable corrective measures. Water bodies and vegetation are assets for development and healthy living. Strategies will be required to conserve these resources and prohibit their exploitation.



9.0 CONCEPT PLAN

Development strategies conceived earlier to address the issues of the present and plan for the future require to be given a ‘framework or concept’ for application either in spatial or non-spatial mode. Spatially, the principles of use and protection of land together with the proposals of physical linkages and spatial location of infrastructure define the approach for development, which is commonly referred as the Concept Plan. Imperatives of ecological conservation influence concept evolution in physical planning exercise of Diglipur. Further, the development concept is required to bolster achievement of the planning goals/objectives and lead towards sustainable development of communities in the region. The salient features of the concept are briefed hereunder and shown in Map No. 4.

- An important feature of the development concept proposed is the developing an entry for North Andaman in the environs of Diglipur. Such an exercise will not only help to develop the north and middle Andamans but also reduce the pressures on Port Blair. It will attract more tourists and help to create more employment opportunities. Aerial Bay has the potential for development as a full-fledged harbour. The potential of Aerial Bay as a harbour was noticed way back in 1790 itself by Admiral Cornwallis who suggested the settlement in south Andaman could be shifted to north. The market for export and import of commodities will be opened up, which can positively influence the economy. In addition to the seaport at Aerial Bay, it is proposed to upgrade the airstrip at Shibpur to operate regular air services to commute the tourists and islanders. It is hoped that creation of direct entries to north & middle Andaman will bring tremendous changes in the present development scenario.
- Creation of entry to north & middle Andamans at Aerial Bay and Shibpur requires adequate strengthening of infrastructure. Improvement in road network is one important measure to be considered. Aerial Bay is accessible at present only through Diglipur and Shibpur where the airstrip is located can be accessed only through Aerial Bay. Thus, reaching the locations of entry is



circuitous, which can severely impede the smooth flow of people and commodities from/to the settlements in Mayabunder and Rangat tehsil. In order to overcome such situation, a link road is proposed connecting Madhupur and Shibpur traversing Krishnapuri, Ravindrapally, Sitanagar, and Khudirampur. This proposed link road will intersect the ATR at Sitanagar. Apart from serving regional movement of goods and people, this road will also provide very good inter-village connectivity for the settlements in the proposed planning area. Another inter-village road is proposed to connect Keralapuram with Shibpur which will reduce the distance between these villages from 10 km., to 4 km..

- Tourism and Fisheries are the two important sectors proposed for improving the economy in the environs of Diglipur. The proposed link roads are expected to greatly benefit these sectors. Of the 16 revenue villages in the proposed planning area, only the three villages namely Durgapur, Shibpur and Kalipur are the fishing villages. Fishing is identified as a potential sector in every attempt to improve the economy. The road links proposed above will also help to develop required infrastructure for promotion of fishing activities. The proposed road links will also improve the accessibility and the travel time to the Kalipur beach and Saddle Peak, the two important tourist locations in the region.
- The only river in Andaman is the Kalpong River, which flows from Saddle peak through Khudirampur and Diglipur. Protection of this river from pollution is of utmost importance in the environmental perspective. Indiscriminate dumping of solid waste is seen to cause damage and hence attempts are required to clean and protect the river. The Master Plan will recognize Kalpong as a unique resource of the islands and hence conceives to propose measures for its conservation and also for river front development along the river, which can be an element of attraction for the tourists improving the aesthetics as well as the leisure and recreational opportunities in the environs of Diglipur.



- Diglipur and its surroundings are known for its oranges, pulses and vegetables. Except Diglipur and Sitanagar, all other villages in the planning area have more than 50% of agricultural lands. Master Plan intent to protect the agricultural lands in the environs of Diglipur, as it functions as the rice-bowl of Andaman. While the availability of plain lands, irrigational sources and the quality of soil are conducive for the practice of agriculture, the support systems including the availability of agricultural implements and storage/marketing facilities are not satisfactorily built. Conceptually it is proposed to protect the lands under agriculture to continue with its present use, and not become prey to the adverse impacts of urbanization.
- Balance in development and distribution of facilities are the principles of planning. There appears to be an over dependence on Diglipur, which itself faces a stiff challenge in terms establishing the desired quality of services & amenities. The difficult terrain and the limitation of road network make it inaccessible even what is available in Diglipur to the residents in the environs. Therefore it becomes necessary to identify certain settlements as '**rural centres**' which may be strengthened to provide the intermediate level of services, in between what is available at the village level and the tehsil headquarters Diglipur. These identified settlements, though referred as 'rural centres' in the backdrop of their physical setting and function are to be equipped with all urban amenities to serve the villages in the cluster. Such a settlement system would enable the rural masses to enjoy the benefit of urban opportunities and privileges. The analysis undertaken earlier for the purpose of delineation and the spatial organization of settlements lead to infer that the following settlements viz., Aerial Bay, Kalipur, Lakshmipur and Sitanagar will qualify for this proposal.
- All settlements need the supply of infrastructural and service facilities in the course of production activities and to meet consumption requirements of their population. Each of the facility and services requires a minimum level of population for



sustainment which is not present in every settlement. The identified rural centres together with a cluster of settlements will gain the much desired level of population for sustaining higher order facilities. This apart, the rural centre approach also evolves an opportunity to serve the special needs of every cluster of villages. The physical, functional and demographic analysis of the settlements in the proposed planning area, give raise to formation of five clusters as mentioned below.

Rank/Cluster	I	II	III	IV	V
Rural Centre / Tehsil Town	Diglipur / Ramkrishnagram	Sitanagar	Lakshmipur	Aerial Bay / Durgapur	Kalipur
Revenue Villages	Subhasgram	Ravindrapally	Madhupur	Vidayasagarpally	Shibpur
	Khudirampur	Krishnapuri	Deshbandhugram	Keralapuram	
Total Area (sq.km.)	19.64	16.05	17.91	13.86	10.66
Total Population	9289	2616	3624	3542	1247
Growth Rate (1991-2001)	25.07	22.07	28.47	25.07	17.98
Density (persons /sq.km)	473	163	202	256	117

Diglipur, the tehsil headquarter town will provide the necessary support for the villages forming the Cluster I. However, Diglipur suffers land availability constraint and hence it requires inclusion of Ramkrishnagram for establishing the required facilities to the level of a tehsil town. Diglipur and Ramkrishnagram apart from providing the local level services for the residents will serve the entire planning area with the administrative and higher order commercial and public activities. The river Kalpong largely traverses this cluster and the proportion of paddy cultivation is the highest here. About 31 % of lands in this cluster is under paddy cultivation. Measures to protect the cultivation along with river front development proposed along Kalpong will help to develop the tehsil town Diglipur on a Green City concept.

The development of revenue villages in the environs of Diglipur has not been uniform. It is expected that the proposed link road in the concept would unlock development of Ravindrapally and Krishnapuri revenue villages in the Cluster II, which can partly accommodate the demand for housing in the region. In Cluster III, Lakshmipur is proposed as 'rural centre', so that the settlements beyond the planning area forming a linear pattern towards north will also benefit from the planning initiatives.

In Cluster IV, Aerial Bay along with Durgapur is to develop as the 'rural centre', as Aerial Bay does not have the required lands for establishing the required facilities. The boat jetty at Aerial Bay is proposed to be developed as a harbour would also require sufficient extent of lands. The creation of harbour will be a boost for fishing activities as well. In fact, Diglipur Tehsil is very rich in both fresh water and sea water fishing. It has the highest fisherman population of 3902 (as of 2003). The number of fishing villages in Diglipur Tehsil is 26, which is the highest for all tehsils. In addition there are 341 ponds available for fresh water fishing in tehsil. The required development for storing, processing and export of



fish is proposed to be developed in the villages forming this cluster. Also, this cluster requires development of infrastructure for the tourists who arrive by the sea route.

Primary Sector employment is dominant in Cluster V, comprising revenue villages Kalipur and Shibpur. More than 50 % of workforce is employment in the primary sector activities. However, it is also surrounded by tourists' locations such as Kalipur beach and Saddle Peak. As Shibpur is proposed as the location for operation of regular air services from Port Blair, the tourists' arrival is expected to increase. This cluster could be ideal, to promote rural and eco tourism for which the agriculture lands are to be protected and also the necessary tourists' infrastructure are created in this cluster.

The Master Plan shall assess the infrastructure needs on the basis of the proposed development concept above, and suggest the strategies and the development regulations for realizing the plan objectives.



