

**GOVERNMENT OF INDIA  
MINISTRY OF TOURISM AND CULTURE  
DEPARTMENT OF TOURISM  
MARKET RESEARCH DIVISION**

**Final report**

**On**

**20-YEAR PERSPECTIVE PLAN FOR  
DAMAN & DIU**

**December 2002**



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## EXECUTIVE SUMMARY

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The 20 years tourism perspective plan for Daman & Diu is prepared separately based on the detailed evaluation of the existing and potential tourism resources and infrastructure, tourism trends analysis, interaction with various stakeholders in the region, and the tourist preferences as revealed by the tourist survey.

Daman & Diu have a mix of natural and manmade attractions. The Major Tourism Drivers and attractions in Daman can be categorised two heads: Heritage Attractions and Waterfront Attractions. In addition to these there are religious attractions and man made attractions too like Water Park, Gardens etc. The Major Tourism Drivers and attractions in Diu can be categorised two heads: Beach Attractions and Heritage Attractions. There are also other attractions like religious attractions, Caves etc. All the tourism attractions are assessed and evaluated in terms of its existing situation vis-à-vis its quality, amenities, infrastructure, popularity etc., the tourism development potential of these sites etc.

The current tourism trend in Daman is mainly the domestic tourists from the nearby towns and cities like Surat, Nasik, Mumbai, etc. of the states Gujarat and Maharashtra. They are either leisure tourists or business/ conference tourists.

The current tourist visitation to Diu is mainly from the neighbouring state of Gujarat. Diu, inspite of having the right mix to grow as a tourist destination, has restricted visitation mainly due to the difficulty in accessibility to Diu.

Based on the tourism resource assessment, SWOT analysis, demand estimation and market study, unique tourism development plans have been proposed for both Daman and Diu.

### **DAMAN:**

#### **Proposed Tourism Development**

The tourism development plans in Daman have been categorized under two main developments viz. Heritage Development Plan & Water Front Development Plan. Heritage and Water Front Tourism are also proposed to be the unique selling feature of the Daman region.

The **Heritage development plan** includes development plan for the Moti Daman Fort, Nani Daman Fort, heritage structures in Daman like Churches, old Portuguese buildings, etc. One of the major tourist products proposed is the **heritage walk** through the **Moti Daman Fort area** and surrounding Portuguese settlements, which would further accentuated by products like heritage cuisine, cultural shows etc. Moti Daman & Nani Daman Fort is proposed to be conserved and developed so as to portray Daman as the **city of Twin forts**.

The **Water Front development plan** includes development and maintenance of Devka Beach, development of Jampore Beach, development and promotion of the Sangam Area (meeting point of the Daman Ganga River and the Arabian Sea) and the development of the upstream Daman Ganga river area.

The **Devka** and the **Jampore Beaches** are proposed to have an arrival plaza with tourist reception centre, organised parking, cloakrooms, proper signages, etc. Jampore Beach is also proposed to have water sports, development of quality restaurants, etc. The entire coastal stretch is proposed to have a retaining wall to avoid beach erosion.

The **Sangam Area** development is proposed to include development of Bandstand, the Nani Daman and Moti Daman Jetty area. The Sangam area will also offer ferry service as a conveyance mode between the two forts. The existing narrow bridge connecting the two forts is proposed to be cantilevered for developing it as a viewing spot.

The upstream of the river is proposed to be developed with all ranges of activities for family and business tourists. It would offer a full fledged club house cum water front tourism products to the tourists.

### **Market Assessment**

Based on the past tourist arrivals, the above mentioned tourism products proposed to be developed and developments planned for the region, the annual tourist traffic is estimated to increase to 927,000 by the year 2022 growing at a CAGR of 2.51% per annum. The table below details the tourist arrivals estimated for each of the four phases.

<b>Phase / Year</b>	<b>Estimated Tourist Arrivals</b>
Phase I / 2004	602899
Phase II / 2010	768907
Phase III / 2016	870065
Phase IV/ 2022	927322

### **Tourist amenities and facilities:**

Based on the assessment of each aspect of the destination including the cultural and physical attractions, the developments proposed and the estimated tourist arrivals, various developments required sub region wise for tourist satisfaction have been proposed with quantitative details and costs in Chapter 5. This includes number of beds proposed to be developed (table below) at various parts of Daman, tourist facilitation centre, restaurants/ eateries, tourist guides, etc by the year 2022.

<b>Phase</b>	<b>Year</b>	<b>No. of rooms</b>
<i>Phase I</i>	<i>2003 – 2004</i>	<i>179</i>
<i>Phase II</i>	<i>2005 – 2010</i>	<i>460</i>
<i>Phase III</i>	<i>2011 – 2016</i>	<i>262</i>
<i>Phase IV</i>	<i>2017 – 2022</i>	<i>150</i>
<b>Total</b>	<b>2003 – 2022</b>	<b>1051</b>

### **Initial Environment Examination**

Initial Environment assessment was integrated with the feasibility studies to ensure that development is environmentally sound and sustainable, and that any environmental consequences are recognised early and taken into account in project design which would include avoiding, mitigating or compensating for adverse impacts.

## **Marketing Plan**

A detailed marketing plan has been proposed to position Daman as an affordable and easily accessible “*water based tourist destination with a heritage backdrop*”. The core geographic tourist segments includes domestic tourists from the neighboring states of Gujarat, Maharashtra and Madhya Pradesh and international tourists from Western European and Asian countries embarking to India from Mumbai. The activity based tourist segments targeted are the general touring market and the special interest segment including adventure travelers, cultural travelers, backpackers and the meetings, incentives & conference visitors. Distribution channels and promotion strategy unique to each segment has been proposed for effective differentiation and positioning of the Daman. A list of various media material also has been detailed in the marketing plan.

## **Employment generation and Cost Benefit Analysis:**

The employment estimated to be generated by the project is as given phase wise in the table below. The estimation is based on the tourism employment multiplier of India and the average tourist expenditure calculated.

<b>Phase</b>	<b>Year</b>	<b>Employment Generated</b>
<i>Phase I</i>	<i>2004</i>	<i>19281</i>
<i>Phase II</i>	<i>2010</i>	<i>20076</i>
<i>Phase III</i>	<i>2016</i>	<i>20905</i>
<i>Phase IV</i>	<i>2022</i>	<i>21768</i>

The cost benefit analysis for the total expenditure was done based on the per capita expenditure of the tourist traffic estimated and the costs estimated under the heads of the core infrastructure, tourist amenities, human resource development, accommodation, and marketing and promotion given as investment heads below. Break even is reached in the year 2011.

## **Implementation and Investment**

Total investments envisaged for the development of Daman as a tourist destination is as below, giving details of investments required under major heads in the four phases of development .

### **Investments (in Rs lacs)**

<b>Investment Head</b>	<b>Phase I 2003 - 2004</b>	<b>Phase II 2005-2010</b>	<b>Phase III 2011-2016</b>	<b>Phase IV 2017-2022</b>	<b>Total 2003-2022</b>
Core Infrastructure	30.00	*	*	*	<b>30.00</b>
Tourism Infrastructure	50.15	170.99	102.32	53.42	<b>364.88</b>
Accommodation	350.00	900.00	375.00	285.00	<b>1910.00</b>
Mktg and promotion	215.00	277.50	175.00	435.00	<b>1102.50</b>
HRD	1.99	6.54	7.04	5.61	<b>21.18</b>
<b>Total</b>	<b>647.14</b>	<b>1355.03</b>	<b>659.36</b>	<b>779.03</b>	<b>3440.56</b>

*\* The core infrastructure development required for supporting the estimated tourist inflow at Daman is already proposed and budgeted for in the Tenth five year plan (analysed in the Chapter C Implementation plan of the report) of the union territory.*

**DIU:**

**Proposed Tourism Development:**

The tourism development plans in Diu include development and conservation of heritage structure in Diu and development plans for the various beach stretches in Diu.

The **Diu Fort development** plan proposed includes restoration of the fort walls, conservation of the Chapels, preservation of the statues, and implementation of self explanatory signages giving needed information on the fort and guiding the tourist flow within.

The **Panikotha development** plan proposed includes construction of a floating jetty to make the heritage more accessible to the tourists, development of the hall for light and sound show, purchase of small craft boats for accessibility during low tide, and implementation of informative signages about the structure and the light and sound show at the jetty.

The **Diu town tourism development** plan proposes tourism attractions like Diu Darshan rides in pollution free road trains, development of crafts emporium, shopping malls, refreshment areas and effective signages giving directions, distances, other tourist spots in Diu, etc.

The beaches are proposed to be developed in five different character stretches i.e. Ghogla Beach, Nagoa Beach, Chakratirth – Jallandhar Beach stretch, Khodhidhar – Gomtimata Beach stretch, and the Simbor Beach, thus projecting Diu as an island destination. The main attraction will be the **Coastal Trail** development along the coast of the island primarily intended for pedestrian tourism.

The **Nagoa Beach** is primarily targeted at the leisure tourists. The development plan includes construction of an arrival plaza with tourist reception centre, floating restaurant on the eastern side of Nagoa beach, organised parking space, provision of cloak rooms, and development of quality restaurants and refreshment stalls.

The development planned at the **Kodhidhar to Gomtimata** beach stretch endeavors to indulge the peace-seeking tourists exclusively. The plan proposed includes accommodation developed close to the nature (the beach bed), plantation of the palm trees in line with the existing *Casuarina* Trees on the beach side, construction of meditation and relaxing platforms, development of deep – sea or game fishing activities in the Vanakabara fishing village with the help of local fishermen in the area. Certain development control guidelines have also been proposed for the development of the stretch.

The **Ghogla Beach** like Nagoa beach is targeted at the leisure tourists. The plan proposed for Ghoghla includes development of tourist reception centre, a number of motorised and other water sports, construction of changing rooms, cloak rooms, organized parking, lighting of the beach etc.

The **Jallandhar – Chakratirth Beach** stretch is proposed to have the character of a cliff beach targeting the self pace loving relaxed tourists. The plan proposed for the stretch includes provision of hanging ropes and ancillary facilities for Cliff climbing, provision of angling facilities from mid cliffs, development of meditation and relaxation platforms and promotion of the open air auditorium for cultural shows, shootings etc.

Last but not the least the **Simbor Beach** is proposed to target eco tourists. The plan for includes development of accommodation close to the nature, provision of angling

facilities, provision of boating facility in the creek, and boathouses in the backwaters of the Simbor region.

Cave tourism has been proposed for the **Naida Caves**. It is proposed that the initial few caves would be for general tourist visitors. The interior caves would however be developed for adventure tourism with activities like treasure hunt, hunting light shows. However the structural stability tests need to be conducted prior to the developments proposed.

### **Market Assessment**

Based on the past tourist arrivals, the above mentioned tourism products proposed to be developed and other developments planned for the region, the annual tourist traffic is estimated to increase to around 520,000 by the year 2022 growing at a CAGR of 8% per annum. The table below details the tourist arrivals estimated for each of the four phases.

<b>Phase / Year</b>	<b>Estimated Tourist Arrivals</b>
Phase I / 2004	125086
Phase II / 2010	197819
Phase III / 2016	347876
Phase IV/ 2022	519055

### **Tourist amenities and facilities:**

Based on the assessment of each aspect of the destination including the cultural, heritage, physical attractions, the developments proposed, the estimated tourist arrivals various types of segmentation of the tourists and the destination, various developments required sub region wise for tourist satisfaction have been proposed with quantitative details and costs in Chapter 5. This includes number of beds proposed to be developed (table below) at various parts of Diu keeping in mind the environmental aspect, tourist facilitation centre, restaurants/ eateries, tourist guides, etc by the year 2022.

<b>Phase</b>	<b>Year</b>	<b>No. of rooms</b>
<i>Phase I</i>	<i>2003 – 2004</i>	<i>49</i>
<i>Phase II</i>	<i>2005 – 2010</i>	<i>347</i>
<i>Phase III</i>	<i>2011 – 2016</i>	<i>646</i>
<i>Phase IV</i>	<i>2017 – 2022</i>	<i>761</i>
<b>Total</b>	<b>2003 – 2022</b>	<b>1803</b>

### **Initial Environment Examination**

Initial Environment assessment was integrated with the feasibility studies to ensure that development is environmentally sound and sustainable, and that any environmental consequences are recognised early and taken into account in project design which would include avoiding, mitigating or compensating for adverse impacts.

### **Marketing Plan**

A detailed marketing plan has been proposed to position Diu as “*The best island beach destination on the country, known for its serenity and pristine beaches*”. The core geographic tourist segments includes domestic tourists from the existing target segment,

state of Gujarat, and new segment of Madhya Pradesh, Uttar Pradesh, Delhi, Rajasthan, Punjab, Maharashtra & West Bengal. International tourists from Western European and Asian countries are targeted. Distribution channels and promotion strategy for the target segment has been proposed for effective differentiation and positioning of the Diu. A list of various media material and vehicles also has been detailed in the marketing plan.

### **Employment generation and Cost Benefit Analysis:**

The employment estimated to be generated by the project is as given phase wise in the table below. The estimation is based on the tourism employment multiplier of India and the average tourist expenditure calculated.

<b>Phase</b>	<b>Year</b>	<b>Employment Generated</b>
<i>Phase I</i>	<i>2004</i>	<i>2176</i>
<i>Phase II</i>	<i>2010</i>	<i>2368</i>
<i>Phase III</i>	<i>2016</i>	<i>2567</i>
<i>Phase IV</i>	<i>2022</i>	<i>2784</i>

The cost benefit analysis for the total expenditure was done based on the per capita expenditure of the tourist traffic estimated and the costs estimated under the heads of the core infrastructure, tourist amenities, human resource development, accommodation, and marketing and promotion given as investment heads below. Break even is reached in the year 2019.

### **Implementation and Investment**

Total investments envisaged for the development of Daman as a tourist destination is as below, giving details of investments required under major heads in the four phases of development .

#### **Investments (in Rs lacs)**

<b>Investment Head</b>	<b>Phase I 2003 - 2004</b>	<b>Phase II 2005-2010</b>	<b>Phase III 2011-2016</b>	<b>Phase IV 2017-2022</b>	<b>Total 2003-2022</b>
Core Infrastructure	0.00	40.00	40.00	0.00	<b>80.00</b>
Tourism Infrastructure	2,688.85	2,951.18	133.95	49.70	<b>5,823.67</b>
Accommodation	100	505	775	395.00	<b>1,775.00</b>
Mktg and promotion	385.00	472.50	275.00	680.00	<b>1,812.50</b>
HRD	1.99	6.54	7.04	5.61	<b>21.18</b>
<b>Total</b>	<b>3,175.84</b>	<b>3,975.22</b>	<b>1,230.99</b>	<b>1,130.31</b>	<b>9,512.35</b>

*\* The core infrastructure development required for supporting the estimated tourist inflow at Daman is already proposed and budgeted for in the Tenth five year plan (analysed in the Chapter C Implementation plan of the report) of the union territory.*

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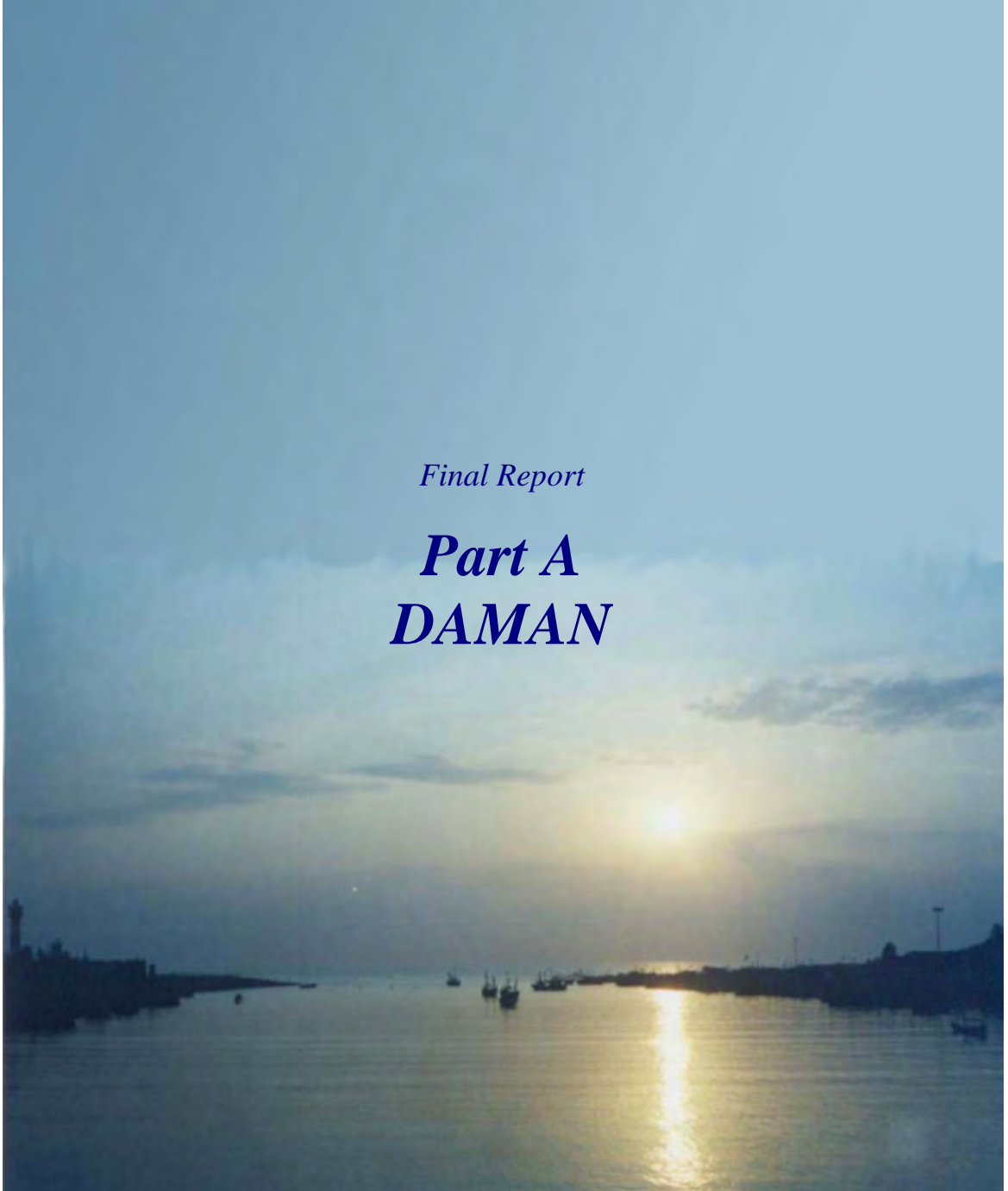
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*Final Report*

***Part A***  
***DAMAN***



## REGIONAL ANALYSIS

### 1.1 REGIONAL SETTING

The Union Territory of Daman and Diu was a colony held by the Portuguese for a long period even after India got independence. In 1961, it was made an integral part of India and was a part of the erstwhile Union Territory of Goa, Daman and Diu. After Goa was given statehood in 1987, Daman and Diu was made a separate Union Territory. The towns of Daman and Diu are separated by the Arabian Sea and are at a distance of 768 Kms from each other by road. Daman and Diu are a melting pot of different cultures and its Portuguese and Indian connections give it a multi-faceted identity.

#### A. GEOGRAPHICAL LOCATION

The district of Daman, the administrative part of the union territory of Daman and Diu is situated in 20°21'55'' and 20°28'38'' North Latitude and 72°48'18'' and 72°54'16'' East Longitude. The Daman district has an area of 72 square kilometers and a population of 1,58,059 as per the census of 2001. It has 26 villages and 1 town that is the taluka head quarters of the district and gives the district its name – Daman.

Its administrative boundaries are shared with the land of Surat district of Gujarat State. In the north, the river Kolak forms a natural boundary for a stretch of 5.8kms and in the south the Kalu Nadi provides a boundary over 3.9kms from the shore to the interior; the Arabian sea frontage extends to about 12.25kms, and over the land in the east, the purely administrative line of demarcation runs over a length of 25kms.

#### B. ACCESSIBILITY

Daman is at 13-kilometer distance with the nearest railhead Vapi on the Western Railway on Mumbai-Baroda Line where most of the Mail and Express Trains stop. The Mumbai-Ahmedabad National Highway No.8 connects Daman via Vapi by road. It is 190 kilometres away from Mumbai, 360 kilometres from Ahmedabad and 768 kilometres away from Diu.



#### C. THE REGION

##### *Formation:*

Daman, situated to the North of Goa is surrounded on the landside by the Surat district of the Gujarat State. In ancient times, it formed part of jurisdiction of the Raja of Ramnagar, the former Surat Agency who paid tribute to the Sultans of Gujarat. In February 1559 the Portuguese under Dom Constantino Braganza drove the Siddi Bapita from Daman and

occupied it as provided for in their treaty by Sultan of Ahmedabad. In 1739 the Marathas successfully conquered the entire Bassein district, the North province situated in Daman. However, in 1740 a Peace Treaty permitted the Portuguese to keep the fort of Daman and 22 villages for its maintenance. In December 1955, the Portuguese Government filed a complaint with the International Court at Hague, claiming the right for passage of their troops from the Indian territory between Daman & Dadra Nagar Haveli. The claim was rejected in April 1960 making way for the liberation of Daman and Diu on the 19<sup>th</sup> December 1961 along with Goa.

### ***Climate:***

Due to proximity to the sea, humidity is generally high. The relative humidity is generally always above 60%. The climate of the union territory though humid is generally pleasant. The mean daily average temperature in May, the hottest month is 36<sup>0</sup> C max & 26<sup>0</sup> C min in Daman. The mean daily average temperature in January, the coldest month is 29<sup>0</sup> C max & 15<sup>0</sup> C min in Daman. When the region is affected by cold waves from the western disturbances the temperatures fall to less than 7<sup>0</sup> C.

### ***Geomorphology:***

The major parts of the area are covered by black soil. From the study of the river sections and quarries, the succession is found to be Deccan trap. The soil is sandy and clayey with massive basalt occurrence. Ground water occurs in Deccan traps. The water table lies mostly between 6 to 10 m.

### ***Landmasses:***

The Damanganga river divides the taluka into its two traditionally well recognised landmasses: the 'Moti Daman' in the south and the 'Nani Daman' in the north.

### ***Physiography:***

Physiographically, Daman is a small part of the South Gujarat coastal land. Developed on the alluvial deposits brought down by the parallel flowing streams from the Sahyadrian hills complex, the land of the taluka shows features of extensive alluvial deposition and subsequent erosion. The Damanganga is the major stream which rising from the Sahyadris develops in this district its estuarine lands.

The basaltic floor of the coastal lands persists to create low plateau and headlands, which separate the drainage of this part of the South Gujarat coast into small parallel flowing river valleys. Thus the extremities of the Daman district are the flanks of the two river valleys as they meet the sea. The basaltic elevations seriously limit the extent of useful alluvial land for agriculture.

## **1.2 SOCIO- ECONOMIC CHARACTERISTICS**

### **A. DEMOGRAPHY**

The ultimate objective for any planning is the welfare of the community (population). For the same it becomes mandatory to study the demography of the population in the region. While framing the planning proposals of the region it is necessary to understand the dynamism of the population of the region under consideration, as they will change in their size and composition in the future.

### ***Growth of Population:***

Daman & Diu rank 34<sup>th</sup> in population size among the states/ UT's of India. Daman has a total population of 1,13,949 in 2001, which has grown by 6.98% per annum since 1991. The decadal population growth in the last decade was around 83.5% as compared to 27.84% in the previous decade.

The population growth since its liberation in 1961 is shown in the following table.

Year	Population	Growth Rate
1960	22,390	
1971	38,739	73.02%
1981	48,560	25.35%
1991	62,101	27.89%
2001	113,949	83.49%

The sex ratio was 591 per 1000 men & a literacy rate of 83.6%. Diu has a total population of 44110 spread over an area of 40 sq. Kms with a population density of 1103 persons per sq. km. The growth during 1991-2001 was 11.71%. The sex ratio was 1117 per 1000 men & a literacy rate of 74.14%.

The main languages spoken in Daman are Gujarati, English & Hindi; in Diu the languages spoken are Gujarati, English, Hindi & Portuguese.

### ***Density of Population:***

The population density of Daman in 2001 is 1563 per square km, which is almost double than what existed in 1991 at 863 per square km.

### ***Urban and Rural Components:***

From the 1991 census it is observed that 35196 inhabitants are rural population and 26905 are urban population in Daman. The ratio of rural to urban population is 1.31.

### ***Sex Ratio:***

The sex ratio of 591 females for every 1000 men is very much lower more than what prevailed in 1991 at 913 females per 1000 men.

### ***Literacy:***

The literacy rate in Daman has increased in the past decade from 75.34% in 1991 to 83.6% in 2001. The percentage of literate males has increased from 85.24% in 1991 to 89.12% in 2001, and the literacy amongst females from 64.39% in 1991 to 73.13% in 2001.

### ***Ethnical characteristics:***

#### ***General composition***

The data on population by region is available for Daman and Diu together. Of the total population in Daman and Diu in 1991, 87.76% are Hindus, 8.91% are Muslims, 2.86% are Christians.

#### ***Scheduled Castes and Scheduled Tribes:***

In Daman 3.9% are from the schedule castes and 18.7% belong to the schedule tribes. The percentage of schedule tribes in Daman is much higher than that of Diu.

## **B. THE ECONOMY**

There are two industrial areas in the Daman. There are a number of small & medium Scale units working in the union territory. Fishing, readymade garments and plastics is the profitable mainstay of the industry in Daman. Paddy, ragi, bajra, jowar, groundnut, pulses and beans wheat, banana, sapota, mango, coconut and sugarcane are the important crops of the union territory. Tourism is an upcoming industry in the region

### ***Occupational structure:***

Of the total population in Daman only 21122 numbers or 34% are workers. 79% of the total workers are main workers and 21% are marginal workers. 26.6% of the workers are industrial workers, 16.6% are agricultural workers, 14.9% are into trade and commerce, 12.4% in livestock, forestry, etc, and the rest in other occupations.

## **1.3 SETTLEMENT PATTERN**

The town and the district still breathe the antiquity of the Portuguese rule. The town is situated at the river mouth and nestles under the fort which is a projecting

The Damanganga river divided the taluka into its two traditionally well recognised reins: the ‘ Moti Daman’ in the south and the ‘Nani Daman’ in the north. But the region is eminently agricultural with commercial activity concentrated at Daman for reasons rooted in the Portuguese colonial history. Moti Daman is mostly an administrative centre whereas Nani Daman is a commercial centre.

The town is laid out with straight roads, clean and peculiar type of traditional houses and lovely beaches. The landscape of Daman region bears through its architecture of the Fort as well as of the Churches the impact of the long Portuguese rule.



## EXISTING TOURISM SCENARIO

### 2.1 TOURISM ATTRACTIONS

#### A. TOURISM IN DAMAN

The tiny port- town of Daman was once a bastion for the Portuguese for almost four- and a half centuries. The waters of the Daman Ganga river divides the township into Nani Daman and Moti Daman. Daman is defined by the Kolak river on its north and the Kala Nadi in the south.

Two magnificent forts, Moti Daman fort and Nani Daman Fort, reminiscence of the Portuguese in Daman, stand across from each other on the waters of the Daman Ganga river. The two beach areas of Devka and Jampore enjoy hectic activity, particularly on weekends. Churches, temples, a lighthouse, memorials, landscaped gardens reflect Daman's close affinity to the past, which was peopled by Portuguese, Muslim and Gujarati influences.

#### B. CATEGORISING THE ATTRACTIONS

Daman has a mix of natural and manmade attractions. The Major Tourism Drivers and attractions in Daman can be categorised under three: Heritage Attractions, Waterfront attractions and other attractions (Religious and other attractions).

##### ***Heritage Attractions:***

The heritage attractions in Daman are

- *Fort of Moti Daman*
- *Fort of Nani Daman*
- *The Portuguese Settlement*
- *The Church of Bom Jesus among other churches*

As these heritage sites are and have the potential to attract a considerable percentage of the current tourist arrivals, it is necessary to prepare a heritage resource inventory to understand the infrastructure, management, conservation and image positioning status for further development. Resource evaluation was done on the following factors:

- *The Uniqueness and Attractions*
- *Present condition*
- *Architectural quality*
- *Environmental quality*
- *Current activities and usage*
- *Tourist infrastructure facilities like interpretation centre etc*
- *Signages*
- *Hotels and restaurants*
- *Management issues like entry timings, charges, maintenance etc*
- *Archaeological sensitivity*

- *Restoration done and Conservation planned*

### ***Water front attractions:***

Being on the coast, Daman has few beaches out of which two are unique. The quality of the various beaches differs and hence the usage patterns too.

The major beaches in Daman are:

- *Devka Beach*
- *Jampore Beach*

As developing all the beaches along the same lines will not create interest in the tourists, and as the beach quality is different, a resource inventory of beaches is prepared which will form the basis to decide the kind of development in each beach and then group and prioritise the development. The following were the major factors evaluated:

- *The beach bed width*
- *Presence of rocky surface at seashore*
- *Presence of rocks in the sea bed and loose sand*
- *Length of the beach (<350m)*
- *Fragility of the environment*

### ***Other Attractions:***

The other tourist attractions fall under two sub categories: Religious attractions and other attractions.

**Religious Sites:** Any site, which is currently being used by the local people for religious purposes, has been included in this category. Most of the sites considered in this category are temples as the church is a heritage spot. The main religious sites (other than the churches covered under heritage sites) are:

- *Jama Masjid*
- *Nurani Mosque*
- *Fire Temple*
- *Satya Narayan Temple*
- *Vishwakarma Devalaya*
- *Bhid Bhanjaneshwar Mahadeva Temple*
- *Adinath Bhagwan Temple*

A resource analysis for the religious sites was done to understand the significance and attractiveness of these sites and their potential to be major tourism drivers.

**Other Sites:** This category includes sites other than beaches, heritage sites and religious sites. The major attractions in this sector are Gardens, Water parks etc. Kachigam garden has a lake with boating facilities and ecolodging. Mirasol water park attracts many tourists especially during weekends.

## **2.2 TOURISM RESOURCE INVENTORY**

The tourism resource inventory is prepared for waterfront attractions, heritage attractions and other sites

## A. TOURISM RESOURCE INVENTORY OF HERITAGE RESOURCES

### MOTI DAMAN FORT

The massive fort that runs round the settlement dates back to 1559 A.D. The fort in the present form is spread over 30,000 sq. Mts. with 10 bastions and two gateways. The fort is protected by a moat on the landside and also connects the river to the sea.



**Table No: 2.1 Tourism Resource Inventory: Moti Daman Fort**

General	Status	Archaeological Monument
	Accessibility (Quality of Road, Local Transport etc)	13 Kms from Vapi. By private vehicles, auto or taxi Poor quality road
	Closeness to other attractions	Houses churches, old bldgs, Nani Daman fort across river
	Category	Heritage monument
	Uniqueness & Attractions	Houses important buildings, well laid streets
	Segment oriented to if any	General tourists and heritage seekers
Quality	Present Condition	Moderate
	Appr. % of tourists visiting	Around 60% of tourists
	Architectural Quality	Medium
	Environmental Quality Solid Waste Management Level of Littering	Good Good
	Current Activities & Usage	Official, residential activities and open to visitors
Tourist infrastructure	Interpretation Centre	No
	Signages & Information	Few with maps, but not details on parts of fort
	Restaurants nearby	Restaurants in town nearby at 1 km
	Security	Govt office security only
Management.	Timings of Entry	Open all the time
	Entry Charges if any	-
	Maintenance & exp.	Done by ASI
	Constraints for planning	Houses offices and residences, hence mgmt. issues
Conservation	Archaeological Sensitivity	Protected Monument under ASI
	Restoration in past	Plastering, landscaping, signages
	Conservation planned	--

The Fort is polygonal in plan with projections at regular intervals of about 500 feet and carrying splayed angular bastions. The parapet above the fortification walls is without merlons but is provided with loopholes. The terraces close to the top of the wall are connected to the inner ground surface by open flight of steps at many places. All along the inner wall, there are barracks for defence personnel. On the Northern side within the confine of the fort are located the palaces, the secretariat and other official buildings. A large number of Portuguese families reside within the fort.

## NANI DAMAN FORT

The fort lies at the ferry mouth in Nani Daman and is a declared ASI monument. The imposing church of our lady of the sea with an intricately embellished altar is the principal building within the fort. The small fort with high stone walls encloses an area of 12,250 sq. m. It has three bastions and two gateways.



**Table No: 2.2 Tourism Resource Inventory: Nani Daman Fort**

General	Status	Archaeological Monument
	Accessibility (Quality of Road, Local Transport etc)	Poor, heavy vehicles cannot pass through the bridge across river
	Closeness to other attractions	Moti Daman river across river
	Category	Heritage, General
	Uniqueness & Attractions	Imposing Gateway, houses Church
	Segment oriented to if any	General tourists & Heritage
Quality	Present Condition	Deteriorating
	Appr. % of tourists visiting	Around 5% of the tourists
	Architectural Quality	Medium
	Environmental Quality Solid Waste Management Level of Littering	Medium
	Current Activities & Usage	Open to public
Tourist infrastructure	Interpretation Centre	Not Existing (N E)
	Signages & Information	N E
	Restaurants nearby	At town, 1km away
	Security	N E
Management.	Timings of Entry	--
	Entry Charges if any	--
	Maintenance & exp.	Poor Condition
	Constraints for planning	--
Conservation	Archaeological Sensitivity	Moderate
	Restoration in past	--
	Conservation planned	Restoration of Gateway

The most conspicuous part of the fort is the giant gateway facing the river with a large statue of St. Jerome and two giant human figures, on either side of the gateway. On the top of these figures are seen two statues of lions, one on each side. From the entry to the right is a vacant room and to the left is an arch- shaped entrance, which leads into a spacious courtyard. To the right are a cemetery and a small shrine in the four walls of the cemetery where an inscription in Latin is visible. The fort and the façade are not properly conserved.

## CHURCH OF BOM JESUS

The Church dedicated to the patron saint Bom Jesus is situated inside the Moti Daman fort. The Church is a massive structure erected in 1606 and is aesthetically appealing with its richly carved doorway, decorated interiors, lofty ceiling and the alter that is surrounded by six statues of saints together with a statue at the top dedicated to Our Lady of the Rosary.



**Table No: 2.3 Tourism Resource Inventory: Church of Bom Jesus**

General	Status	Archaeological Monument
	Accessibility (Quality of Road, Local Transport etc)	13 Kms from Vapi. By private vehicles, auto or taxi Poor quality road till Daman, good roads inside Fort
	Closeness to other attractions	Inside Moti Daman Fort
	Category	Heritage & Religious monument
	Uniqueness & Attractions	Old church, massive
	Segment oriented to if any	General tourists, religious and heritage lovers
Quality	Present Condition	Moderate
	Appr. % of tourists visiting	Around 50% of tourists
	Architectural Quality	Medium
	Environmental Quality	Good
	Solid Waste Management Level of Littering	Good Less
Tourist infrastructure	Current Activities & Usage	Official, residential activities and open to visitors
	Interpretation Centre	N E
	Signages & Information	Outside with monument & ASI features
	Restaurants nearby	Restaurants in town nearby at 1 km
Management	Security	--
	Timings of Entry	Open from 8am to 6pm
	Entry Charges if any	--
Conservation	Maintenance & exp.	Done by ASI
	Constraints for planning	ASI decides the need of intervention & development
	Archaeological Sensitivity	Protected Monument under ASI
	Restoration in past	Whitewashing and painting underway
	Conservation planned	Completion of Whitewashing and painting

In the early days of the Portuguese rule Bom Jesus was a parish church. The main altar is exquisitely carved in wood and is painted in various colours predominantly golden. The feast of the patron saint is celebrated in January every year, when about 1000 people assemble.

### ***The Lighthouse***

A walkway beside the Moti Daman Fort wall leads to the Lighthouse that overlooks the Sangam area of Daman Ganga river with the Arabian Sea. Nani Daman Fort is visible from the Lighthouse. Banyan trees surround the lighthouse.

The lighthouse if open to public offers a beautiful view of the river- sea sangam, the Moti Daman fort adjacent, the Nani Daman fort across the river and the vast expanse of sea.

### ***Churches:***

Exquisite example of fine detailing is the prominent feature of the Portuguese churches in Daman. The gold leaf embellishments are in excellent condition even today and efforts need to be maintained to ensure their regular upkeep. This exercise could be augmented by floodlighting them and a cleanliness drive around their immediate surroundings should be initiated on a regular basis.

### ***Church of Our Lady of Remedies***

The church dedicated to our lady of remedies is located at Daman camp and is also declared as a national monument. It was created in 1607. The church contains five altars and the main altar is carved in wood and is painted in different colours. It is reported that these engravings belong to the 17<sup>th</sup> century. Attached to the church is a garden known as hathibag, which is maintained by the church.

A feast is celebrated at the Church on the second Sunday after Easter which generally falls in April/ may, when about 1,500 persons assemble.

### ***Church of Our Lady of the Sea***

The church in the fort of Daman is dedicated to our lady of the sea and was constructed in the year 1901 and renovated in 1966. The front portion of the church is beautifully constructed and is composed of twelve round pillars with a cross on the top.

Close to the church is a well and water tank. From here one has to climb a flight of steps to reach the upper portion, where there are two causeways, one leading towards the main entrance and the other leading towards the side entrances of the fort.

## B. TOURISM RESOURCE INVENTORY OF WATERFRONT RESOURCES

### DEVKA BEACH

Devka beach has a long shore- line and attracts most of the weekend tourists. However, there are rough rocky formations beneath the water level. Devka is located in Nani Daman and houses some of the largest hotels in Daman. Taxis and auto rickshaws are easily available to take one to Devka.



**Table No: 2.4 Tourism Resource Inventory: Devka Beach**

Spatial	Accessibility (Road Quality, Local Transport etc)	2 Kms from Town Good roads, auto rickshaws and taxis available to reach
	Closeness to other attractions	3 Kms from town
Status & Quality	Appr. Beach length	1km
	Appr. Beach width	Tidal dependent- varies from around 150m to 800m
	Beach & Sand Quality	Clayey and rocky
	Nature of Sea	Rough
	Aesthetic appeal & Uniqueness	Average, ribbon development of hotels
	Seasonal Characteristic	High tidal fluctuations
	Shade	No
	Environmental Quality	Poor
	Solid Waste Management Level of Littering	Poor, hotels' sullage line into beach Plastics disposed on beach
	Level of Commercialisation	Moderate to high on weekends
	Tourist Profile & nos.	Families, youth and weekend crowd
Tourist Infrastructure & Facilities	Water Related Recreation (W. Sports, Pool etc)	--
	Changing Rms & Toilets	--
	Cloak Rooms	--
	Restaurants	Lot of restaurants on beach side and road side
	Hotels/ Resorts & Grades	Lot of hotels- upto 3 star
	Signages & Information	No prominent signages, but intense dvpt denote arrival
	Security	--
	Other interesting features	--
	Segment oriented if	General tourists- weekenders
	Constraints	Natural beach constraints, ecological fragility, CRZ
Development	Overall potential for dvpt	--
	Tourist Carrying Capacity	Already reached high level of intense usage
	Development planned	--

The amusement park and the musical fountain, the pony ride on the sands etc are popular with children while men enjoy the numerous bars here. When the park is illuminated on festive days, it provides an enchanting sight. Most of the food joints and posh hotels are just within walking distance of the beaches.



## JAMPORE BEACH

Jampore beach is at the Southern end at about 5 kilometres from the town. Jampore is the most beautiful beach in Daman. The beach lies along calm and quiet surroundings. Along the beach are palm and coconut trees, which beautify the beach. However its linkages to the town are quite poor.



**Table No: 2.5 Tourism Resource Inventory: Jampore Beach**

Spatial	Accessibility	By private vehicles only
	(Road Quality, Local Transport etc)	Poor Road Quality
	Closeness to other attractions	7 km from town
Status & Quality	Appr. Beach length	Around 800 m
	Appr. Beach width	100m
	Beach & Sand Quality	Excellent beach condition, fine beach sand
	Nature of Sea	Moderate
	Aesthetic appeal & Uniqueness	Highly appealing, long stretch of beach lined with plantations
	Seasonal Characteristic	Mainly during weekends and holidays
	Shade	Shaded
	Environmental Quality	Good
	Solid Waste Management	Good
	Level of Littering	Less
	Level of Commercialisation	Less
Tourist infrastructure & Facilities	Tourist Profile & nos.	Tourists in look for good beach quality
	Water Related Recreation (W. Sports, Pool etc)	New entrepreneurs approaching for water sports
	Changing Rms & Toilets	Not Existing (N E)
	Cloak Rooms	N E
	Restaurants	Only two
	Hotels/ Resorts & Grades	Only one across road: China town
	Signages & Information	Less catchy signages leading to the beach
	Security	--
Development	Other interesting features	Excellent view of vast expanse of sea & tranquillity
	Segment oriented if	General leisure tourists
	Constraints	Limitation of land for development, CRZ regulations
	Overall potential for dvpt	Good; also for water sports
	Tourist Carrying Capacity	Not much limitations, moderate ecological sensitivity
	Development planned	Water sports development planned

Jampore beach is a pleasant spot where one communes with nature in solitude. This beach is most suited for swimming, as it has no rocky formations. The beach is lined with Casurina plantation on the seashore. During low tide, one can walk on the soft wet sand right into the sea.



### ***Sangam area (River – Sea Sangam)***

The mouth of the Daman Ganga river where it meets the Arabian Sea is a very unique and potential area for development. Such meeting points have elsewhere become major tourist attractions.

### ***Mirasol Water Park***

To cater to the family and youth oriented tourists, in the Northern end of Daman, Mirasol water park has been developed with all facilities and the feel of a theme park. This water park attracts a major share of the tourists especially in the context of only few attractions in Daman.

## **B. TOURISM RESOURCE INVENTORY OF OTHER RESOURCES**

### **RELIGIOUS ATTRACTIONS**

This section deals with the religious attractions other than the churches, which are discussed under heritage attractions.

#### ***Jama Masjid***

The mosque was constructed in A.D 1903. The mosque is crowned with a dome with a star and a crescent moon embossed upon it, besides four minarets at four corners. A wooden door with some creeper designs leads into the compound where stands the majestic edifice. The masjid is divided into two parts. The first part in front of the main hall is supported on four pillars and two pilasters. It has three doors through which the visitor can enter into the main hall, which is spacious in size and rectangular in shape. It can accommodate about 500 persons for reciting namaz.

Two major festivals, Ramzan Id and Bakri Id are celebrated at this mosque with great pomp and are attended by a large number of persons.

The masjid has been recently painted which has washed away part of the old character.

#### ***Nurani Mosque***

Located at the Muslim muhalla in Kharwada, the mosque was constructed in 1896 and was renovated in 1960. The mosque covers an area 240 sq. feet approximately. The mosque has a pavilion in front, which can accommodate a number of persons. It has four minarets at four corners besides six small minarets in between these four minarets.

Ramzan Id and Bakri Id are the festivals celebrated at this mosque with great traditional pomp.

#### ***Fire Temple***

The Fire Temple belonging to the Parsi community is constructed in simple style with a tiled roof, encircled by a compound wall. The entrance to the temple is restricted to Parsis. The temple contains a home-kunda or sacred fireplace known as Atash. Daily prayers are held here besides some religious ceremonies every year.

### ***Satya Narayan Temple***

The temple dedicated to Satya Narayan is situated at Jumpri in Moti Daman close to the roadside. It faces the east and is said to have been renovated in 1971. It is an impressive structure surmounted with a dome. The temple is divided into a subhamandap and a garbha griha. The garbhagriha has a stone canopy in which is installed an idol of Satya Narayan on a raised pedestal. The four-armed idol is in standing posture and beautifully painted.

### ***Vishwakarma Devalaya***

This belongs to the panchal, carpenter and blacksmith community and was constructed around 1911. At the entrance are erected two small lamp pillars, one on each side. At the top of the entrance gate are seen two idols of saints and on the external walls of the temple are visible the idols of saints in Dyanamudra.

## **OTHER ATTRACTIONS**

### ***Gardens:***

#### **Satyasagar Udyan:**

Satyasagar Udyan is at 3 kms from Nani Daman. This is the only garden of its kind in Daman developed as a relaxation resort for tourists. The garden and resort is developed around a lake and has attractive fountains, lakeside seating, restaurant etc.

#### **Daman Ganga Tourist Complex:**

The tourist complex is a unique development in Daman with development around lake. The landscape is appealing with Island Gardens, walkway all along the periphery, water falls, fountains etc. The facilities at the complex include Boating, Amphitheatre, Cafeteria, cottages, conference hall, amphitheatre, etc. The newly developed ecolodging facilities in the form of tents are developing as a major attraction.

## **2.3 TOURISM INFRASTRUCTURE**

### **A. ACCOMMODATION**

In Daman, there are 13 hotels in A category housing 430 rooms, 47 hotels in B category contributing to 761 rooms, 4 hotels in C category housing 27 rooms, one hotel in D category having 4 rooms. (Source: Tourism Dept, Daman)

The rooms in Daman are sufficient to handle the present visitors.

### **B. RESTAURANTS**

In addition to the restaurants associated with the above accommodation facilities, there are exclusive restaurants and light refreshment stalls in various parts of Daman like near Jampore beach, Nani Daman etc.

## **C. TOURIST SAFETY**

Lifeguards are not available at the beaches of Daman. There are no Tourism Police at the any of the Tourist Sites in Daman. Family tourists are hence sceptical to visit the beaches on weekends after 7 p.m.

## **D. INFORMATION CENTRE**

Tourist information centre is along with the Tourism department and is not present in any of the tourist attractions. Hence for information on non office days and after office hours becomes very difficult

## **E. TOUR AND TRAVEL SERVICES**

From Vapi station, taxis and auto rickshaws ply to Daman taking the tourists. There are no local level organised travel services which take the tourists for full tour to Daman's attractions

## **F. TOUR GUIDES**

There are no tourist guides in the region to take visitors to the heritage monuments and for interpretations.

## **G. SHOPPING**

The shopping facilities are for the local population only, here are no specialised tourist specific shopping.

## **H. BANKING AND MONEY EXCHANGE**

Daman has the branches of a few major banks. Moreover it is only 13kms from Vapi, which has facilities for all types of financial transactions.

## **2.4 PLANNING EFFORTS**

The development of tourism in the UT began in the VIII Five-Year Plan period. In 1994 a plan for tourism development was prepared for Daman. The recommendations were incorporated in the next five-year plan. For the period 1995-2000 a five-year plan for Daman was prepared by Publicity & Promotion division of ITDC recommending a number of developments for the region. It is observed that the approved outlay and expenditure, tourist infrastructure and development of tourists spots has increased considerably over the period.

## 2.5 COMPONENT WISE SWOT ANALYSIS

### Category : HERITAGE ATTRACTIONS

**Attractions :** *Fort of Moti Daman, Fort of Nani Daman, Portuguese Settlement, Church of Bom Jesus among other churches*

Analysis Aspects	Attractions	Infrastructure	Degree of Popularity	Sustainability factors
<b>Strengths</b>	<ul style="list-style-type: none"> <li>Imposing forts, reminder of the glorious Portuguese past</li> <li>Unique Settlement Pattern</li> </ul>	<ul style="list-style-type: none"> <li>Well laid streets</li> </ul>	Medium	<ul style="list-style-type: none"> <li>Conservation and preservation would decide sustainability</li> <li>Thrust of official and residential neighbourhood on forts</li> </ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>Lack of proper conservation</li> </ul>	<ul style="list-style-type: none"> <li>Absence of signages at all spots</li> </ul>		
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>Development of Heritage Tourism, Heritage Walks etc</li> </ul>	<ul style="list-style-type: none"> <li>Stay at heritage locations</li> </ul>		
<b>Threats</b>	<ul style="list-style-type: none"> <li>Fading Portuguese culture</li> </ul>			

### Category : WATERFRONT ATTRACTIONS

**Attractions :** *Devka Beach, Jampore Beach, River-Sea Sangam*

Analysis Aspects	Attractions	Infrastructure	Degree of Popularity	Sustainability factors
<b>Strengths</b>	<ul style="list-style-type: none"> <li>Meeting point of Daman Ganga river with the Sea.</li> <li>Coastal length of 13.5 Kms</li> <li>River- Sea meeting point</li> </ul>	<ul style="list-style-type: none"> <li>Accommodation facilities near Devka</li> </ul>	Devka beach most popular	<ul style="list-style-type: none"> <li>Optimum usage of waterfront</li> <li>Highly fragile ecology especially with intense development</li> </ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>Rocky beach and natural constraints.</li> </ul>	<ul style="list-style-type: none"> <li>Old bridge connecting two parts</li> <li>Waste disposal on water front/ beaches</li> </ul>		
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>Dvpt of Sangam area &amp; Jampore which is not developed</li> </ul>	<ul style="list-style-type: none"> <li>Alternate tourism usage of old bridge</li> </ul>		
<b>Threats</b>	<ul style="list-style-type: none"> <li>Continuing siltation of river</li> <li>Over exploitation a threat due to Ecological fragility</li> </ul>	<ul style="list-style-type: none"> <li>CRZ regulations not permitting waterfront essential infra dvpt</li> </ul>		

### 3.1 INTRODUCTION

The objective of the study is to provide the tourist growth projections and visitor estimates to the Daman region till the year 2022 and project a mix of targeted tourists segments.

The analysis and projections have been based on the officially published documents, statistics and reports of the Ministry of Tourism (MOT) and the yearly plans of the local administration of Daman and the Consultants database of earlier surveys carried out at similar destinations.

Assumptions made during the calculations of the projections are based on the Consultants interactions with the stakeholders in Daman, i.e. the hoteliers association, the industry association and the government officials.

The reports referred to by the Consultants include the official statistics prepared by the MOT, approved yearly plans prepared by the local administration of Daman, other surveys and published reports.

### 3.2 OVERVIEW OF TOURIST GROWTH IN INDIA:

As per the estimates of the World Tourism Organisation, annually, 8.9 million people are expected to visit India by the year 2020. As per the WTO estimates tourism to South Asian region is expected to grow at an average of 6.2%, much above the world average of 4.1%.

### 3.3 CONSTRAINTS AND ASSUMPTIONS:

Data for visitor arrivals at Daman provided by the local administration are assumed as a benchmark for future projections of domestic tourist arrivals to Daman.

No statistical data is available to indicate neither the composition of domestic tourists and international tourists nor the state-wise composition of the domestic tourists. However on the basis of the Consultants interaction with the hotel owners, and government officials the following characteristics were highlighted:

- 99% of the tourists are domestic tourists.
- The 1% international tourists are mostly tourists who are embarking from Mumbai back to their country
- The composition of domestic tourist is from the nearby towns and cities like Surat, Nasik, Mumbai, etc. of the states Gujarat and Maharashtra.
- The domestic tourists are in two broad categories, the leisure tourists and the business and conference tourists.

- 80% of the tourists currently visiting Daman are weekend tourists and 20% tourist arrivals are distributed over the week without any definite trend.

#### **A. ASSUMPTIONS FOR DOMESTIC TOURIST ARRIVALS:**

During the course of calculations of the domestic tourist estimation, it is assumed that

1. Even though Daman has witnessed a compounded growth rate in tourists arrivals at 11.94% over the last 10 years, the future growth would be at a lesser rate as firstly the development plan proposed will endeavour to
  - Increase the stay of the existing tourists.
  - The growth in existing tourists' visitation to not be concentrated during the weekends but be spread over the week i.e. growth in the 20% of all week tourists will be observed rather than the weekend tourist. This will not only increase the business days of the tourism providers, but also achieve an even spread in utilisation of resources.
  - Maintain the percentage share leisure tourists and business tourists.
  - Once the existing market of the nearby towns and cities is exhausted the destination will have visitation from other states like Madhya Pradesh from awareness created through word of mouth and limited publicity.
2. The growth rate of tourist arrivals in Daman is more than double than that of the India average of tourist's arrivals. However the world's average of growth in tourist at 4.1% is being taken upto 2012, followed by the growth tapering to 1% till 2022,
  - To maintain a pessimistic figure to cater to the ups and downs in the India Inc,
  - Tapering of the growth rate due to increase in quality tourists rather than quantity, stagnation of market and future development of better alternative destinations.

#### **B. ASSUMPTIONS FOR FOREIGN TOURISTS ARRIVALS:**

From interactions with the hotel owners and the other tourism stakeholders in Daman, it was realized that the current international tourists visiting Daman are typically those who are going to embark from Mumbai and are on a look out for a value for money tourist accommodation, facilities, proximity and easy accessibility to Mumbai.

These tourists also belong to the international target segment for Daman. They have further been classified into Asian and European Tourists. The following facts and assumptions have been used to forecast their arrival in Daman.

- 26.75% of all international tourists visiting India use Mumbai as a port for disembarkation
- 26.5% visitors are South Asian and 32.3% are European travellers (excludes arrivals from Bangladesh and Pakistan).

*(Source, Tourists Statistics, DOT, Government of India)*

- Foreign tourist arrivals are projected to grow at 4.1% per annum as projected by WTO world tourist's growth average.

- The awareness cum desire of the foreign European and the Asian tourists embarking from Mumbai is assumed to gradually increase from 1% to 3% till the year 2022.

*The forecasted tourist's arrivals based on the above mentioned facts and assumptions are as follows:*

**Table No: 3.1 Forecasted Tourist Arrival**

<b>Year</b>	<b>Domestic</b>	<b>Foreign</b>	<b>Total</b>
2003	575514	3493	579007
2004	598535	4364	602899
2005	622476	5300	627776
2006	647375	6305	653680
2007	673270	7384	680654
2008	700201	8541	708742
2009	728209	11114	739323
2010	757338	11570	768907
2011	787631	12044	799675
2012	819136	13541	832677
2013	827328	14096	841424
2014	835601	14674	850275
2015	843957	15276	859232
2016	852396	17669	870065
2017	860920	18393	879314
2018	869530	19147	888677
2019	878225	19932	898157
2020	887007	20749	907757
2021	895877	21600	917477
2022	904836	22486	927322

## TOURISM DEVELOPMENT

### 4.1 DESTINATION ANALYSIS

The first step towards destination planning is the analysis of the destination with respect to the business environment. This involves determining the intrinsic strengths (S) and weaknesses (W) of the site and the opportunities (O) and threats (T) that the environment offers. The SWOT analysis will study the external and internal environment of the entire region of Daman as a business unit and would provide a framework as an output, for further demand projections. In general, a tourism business unit has to monitor key macro environment forces (like demographic, economic, technological, political, legal, social and cultural factors) and significant microenvironment actors (like customers, competitors, systematic factors and tourism resource suppliers) that will affect its ability to ensure sustainability and earn profits. While the External Environment Analysis aims at discerning attractive opportunities or potential threats in the environment, the Internal Environmental Analysis focuses on the necessary competencies to succeed in these opportunities.

A SWOT analysis of Daman has therefore been done and described in this section. The SWOT analysis would provide a strategy for development, which would consolidate the strengths, overcome the weaknesses, build on the opportunities and tackle the threats. The SWOT analysis is therefore logically followed by the Strategy for Planning, which describes the broad guidelines on which the planning should be done.

#### A. STRENGTHS:

The strengths and weaknesses of a system are inherent to a system owing to the properties or characteristics of the system. The following are the strengths of the Daman region:

- Daman, the city of twin forts, is an instant reminder of Portuguese rule with unique settlement pattern, the massive forts, the streets, etc.
- Developed value for money accommodation facilities.
- A coastal length of 13.5 kms with which can be developed as hub for water related activities.
- A meeting point of the Daman Ganga River with the Arabian Sea.
- Zoning of the industries such that the tourism zone is pollution free.
- Active tourism departments keen on increasing tourist flow in the region with a visionary head, the Administrator.
- Proximity to Mumbai, one of the largest gateway for foreign tourists, Surat, Nasik, etc, resulting in increased level of business tourists in the region.
- Only 13kms away from Vapi hence have access to the latest financial and technological infrastructure.



- Proximity to the National Highway 8 and the Vapi station, facilitating easy access to the region.
- Adequate supply of power, electricity, and water in Daman and a well developed basic road infrastructure. This enables absorption of recommended development programme.

## **B. WEAKNESSES:**

The weaknesses of the region are documented as follows:

- Lack of a well developed local internal transport facility.
- Due to lack of proper conservation of the heritage monuments they are fading away.
- The Portuguese culture is fading away as most people are going away in search of better opportunities.
- There are no tour operators functional in Daman to show around the tourists the assets. The tourism activity has hence been restricted to and concentrated at Devka Beach area.
- The Daman Ganga River is getting silted and requires dredging. Moreover the industrial waste is being dumped in the river polluting it further.
- Lack of a proper bridge connecting the Moti and Nani Daman.
- No proper sewage and sewerage disposal system, affecting the ecology of Daman.
- No proper marketing strategy has been implemented in the region. Hence there is no distribution network in place; none of the tour operators sell Daman tourism. There is a lack of a brand identity.

## **C. OPPORTUNITIES:**

Major opportunities for Daman are:

- Proximity to Mumbai, one of the largest gateway for international tourists to India
- Proximity to some other industrial towns of Maharashtra and Gujarat.
- Tourism has been granted industry status. Daman being a union territory can attract private investment with special incentives.
- Proximity to Dadra & Nagar Haveli, which is also being developed and is moving towards being an increased tourism hub.

## **D. THREATS:**

The perceptible threats to the region are:

- The tourism potential of the region is being exploited in an unorganized and unplanned manner. Hence even though growth in domestic tourism is witnessed, the region is not attracting quality tourists and its ecology is getting effected.
- Local population looks down upon working as unskilled hotel staff.

- Decrease in the percentage of people disembarking from Mumbai.
- Fading of Portuguese culture, one of the major differentiators of Daman vis-à-vis other destinations in the vicinity, with number of Christians moving out to the western countries for better livelihood and opportunities.
- Implementation of CRZ regulations does not leave much scope for development of less developed beaches like Jampore beach. If the development here is not properly planned will lead to unsustainable development as in Devka.

A proper tourism development and marketing strategy would warrant consolidation of strengths, capitalization of opportunities, alleviation of weaknesses and counter measures for threats.

## 4.2 TOURISM PLANNING STRATEGY

### A. PRODUCT CONCEPTUALISATION

Daman Territory has two very important categories of tourism. One is the heritage left by the Portuguese after a four and a half-century rule on the territory in the form of two huge forts and the remains of typical Portuguese settlements. Second is the waterfront with the Arabian coastline, three rivers and more interestingly the meeting point of the rivers and the sea.

There is a need for not only showcasing and promoting the existing products to tourist markets which either lack the sea front or are very accessible to Daman, but also a plan for development and maintenance of basic tourism amenities, infrastructure, bridge connecting Nani Daman and Moti Daman in the region and heritage promotion.

Today Daman is attracting middle and lower income tourists from Gujarat and Maharashtra, tourists who would easily divert to other locations when convenient.

Capitalizing on the natural, heritage and scenic advantages and by providing proper accessibility and infrastructure to the region, Daman offers immense potential for being a popular tourist destination.

#### ***The Unique Selling Proposition:***

The USP for Daman will be **‘Waterfront Tourism in the Heritage backdrop’**.

The development will revolve around the following two pillars of tourism:

- Mankind’s inherent desire to see and learn about the cultural identities in different parts of the world. Hence on similar lines, Daman is proposed to be developed as a region rich in Portuguese heritage, settlement and culture experience. The core areas of development will be conservation of the heritage monuments, pedestrian guided/self guided tour, development of an area in Daman as remising Portugal way of living by way of their cuisine, dances, music, etc.
- The second pillar is the water front tourism that has been extremely active in capitalising economic benefits from tourism especially Daman being traditionally a port town. The core areas of development would be upgradation of tourism amenities at the beaches, develop more waterfront tourism and entertainment resources.

## **B. THE DEVELOPMENT STRATEGY:**

The Tourism Development Strategy for Daman emphasises on:

- developing Daman as a quality tourist destination to attract tourists nearer to waterfront and heritage
- developing tourism to ensure the overall development of the region

The following principles underpin the Tourism Strategy for Daman as outlined below.

### **• A Unique Selling Proposition**

*Tourism is about uniqueness and attractiveness of the destination.*

#### *– Market Positioning*

Daman needs to create a unique selling proposition based on its core theme strength. This would position itself well with an edge over in the market.

#### *– Perspective Vision for Daman's Tourism Development*

Daman needs to develop a vision for its tourism development for a long-term time frame. This perspective vision would envisage the developments required with the time of it for making Daman an ideal and sought after tourist destination

### **• Quality Experience**

*Tourism is also about quality experience*

#### *– Creation of a High-quality Product*

Simultaneous with the creation of brand equity for the product, a high-quality product will have to be created. The tourism industry is very sensitive toward quality and especially when Daman's speciality is in its quality environment. Therefore, it is necessary to establish a mechanism to ensure that good quality services are offered to tourists.

#### *– Creation of a Highly Visible Product*

An equally important aspect is the creation of a product that is highly visible. In spite of having a long coastline with beautiful beaches, heritage sites, affordable accommodation etc, Daman has not been seen as a highly attractive tourist destination.

### **• Viable Business Proposition**

*Tourism is about business.* Tourism is an industry, which is made up of small businesses. If tourism businesses are not viable, the destination suffers.

*Tourism is also about partnerships.* A key element to success is a close working rapport between the private and public sectors. Such partnerships deliver real benefits for the whole community not only for the tourism industry. Also, the local community should be involved in the process of development of tourism. Their support would advance developments in tourism and provide for a better image of Daman.

### **• Boost to the Economy**

Tourism is also about benefit to the local economy. Tourism will become a boost to the economy providing employment and the required training for the locals.

### **• Conservation of Heritage and the Environment**

*Tourism needs to be sustainable.* Any long-term diversification strategy requires careful consideration of the social and environmental effects such a strategy will have on the amenity of the area. Tourism is not different in this respect than any other industry.

- *Conservation of Heritage*

The remains of the Portuguese heritage in Daman are unique and have been cultivated diligently over the centuries. Daman district also has two of the most imposing forts—the forts of Moti Daman and Nani Daman.

The Archaeological Survey of India (ASI), and the other museums have to carry out necessary Conservation, Preservation and Restoration.

- *Conservation of Environment*

If leisure activities and adventure tourism is to thrive in Daman, it is essential to consider the impact on the environment while suggesting developments.

Hence there is the requirement for **Planned Development** of Daman region

- *Categorisation of Areas*

To plan the development of the region, the tourist destinations should be categorised into activity zones. Also different identity should be maintained for the zones.

- *Formulation of Development Plans*

A tourist destination should have attractions, good facilities, infrastructure, transport and hospitality. These five aspects need to be developed for a site to become a tourist destination. These are described below.

- *Standards for Maintenance of Environmental Balance*

The implementation of standards for the planning, layout, and design of accommodation or facilities will optimally blend these developments with the surroundings and minimise any degradation of the environment. This should be done keeping in mind the most appreciated features of Daman: ‘Peace and pollution free environment’.

- *Formulating Circuits*

As there few tourist destinations nearby Daman, potential of developing circuits with Daman needs to be explored. This would help in attracting more tourists to Daman. Circuit/s should be developed in a way that tourists can choose the circuits they want to visit depending on the duration of their stay.

***These measures define the Tourism Development Strategy for Daman. The strategy takes advantage of the developmental opportunities, and tries to remove the constraints to develop Daman as a tourist destination.***

## **4.3 MACRO LEVEL PLANNING**

### ***Improving the Accessibility & Infrastructure***

*(Refer Chapter 5 for details of proposals for Infrastructure development and accessibility improvements)*

### ***Policy Level Recommendations***

- The CRZ regulations in Daman are recommended to be relaxed in a restricted manner due to the following reasons:
  - Daman has a small geographical area of just 72 sq. km, the CRZ regulations take away valuable land from development.

- Devoid of industries and other major economic activities, Tourism is the major driver expected to bring in change.
- Jampore beach of Daman being virgin in nature, the minimum infrastructure needs to be created at the beaches to make it a good tourism destination; a prerequisite to make Daman a preferred tourism destination (beaches being the major attraction).
- Special incentives and regulations need to be declared for tourism industry as part of Daman being declared a Special Tourism Zone, which would bring in the required investments.

## 4.4 DEVELOPMENT PLANS

### A. HERITAGE DEVELOPMENT PLAN

Daman is a town of twin forts, on either side of the Sangam area of the Daman Ganga river and the sea. The forts are under ASI, so any development can be taken up only with ASI permission. ASI has to build or repair the existing walls and parapets and the pathway inside the fort to preserve the monument. Also the uniqueness of the settlement pattern and its scale and character is proposed to be highlighted as tourist attractions.

#### *Proposed Developments*

The major tourist development strategy is to promote heritage tourism along with waterfront tourism. One of the major tourist attractions will be the **heritage walk** through the Moti Daman fort area and surrounding Portuguese settlements. This shall be further accentuated by observing heritage week with attractive packages of heritage walk, heritage stay, heritage cuisine etc.

### MOTI DAMAN FORT (& surroundings) DEVELOPMENT

The Moti Daman fort is to be developed as a major attraction in the area to enable tourists to experience the glory of Daman Fort and the Portuguese glory in past. Moti Daman Fort and surroundings will form a major tourism node in the Daman tourism development. In addition to the churches, the old buildings inside the fort, many of which are offices or Portuguese residences will be highlighted. The major tourist attractions developed are:

#### *i. The Heritage Walk*

Tourist's appreciation and interaction of the settlement pattern and the heritage of the region will be enhanced through the Heritage Walk of the Fort area and the surroundings. The entire heritage walk area is landscaped with places to relax with good heritage views by creation of seating spaces under the Banyan trees, where also informative signages will be displayed. A printed guiding tour brochure containing the map of the fort and surroundings and self-explanatory details highlighting the Fort's main attractions, in terms of its historical relevance, architectural character, uniqueness etc shall be made available for those who want to do the walk alone.

Outside the Fort, the walk is proposed to extend to the nearby Portuguese settlements, which still maintain the heritage character. Relaxing spaces and toilet facilities are

arranged in one of these heritage homes on the way. Drinking water will be installed at appropriate places.

*ii. Time bound traffic control*

The Moti Daman Fort houses offices and residential settlements and hence the traffic movement cannot be fully controlled. Time bound restrictions shall be imposed on the traffic movement within the Fort, which is as follows:

- Every day morning 6-8 am, the fort will be open for pedestrian walks, jogging etc only
- Saturdays evening after 7 PM, vehicles will not be allowed inside for a humane scale understanding of the fort
- Sundays, the major expected heritage walk time, till noon, no vehicles will be allowed inside.

Proper arrangements for parking outside the Southern entrance to the fort will be done to facilitate inward movement of others during the traffic restricted timings.

*iii. Fort lighting*

Street lighting will be a major element that will impart a feel of the walk through the fort especially in the evenings. The lights by the side of the streets shall be of height not more than 3 mts. The main attractions will be flood lit. The Fort walls are also proposed to be flood lit. The flood lighting of the fort walls has been prioritised by the MOT, Govt. of India for the year 2001-2002 and proposal for the same have been submitted.

*iv. The Churches*

The Churches are in a moderate to good condition. Church of Bom Jesus requires some maintenance and painting work. The two Churches in the fort shall be highlighted by floodlighting. Also proper conservation measures for the churches are proposed to be undertaken at a regular basis.

*v. Cultural activities*

Cultural activities will be conducted on a regular basis at Bandstand outside Moti Daman Fort and the memorial garden inside the Fort.

*(Kindly refer Page No:32 on Sangam Area Development for Bandstand development)*

The memorial garden will house open-air entertainment and cultural activities, which predominantly include musical programmes, stage shows in evenings, theatrical performances etc. Maintaining the landscape of the garden, additional developments include seating space, kiosks, changing rooms and toilets (for performers only), kiosks etc. The kiosk will be of flexible nature to accommodate varying uses as the activity and the time of the day changes. The area will be well lit using flood lighting. The kiosks would also function as makeshift light refreshment stalls.

*vi. The Lighthouse*

The lighthouse beside the Fort wall is proposed to be opened for public viewing and will offer a beautiful view of the river- sea sangam, the Moti Daman fort adjacent, and the

Nani Daman fort across the river and the vast expanse of sea. An entry charge will be taken from tourists.

*vii. Heritage Homes*

For the tourists who wish to stay in a Portuguese house and experience the unique settlement, few Portuguese houses in and outside the fort will be developed into heritage homes. Here tourists will be provided with Portuguese cuisine.

One heritage home will be developed to house a handicraft centre in the character of a heritage haat pavilion. This will also be a platform for local people to be participating in the haat.

- \* Sound and Light Show at the Dominican Monastery in the Moti Daman Fort has already been prioritised by the Ministry of Tourism, Govt. of India for the year 2001-2002 and proposal for the same has been submitted accordingly. This would not only be an attraction to the domestic and the international tourists but also to the local people, as it would help them keep their culture.

The sound and light show would evolve around the rich history of the Moti Daman Fort, the history of Daman, the culture and Portuguese folk dance and songs. The script should be exceptional and well researched to appeal the tourists. The entire show should be well choreographed and gelled with the environs of the monastery.

The proposed cost and phasing of the physical developments are:

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Phase of Development
1	Cleaning & Maintaining the Roads for Heritage Walk in the Fort Area	5.00	I, II, III, IV
2	Conservation of Fort Walls	15.00	II, IV
3	Conservation of Churches	10.00	I, II
4	Maintenance of Heritage Buildings	4.00	II
5	Development of Heritage Homes	10.00	II
6	Development of Heritage Haat	4.00	II
7	Beautification of Moat	4.00	II
8	Landscaping in the Moti Daman Fort area	5.00	I, II
9	Provision of Relaxing spaces & seating	0.60	I
10	Signages for Heritage walk	0.60	I, II
11	Museum of Portuguese Antics	4.00	II
12	Parking arrangement (including landscaping) for Heritage Walk	1.60	II
13	Floodlighting of the fort, gardens	2.00	II
	<b>The Memorial garden-cultural activities</b>		
1	Repair, Plastering & Painting of the Beams	2.00	II
2	Paving of the walkway	0.15	II
3	Signage at the Memorial	0.10	II
4	Kiosks, changing rooms at memorial garden	1.80	II
5	Maintenance of garden	1.20	II,III,IV



	<b>The LightHouse</b>		
1	Arrangements for Public viewing (ticket sale counter)	1.20	II
2	General Site Clearance and Development	0.60	II
	<b>Total (In Lakh Rs.)</b>	<b>118.85</b>	

(Note: All Cost are Block Costs only- applicable wherever costs are mentioned)

Phase I : 2003-2004; Phase II : 2005-2010; Phase III : 2011-2016; Phase IV : 2017-2022

Refer Section on Accommodation: Page 38 for no. & cost of accommodation at various places )

\* Projects Prioritised by the Ministry of Tourism, Govt. of India for the year 2001-2002

*	Sound and Light show at Dominican Monastery	20.00	I
*	Illumination of Fort walls of Moti Daman and Nani Daman Forts	30.00	I

## NANI DAMAN FORT DEVELOPMENT

The Nani Daman fort has to be conserved, developed and marketed as an attraction in the area to enable tourists to experience the glory of the twin forts.

Therefore, the following measures shall be undertaken:

- i. The fort walls are wearing away. This shall be immediately restored retaining the character and materials of the old fort.
- ii. Fort Lighting: The Fort walls are proposed to be flood lit. The flood lighting of the fort walls has been prioritised by the MOT, Govt. of India for the year 2001-2002 and proposal for the same have been submitted.
- iii. The Entrance Gate and the Statue of St. Jerome are to be restored into original character and condition.
- iv. The Church inside is proposed to be conserved immediately and renovations done.
- v. Maintenance of the jetty and the garden outside the fort will be done on a regular basis with good waste management measures.
- vi. Signages indicating various parts of the fort shall be placed in the fort making the parts of the fort self-explanatory. Also signage's outside will make it inviting for a visit to the fort.
- vii. To generate interest among the tourists, literature will be made available on aspects of both the fort such as construction, materials used, and reasons for selection of the site to build the two forts etc.

No toilet block or refreshment stalls shall be constructed within the fort premises. The light essential refreshment will be in the form of temporary stalls/ kiosks outside.



The proposed cost and phasing of the physical developments are:

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Phase of Development
1	Restoration of Fort Wall	6.00	II,IV
2	Restoration of entrance gate & Statue of St. Jerome into original character	3.00	II
3	Conservation of Church	4.00	II,IV
4	Maintenance of the Jetty & garden	5.00	II,III,IV
5	Signage in the Nani Daman fort	0.20	II,IV
	<b>Total ( In Lakh Rs.)</b>	<b>18.20</b>	

### DAMAN DARSHAN

Daman town is compact and agglomerated in nature. The scale and character of the town is unique with paved roads, human scale streets, old character buildings, interesting tourist spots etc.

#### *Required Developments:*

The town should be promoted for its old port town character as a major tourist attraction. To get the feel of the town, facilities should be so provided which bring out the intangible character of the place too.

The main highlights of the town tourism development plan proposed are:

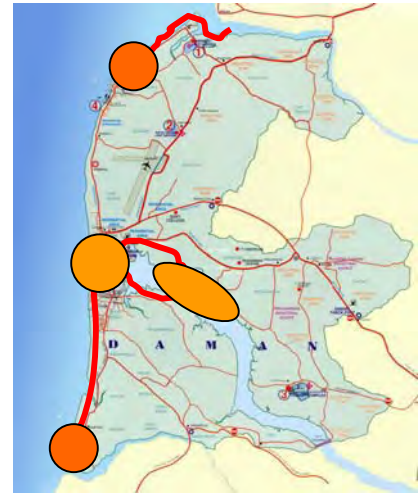
- Daman Darshan (settlement ride)- organised tour operator service taking tourists to the forts, the bandstand, gardens, beaches etc. Planned tours for both the day and the evening must be incorporated in Daman's tourism menu.
- Provision of vehicles like bicycles, mopeds to tourists on hire
- Development of Crafts emporium, shopping areas in Nani Daman settlement area.
- Development of attractive and effective signages in various parts of the town showing location of destinations, directions, distances etc.

The proposed cost and phasing of the physical developments are:

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Phase of Development
1	Purchase of two open faced mini coach for Daman Darshan	40.00	II
2	Regularizing the renting of bicycle, bikes & mopeds	0.10	II
3	Providing different types of signages in Daman	0.40	I
4	Construction of Crafts emporium	0.60	II
5	Purchase of mechanized beach cleaning equipment's.	20.00	I
	<b>Total ( In Lakh Rs.)</b>	<b>61.10</b>	

## B. WATER FRONT DEVELOPMENT PLAN

The major areas of water front development will be Devka beach management & maintenance, Jampore beach development, the Sangam (of river and sea) area development, upstream of river area development etc. Daman that was traditionally a port town shall revive its character.



### DEVKA BEACH DEVELOPMENT

#### *Required Developments*

The development at Devka beach will be more in visitor facility enhancement than introduction of more activities. Devka being the major tourist visited beach, should not be overloaded more. The proposed developments in the beach stretch are:

- i. An arrival plaza including tourist reception centre facilitating the tourists in visit to other attractions, information about other destinations in the nearby circuit and booking facilities.
- ii. Organised Parking Space for private and other vehicles.
- iii. Provision of Cloakrooms for tourists to keep their things.
- iv. Effective Signages and lighting of the beach
- v. Prohibiting any sullage disposal by nearby hotels to the beach
- vi. Prohibiting use of plastics and bottles on the beach
- vii. Cleaning and maintenance of the beach with good waste disposal measures.

The proposed cost and phasing of the physical developments are:

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Phase of Development
1	Plaza and Tourist reception centre	2.00	I
2	Organized parking space	0.50	I
3	Provision of Cloak rooms	0.50	II
4	Provision of signage	0.20	I,II
5	Lighting arrangement at beach	4.65	II
6	Cleaning & maintenance of the beach	5.00	I,II,III,IV
7	Police Cabin	1.00	II
8	Integrated Beach development	12.50	I
	<b>Total (In Lakh Rs.)</b>	<b>26.35</b>	

- \* Integrated development of Devka Beach has already been prioritised by the Ministry of Tourism, Govt. of India for the year 2001-2002. The developments proposed under this project includes Development of the Devka beach from Princess Park to Kadaiya School by preparing gates to stove seawater into a canal for boating.

## **JAMPORE BEACH DEVELOPMENT**

### ***Required Developments***

Jampore beach, which is proposed to be developed as the main leisure segment oriented beach (along with Devka) with less of intense commercialisation. This will be achieved by introduction of more activities, facilities and promotion. The beautiful Long Beach has a serene character, which needs to be maintained while being developed for leisure tourism. The proposed developments in the beach stretch are:

- i. Entrance Plaza with tourist reception centre facilitating the tourists to visit other attractions, information about other destinations in the circuit and booking facilities.
  - ii. Provision of Changing rooms, Toilets and Cloak rooms on the beach front.
  - iii. Organised Parking Space for private and other vehicles.
  - iv. Development of motorised and other water sports
  - v. Provision of few quality restaurants on the land ward side of the road.
  - vi. Few temporary refreshment huts/ plazas/ kiosks should be provided
  - vii. Visible and attractive Signages and lighting of the beach
  - viii. Bold neon signs welcoming tourists to the tourism district of Daman should be installed. The signs should also be able to give the distance and direction of all the important destinations.
  - ix. Provision of decks, chairs etc on the beach bed.
  - x. Establishment of necessary communication facilities.
  - xi. Cleaning and maintenance of the beach with good waste disposal measures with a ban on use of plastics on the beach
- \* Integrated development of Jampore Beach has already been prioritised by the Ministry of Tourism, Govt. of India for the year 2001-2002. The developments proposed under this project includes development by providing lighting facilities, seating arrangement, retaining wall to check soil erosion etc.

Under the above scheme, a 1 km long bye-pass road is also proposed to be constructed. However, to promote rural interfaces of the tourist, the road through the village to the beach (3km long) is also proposed to be developed and well surfaced.

xii. Enforcement of development control for any development for retaining the character of the pleasant beach with the following features:

- The only permanent construction allowed at the seaside of the road will be changing rooms and toilets.
- Any other development on the beach side of the road will be temporary in nature.
- Sloping roofs in case of open platforms etc
- No physical provisions shall be more than 3 m in height.
- The land ward side of the road shall have physical development of height not more than 7 m.

The proposed cost and phasing of the physical developments are:

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Phase of Development
1	Plaza and Tourist reception centre	2.00	I
2	Construction of Changing rooms	2.00	I
3	Construction of Toilets	1.20	I
4	Construction of Cloak rooms	1.20	II
5	Organized parking space	1.00	I
6	Development of Water Sports	10.6	II
7	Ticketing cabin for water sports	1.00	II
8	Construction of hotels and restaurants	7.00	II, III
9	Temporary refreshment huts/plazas/kiosks	2.00	I
10	Provision of signages	0.15	II
11	Lighting of the Beach	4.65	II
12	Cleaning & maintenance of the beach	5.00	I,II,III,IV
13	Police cabin	1.00	II
14	Improvement of Jampore Road	30.00	I
	<b>Total (In Lakh Rs.)</b>	<b>68.8</b>	

	<b>Coastal Walk: Impact Assessment</b>	4.00	II
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## COASTAL WALK

The beach from the Sangam area to Jampore is a continuous uninterrupted stretch of 4km. A coastal walk is developed along this stretch which will start from outside Moti Daman Fort in the backdrop of imposing Portuguese heritage and the port town character and end at Jampore beach. The stretch is lined with plantations on one side and vast expanse of ocean on the other.

The purpose of the walking trail is also to encourage tourists to appreciate the fragile environment while restoring the coastal vegetation. This will also prevent the beach stretch from the kind of previously uncontrolled access and urban encroachment as had happened in Devka area which has led to increasing erosion problems and degradation of the coastal vegetation, wildlife habitats and the general environment in that region. It is proposed that an Impact Assessment Study be done to ascertain the impacts of coastal walk and the feasibility and impacts of a retaining wall parallel to sea from Kadaiya to Jampore.

## THE 'SANGAM' AREA DEVELOPMENT

The Sangam area and the surroundings offer one of the most appropriate settings for tourist attraction development and promotion as the Daman Ganga river, as it wends its way to the Arabian Sea.

### i. Band Stand Area Development

The area outside the Moti Daman fort should be developed as a Bandstand with bands playing on special occasions. The bandstand has built in seats, which will be further enhanced. The eastern side of the bandstand is developed as a landscape garden. Temporary kiosks are proposed to be built which will be flexible in nature to adapt to different uses like light refreshment stalls, ticketing counters etc. Limited parking facilities will be provided outside the bandstand.

### ii. Ghat & Jetty Development

The Nani Daman and the Moti Daman Jetties form an important part of the Sangam areas. Outside Moti Daman fort, from the bandstand, the present steps to water is proposed to be developed as a Ghat, partially covered, using temporary open construction. The jetty outside the Nani Daman fort too to be developed.

### iii. Ferry service

With both the forts overlooking each other, a tourist ferry service shall operate between the two forts. This would be the conveyance between the two forts for the tourists. The tourist ferry shall ply between the Ghat outside the bandstand outside Moti Daman Fort and the jetty outside Nani Daman Fort. This covered ferry will be a major attraction to the tourists.

Light refreshment will be available in the covered ferry. Portuguese music shall be played for entertainment. In the later phase, the ferry will extend to the upstream and to the Sangam side of the sea.

### iv. Bridge beautification

Once the new bridge is commissioned over Daman Ganga river connecting Moti Daman and Nani Daman, the existing narrow bridge will be used primarily for tourism activities. Movement of four wheelers over the existing bridge will be prohibited.

The bridge is proposed to be cantilevered by 2m with provision of seating and viewing areas on the cantilevered area from where the best view of Daman, that of the river-sea sangam is obtained.

However, structural tests to estimate capacity of the bridge to be cantilevered needs to be conducted.

### v. Suspension Bridge

A suspension bridge is proposed across the river and the Sangam area, running between Moti Daman side and Nani Daman side and running parallel on the sea ward side of the existing bridge which is proposed to be pedestrianised. The suspension bridge suspends the roadway from huge main cables, which extend from one end of the bridge to the other over the river. These cables rest on top of high

towers and are secured at each end by anchorages. The bridge is proposed to be illuminated in the night.

The proposed cost and phasing of the physical developments are:

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Phase of Development
	<b>Band Stand Area Development</b>	-	
1	Seating and beautification	2.00	I
2	Landscaping	9.00	I,II
3	Temporary Kiosks	2.00	II
4	Parking	0.50	II
	<b>Ghat &amp; Jetty Development</b>	-	
5	Renovation of Steps	0.50	II
6	Partly covered Ghat development	2.00	II
7	Repair & renovation of Jetty	3.50	II
	<b>Ferry Service</b>		
8	Purchase of ferry with arrangement of playing music & other basic facilities	20.00	II
9	Ferry Service between the two forts	5.00	II
10	<b>Suspension Bridge</b>	40.00	III
	<b>Bridge beautification</b>		
11	Structural analysis to test capacity	4.00	I
12	Cantilevering of bridge	15.00	II/ III
13	Seating and viewing area development	4.00	II/III
14	Lighting	4.00	II
	<b>Total</b>	<b>71.50</b>	

## UPSTREAM OF RIVER DEVELOPMENT

A full-fledged club house cum' water front tourist attraction will be developed in the grassy land upstream of the river Daman Ganga around Magarwada region. This would be developed with all ranges of activities for family and business tourists.

- The upstream of the river will be protected from forms of pollution majorly inflicted from the upstream industrial effluent discharge from the Vapi Industrial Estate
- A privately run clubhouse and cottage resort is proposed to be developed in this area. The clubhouse will have all indoor sports facilities. The cottage resort will be of major tourist interest to the targeted embarking tourists. A Yoga Centre is proposed to be developed as part of the clubhouse targeting the Business Tourists and the International Tourists.
- Boating in the river will be developed as an added attraction and the ferry across the forts will extend to this region.
- The development will have facilities like restaurants, gardens, tourist information centre, playing area for children, amphitheatre, amusement park, handicrafts emporium, souvenir shop etc.

- v. For the day visitors who come to the club house, in addition to the restaurants and the amusement park, there will be parking arrangements, games facilities, drinking water, toilets etc.
- vi. All construction will be done complying with the CRZ regulations.
- vii. Proper solid waste and sewerage management will be adhered to. Use of plastics will be banned.
- viii. Traditional architecture will be maintained for all buildings with sloping roofs and a height ceiling of 7 m.

The proposed cost and phasing of the physical developments are:

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Phase of Development
1	Construction of Club House	50.00	III
2	Facilitation for boating facilities in the river	1.00	II
3	Provision of restaurants	5.00	III
4	Amusement Park	20.00	III
5	Tourist information centre	2.00	III
6	Handicraft emporium & Souvenir Shop	2.50	III
7	Drinking water & Toilet facilities	3.00	III
8	Water sports facilities (row boats, paddle boats)	7.00	III
9	Parking space	1.00	III
	<b>Total (In Lakh Rs.)</b>	<b>91.50</b>	

### C. KHURASIYA DUNGAR DEVELOPMENT

Khurasiya Dungar in the Coast Guard area is proposed to be developed as an evening relaxation area. The Dungar is proposed to be lit along the contours with an area specially developed as an evening garden. Cultural evenings would be conducted here also during tourism / heritage week celebrations etc

However, the Dept of Tourism needs to get the necessary permissions from the Coast Guard Authorities for opening up the area for the general and tourist public.

	<b>Khurasiya Dungar Development</b>	8.00	III
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### D. RURAL TOURISM DEVELOPMENT

In recent years it has been widely discussed to implement rural tourism in India and worldwide to bring about sustainable development in the rural areas. Rural tourism is proposed to be developed in Daman Region.

The Jampore Beach area will be developed in a participatory manner involving the people of Jampore village. The tourists will be exposed to rural lifestyle and could experience the same by staying with them. For this, few of the village hutments will be promoted for tourists stay and local food will be prepared for the tourists.

## 4.5 CIRCUIT INTEGRATION

This section discusses the need for forming tourist circuit with Daman as an integral part of the same to attract tourists visiting nearby tourist destinations also to Daman.



A tourist survey conducted by the Director General of Tourism, Government of India (GOI), indicated that most tourists prefer to visit more than one type of destination while on vacation. Therefore, the strategy underlying the development of circuits is to provide varied experiences (secondary interests) to tourists around a central theme (primary interest).

The circuit development is formed to meet the following objectives:

- To develop Daman as a base destination for a larger tourist visitation.
- To provide a varied experience to tourists.
- To attract the varying type of tourists like religious tourist, forest and wildlife oriented tourists etc and thereby increase tourist arrivals in Daman

### ***Formation of Circuits – Criteria***

Daman, though unique in character, is a small region. Hence in addition to attracting new tourists specifically to Daman, tapping the tourist visitation to nearby destinations would change the tourism scenario in Daman considerably.

One of the critical parameters considered for the formations of various circuits are duration of Stay and distance between destinations. Time is one of the most important determinants of the destinations that can be visited and the activities that tourists can undertake either on the way to the destination, or at the destination itself.

### **Daman – Dadra and Nagar Haveli – Daman Circuit**

The Daman- Dadra and Nagar Haveli circuit will be for tourists with a duration of stay of around 3 to 5 days. Dadra and Nagar Haveli is only 35 Kms from Daman. A visit to the wildlife and forest areas would give tourists more varied experience and they could keep their base at Daman with affordable accommodation. This circuit should be jointly promoted with the Dadra & Nagar Haveli Administration.

### **Mumbai – Aurangabad (Ajanta Ellora) – Shirdi – Nasik – Dadra and Nagar Haveli - Daman – Iggatpuri – Mumbai Circuit**

This circuit has already been requested for inclusion to the Ministry of Tourism, Government of India, New Delhi, leveraging its proximity to major tourist spots in Maharashtra. This circuit should be jointly promoted with the Maharashtra Tourism Development Corporation. Dadra and Nagar Haveli has also been included in this circuit.

## **4.6 FACILITIES PLAN**

The total facilities and amenities to be developed in Daman can be summarised as;

### **A. ACCOMMODATION**

Accommodation facilities are projected for and over:

- The different tourist markets

The three different tourist markets are the neighbouring tourists especially from Gujarat; the other domestic tourists.



- The different grades of accommodation

Grades of accommodation ranging from Star facilities to economy facilities and youth hostels.

- The different phases of development

The development is phased into four phases:

Phase I : the first two years.

Phase II : 2005 to 2010 (6years)

Phase III : 2011 to 2016 (6years)

Phase IV : 2017 to 2022 (6years)

Notes:

The accommodation requirement for each target market is calculated as:

$$\text{Demand for beds} = \frac{\text{Effective addnl. tourists (per period)} * \text{average length of stay in nights}}{\text{No of nights per period} * \text{Accommodation Occupancy factor}}$$

The effective additional tourists is the number of tourists out of the total incoming tourists who will avail the paid accommodation facilities (excluding some who would stay with relatives/ religious accommodation etc)

**Average accommodation occupancy** rate taken as 65% in Phases I and II and 70% in Phases III and IV

$$\text{Demand for rooms} = \text{No of beds demand} / \text{Average room occupancy}$$

**Average room occupancy** is taken as 2.2persons/room for Neighbouring & Domestic tourists and 1.7 persons/ room for International tourists

**Average length of stay** in nights: 1.5 nights

<i><b>Tourist Category</b></i>	Effective addnl tourists E	Addnl no of beds B	No of rooms	% tourists in each type of accommodation		
				Star	Standard	Economy
<b>DT</b> ( <i>Domestic Tourists</i> )	Total Addnl Tourists* 0.95	= (E*1.5)/ (365*.65)	= B/2.2	25%	55%	20%
<b>IT</b> ( <i>International Tourists</i> )	Total Addnl Tourists	= (E*1.5)/ (365*.65)	= B/ 1.7	35%	45%	20%

	Tourist Category	Additional tourists	Effective Additional tourists	Addnl. no of beds	No of rooms	Star	Standard	Economy
<b>Phase I</b> 2003-04 2 yrs	<b>DT</b>	64827	61586	389	177	44	97	35
	<b>IT</b>	601	601	4	2	1	1	0
	<b>Total</b>	65429	62187	393	<b>179</b>	<b>45</b>	<b>98</b>	<b>36</b>
<b>Phase II</b> 2005-10 6 yrs	<b>DT</b>	158803	150863	954	434	108	238	87
	<b>IT</b>	7206	7206	46	27	9	12	5
	<b>Total</b>	166009	158068	999	<b>460</b>	<b>118</b>	<b>251</b>	<b>92</b>
<b>Phase III</b> 2011-16 6 yrs	<b>DT</b>	95059	90306	530	241	60	133	48
	<b>IT</b>	6099	6099	36	21	7	9	4
	<b>Total</b>	101158	96405	566	<b>262</b>	<b>68</b>	<b>142</b>	<b>52</b>
<b>Phase IV</b> 2017-22 6 yrs	<b>DT</b>	52440	49818	292	133	33	73	27
	<b>IT</b>	4817	4817	28	17	6	7	3
	<b>Total</b>	57257	54635	321	<b>150</b>	<b>39</b>	<b>81</b>	<b>30</b>
<b>Total Accommodation</b>					<b>1051</b>	<b>269</b>	<b>571</b>	<b>210</b>

Thus, the total no of rooms required is 1051 over 20 years. Distributing these numbers of rooms required over Daman, the projected accommodation availability over the categories and phases would be:

Area of accommodation	Max no of Rooms	Phase				Cost (Rs Lakhs)
		I	II	III	IV	
<b>Devka- Mirasol stretch</b>	150	75	75			300
<b>Coast Guard Area</b>	250		100	50	100	450
<b>Nani Daman town</b>	50				50	100
<b>Heritage homes</b>	25			25		10
<b>Moti Daman- Jampore stretch</b>	100		50	50		175
<b>Around Jampore beach</b>	200	100	100			400
<b>Magarwada</b>	75			75		125
<b>Near Kachchigam</b>	200		150	50		350

## **B. RESTAURANTS**

Other than the restaurants associated with the proposed hotels, independent restaurants would also come up in various places like Nani Daman town area, Coast Guard area, light refreshment at Sangam area, Beaches, sunset point north of Devka etc.

## **C. TOUR AND TRAVEL SERVICES**

Tour and travel agents in the target markets could be focussed upon to conduct package tours to Daman. Also, local agents could conduct Daman Darshan tour. Local people could be trained to be Tour Guides for the tour and interpretation at heritage sites.

## **D. TOURIST INFORMATION SERVICES**

Tourist information services within Daman shall be strengthened and information centre will be set up at Devka and Jampore beaches.

## **E. TOURIST SAFETY**

There should be police protection services especially during the peak season and at beaches in evenings. LifeGuards will be deployed at Devka and Jampore beaches and they will be equipped with safety devices so that they can act as lifesavers in times of distress. They will be stationed at visible locations on the beach bed itself where visitors at the Beach can be aware of their existence, so that they know whom to approach during emergencies.

## **F. TOURISM POLICE**

There is no Tourism Police prevalent at the any of the tourist sites in Daman. There should be deployment of tourism police personnel at Police assistance booths located at the major tourism spots in Daman, i.e. at Devka Beach, Jampore Beach and centrally located around Nani Daman Fort. During the peak seasons the police patrol vehicles should be located at traffic junctions and strategic points throughout the region with sub regions allocated to each patrolling vehicle.

The tourism police would be an integral part of the local police administration consisting of men and women especially trained and competent to offer tourist information and help. These tourist officers would be groomed by the professionals in tourism industry and the police department to assist, protect and benefit visitors staying in the region. These officers will also be responsible for protecting the government properties in the region.

There will also exist a Help Desk facility in all police stations in the region to assist tourists get back lost belongings.

## **G. SIGNAGES**

Prominent directional and informative signages will be resorted to.

*(Kindly refer Chapter 7 for details of signages)*

## **H. SOUVENIER CENTRE:**

In one of the heritage homes developed, the following souvenirs developed, which will be of interest to tourists to Daman, will be sold.

1. Replicas of Forts, church
2. Laminated photographs ( Forts, Church)
3. Picture Post cards of the major tourist's attractions.
4. Ties, scarves, handkerchiefs, caps or hats having designs from the tourist destinations of the Daman.

## 4.7 DEVELOPMENT SCHEME AND PHASING



Cloak Rooms  
Signages  
Lighting of beach  
Maintenance  
Police Cabin

Restoration-fort walls  
Restoration-entrance  
Conservation- Church  
Maintenance-garden  
&jetty  
Signages

Bridge  
Cantilevering  
Seating & Viewing  
Lighting

Heritage Homes  
Conservation-Fort Walls  
Conservation-Churches  
Moat Beautification  
Landscaping, Signages  
Parking, Flood Lighting  
Lighthouse dvpt  
Memorial garden

Temporary Kiosks  
Landscaping  
Parking

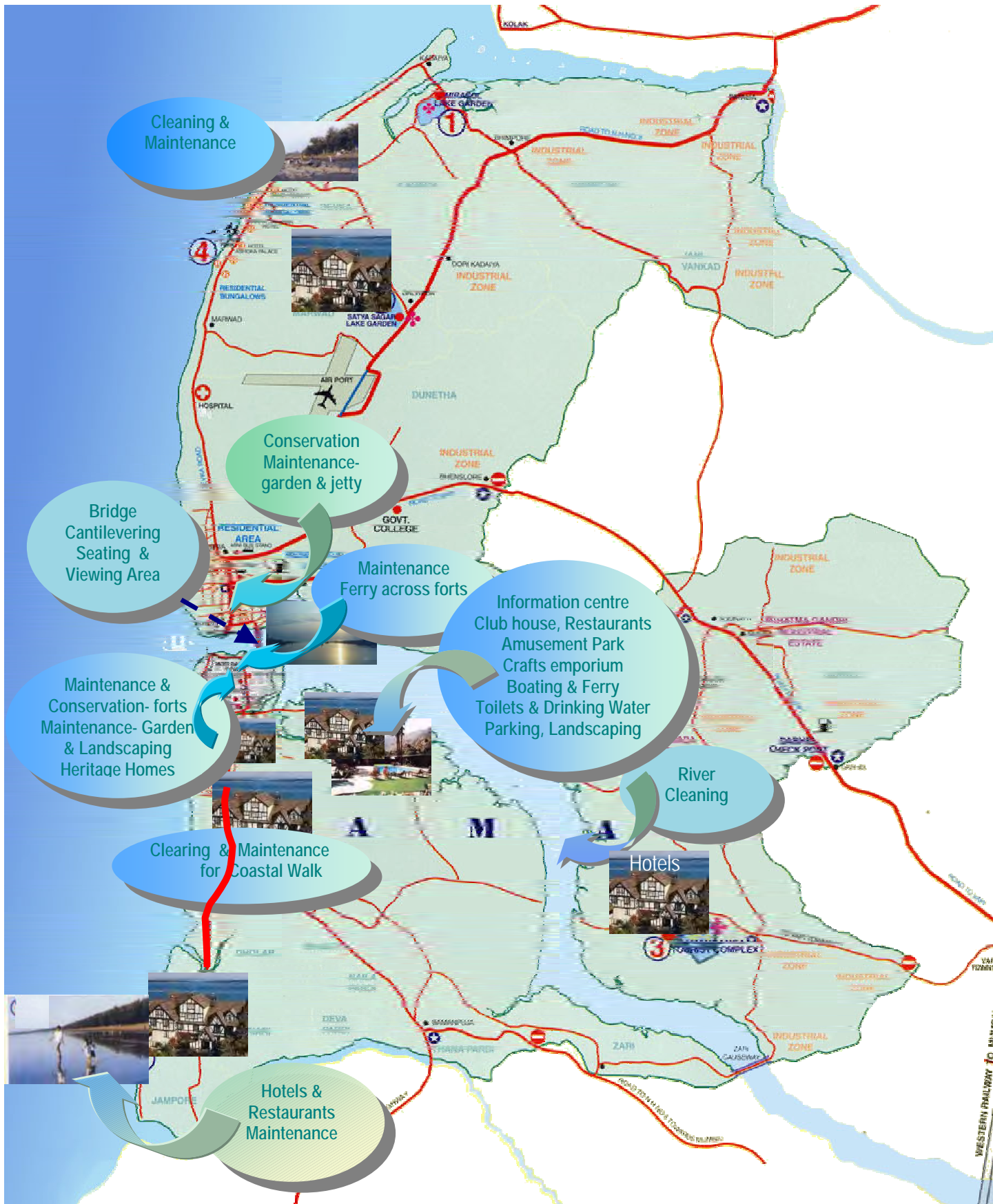
River Cleaning  
Boating in river

Clearing & Maintenance  
for Coastal Walk

Cloak Rooms  
Ticketing Cabin- w. sports  
Hotels & Restaurants  
Signages  
Lighting of Beach  
Maintenance



## C PHASE III DEVELOPMENT



## INFRASTRUCTURE

### 5.1 INTRODUCTION

Every tourist destination, in addition to natural and cultural beauty, requires well-developed infrastructure to support the tourism development to make the destination more attractive to tourists.

Infrastructure in the context of tourism could be classified as:

- A well developed *Core infrastructure* i.e. ensuring accessibility (i.e. rail, road, air & water), improving communication, power, water supply and sewage, etc. that not only increases the tourists satisfaction but also benefits the local population directly, and achieves a broader aim of regional development.
- “Tourism Infrastructure” relating to developments like accommodation, tourist information centres, restaurants, (facilitating the tourist arrival and stay at the tourist destination) is a prerequisite for attracting tourists to the site and enhancing there destination experience.

#### A. APPROACH AND METHODOLOGY

In order to arrive at the Infrastructure Plan for Daman the following steps were taken:

- The existing infrastructure at Daman was studied. It also included study of proposals, which are due for implementation.
- The infrastructure was assessed for capacity to handle additional tourist traffic.
- Block costs associated with each of these development plans was estimated.
- The plans were then prioritised for short & medium term and phased over 20 years.

The core infrastructure considered for Daman is given below:

- Accessibility in terms of roads rails, air & water ways.
- Water Supply & Sewerage system
- Power supply
- Telecommunication
- General facilities

The present tourist inflow is about 5,37,470, which is expected to touch 9,27,322 in the year 2022. The figures of the tourist inflow to Daman are taken as described in the demand estimation model in chapter 3.

#### B. DAMAN-LOCATION:

Daman is sandwiched between the industrially prosperous states of Gujarat and Maharashtra. Most of the tourists coming from Maharashtra & Gujarat drive down mainly from Mumbai, Nasik, Valsad, Surat, Baroda, Ahmedabad or either come by train or buses (private or State transport).

## 5.2 ACCESSIBILITY

A tourist has to get down at Vapi station, which is on Mumbai-Delhi Western Express railway line. If a tourist is coming by bus he can come via NH-8 and get down at the Vapi Bus station. There are shared taxi services from Vapi to Daman on a regular basis near Vapi Bus-station as well as Vapi Railway station. The shared taxi is overcrowded and the taxi operator carries eight tourists per taxi. The taxi operator drops the tourists at Nani Daman taxi stand from where the tourist takes an autorickshaw for reaching the Hotel.

Tourists coming with their family come by their own vehicle. There is a shortcut near Bhilad on NH-8, which enters Daman directly. The NH-8 is being made 4-laned from Surat-Manor. The Project Surat-Manor Tollway Project is carried out by National Highway Authority of India (NHAI) and is funded by World Bank and would be completed by March-2003. This project once completed would reduce the travel time from Daman-Mumbai. The present travel time is 3.5 to 4 hr, which would be reduced to 3hr.

### A. ROAD:

#### • ROADS TO DAMAN

From Vapi Railway station there is Road connecting Daman, which passes through the Gujarat State. There are four border check posts namely Dabhel, Patalia, Kachigam and Bamanpunja from which a vehicle can enter Daman. The roads coming under the Government of Gujarat are being maintained by PWD (Gujarat). All the roads passing through Gujarat needs recarpeting and shoulder improvement, which needs to be done by PWD (Gujarat)

#### • ROADS IN DAMAN

Rapid industrialisation after April-1993 has led to an un-expected inflow of heavy vehicular traffic. On an average, 100 vehicles of 10-15 tons capacity as well as 30-ton containers enter into Daman District on a daily basis. The present road infrastructure cannot bear this load of traffic and this is causing further deterioration. This has already been addressed in the tenth five-year plan the list of the projects is given in Table: 5.2

All the roads in Daman are very narrow and in the developed areas further scope for expansion is ruled out by the packing of buildings without any set backs along these narrow lanes and by lanes. It is apprehended that in short while the expected prosperity in the district and increase in traffic will put a serious strain on the road system specially the urban areas.

The following roads as shown in the Table: 5.1 in the district have been classified as district roads. All these roads are black topped.

**Table No: 5.1 Roads in Daman**

Sr. No.	Name of the road	Length (Kms)
1	Road from Bhamti Magarvada Kachigam to Vapi	6.50
2	Road from Moti Vankad, Chori Bunder to Bhimpor Kachigam	4.85
3	Road from Behen road to Dunetha	1.00



4	Road from Devka colony to Kadaiya	3.22
5	Road from Pariari to Naila pardi	1.61
6	Road from Moti Daman to Patlara	1.60
7	Devka Colony to Devka Taiwad Road	1.00
8	Delwada to Devka Taiwad Road	2.00
9	Varkund to kachigam Road	3.22
10	Marwad to Delwada to Airport Road	3.22
11	Magarwada Via Thana pardi to Jhari Road	4.00
12	Jampore to kamei Khadi Road	1.20
13	Road Leading to Dairy Junction of Kachigam road via Kachigam Chowki	1.00

The road from Moti Daman Police station to Barwad Faila Magarwadol road is a Panchayat road covering a distance of 1.4 Km and is black topped.

The roads & bridges, which are covered in the 10th five-year, plan (2002-2007) and will have impact on the tourism development are as shown in the Table: 5.2

**Table No: 5.2 Proposed Raods under Tenth Five Year Plan**

<b>Proposed Roads covered under Tenth five year plan (2002-2007)</b>			
<b>Sr. No.</b>	<b>Developmental Measures</b>	<b>Implementing Agency</b>	<b>Total Cost (in Lakh Rs.)</b>
1	Construction of four lane road for coastal Highway passing through Daman District	PWD	2,000.00
2	Parallel Bridge on Damanganga joining shama talkies Nani Daman near khariwad – Ambawadi Moti Daman	PWD	3,000.00
3	High level Bridge on Damanganga River Patlara Zari village Moti Daman side-kachigam Industrial Estate Nani Daman side	PWD	1,500.00
4	Widening & strengthening of Major District Roads/Other District roads in Daman	PWD	1,100.00
<b>Total (In Lakh Rs.)</b>			<b>7,600.00</b>

\* In addition to the above a bye pass road measuring 1km is recommended in place of the current narrow road leading to the Jampore beach. This road currently passes through a village and not only disturbs the tranquillity of the village but also is very narrow to cater the tourist traffic. The costing for the same (30 lakhs) has been included in the integrated development of the Jampore Beach covered in Chapter 4. The project Integrated Development of Jampore Beach has been prioritised by the Ministry of Tourism, Govt of India for the year 2001 – 2002.

## **B. RAILWAY:**

There is no railway line directly reaching Daman. Vapi (13kms) is the nearest railhead having train connections with Ahmedabad, Mumbai, Delhi, Rajkot, Pune, Bhopal, and

Bikaner. All major Express trains August-Karanti, Ranakpur, Swaraj, Avantika, Shatabadi, Ahinsa have a halt at Vapi station.

Tourists coming by train get down at Vapi and then can take a bus, shared taxi or hire a private taxi to Daman. Today there is no Tourist Information centre at Vapi station. It is necessary to provide information centre for the benefit of the tourists coming by train.

### **C. AIRPORT:**

Daman Airport is under possession of Coast Guard. Today there are no flights operating from Daman. Santacruz Airport Mumbai is the nearest Domestic Airport and Andheri Airport is the nearest International Airport.

In the past there were hoping flights coming to Daman and leaving for other destinations. Gujarat Airways & other operators were operating these flights. These flights have been stopped since they were making losses on these routes.

Today travelling by Shatabadi Express is the fastest way to reach Mumbai. The train starts from Mumbai Central in the morning at 6.20 AM and reaches Vapi station at around 8.30 AM and the in the evening it starts from Vapi at 7.20 PM and reaches Mumbai Central by 9.30 PM. which has a halt at Vapi station.

Hence there is no need of any Airport Infrastructure improvement for tourism purpose.

### **D. SEA ROUTE:**

Generally sea route is utilised for fishing purpose and also some small ships are routed through sea route. There is a need for sea link Mumbai-Daman-Diu since the travel time required to reach Diu from Daman is too long. The sea-link will solve the problems of commuters between Daman and Diu. This service would be popular among International tourists as well as domestic tourists.

The importance of sea-link was felt when the Railway Bridge near Poisar collapsed due to heavy monsoon in end of June 2002 as a result all the commuters used NH-8 and there were great traffic jams it required 8-9 hrs to reach Vapi from Mumbai.

## **5.3 INTERNAL TRANSPORT:**

There is no transport service, which runs throughout the Daman. Private Mini Buses Taxi/ Auto richshaws ply throughout the Daman. Today there are no government run buses in Daman nor is there any known Government policy on transportation. Private Mini Buses also operates on various village routes connecting Daman.

## **5.4 WATER SUPPLY & SANITATION:**

The district receives its rainfall from the Southwest monsoon, which bursts over the district in the second week of the June and continues till September. Pre monsoon showers are witnessed in April and May. Post-monsoon showers are witnessed in October & November. Showers in the months of October & November can be ascribed to the NorthEast Monsoon. Annual Rainfall for 2000 was 1687mm.

Daman is facing perennial shortage of drinking water. To sort out this crisis condition Union Territory administration has planned to provide the treated drinking water in a

limited quantity of 20 litre capacity per day and non- drinking water in a limited quantity at the rate of say of 100litres per day per person.

The present source of raw water is received from the river Damanganga Irrigation Canal. Due to sudden growth in population the existing treatment plant has become inadequate. The existing treatment plant can not run at its designed capacity of 16 MLD. Due to increase in population the capacity of 16MLD is inadequate. Hence there is urgent need to develop various water reservoirs to receive and collect the rainwater in adequate quantities to supplement the need of the drinking water. Three ponds in Daman district situated at Damanwada, Dunetha & MotiVankad are proposed to be developed in the tenth five-year plan as shown in the Table: 5.3

**Table No: 5.3 Water Supply Works covered under Tenth Five Year Plan**

<b>Water Supply works covered under Tenth five year plan (2002-2007)</b>			
<b>Sr. No.</b>	<b>Developmental Measures</b>	<b>Implementing Agency</b>	<b>Total Cost (in Lakh Rs.)</b>
1	Development of existing ponds for storage of rain water and raw water from irrigation canal to use the same for drinking water purpose by treatment and augmentation of the existing drinking water supply scheme.	PWD (Water Supply)	300.00
2	Development of various infrastructural unit like ground water sumps overhead water tanks extension/conversion of existing water supply network..	PWD (Water Supply)	135.00
3	Construction of compact Non-Conventional water treatment plant at Bhim Talav, Magarwada for Rural water supply to Moti Daman side of Daman district & Dunetha pond for rural water supply on Nani Daman side of Daman District.	PWD (Water Supply)	250.00
	<b>Total (In Lakh Rs.)</b>		<b>685.00</b>

By 2022 the new rooms to be added as calculated in Chapter: 4 is 1051. The water supply gaps will be filled up once all the works of tenth five-year plan are completed.

At present there is no comprehensive system of sewage disposal in Daman. Excreta disposal is through septic tanks and soak pits. The increase in the inflow of Tourist traffic & industrialisation of Daman has created an immediate requirement for drainage and sewage. The consultancy work has been entrusted to WAPCO Delhi. The survey & investigation work has already been completed. In the design of the sewerage scheme WAPCO has already considered the floating tourist population as 5000 per day, which will be sufficient for tourist growth of 2022. The estimated expenditure proposed in the report for both Moti Daman & Nani Daman is Rupees 9.5cr.

## **5.5 POWER SUPPLY**

There are no power generation stations in the union territory of Daman. The total power need is met from the central sector power stations in the western region through Gujarat Electricity Board Grid. Today Daman gets power from 220/66KV Vapi Sub-station through 66KV double circuit lines.

At present there are 66/11KV sub-stations at Kachigam, Dalwada & Dabhel. The peak demand without staggering is 104.5 MW. The existing power transformers of sub-stations are loaded up to their optimum capacity. Today regular weekly staggering has to be imposed. In the tenth five-year plan the department is planning to augment the existing capacities of transformers at kachigam, Dalwada, Varkund and Magarwada sub-stations. List of few works to be undertaken in the tenth five-year plan is as shown in Table: 5.4

**Table No: 5.4 Power Related Works under Tenth Five Year Plan**

<b>Few of the Power related works covered under tenth five year plan (2002-2007)</b>			
<b>Sr. No.</b>	<b>Developmental Measures</b>	<b>Implementing Agency</b>	<b>Total Cost (in Lakh Rs.)</b>
1	Strengthening/Augmentation of sub-station capacity of 220/66KV and 66/11KV S/S in Daman	Electricity Dept. Daman	1,409.00
2	Installation of New 66KV S/S at Ringanwada Nani Daman 30MVA (2X15 MVA) (10th & 11th Plan)	Electricity Dept. Daman	550.00
3	Augmentation of 66/11KV Dabhel sub-station from 40MVA to 60MVA	Electricity Dept. Daman	160.00
	<b>Total (In Lakh Rs.)</b>		<b>2,119.00</b>

## 5.6 PORT:

Daman was earlier a good minor port, which at present is not in proper condition. These port & harbour are proposed to be developed for better trade & water transport.

The port is visited by number of sailing vessels and fishing boats, manned and operated by the local population. Imports at the port consist of salt, fish, onions, coconut palm leaves and tiles.

The major works proposed during the ninth plan were Construction of lighthouses in Daman & Widening of navigational channel in Daman.

Construction of jetty at Moti Daman side has been completed. The construction of Daman lighthouse has also been completed. The survey investigation work for Widening of navigational channel has been completed by the Dredging Corporation of India.

At present the entry of vessels during the low tide is prevented due to the continuous siltation at the mouth of the Damanganga river. The works for widening & dredging has been proposed in the tenth five year plan as given in Table: 5.5.

**Table No: 5.5 Port Works under Tenth Five Year Plan**

<b>Port works covered under Tenth five year plan (2002-2007)</b>			
<b>Sr. No.</b>	<b>Developmental Measures</b>	<b>Implementing Agency</b>	<b>Total Cost (in Lakh Rs.)</b>
1	Widening and Dredging of Damanganga navigable channel by 1000mt length & 10mt depth.	Port	125.00
2	Repair & maintenance of the existing Jetty at Daman	Port	10.00
	<b>Total (In Lakh Rs.)</b>		<b>135.00</b>

## 5.7 POSTS & TELEGRAPHS

There are 13 Post offices in the Daman district. In the district of Daman, the post offices are located at Marwad, Bhimpor, Varkund, Kachigam, Naila pardi and Daman.

## 5.8 TELEPHONE

At present there are frequent breakdowns in the telephone services. The telephone services should be regularised at the earliest. The faults in telephone services also affect the Internet services.

## 5.9 RETAINING WALL

**BEACH EROSION** has ravaged Kerala and other parts of the west coast of India in recent years. Environmentalists have been issuing warnings that in the wake of the increasing levels of carbon dioxide in the atmosphere, global warming will lead to a rise in the sea level not only because of melting glaciers but there would also be expansion of ocean water as well.

Scientists are of the opinion that the beach erosion encountered on the west coast of India is not as yet the result of global warming but is more likely the consequence of geotectonic movements like the tilting or up-lifting of the coastal margin.

Engineering works like the construction of a suitable retaining wall in the parts that are affected or may be affected where tons of sand with parts of houses have been or will be washed away seems like the cost effective solution. The available land all along the shoreline should also be protected by a green belt, in which *Casuarina equisetifolia* has to play a key role.

These sea walls however offer solutions that are of value for a limited time. Vertically impermeable walls have been used in the past with little success. Sloping permeable sea walls give better results, however they require continuous maintenance.

Since sea-walls restrict the use of the beach, sand nourishment is a new concept. Dredgers have been used to nourish eroding beaches from sources of sand offshore. Except in the case of major ports, this method is not very popular in India as it is an expensive means of beach protection.

Hence it is recommended that sea retaining wall be constructed on the entire coastal length of the Daman territory. The rate estimated at Rs 750/- per running meter in line with the costing of a typical retaining wall.

However, this construction should be done only after a detailed Environmental Impact Assessment of the proposed development and without disturbing the aesthetic sky line and appeal of the region. An amount of Rs. 4,00,000/- has been budgeted for the same.

## 5.10 STUDY OF EXISTING SCHEMES:

In the Past development plans strengthening of Tourism Department has been repeatedly asked for.

Number of projects like development of beaches, ponds, tanks, cottages and other tourist spots were completed during the eighth five-year plan.

The following is the list of the main projects carried out in the last five-year plan.

1. Development of maintenance of garden/parks/ponds/green areas/beaches and other tourist spots/facilities.
2. Lighting arrangement at various tourist spots
3. Strengthening of Tourism Department.
4. Promotion & Publicity of Tourism.

The new schemes proposed in the 10<sup>th</sup> five year Plan (2002-2007) are as in Table: 5.6

**Table No: 5.6 Proposed Tourism Schemes under Tenth Five Year Plan**

<b>Proposed Tourism schemes proposed in Tenth five year plan (2002-2007)</b>		
<b>Sr. No.</b>	<b>Name of Scheme</b>	<b>Proposed Outlay (In Lakh Rs.)</b>
1	Grant-in-aid to Tourism Development Authority	10.00
2	Strengthening of Tourism Department in Daman & Diu	27.00
3	Development & Maintenance of garden/parks ponds/beaches & other tourist spots /facilities	237.00
4	Lighting arrangement at various tourist spots	158.00
	<b>Total (In Lakh Rs.)</b>	<b>432.00</b>

List of the some of the proposed works under above schemes is as shown in Table: 5.7

**Table No: 5.7 Proposed works**

<b>Some of the Proposed works under above heads</b>	
1	Illumination of churches, other historical & architectural heritage, bridge connecting Moti Daman & Nani Daman
2	Light & sound show at Dominican Ruins
3	Illumination of Khurasiya Dungar
4	Integrated development of Devka beach
5	Integrated development of Jampore beach
6	Construction of fish aquarium at Diu
8	To establish & install Tourist Information centre at various metropolitan cities such as Mumbai, Surat, Ahmedabad, Baroda, Valsad, Vapi etc.
9	Display of retroreflective signage boards at various places in Daman cities as at Mumbai Central, Churchgate, International & Domestic Airport at Mumbai. The direction signboards will be installed at critical junction at National Highway No.8 leading towards Daman.
10	Purchase of boat for river restaurant at Daman Ganga River

11	Garden at Kadaiya creek near sandy Resort.
12	Development of parks at Devka, Jampore Fort area, Kachigam, Kadaiya.
13	Construction of musical fountain at MotiDaman Jetty.

## INITIAL ENVIRONMENTAL EXAMINATION

The natural and socio-cultural environments of a region are important for its development as a tourist destination. If, however, the development is not planned well, it will not only damage the environment, but also have a negative impact on development of Daman as a tourist destination.

Tourism contributes significantly to the economies of developing countries. Growth in this sector has been more rapid in these countries than in developed countries for several decades. Tourism projects, though mostly smaller in magnitude than other type of development projects, need to be screened for probable environmental impacts.

This chapter examines the environmental quality of the region and the probable impact of the proposed developments on the environment.

The features of the natural and socio-cultural environment are most important resources for tourism development because of their aesthetic, recreational, or historical value. Many of the same features, however, are particularly sensitive to disturbance by human activities. Increased vigilance will, therefore, be necessary to protect the environment from damage, which would in turn not only protect its tourism value but the resource itself.

### 6.1 OBJECTIVES OF IEE

The purpose of environmental assessment is to ensure that development is environmentally sound and sustainable, and that any environmental consequences are recognised early and taken into account in project design. It should also include avoiding, mitigating or compensating for adverse impacts.

Environmental analysis has to be integrated with all stages of the tourism project life cycle, to facilitate incorporation of the findings into selection of sites, designs and implementation plans. Environmental review includes monitoring the project's environmental performance and compliance with relevant conditions. After implementation, evaluation of the impacts that actually occurred and the effectiveness of mitigation measures should be done.

Integration of the IEE with feasibility studies and design work is essential so that alternatives which might be desirable from an environmental view point can be considered realistically. At a later stage, making a major design change or selecting an alternative site, or even deciding not to proceed at all with a project, becomes very expensive. Similarly, an early consideration of the environmental issues enable formulation of implementation and operating plans designed to respond to critical environmental issues in the most costs- effective manner. Delays in implementation of a project because of environmental issues which were not considered at the design stage can be very costly.

In brief, role of an EIA is to influence or modify project planning so that the project will, within the limits of feasibility, avoid environmental damage and use positive measures to offset unavoidable damage. The feasibility of the project should be determined based on



an assessment of all costs, including the specific provisions needed for minimising or offsetting the adverse effects on the environment

The objective of an initial environment examination (IEE) is to identify and assess the adverse impacts of a development in the planning stages itself, so that measures to mitigate adverse impacts can be planned. In view of this, the specific objectives of this IEE were as follows:

- To assess the existing environmental quality of Daman and examine the environmental issues.
- To identify the environmental impact potential of the proposed development.
- To recommend mitigation to protect the environment of Daman.

## **6.2 APPROACH AND METHODOLOGY**

A participatory approach was adopted for IEE of tourism development of Daman. Various alternatives were discussed with the project team keeping in view their relative impact on the environment. The methodology followed for IEE was:

- Review of existing environmental quality of the Daman region
- Identification of environmental issues
- Preliminary screening of tourism sites (and sub-regions) on the basis of environmental issues
- Environmental evaluation of the selected sub-regions
- Suggestions on possible environmental mitigation measures

## **6.3 ENVIRONMENTAL QUALITY OF THE REGION**

TCS consultants visited the sites in the project area. Information was collected, mainly through discussions with the local people, Tourism Department of Daman. The consultants collected information on:

- The natural environment (air, water, land, noise, flora, fauna and so on)
- The socio-economic status of the population
- Ecologically-sensitive habitats

Field visits to various sites in the project area were made for familiarisation. During these visits, information on the following aspects was collected, mainly through visual observations and discussions with local people and officials from Forestry Department, Planning Department, Daman Tourism Department, and various local government bodies.

- Existing environmental conditions (air, water, land, noise, flora, fauna, etc.)
- Existing socio-economic status of the population around potential tourism development sites
- Ecologically sensitive habitats

## **A. METEOROLOGY**

### ***Temperature***

Daman has a coastal climate. After February, the temperatures begin to increase steadily. May is generally the month with the highest temperatures, the mean daily max being about 34deg C and the mean minimum being 26deg C. With the advance of monsoon during the second week of June, there is a drop in temperature.

### ***Rainfall***

The average annual rainfall of Daman is 206 cm of which more than 95% occurs during the monsoon months of June to September. July is the rainiest of all the months.

Due to the proximity of the sea, humidity is generally high.

### ***Wind Speed & Direction***

Winds are generally light to moderate. However, moderate to strong winds blow during the late summer and the monsoon months.

## **B. AMBIENT AIR QUALITY**

The ambient air quality in various parts of Daman is moderate. The industries though produce some amount of air pollution, since they are grouped and zoned together, it doesn't harm the general tourist and residential areas. Daman with industries and distilleries produce unpleasant smell to the surroundings.

## **C. WATER QUALITY**

Daman being a coastal land, the water quality near the coast is slightly saline.

Most of the surface water bodies (lakes, tanks, rivers) and groundwater sources are used as primary source of drinking water. Water quality in the region is suitable for domestic consumption and water is supplied after primary treatment and chlorination.

## **D. NOISE**

Moderate amount of noise is created due to the industries, however, this doesn't affect the tourism in the region as the industries zone is away from the tourist attractions.

## **E. LAND DISTRIBUTION**

The total area of Daman is 72 sq km. 5.60 sq km falls under Urban area while 66.40 sq. km falls under Rural area. The region has many industries. The area near Devka beach has maximum land under accommodation and tourist facility usage other than the Moti Daman town area.

The Agricultural landuse (Ha):

Net cultivation : 5600

Permanent pasture and grazing land : 174

## **F. COASTAL ENVIRONMENT**

The shoreline is characterised by embankments, submerged shoals, and offshore islands. A number of rivers flowing west form estuaries, bays, mud flats, creeks, backwaters, and tidal marshes. Seabed's at a depth of up to 100 m. are clayish, whereas those between 100 m. and 200 m. deep are sandy. The beaches are very stable and regain their original profile by February to April

The dissolved oxygen levels in the seawater showed large variations in space and time. In general, the shelf waters are well-aerated for most of the year except during the monsoons (July to September). Dissolved oxygen content is important in controlling the distribution of fish.

## **G. SOIL QUALITY**

Geologically the rock strata of Daman belongs to the Palaeozoic Era. The rocks are of sedimentary nature consisting of sandstones and limestones. The soils of the region are loamy, clays and sandy which are very adhesive in character.

### **Minerals:**

The only minerals in the existing rock strata are black balla, sand stones and lime stones.

## **H. BIOLOGICAL ENVIRONMENT (FLORA & FAUNA)**

### **Vegetation:**

Major part of the area is under cultivation either for food crops or cash crops. The dandy or strand vegetation appears all along the narrow sandy beach mixed with undulating gravelly mounds or small hillocks, practically barren or with low scrubby vegetation. The narrow strips of muddy flats present a poor mangrove vegetation.

### **Fish and fisheries:**

Some of the important fish caught in the area are Pomfret, Indian Salmon, Prawns, Perches and Bombay Duck. There are also fishes like doma, varada, sol-fish, boi, mandli, etc which are found in the trawl nets.

## **6.4 ENVIRONMENTAL ISSUES**

The environmental issues and parameters were selected considering the close relationship between tourism and environmental quality, and the linkages between tourism and other sectors.

The impact of tourism development on the environment may not be significant, but the impact of secondary activities (as a result of this development) can be damaging. The associated environmental impact can be both short-term as well as long-term.

### **Classification of Environmental components:**

The various environmental components that have been considered for conducting the IEE are classified in table below:

Components	Sub-component	Parameters
<b>Physical</b> <ul style="list-style-type: none"> <li>Water</li> <li>Air</li> <li>Land</li> </ul>	Surface water Ground water Sea water Air, noise Soil	Hydrology, quality  Air quality, noise Erosion, quality
<b>Ecological</b> <ul style="list-style-type: none"> <li>Aquatic</li> <li>Terrestrial</li> </ul>	Fisheries (inland/ marine) Aquatic Biology Forests, vegetation Wildlife	Species, diversity, economic value Density, species, Species, population Species, population
<b>Infrastructure</b> <ul style="list-style-type: none"> <li>Water Supply</li> <li>Electricity</li> <li>Transport</li> <li>Land use</li> <li>Drainage</li> </ul>	Surface/ground water —  Highways/Roads Rail Air Water	Frequency, quality Generation, Transmission, requirement, power gap Access, availability, type, utility of each mode  — Flooding, drainage
<b>Quality of Life</b> <ul style="list-style-type: none"> <li>Socio-economic</li> <li>Cultural</li> <li>Aesthetics</li> </ul>	Public health Public safety Economic and social structure Human ecology Resettlement Historical Archaeological Recreation and aesthetics	Demographic, amenities, occupational pattern  Locations and importance — —

The major environmental issues involved in developing Diu as a tourist destination are:

- **Increased demand on local infrastructure** — transportation, water supply, wastewater collection and treatment, solid waste disposal, and health-care facilities
- **Indirect effect of tourism** on the local culture, business, population, and workforce

The magnitude and scale of the impact will depend on the magnitude and kind of development proposed. For example, projects that involve the setting up of a large hotel complex and a sports and recreation facility will do more damage to fragile ecosystems, than projects with tourist attractions such as bird watching, nature photography.

*Eco-tourism projects combine conservation of the environment with economic benefits. Comprehensive environmental and land use planning can identify options and alternatives in the long run and balance single- or multiple-use concepts.*

## **6.5 ENVIRONMENTAL ASSESSMENT OF THE PROPOSED DEVELOPMENT**

The following assessment is based on the preliminary survey conducted and the availability of data. The assessment also includes recommendations to protect the environment.

*The following are some of the important environmental issues to be considered.*

### **(a) Unplanned Physical Development**

Unplanned development can have serious repercussions on the coastal environment. If the proposed activities do not take into consideration the need to have adequate setback areas from the beaches, stability of the beachfronts, and aesthetic building concepts, it will result in problems such as soil erosion and loss of beachfronts. In addition, the residential estates along the coast do not conform to the local planning requirements.

The primary consideration in the layout of a water-fronted hotel, resort or other tourist development should be to ensure that the development would have no harmful effects on the coast. In this respect, the following should be considered:

- To protect the scenic beauty of the beaches, cluster development should be given priority over ribbon development.
- Provision should be made for adequate open spaces.
- Rubbish should not be dumped into the sea. Sewage and wastewater must be treated before it is dumped. Provision should be made for the disposal of solid waste.

### **(b) Erosion of the Coastline**

Sand is mined on a large-scale from beaches for use in the construction of hotels and resorts. This is a cause of soil erosion. Proper care needs to be taken to prevent this.

Unauthorised construction at Devka beach has resulted in erosion of the coastline.

### **(c) Fort deterioration**

The Fort will deteriorate if suitable conservation measures are not adopted. Also, if not restored to its original condition, the archaeological relevance will be lost. In addition, facilities should be provided for the collection of waste, such as wrappers, plastic bags and empty bottles so that it is not dumped into the sea.

### **(d) Natural and Social Environmental Impacts**

The environmental concerns and possible mitigating measures are considered here in the more specific context of the type of natural or cultural resource, which may be affected. These categories are, however, interrelated, and not mutually exclusive.

The impact magnitude and scale of the impacts of tourism development depend on the type and size of the development proposed. Recreational tourism, involving a variety of sporting activities and a large hotel complex and infrastructure, has a greater potential to degrade fragile ecosystems than projects, which attempt to attract tourists with special interests such as wildlife viewing or archaeology.

Generally many projects or project components have a potential impact on archaeological sites, building complexes, architecture, monumental sculpture, painting, inscriptions and other physical remains considered part of a country's cultural heritage. This is especially relevant as the Daman Fort and the heritage buildings are proposed to be opened further for tourist use. In numerous cases, cultural property sites coincide with important natural sites. Cultural resources are a part of the tourism resource base and therefore, it is essential to screen development projects for potential impacts on cultural property.

Various types of impacts that disturb the Archaeological and historic sites, settlements and structures are flooding, changes in water table, deterioration of air quality, vibration caused by construction activities, building or airplanes and human intrusion.

The possible natural and social environmental impacts, which have to be considered in the initial environmental examination, are as follows:

- Changes in physical resources including air quality, soil, water quality, and topography.
- Impact on the ecological/ biological resources including aquatic biology, fisheries etc.
- Changes in the land use pattern i.e. the activities performed by the people inhabiting the region such as agriculture, irrigation and industry.
- Impact on the quality of life and values of the local population. This would include employment patterns, noise levels, cleanliness, cultural values, population density, and public safety.

#### ***(e) Environmental Impacts of Infrastructure Development***

Tourism development projects require not only development of tourism related facilities, but also development of the associated infrastructure such as highways and roads, water supply and power. Initial environmental examinations of the sites include the examination of impacts due to the infrastructure development projects. Some of the environmental problems often connected with such projects, and which require special attention, are discussed here.

#### ***Construction Stage Problems***

Certain construction stage problems would be common to the various components of the project. These are:

- 1) Runoff erosion during rains from unprotected excavated areas resulting in excessive soil erosion can be very damaging.

Mitigation measures include:

- Careful planning of cut-and-fill to minimise erosion, including resurfacing/revegetation of exposed areas.
  - Provision of dikes to hold runoff to settle out soil particles.
- 2) Pollution of groundwater by dumping of construction spoils can be mitigated by careful planning for spoils disposal.

- 3) Noise and vibrations, which are hazardous or nuisances to workers or nearby residents require appropriate planning and controls.
- 4) Cultural hazards due to differences in customs of imported workers and local villagers also require appropriate planning at the construction stage.
- 5) Slum hazards can arise if workers decide to stay after construction is completed, unless appropriate planning provides for acceptable permanent housing in such cases.

### ***Problems Due to Water Supply Projects***

Water supply projects involve any of the following construction, expansion or rehabilitation of dams and reservoirs, wells and intake structures, transmission mains and pumping stations, and treatment works and distribution systems.

Environmental problems commonly identified are;

- 1) Problems Related to Project Siting
  - Pollution of water supply source by upstream waste inflows from communities, industries, agricultural runoff and soil erosion runoff;
  - Abstractions of raw water for water supply conflicting with other beneficial water uses (for both surface and groundwater's)
  - For groundwater sources, hazard of land subsidence caused by excessive groundwater pumping.
- 2) Problems Related to Design Phase
  - inadequate protection of water source (intakes or wells) from surface runoff pollution.
  - Polluted/contaminated water in distribution system, which may be due to:
    - inadequate filters and chlorinators, or
    - fluctuation pressures due usually to excessive leaking in the distribution system causing inflow of pollutants/contaminants.
  - excessive growth of algae in distribution reservoirs;
  - inadequate disposal of sludges from water treatment plants; these can generally be satisfactory disposed of by engineered landfills.
  - Inadequate buffer zone around pumping and treatment plants as needed for alleviating noise and other possible nuisances to neighbouring properties and for protecting these facilities from damage by outsiders.

### ***Problems Due to Road Projects***

Direct impact of highways and roads projects result from construction, maintenance and traffic use. The most significant construction-related impacts are those related to clearing, grading or roadbed construction: loss of vegetative cover, foreclosure of other land uses, modifications of natural drainage patterns, changes in groundwater elevation, and interference with movements of wildlife.

Environmental problems associated with new major highways and roads projects include:

- encroachment on precious ecological resources, such as forests,
- unwarranted depreciation of environmental aesthetic (scenic) values.
- Highway runoff pollution
- Air pollution due to vehicle emissions
- Traffic congestion and hazards at access and exit points

*Socio-economic benefits provided by highway and road projects include all-weather reliability, reduced transportation costs, increased accesses to markets for local produce and products, access to new employment centres, employment of local workers on the project itself, better access to health care and other social services and strengthening of local economics.*

## 6.6 MEASURES TO PROTECT THE ENVIRONMENT

Developing Daman as a tourist destination will have both positive and negative results. The negative results can be minimised by enforcing suitable measures to protect the environment such as fixing the carrying capacity of the beaches and appropriate waste-management practices.

The various problems that will accompany the development of Daman as a tourist destination, and measures suggested to protect the environment are summarised in the following table

### Measures to Protect the Environment

ENVIRONMENTAL ISSUE	RECOMMENDATIONS
<b>Direct</b>	
Sand mining and depletion of coastal resources for infrastructure development	<ul style="list-style-type: none"> <li>• Supervision of the activities of the construction contractor</li> <li>• Submission of plans in accordance with local ordinances on sand mining</li> </ul>
Destruction of wetlands, forests, other sensitive habitats, and cultural, historical and archeologically-important sites	<ul style="list-style-type: none"> <li>• Areas considered for development should have zoning plans to account for natural, geographic and socio-economic conditions</li> <li>• Development to be based on an inventory of resources</li> </ul>
Erosion resulting from uncontrolled clearing, and infrastructure development, such as roads and marinas.	<ul style="list-style-type: none"> <li>• Formulation of erosion and sediment control plans</li> <li>• Afforestation along the slopes</li> </ul>
Loss of 'free' environmental services from natural systems and degradation of air, water, and land resources	<ul style="list-style-type: none"> <li>• Definition of carrying capacity so that the tourist segment targeted can be sustained without overburdening existing infrastructure and resources</li> </ul>



<p>Water pollution from inappropriate sewage or solid waste disposal</p> <ul style="list-style-type: none"> <li>• Marine effluent disposal</li> <li>• Residential sewage disposal</li> <li>• Marinas</li> <li>• Contamination of groundwater</li> </ul>	<ul style="list-style-type: none"> <li>• Upgrade of existing municipal/regional collection and disposal system, or construction of a sewage treatment plant onsite</li> <li>• Liquid wastes should not be discharged on the beaches, into the sea, or other sensitive areas</li> <li>• Strengthening of local capacity to monitor and enforce pollution regulations</li> </ul>
<p>Solid and liquid waste disposal next to amenities</p>	<ul style="list-style-type: none"> <li>• Appropriate waste disposal options</li> <li>• Landfill versus incineration alternatives, as well as waste minimization</li> </ul>
<p>Problems created by:</p> <ul style="list-style-type: none"> <li>• Traffic congestion</li> <li>• Noise</li> <li>• Air pollution</li> <li>• Demand for services exceeding supply</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated planning to reduce traffic, overcrowding and noise</li> </ul>
<p>Displacement of local population</p>	<ul style="list-style-type: none"> <li>• Implementation of compensation and resettlement programs after proper planning</li> <li>• Implementation of a rehabilitation plan</li> </ul>

<b>Indirect</b>	
<p>Conflicts that arise with the use of other resources, such as fisheries, agriculture</p>	<ul style="list-style-type: none"> <li>• Tourism development in a framework of national, regional, local socio-economic development plans to integrate new objectives into development strategies</li> <li>• Identification of zones suitable for tourism</li> </ul>
<p>Capacity to manage the “tourist or related environment”</p> <ul style="list-style-type: none"> <li>• Legislation and polling constraints</li> <li>• Lack of agency support</li> <li>• Absent/reduced human and financial resources to alleviate environmental problems</li> <li>• Inadequate training in Environment Management</li> </ul>	<ul style="list-style-type: none"> <li>• Periodic and comprehensive action to address direct and indirect problems and their monitoring and evaluation</li> <li>• Staffing and equipment support must be budgeted. This will include training needed to alleviate environmental problems and monitor the Environmental Management Plan or any other alleviation plan.</li> </ul>
<p>Multiplier effect on other industries increases the burden on natural resources and public services</p>	<ul style="list-style-type: none"> <li>• Provision of adequate infrastructure and services to meet physical, social and economic needs of the region</li> <li>• Recognition that overbuilding may be a persistent problem</li> </ul>

Congestion, overcrowding	<ul style="list-style-type: none"> <li>Design of urban areas, transport network according to the carrying capacity of the natural setting</li> </ul>
Natural hazards peculiar to developed sites such as coastal storms, flooding, landslides and earthquakes may damage infrastructure and reduce long-term benefits	<ul style="list-style-type: none"> <li>Design of facilities: <ul style="list-style-type: none"> <li>for natural hazard management</li> <li>to take advantage of natural resources such as wetlands to act as a buffer against storms or absorb treated wastewater</li> </ul> </li> </ul>

A detailed assessment of environmentally sensitive sites will be helpful in developing Daman as a tourist destination that is environmentally sound and sustainable.

### Guidelines for Construction of buildings and basic Infrastructure

#### Negative Impacts and Mitigative measures

Problem	Impact	Mitigation measures.
	Negative	
Noise pollution	Creates problem to the nearby habitants and residents	- Planning and control of the construction phase should be done properly
Air pollution	Smoke and dust.	<ul style="list-style-type: none"> <li>Planting trees is one of the mitigation measures.</li> <li>Construction should be away from the local habitants and tourist traffic.</li> </ul>
Groundwater pollution	Due to dumping of construction spoils	- Planning should be done to dispose the spoils properly.
Runoff erosion	Excessive soil erosion from unprotected excavated areas	<ul style="list-style-type: none"> <li>Careful planning of cut-and-fill to minimize erosion, including resurfacing/revegetation of exposed areas.</li> <li>Provision of dikes to hold runoff to settle out soil particles.</li> </ul>

#### Positive socio-economic benefits

Problem	Impact	Mitigation measures.
	Positive	
Socio economic benefits	<ul style="list-style-type: none"> <li>Creates employment to the local population</li> <li>Long term benefit from the construction of the roads.</li> <li>Improvement in the quality of life</li> <li>Better accessibility to the health care, social service centres.</li> </ul>	-

## Negative Impacts due to other projects and mitigation measures

Problem	Impact		Mitigation measures.
	Negative	Positive	
Coastal Walk	Indiscriminate liquoring of the trekking routes		<ul style="list-style-type: none"> <li>- Trail walkers &amp; campers should be cautioned about the pollution</li> <li>- Waste disposal measures should be taken properly by providing waste bins at appropriate intervals.</li> </ul>
Waterfront development	May pollute the river bank		Should enhance the strength of the riverbanks and in no case should weaken the riverbank.
Camping site at sea front	<ul style="list-style-type: none"> <li>- Spreading dust during construction stage</li> <li>- Effect of construction of facilities on aquatic organisms</li> </ul>		<ul style="list-style-type: none"> <li>- Care should be taken to see it that the natural habitats of marine creatures should not get affected due to the construction.</li> <li>- Habitate should be identified prior to the construction, and active constructive zones should be away from such sensitive habitats.</li> <li>- Care should be taken to preserve the fresh water balance of the ocean park area.</li> <li>- Stability of the beachfront should be considered while planning theme park arrangements.</li> </ul>
Coastal erosion	<ul style="list-style-type: none"> <li>- Coastal erosion due to the construction of facilities</li> </ul>		<ul style="list-style-type: none"> <li>- Buffer areas of vegetation should be planned not only to minimise the coastal erosion but also to provide protection from low depressions and cyclonic storms.</li> </ul>

## 6.7 SUMMARY

As indicated in this chapter, the tourism development in Daman could result in a wide range of environmental and social impacts, some positive and some negative. In order to minimise the negative impacts and enhance the positive ones, a detailed environmental impact assessment of sensitive sites and carrying capacity studies of this region may be helpful in environmentally sound and sustainable tourism development of the region.

Thus the impacts and broad mitigative measures can be summarised as under:

Sr. No.	Activity	Environmental Issue	Impact	Scale of impact	Mitigative Measures
1	Increased tourist activity	<ul style="list-style-type: none"> <li>Inadequate potable water supply during summer</li> <li>Threat to ecology</li> </ul>	<ul style="list-style-type: none"> <li>Water-borne diseases to tourists as well as local people</li> <li>Destruction of exotic flora</li> </ul>	Moderate Negative	<ul style="list-style-type: none"> <li>Modernisation of existing water treatment facilities or supply of groundwater after chlorination</li> <li>Demarcation of restricted zones for tourist activities at locations where exotic species exist</li> </ul>
		<ul style="list-style-type: none"> <li>Vehicular pollution</li> <li>Disposal of untreated sanitary waste</li> <li>Unscientific disposal of solid waste</li> </ul>	<ul style="list-style-type: none"> <li>Deterioration of air quality</li> <li>Health hazards due to untreated sanitary waste and solid waste</li> </ul>	Low Negative	<ul style="list-style-type: none"> <li>Better traffic planning</li> <li>Provision of septic tank and soak pit system at each site</li> <li>Provision for sanitary landfill facility for solid waste disposal</li> </ul>
		<ul style="list-style-type: none"> <li>Cultural change</li> </ul>	<ul style="list-style-type: none"> <li>Preservation of Fort</li> <li>Training of new craftsmen to cater to the increased tourist activity</li> </ul>	Low Positive	
		<ul style="list-style-type: none"> <li>Socio-economics of the region</li> </ul>	<ul style="list-style-type: none"> <li>Generation of direct employment</li> <li>Availability of better amenities</li> <li>Secondary growth such as small scale industries, handicrafts, commercial establishments, etc.</li> <li>Improvement in quality of life</li> </ul>	High Positive	
			<ul style="list-style-type: none"> <li>Loss of cultural identity and commercialisation of traditions</li> </ul>	Low Negative	

Sr. No.	Activity	Environmental Issue	Impact	Scale of impact	Mitigative Measures
2	Construction of facilities	<ul style="list-style-type: none"> <li>Land use change</li> <li>Cutting of trees (approx. 300 trees) for proposed accommodation &amp; other facilities and threat to sand dunes etc</li> <li>Disposal of sanitary waste</li> </ul>	<ul style="list-style-type: none"> <li>Urbanisation</li> <li>Potential loss of agriculture</li> <li>Sedimentation, loss of topsoil, soil erosion</li> <li>Health hazards to tourists</li> </ul>	Low Negative	<ul style="list-style-type: none"> <li>Implementation of area development plan to regulate the secondary growth</li> <li>Compensatory afforestation</li> <li>Disposal of sanitary wastewater into septic tanks and soak pits</li> </ul>
	Construction	<ul style="list-style-type: none"> <li>Noise</li> <li>Fugitive dust</li> <li>Machinery emissions</li> <li>Congestion traffic</li> <li>Structural addition to coast and landscape</li> </ul>	<p>Ecosystem impact</p> <ul style="list-style-type: none"> <li>Disturbance of animals</li> <li>Poison environment</li> <li>Water quality degradation</li> <li>Lower oxygen in land/ water</li> </ul> <p>Human Impact</p> <ul style="list-style-type: none"> <li>Worker safety</li> <li>Public health risk</li> <li>Respiratory irritation</li> <li>Welfare losses (quality of life, subsistence)</li> <li>Aesthetics</li> </ul>		<ul style="list-style-type: none"> <li>Noise and emission control ordinances</li> <li>Toxic substance controls</li> <li>Timing to avoid migratory or spawning</li> <li>Improve over original</li> </ul>
	Landscaping construction	<ul style="list-style-type: none"> <li>Introduction of exotic species</li> <li>Fertiliser/ pesticides</li> <li>Toxicity: species/ habitat loss</li> <li>Downstream eutrophication</li> </ul>	<p>Ecosystem impact</p> <p>Displacement of indigenous, rare species</p> <p>Human Impact</p> <p>Natural/ cultural resource loss</p> <p>Welfare loss (subsistence, recreation)</p>	Low	<ul style="list-style-type: none"> <li>use of native plants</li> <li>management of chemical products</li> </ul>

Sr. No.	Activity	Environmental Issue	Impact	Scale of impact	Mitigative Measures
3	Solid waste disposal	<ul style="list-style-type: none"> <li>Waste from human activities pollutes water and soil</li> <li>Drainage from landfills or dumps</li> <li>Smoke and fumes from burning</li> </ul>	<p>Ecosystem impact</p> <ul style="list-style-type: none"> <li>Water and air quality reduced</li> <li>Species/ habitat poisoned</li> <li>Fish caught in trash</li> <li>Clean up costs</li> </ul> <p>Human Impact</p> <ul style="list-style-type: none"> <li>Public Health risk</li> <li>Economic loss (tourism)</li> <li>Aesthetics</li> </ul>	<ul style="list-style-type: none"> <li>High Negative</li> </ul>	<ul style="list-style-type: none"> <li>Lots of trash cans</li> <li>Routine clean-up</li> <li>Adequate treatment and disposal technology</li> </ul>
4	Sewage disposal	<ul style="list-style-type: none"> <li>Suspended solids</li> <li>Fish and plants need oxygen</li> <li>Bacteria and germs</li> <li>Chlorine</li> <li>Freshwater demand</li> <li>Toxic Industrial waste</li> </ul>	<p>Ecosystem impact</p> <ul style="list-style-type: none"> <li>Water quality goes down</li> <li>Oxygen in water decreases</li> <li>Environment poisoned</li> <li>Ground water contamination</li> <li>Drainage from landfills or dumps</li> <li>Smoke and fumes from burning</li> </ul> <p>Human Impact</p> <ul style="list-style-type: none"> <li>Public Health risk</li> <li>Welfare loss (subsistence, recreation, economic- fisheries and tourism)</li> <li>Aesthetics</li> <li>Increased local infrastructure costs</li> </ul>	<ul style="list-style-type: none"> <li>High Negative</li> </ul>	<ul style="list-style-type: none"> <li>Waste management</li> <li>User/ impact fees</li> </ul>

Sr. No.	Activity	Environmental Issue	Impact	Scale of impact	Mitigative Measures
5	Land Use Changes	<ul style="list-style-type: none"> <li>• Secondary development</li> <li>• Enhanced access/ high density</li> </ul>	<p>Ecosystem impact</p> <ul style="list-style-type: none"> <li>• Urbanisation</li> <li>• Overfishing/resource depletion</li> <li>• Change in ecosystem structure</li> </ul> <p>Human Impact</p> <ul style="list-style-type: none"> <li>• Public Health risk (air and water pollution)</li> <li>• Welfare losses (Quality of life, loss of agricultural land, overburdening of infrastructure)</li> <li>• Aesthetics</li> </ul>	<ul style="list-style-type: none"> <li>• Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• Land use planning</li> <li>• Resource management (Catch limits, education)</li> <li>• Appropriate site selection avoiding sensitive areas</li> </ul>
6	Tourist Activities(sight seeing, souvenir collecting, reef walking)	<ul style="list-style-type: none"> <li>- More people in area</li> <li>- Increased contact different cultures and lifestyles</li> </ul>	<p>Ecosystem impact</p> <ul style="list-style-type: none"> <li>• Resource depletion</li> <li>• Change in ecosystem structure</li> <li>• Degradation of important cultural/ historic or recreational areas</li> </ul> <p>Human Impact</p> <ul style="list-style-type: none"> <li>• Welfare losses</li> <li>- Commercialisation of culture/ religious practices</li> <li>- Quality of life, Subsistence</li> <li>- Economic (fisheries)</li> </ul>	<ul style="list-style-type: none"> <li>• Low</li> </ul>	<ul style="list-style-type: none"> <li>• Education/ information</li> <li>• Ensure compatibility with community through</li> <li>• Compensation in money or land</li> </ul>

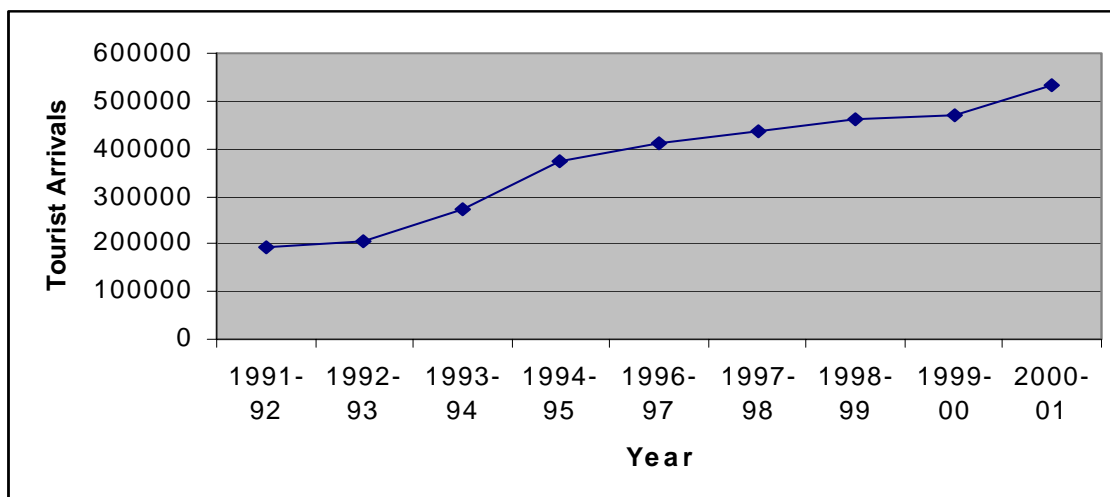
## MARKETING STRATEGY

The first step towards developing a marketing strategy is to understand the environment in which the product exists, i.e. an environmental analysis. Marketing audit detailed below is an important part of the environmental analysis, which is followed by setting the marketing objectives and developing a marketing strategy for Daman based on the marketing audit and the assessment of the internal and external environment of Daman in Chapter 4.

### 7.1 THE MARKETING AUDIT:

#### A. PRODUCT SITUATION:

The graph given below details the tourist arrivals in Daman over the past 10 years. It is observed that the number of tourists (mostly domestic), typically the weekend tourists have gradually but continuously increased at a compounded rate of 11.9% per annum in the 1991-2001 period. (Source: *Department of Tourism, Daman and Diu*). The non-weekend tourists are typically the business tourists/ conferencing tourists.



The product today has the following perceptions:

- The domestic tourists from the nearby state of Gujarat and Maharashtra visualize it as a weekend/ holiday destination typically restricting the tourists to a specific set of days in a year.
- The domestic tourists from other states have awe about the place and link it with the Portuguese culture's existence. This could be capitalized upon.
- Business and conference tourists are quiet prominent here due to the value for money accommodation, accessibility, availability of evening entertainment in the hotels and last but not the least is the availability of cheap liquor.

Data on the international tourist trend is not available. However from the discussions with the stakeholders of the tourism industry in Daman, it was realized that the international tourist arrivals are almost negligible. Most of the international tourist here use Daman as



a last stop before exit from Mumbai as Daman provides reasonable and value for money accommodation and entertainment. The tourist tends to stay for a day to catch their flight back from Mumbai, which is only 4 hours away. However some of these international tourists are also attracted to Daman because of its Portuguese history.

Clearly there exists a need for a well planned and organised tourism development in Daman. A marketing strategy also needs to be developed and implemented that will help increase tourists from the target group only, increase their stay duration in this region, rather than congesting the region during the weekends. It will also be endeavored to increase the number of foreign tourists who use Mumbai to embark from India by increasing their awareness and interest in the Portuguese culture left behind by their four and half century rule, which also may be used as a differentiator against existing and potential competitive destinations.

## **B. COMPETITIVE SITUATION:**

Daman's competitors may be broadly classified into two types of destinations:

- Destinations in and around the two states Gujarat and Maharashtra, which have the potential to be developed at any point of time.
- Destinations in and around the two states Gujarat and Maharashtra that already have a brand image in tourists perception and have a large brand pull.

On the western coasts, in and around the two states of Gujarat and Maharashtra there exist a number of destinations which are undeveloped and unknown to the general tourists, and may be very accessible to these states, which is the main Daman advantage. These destinations have the potential to offer fresh alternatives to the existing and potential tourists of Daman.

In case of the foreign tourists targeted for Daman, the respective State Tourism Development Corporations will try to attract them to spend the time in their states, as tourism is becoming a priority for every state tourism department in the country. For the domestic leisure tourists in these states Daman is a short getaway from their monotonous mundane life. A similar getaway will not be difficult to develop unless Daman is differentiated with some unique characteristic. Typically for the domestic conference tourists any fresh alternatives will be a welcome change as such conferences is a regular feature.

Destinations like Matheran, Lonavla, Mahabaleshwar, which have a brand image and awareness among the target tourist segment, Daman already has competition from them. These destinations also have the advantage of proximity to Mumbai, one of the major source markets for Daman. Information on them is also easily available not only from the state tourist department but also word of mouth due to frequent visitation to these areas.

## **C. DISTRIBUTION SITUATION:**

For the tourism product, which is not only high involvement but also a case where the product and the user are at extreme ends, identification of proper distribution channel is mandatory. The channel so identified should be located at convenient locations to enable easy access to information and relevant facilities to inject positive buying behaviour.

Today Daman has no distribution channel identified or set up. The relevant information on the destination is accessible only if either a tourist or travel operator or a hotel approaches the tourism department at Daman and in the office hours.

Hence there is a need for a proper design of the channel system considering the customer needs, establishing channel objectives, identifying the major channel alternatives and evaluating them. The identified distribution channels are detailed in the marketing mix in table 7.1, section no 7.3.E.

## **7.2 THE MARKETING OBJECTIVES:**

Setting objectives is mandatory and vital to any planning process and so is the case with marketing plan.

- To increase awareness about Daman, positioning it as a town of varied water sports activities with a Portuguese backdrop.
- To increase the number of the tourists from the identified target segment and market.
- To attract various tourism distributors, the tour operators, hotels in neighboring states, etc to sell Daman as a destination.
- To increase the average stay duration of the tourists.

## **7.3 MARKETING STRATEGY:**

Based on the marketing objectives set a marketing strategy has been formulated which includes

### **A. POSITIONING OF DAMAN:**

The marketing strategy will endeavour to position Daman as *the city of twin forts which is affordable and easily accessible and has water based tourist attractions.*

### **B. THE TARGET SEGMENTS:**

The target markets would be broadly classified under two types of segmentation, geographic segmentation and activity based segmentation.

#### ***Geographic market segments:***

The geographical market segment may be broadly classified into two types of markets, the international market and the domestic market. The international markets would include all countries of tourist generation outside India. Domestic market would consist of all States and Union territories in India including Daman and Diu.

#### **➤ International Market**

Section 2.1.2.1 B of this document indicates that West European countries contribute around 30% of tourists. The tourists from this region are not only the highest per capita spenders according to the WTO statistics, but also shows an increase in outbound tourism. It is therefore imperative to target these countries as prospects for increasing tourism. These form Category 'A' market, where the media vehicles should aim at achieving two objectives. Firstly motivate and induce into the tourists embarking from

Mumbai to use Daman as the last spot before embarking from Mumbai, India on the basis of its accessibility to Mumbai and its developed and economical tourist infrastructure. Secondly also create an interest in Daman by showcasing the legacy left behind by the four and a half-year rule by the Portuguese.

It is also observed that the Indian inbound tourism market has more than 40% contribution from the Asian countries. These form Category 'B' market, where the media vehicle mix used should aim at placing Daman as a tourist attraction with developed and economical tourist infrastructure, and accessible destination attracting tourists embarking from Mumbai to spend their last couple of days at Daman.

### ➤ **Domestic Market**

The analysis in Sections 2.1.3.1 C suggests that the maximum number of tourist generating states for the country are Maharashtra, West Bengal, Andhra Pradesh, Gujarat, Karnataka and Madhya Pradesh. Other major tourist generating states in India include Uttar Pradesh, Tamil Nadu and Delhi.

Of these the maximum tourists to Daman are from Gujarat, then Maharashtra, accounting for 90-95% of the total number of domestic tourists. This would be the core mass-market segment targeted for Daman. Tourists generated by Gujarat and Maharashtra are mostly weekend tourists, loading Daman with all the tourism activities only during the weekends, giving lesser number of business days to the tourism providers, giving rise to unhealthy competition amongst them and has lead to unplanned tourism being developed. The media vehicles used would aim to reduce the increasing pressure on Daman during the weekends and endeavour to spread the increase in the tourist arrivals over the weekdays.

The other key segment market that will be targeted will be Madhya Pradesh. The media vehicles here would aim to increase awareness and interest in Daman, a destination that offers quality water based tourism and a glimpse into the Portugal culture.

### ***Activity Market Segments:***

While it is important to identify area and country markets in order to focus marketing spend, destination-marketing strategies need to be based on the specific needs of visitors. This means that the target markets should be impacted by the full marketing mix and that the marketing mix should be in a position to manipulate travel trends. Such target markets should reflect consumer patterns, should be clearly identifiable and should be measurable. The following activity segments will be targeted:

- The General Touring market can be divided into:
  - ♦ *Group Tour Market*, where visitors travel in groups on tightly packaged holidays, visiting the major tourism icons and highlights. Under this market the Category B international tourists are targeted. These tourists are in the middle end of the market and fairly price sensitive, feel safe in a group and need to socialise. The key product requirements include want for a broad destination experience, fairly fixed circuits, tourist class accommodation.
  - ♦ *FIT (fully independent travel) Market*, where tourists travel in couples, families, friends, follow flexible, tailor made itineraries and get in depth with the overall destination experience. This market includes the Category A international tourists

and tourists from the neighboring states of Gujarat and Maharashtra. These tourists are generally well educated and well traveled. These may be professionals or student groups. Their key product requirements are seeking “alternative” experiences in main tourists attractions or undiscovered tourist areas, good road infrastructure, signage, visitor information system and good public transport options.

- The Special Interest target market includes the following:
  - ♦ *Adventure travelers* who practice adrenaline sport and activities will mainly include the domestic tourists target segment, who are also environmentally aware. These tourists are mostly singles in groups, and also corporations with executive team building activities.
  - ♦ Travelers who are interested in the *Cultural Aspects* of Daman will include the Category A international tourist target segment. These tourists are typically educated and well read. Their key product requirements include interaction with locals, getting real experiences – cuisine, lifestyle, settlement patterns, etc.
  - ♦ *Backpacker* tourists market who require a no frill, exploratory experience include a small percentage of the Category A international tourists and the domestic tourists. They are typically on low budget, are in the age group of 18-30 years, singles in small groups or couples with flexible travel itinerary. They require entertainment facilities, like to socialise with other travelers and locals and prefer economical accommodation and good public transport system.
  - ♦ *Charter holiday* market that requires an all-inclusive low priced holiday package, to be sold on a mass basis which include the domestic tourists. These tourists are typically from the middle-income segment, are price conscious families and couples. The major destination requirements for this segment are major attractions, day visits, optional tours and some special interest charters like sport tours, biking, etc.
  - ♦ *The meetings, incentives, conference visitors* segment travel to attend or participate in specific functions held and typically belong to the domestic geographic segment. They are typically professionals from the middle – upper income group, belong to the 30 – 55 age group, they may be individuals accompanied with their families and have high per capita expenditure. They require high quality convention facilities, accommodation, good food and wine, shopping good transport and other infrastructure with optional tours.

### C. PRODUCT:

The region has the potential to be developed as an all year and all week destination due to its relatively pollution free environ; pleasant climate all the year around; beaches with plans for water sports development; captivating forts and churches with plans to conserve and showcase them; proximity to a number of industrial towns of Maharashtra and Gujarat. These all need to be integrated as part of destination experience for tourists from different target segments. The major features of the existing tourism products are as follows:

- A coast length of 13.5 kms distributed over Jampore and Devka beach, today offer limited and yet unofficial water sport facility and an unguided beach walk at Jampore.

- The two forts, the Moti Daman fort and the Nani Daman forts though captivating are neither showcased properly nor are being conserved. Hence most tourists in the region do not take the two heritage structures as tourist attractions. Conservation measures need to be adopted for preserving and restoring these heritage monuments. The conservation details are detailed in Chapter 5. The development and showcasing plans for the same are detailed in Chapter 4. Similarly the Churches also call for proper conservation measures as these structures are fading away.
- There exists another point that can be developed as a major attraction. This is the meeting point of the Daman Ganga River with the Arabian Sea. This is proposed to be showcased by pedestrianising the bridge connecting Nani Daman and Moti Daman and by ferry river crossing.
- Accessibility, is one of the major strengths identified for the Daman region. It has a good rail connectivity via Vapi station and a 4 lane National Highway is towards completion.

The tourism products proposed to be offered at Daman includes the following:

#### **The Portuguese Culture Trail:**

- ✘ Properly showcased forts, the Nani Daman and the Moti Daman Forts with a well-planned heritage walk. Details in Chapter 4.
- ✘ A circuit showcasing the settlement pattern and the main churches like Bom Jesus in Daman,
- ✘ Occasional fetes organised in cultural complexes showcasing the Portuguese dances and cuisine, organised during the tourist peak season.

#### **The Water Based Tourism:**

- ✘ The Jampore Beach and the Devka Beach with regulations and recommendations on development plans. Details in Chapter 4.
- ✘ The existing and the proposed bridge connecting Moti Daman and Nani Daman as a major view point showcasing the meeting point of Daman Ganga River and the Arabian Sea, the Sangam Area.
- ✘ Recommendations on water based tourism activities like ferry cruises, and some innovative adventure sports on the Daman Ganga River and the Jampore Beach.
- ✘ Spots like Kachigam, with developed tourist parks, water parks, etc. Details in chapter 4.

The entire Daman region will zoned into a tourism zone, industrial zone, residential zone, etc. This will enable the show casing of all its tourism assets, and chalking out a fixed tourist itinerary.

### **D. DISTRIBUTION CHANNELS TO REACH EACH SEGMENT**

The distribution channel is target segment specific and is detailed in the table 7.1 below. Some of the common distribution channels are detailed in the distribution channels for Diu in Part B Chapter 7.

## E. PROMOTION STRATEGY TO BE ADOPTED FOR EACH SEGMENT:

Similarly, the promotion strategy is also target segment specific and is detailed in the table 7.1 below. The table 7.1 below gives in detail for every target tourist segments the product offerings, the ideal distribution channels to reach these target groups, and the promotional campaign to attract these tourists to Daman.

**TABLE NO: 7.1 The Marketing mix for specific market segments**

TARGET MARKET	PRODUCT	DISTRIBUTION CHANNEL	PROMOTION
<ul style="list-style-type: none"> <li>• FIT general tourists</li> <li>• Group general tourists</li> <li>• Back Packers</li> <li>• Charter Holiday tourists</li> </ul>	<ul style="list-style-type: none"> <li>• Fairly fixed routings and theme “magnets” through out the province</li> <li>• Seasonal tour options to make the most of seasonal traffic</li> <li>• Joint packaging with neighboring destinations like DNH to provide optional tours.</li> <li>• Incentives for product development programmes</li> </ul>	<ul style="list-style-type: none"> <li>• Marketing &amp; Sales representation in key markets</li> <li>• Liaison with outbound tour wholesalers</li> <li>• Encourage participation of locals as tour brokers</li> <li>• Daman reservation and tourism offices</li> <li>• Internet</li> <li>• Relatives and friends</li> </ul>	<p><b>Sales:</b></p> <ul style="list-style-type: none"> <li>• Selective tourism exhibitions, shows, workshops</li> <li>• Co-operative marketing programmes with key outbound and inbound operators</li> <li>• Direct to Consumer at consumer shows and exhibitions</li> </ul> <p><b>Promotions:</b></p> <ul style="list-style-type: none"> <li>• Engage airlines, trade, etc. in putting together co-operative price promotions, specifically during down season</li> </ul> <p><b>Public Relations/Communication:</b></p> <ul style="list-style-type: none"> <li>• Major guest-media programme</li> <li>• Customer relationship marketing</li> </ul> <p><b>Advertising</b></p> <p><b>Outdoor</b> advertising in DNH, the Airport in Mumbai, railway stations of the target states, trains like Shatabdi, and NH8 Highway.</p> <p><b>Press</b>(optional, depends on funding)</p> <ul style="list-style-type: none"> <li>• Co-operative advertising with Diu and DNH; other major tour operators in the target market; airlines; hotel association</li> <li>• General Lifestyle Magazines</li> </ul>
<ul style="list-style-type: none"> <li>• Culture Tourists</li> </ul>	<ul style="list-style-type: none"> <li>• Provision of visitor facilities &amp; interpretative signage at the sites</li> <li>• Facilitate</li> </ul>	<ul style="list-style-type: none"> <li>• Outbound Tour Operators in the target market</li> <li>• Clubs Associations</li> </ul>	<p><b>Sales:</b></p> <ul style="list-style-type: none"> <li>• Contact and information visits to major clubs/ associations</li> <li>• Educational Agent Programme</li> </ul>



<ul style="list-style-type: none"> <li>• <i>Adventure tourists</i></li> </ul>	<p><i>showcasing of special cultural events like cuisine and Dance fete</i></p> <ul style="list-style-type: none"> <li>• <i>Identify and train the locals as guides and facilitators</i></li> <li>• <i>Dedicated marketing material on the sites</i></li> <li>• <i>Development of adventure sports at Jampore – Sea Kayaking, paragliding, water skiing, etc.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Internet</i></li> <li>• <i>Adventure/ cultural publications</i></li> </ul>	<p><b>Promotions:</b></p> <ul style="list-style-type: none"> <li>• <i>Promotional e-mailers</i></li> <li>• <i>Direct marketing of lucrative packages to various corporate houses for their employees.</i></li> </ul> <p><b>Public Relations/Communication:</b></p> <ul style="list-style-type: none"> <li>• <i>Major guest media programme for special interest media.</i></li> <li>• <i>Use of radio as a medium</i></li> </ul> <p><b>Advertising:</b></p> <ul style="list-style-type: none"> <li>• <i>Special interest adventure and cultural publications.</i></li> <li>• <b>Outdoor</b> advertising in DNH, the Airport in Mumbai, railway stations of the target states, trains like Shatabdi, and NH8 Highway.</li> </ul>
<ul style="list-style-type: none"> <li>• <i>Conferences</i></li> <li>• <i>Meetings</i></li> <li>• <i>Incentives</i></li> <li>• <i>Exhibitions</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Incentives to hotels to further develop conferencing facilities.</i></li> <li>• <i>Well developed accessibility infrastructure</i></li> <li>• <i>Good local transportation</i></li> <li>• <i>Organised optional tours</i></li> <li>• <i>Availability of range of Hotels</i></li> <li>• <i>Flight Availability</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Professional convention organizers</i></li> <li>• <i>Associations: Professional, Sport, academic</i></li> <li>• <i>Major corporations</i></li> <li>• <i>Exhibition organizers</i></li> </ul>	<p><b>Sales:</b></p> <ul style="list-style-type: none"> <li>• <i>Contact &amp; information visits to major corporations and associations</i></li> <li>• <i>Identification and tapping of appropriate conventions and exhibitions</i></li> </ul> <p><b>Promotions:</b></p> <ul style="list-style-type: none"> <li>• <i>Promotional mailers through emails.</i></li> <li>• <i>Direct marketing of lucrative packages to various corporate houses for their employees.</i></li> </ul> <p><b>Public Relations/Communication:</b></p> <ul style="list-style-type: none"> <li>• <i>Major guest media programme</i></li> </ul>
<p><i>International Tourists</i></p>	<ul style="list-style-type: none"> <li>• <i>Availability of range of Hotels</i></li> <li>• <i>Well developed accessibility infrastructure</i></li> <li>• <i>Good local transportation</i></li> <li>• <i>Organised optional</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Information and representative offices at the arrivals of International airports at Mumbai</i></li> <li>• <i>Tour Operators.</i></li> <li>• <i>Hotels at the</i></li> </ul>	<p><b>Sales:</b></p> <ul style="list-style-type: none"> <li>• <i>Direct sales to tourists select locations.</i></li> </ul> <p><b>Advertising:</b></p> <ul style="list-style-type: none"> <li>• <i>Outdoor advertising at the arrivals of international airport at Mumbai highlighting the value for money accommodation at Daman.</i></li> </ul> <p><b>Public Relations/Communication:</b></p>

	<i>tours</i>  <i>Facilitate showcasing of special cultural events like cuisine and Dance fete.</i>	<i>major foreign tourists destinations</i>	<i>May be done jointly with Diu in the target countries.</i>
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#### **F. SHORT TERM MEDIA PLAN:**

The short-term media plan for the first phase (year 1 & year 2) is detailed in Annexure F.

#### **G. MEDIA MATERIALS FOR DAMAN:**

The different media materials, which could be used as part of media planning, are described in brief as follows:

##### **• BROCHURES/GUIDE BOOKS/LEAFLETS**

###### *Comprehensive Guidebooks*

This guidebook would be to enhance experience of tourists during their stay in the region as well as while visiting the tourist spots.

There would be detailed booklets and brochures, which would be comprehensive for self-interpretation by the tourists and would cover all tourist spots, giving exhaustive information about the spots i.e. historical, geographical, religious and cultural information in forms of secondary attractions covering all the tourist attractions. The books and brochures would also include information on festivals held in Daman and detail the special attractions at the time. Pictorial and geographical maps giving complete details of tourist spot layout, amenities, etc would accompany all booklets.

###### *Leaflets by spot/theme and comprehensive*

These would be some separate leaflets detailing the services, attractions, facilities and infrastructure of the spot, which when combined can form a brochure pack.

- ◆ Jampore and Devka Beach
- ◆ Moti Daman and Nani Daman Forts.
- ◆ Theme parks in Daman

The brochures would provide readers with knowledge on the spots so as to create awareness and a desire to visit them and the accompanying information on the various facilities would hasten their decision making process. The salient points to be incorporated are as follows:

- The brochures should epitomize the history of Daman. It would have comprehensive information on the respective spots, accommodation, means of travel and other available facilities.



- The brochure should be picture based and created in the form of a jacket with supplementary inside brochures on the various nearby tourist spots making them use Daman as a node for visiting other spots and increase their stay similar to as in the case of Diu.

These Brochures would be distributed through channels such as hotels, tourist offices (Indian and International), Airlines, Airports and Bookshops, Travel Agencies and Tour Operators.

#### *In-flight Brochures*

The in flight brochure would contain basic information that the tourist would require on arrival at Daman e.g. names of hotels and addresses, restaurants, tourist offices, etc. The brochure would also have a small pictorial map of Daman region showing these places to help the tourist when he lands in Daman.

It can be distributed as an in-flight magazine in flights originating from the target European countries.

- **MAPS**

The maps would be to enhance experience of the tourists.

#### *Pictorial Maps*

The maps would give the following indications:

- Tourist spots
- Refreshment places
- Rest places & picnic spots
- Road map directions to the tourist spots with details on wayside amenities
- Toilets
- First aid centres
- Security & Emergency services
- Inquiry and information booths.

The maps would depict all these facilities in the form of diagrams and pictures. These would be large maps folded to look like a small booklet, which is handy to carry. At the back of the map there would be historic and cultural information about that tourist spot. The addresses of hotels and their phone numbers would also be mentioned.

These would be available at the tourist site, they could be part of the travel kit and could also be available at the hotel book shop.

- **SIGNAGE**

The signs are to enhance experience.

#### *Welcome/invitation Boards*

This sign would carry a message welcoming the tourist to:

- Main destination point e.g. at the entrance point, at the beaches, at the fort, etc.
- Transit points & Hotels.
- Wayside amenities

#### To Daman:

An eye-catching visual of Daman at all the nearest rail heads, at various destinations near Daman in Gujarat and Maharashtra and the international airports of Mumbai.

#### To Tourist sites

At the entrance of every tourist site there would be a welcome board inviting tourists to the spot. The board would be pictorial and would have visual of the tourist spot.

#### To Transit points & hotels

There would be an invitation board at the entrance of every hotel that would contain a welcome message to the tourists. The board would be pictorial and will display frescoes, photographs, sculptures, murals, etc.

#### *Information Boards*

There would in the form of Signage/ information board for:

- At the city entry and exit routes
- At the entrance of tourist spot
- At key locations around the tourist sites and region.

#### All around the region

These are typically direction boards and indicate the distances from various points in the region to places of tourist interest, directions to various places of accommodation. Boards would be of different sizes depending on the text but will follow standard highway code for the colour, background, letter size and physical size and height of the board.

#### *Direction Boards*

There would be direction Boards all around and in the tourist sites which would indicate locations in and around the tourist sites.

- Direction board within the tourist site i.e. within the Moti Daman fort, Nani Daman fort, would indicate the visitor flow directions.
- Direction boards within beaches indicating the rough or rocky sea zone and safety zone etc.
- Facility boards around the site, which would indicate locations of various facilities such as Toilets, Refreshment rooms, Dustbins etc.
- Signage indicating route, distances and title description to various tourists sites on the arterial and branch roads in the Daman Region.

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*Final Report*

***Part B***  
***DIU***

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## REGIONAL ANALYSIS

### 1.1 REGIONAL SETTING

Diu district is a small island of 40 sq. km situated at the entrance of the Gulf of Cambay near Veraval Port. It is separated from the southern extremity of the Saurashtra Peninsula by an arrow channel running through a swamp.

#### A. GEOGRAPHICAL LOCATION:

The beautiful island of Diu is situated about 192 kilometers west north west of Daman, the direct distance across the Arabian Sea. Slightly off the coast of Kathiawar near the port of Veraval in Gujarat, the island is bounded by the River Chasi on North and the Arabian sea on the other three sides and lies between the North Latitudes of 20°40'55'' and 20°44'32''N latitude and 70°52'17'' and 70°00'29''E longitude mark its geographical position. Of an area of 40 sq. kilometers, its landwards boundaries are shared with the Junagadh district of the Gujarat State.

#### B. ACCESSIBILITY:

Diu is approachable by road from Gujarat, from Una town (14 Kms) by a bridge over Chassi river at Tad, as well as through the village of Ahmedpur Mandvi to Ghoghla. This ward of Diu Municipal town was connected to the island by ferry, but since 1991, has been joined by a second bridge over Chassi. The nearest railhead is at Una, while the junction station is Veraval (96kms) which provides an onward connection to Ahmedabad, Mumbai and other cities. The airports at Bhavnagar (200 Kms) and Keshod (135 Kms) were earlier the only means of approach by air. Diu, however, has had its own airport since the Portuguese times. The Diu airport is also operational with flights from Mumbai available regularly.



#### C. THE REGION

##### *Formation:*

Diu, an island situated on the western coast of the Indian Continent, is delimited by the Arabian Sea on the east, south and west and river Chasi on the north. In the middle of the 16<sup>th</sup> Century the Portuguese under Viceroy Nuno da Cunha, succeeded in obtaining a foothold on the island of Diu. With the country becoming independent in 1947, the struggle for freedom from colonial domination gained momentum in this Portuguese pocket and territory gained its independence with Daman & Goa.

### ***Climate:***

Due to proximity to the sea, humidity is generally high. The relative humidity is generally always above 60% in Daman & Diu. The climate of the union territory though humid is generally pleasant. The mean daily average temperature in May, the hottest month is 30<sup>0</sup> C max & 27<sup>0</sup> C min in Diu. The mean daily average temperature in January, the coldest month is 27<sup>0</sup> C max & 15<sup>0</sup> C min in Diu. If the region is affected by cold waves from the western disturbances the temperatures fall to less than 7<sup>0</sup> C.

### ***Geomorphology:***

Diu is more arid and saline. Nearly four- fifths of Diu, especially the central and northern portion is covered by sand, sit and back- waters of the sea along the creeks. The remaining portion that is, the southern and south- eastern portion is covered by foraminiferal limestone of pliestocene to recent sub- age. The limestone deposits contain more than 40% CaO and is suitable for cement manufacture, and indicated reserves upto water table, namely 6 Mts. depth, is 45 million tonnes.

Inland made up limestone of Pleistocene age

### ***Landmasses:***

Three land masses which constitute Diu:

- |                 |   |
|-----------------|---|
| Diu main island | : 36 sq. km landmass linked to Gujarat by two bridges                                     |
| Ghoghla         | : nearly 4 sq.km of landmass touching Junagadh, connected to Diu main island by a bridge. |
| Simbor          | : a stretch of 1 km long beach nearly 27 km from mainland Diu in the North East direction |

### ***Physiography:***

The general topography does not show much variation, the region is generally plain. The average altitude of the region ranges between 6m above M.S.L to 30m above M.S.L. the region can be physiographically subdivided into four main parts:

- *The northern side of the region* along the Chassi river, a plain marshy area under the influence of tidal inflows and outflows.
- *Sand dunes zones:* the southwestern part stretching from Vanakbara to Nagoa along the coast. The height of the shifting sand dunes varies form 5m to 15m, afforestation is under progress.
- *The rocky zone:* The southeastern part of the region from Nagoa to southern tip of Diu town is a rocky area, which contains sandstones and limestone.
- *Flat Plains:* The middle portion of the region extending, as a strip along the Diu Vanakbara road and Malala side is a good agricultural land in the region. This zone is sandwiched between marshy areas, in the north and sand dunes and rocky areas in the south and is having rich ground water resources.

- *Sandy belts:* Apart from the broad physiographic sub- regions the golden sandy belts marks the topography of the sea beach of Nagoa and Jalandhar. All along the coast in the south of the region, sheet rocks formed of coral reaves are existing which endangers sea bathing. In the southeast direction the existing rocky area such as sandstone cliff is protecting the region from the tidal onrush. Few pockets of marshy areas in the north of the region are used for salt pans. The remaining marshy area can also be reclaimed for other activities by constructing the bund and dredging and desilting of Chassi River in the North. The topography of Ghoghla village consists of a flat and level plain. The area is thickly built up. The southwest strip of the village is under the influence of tidal waves whereas eastern strip is protected by a retaining wall.

## 1.2 SOCIO- ECONOMIC CHARACTERISTICS

### A. DEMOGRAPHY

The ultimate objective for any planning is the welfare of the community (population). For the same it becomes mandatory to study the demography of the population in the region. While framing the planning proposals of the region it is necessary to understand the dynamism of the population of the region under consideration, as they will change in their size and composition in the future.

#### *Growth of Population:*

Diu has a total population of 44110 spread over an area of 40 sq. Kms with a population density of 1103 persons per sq. km. The growth during 1991-2001 was 11.71%. The sex ratio was 1117 per 1000 men & a literacy rate of 74.14%.

The population growth since its liberation in 1961 is shown in the following table.

Year	Population	Growth Rate
1960	14280	
1971	23912	67.5%
1981	30420	27.2%
1991	39485	29.8%
2001	44110	11.7%

The above table clearly indicates a growth in the region. However it is also observed that the growth is not constant. After liberation in 1961 due to energetic steps by the Government to revive the economy of the region a tremendous growth in population is observed. The percentage growth observed in the 2001 census could be attributed to the fact that persons born prior to 1961 are migrating out with their Portuguese citizenship in search of better livelihood opportunities. At present a similar growth of 11 percent can be assumed or the growth of birth rate can be used as a basis of projecting the population.

### ***Density and Distribution of Population:***

As per the 2001 census, 44110 were concentrated in five villages Fudam, Bucharwada, Vanakbara, Ghoghla and Simbor and one town, the Diu district. The population density is 1103 per sq.km. as compared to that 987 per sq.km. in 1991 census.

### ***Urban and Rural Components:***

The 1991 census indicates that 52.27 % of the total population is the urban population. There is only one urban centre namely the Diu district. The remaining are classified as rural, concentrated over the five villages.

### ***Sex Ratio:***

There were 1117 females per 1000 males in 2001 in the region as compared to 1064 females per 1000 males in 1991, which indicates female predominating society in the region. The excess of females over males in Diu district is highest as compared to 591 females per 1000 males in Daman.

### ***Literacy:***

Literacy has increased in the region from 64.46% in 1991 census to 74.14% in the 2001 census. However literacy amongst females is less at 64.16% as compared to that in males at 85.63 %. It is also lower than that existing in Daman. In spite of being a region with a very small population 100% literacy has not been achieved, there is need for serious efforts in making child education compulsory in the rural areas of the region.

The main languages spoken in Diu are Gujarati, English, Hindi & Portuguese.

### ***Ethnic characteristics:***

#### ***Scheduled Castes and Scheduled Tribes:***

In the 1991 census the percentage of scheduled castes were counted at 3.74% of the total population and the scheduled tribe population were counted at 0.32% of the total population.

## **B. THE ECONOMY**

The primary activities comprising of fishing and agriculture and also tertiary activities are the most dominant in the economy of the region. Agriculture in the region is on subsistence level, which is mainly dependent upon monsoon rains.

### ***Occupational structure:***

1991 census shows that 27.96 % of the total population constituted by the main workers, 3.98% are marginal workers and the rest are non-workers. Amongst the main workers, 6.22 % are cultivators, 2.48% are agricultural labourers, 43% persons are into livestock, forestry, fishing, hunting and plantations, orchards and allied activities. Mining and quarrying employs a marginal percentage of 0.455 of main workers, 5.40% in Manufacturing, processing, servicing, repairs, a mere 1.65% in household industry and 3.75% in other than household industry, approximately 6% are into construction, 11.73% are into trade and commerce, 10.20% into transport, storage and communications and the rest into other services.



The male participation as active workers is 45.33% whereas the female participation is at a very low percentage of 11.45%. However amongst marginal workers the female workers ratio at 6.96% outnumber the male workers ratio at 0.82.

### **1.3 SETTLEMENT PATTERN**

The main settlements in the region are Ghoghla, Vanakbara, Bucharwada, Fudam villages and Diu town. Simbor village has a floating fishing population for six months only.

All the settlements in Diu Island are compact and agglomerated in nature and growing in the form of ribbon development along the Diu-Vanakbara major district road. Diu-Nagoa- Vanakbara road in the Southern part of the region could not attract any big settlement de to the existence of sand dunes, airstrip and rocky patches in this part of the region.

Ghoghla village across Chassi river, in the northeast is a compact and thickly populated village. This is also developing along Ghoghla- Una major district road. Locational factors have played a vital role in the development of various settlements in the region.

Diu town, situated in the western end of the region has been developed as a main administrative trading and urban centre since Portuguese time.

Vanakbara, situated in the western end of the region, has been developed as a main fishing village. Waterfronts with rich marine wealth on its three sides have been conducive to the development of the village as a fishing centre. The economic, functional and social relation of the nearby villages of the Gujarat State across Chassi River have been the main factor in the development of Vanakbara as a rural service centre in the western end of the region.

Ghoghla village, being on the main land, has bloomed as a major village. Its size is bigger than the Diu town and has attained the urban character.

Village Bucharwada is scatterdly developed in the central part of the region. It is comprised of 22 hamlets perched within the orchards/ agricultural lands (vadias).

Fudam is a small but compact and nucleated settlement at the outskirts of Diu town. As the number of settlements in the region is very small and the variation in the size of first four settlements is not noticeable. However, Diu, Ghoghla and Vanakbara are the growing service centres catering to the basic needs of the population in the region.



## EXISTING TOURISM SCENARIO

### 2.1 TOURISM ATTRACTIONS

#### A. TOURISM IN DIU

Diu is known for its quiet beaches, imposing heritage monuments ~~and heritage sites~~ with ancient Portuguese architecture and exotic liquor. Within its small area, there is everything a tourist looks for: ~~majestic forts, gentle winds,~~ soft sand, ~~inviting calm~~ waters, historic churches, rock cliffs, desert dunes, gentle winds, majestic forts in their imposing splendour, coconut groves, stately palm grooves, pleasant climates and sleepy quiet villages nestled on the creeks.

Diu has witnessed a continuous increase in the inflow of domestic tourists from the neighbouring states, mainly weekend tourists. The long-stay tourists, a majority of which are foreign tourists, have also shown a continuous increase except for the number of foreign tourists in 2001 have fallen to less than 60% over the previous year.

~~Boasting of an unspoilt natural beauty, where the sea and sand merge in a back drop of sheer rocks, desert dunes, or crescent-shaped natural beaches with white sand and “Orka” palm groves, quiet, crowd-bereft surroundings and a general ambience and climate that has remained so perhaps for centuries. Diu with its well-preserved monuments and a well-chaptered history could become a key tourist destination.~~

~~The windy and balmy climate of Diu is best felt in its beaches. Worthy of mention are Nagoa, Gomteshwar, Goghla, Jallandhar Chakrathirth and Gangeshwar.~~

~~The Chassi River to the north of the island is a natural bird sanctuary, which in winter abounds in Egrets, Flamingos and the Great Indian Bustard.~~

~~Among the Historic buildings, Churches and Temples are the Diu fort, the island fortress of forte do mar guarding the entrance to Diu harbour, the main church of Diu Town, St. Paul’s Church and museum (earlier St Thomas church), the Parshwanath Temple in Diu Town, the Gangeshwar beach outside Diu with its Shivlinga washed by the sea, and the historic Parsee burial ground above it. Apart from these, the town itself is unique in character with its narrow, winding, though spotlessly clean streets and bazaars, and the general landscape of the island lends Diu tranquil character, such sought after by urban holiday makers.~~

#### B. CATEGORISING THE ATTRACTIONS

Diu has a right mix of natural and manmade attractions. The Major Tourism Drivers and attractions in Diu can be categorised under three heads: Beaches, Heritage Monuments and Other attractions (Religious and other spots attractions).

*Beach spots:*

Being an island, Diu has a long coastal line and different beautiful beaches. The windy and pleasant climate of Diu is best felt in its beaches. The ~~quality of the various beaches differs~~ and hence the ~~usage pattern~~usage patterns too. The Chassi River to the north of the island is a natural bird sanctuary, which in winter abounds in Egrets, Flamingos and the Great Indian Bustard.

The major beaches in Diu are:

- *Nagoa Beach*
- *Ghoghla Beach*
- *Chakratirath Beach*
- *Jallandhar Beach*
- *Gomtimata Beach*
- *Khodidhar Beach*
- *Gangeshwar Beach*
- *Simbor Beach*

As developing all the beaches along the same lines will not create interest in tourists, a resource inventory of beaches is prepared which will form the basis to decide the kind of development in each beach and then group and prioritise the development.

The following were the major factors evaluated:

- *Width of the beach during high tide (<20m)*
- *Presence of rocky surface at seashore*
- *Presence of rocks in the sea bed*
- *Presence of strong fish odour at the site*
- *Presence of fishing village at the beach site*
- *Unevenness of beach surface*
- *High draft/gradient in the sea bed*
- *Presence of loose sand*
- *Length of the beach (<350m)*
- *Fragility of the environment*

### ***Heritage Monuments:***

Among the Heritage monuments, the following are the most important ones in Diu:

#### Diu

- *Fort of Diu*
- *Fortress of Panikota*
- *St Pauls Church*
- *Diu Museum*

~~Diu~~

~~Fort of Diu~~

~~Fortress of Panikota~~

~~St Pauls Church~~

~~Diu Museum~~

As these heritage sites are attracting a considerable percentage of the current tourist arrivals, it is necessary to prepare a heritage resource inventory to understand the infrastructure, management, conservation and image positioning status for further development. The following were the major factors evaluated:

- *The Uniqueness and Attractions*
- *Present condition*
- *Architectural quality*
- *Environmental quality*
- *Current activities and usage*
- *Tourist infrastructure facilities like interpretation centre etc*
- *Signages*
- *Hotels and restaurants*
- *Management issues like entry timings, charges, ~~maintenance~~ maintenance etc*
- *Archaeological sensitivity*
- *Restoration done and Conservation planned*

Apart from these, the town itself is unique in its settlement character with its narrow, winding, clean streets and bazaars, and the general landscape of the island lends Diu serene character, such sought after by urban holiday- makers.

### ***Other spots:***

The other tourist spots fall under two sub categories: Religious spots and other spots.

### **Religious Sites**

Any site, which is currently being used by the local people for religious purposes, has been included in this category. Most of the sites considered in this category are temples ~~and~~ the ~~ehureh~~ which church, which is a heritage spot. The main religious sites are:

- *St. Paul's Church (also covered in heritage monuments)*
- *Gangeshwar Temple*
- *Jallandhar Shrine*

A resource status case was prepared for the religious sites, to understand the significance and attractiveness of these sites and its potential to be part of a sub circuit. The following were the major factors evaluated:

- *The Uniqueness*
- *Present condition*

- *The aesthetic beauty of the place*
- *The historical & mythological importance of the place*
- *The present and potential flow of tourists to the place*
- *The site's potential to be part of the tourist circuit*
- *Architectural quality & Archaeological sensitivity*
- *The environmental sensitivity of the site*
- *Environmental quality*
- *Current activities and usage*
- *Tourist infrastructure facilities like interpretation centre etc*
- *Signages*
- *Hotels and restaurants*
- *Management issues like entry timings, charges, maintenance etc*
- *Restoration done and Conservation planned*

### **Other Sites**

This category includes sites other than beaches, heritage sites and religious sites. A major ~~spot~~ attraction in this sector was Naida caves.

## **2.12.2 TOURISM RESOURCE INVENTORY**

The tourism resource inventory is prepared for beaches, heritage monuments, religious and other sites.

## A. TOURISM RESOURCE INVENTORY OF BEACHES

### 1. NAGOA BEACH

The Beach is exceptionally beautiful and quiet. ~~In this exceptionally~~ The beach is a beautiful horse - shoe (semi circular) shaped beach, ~~one with~~ various water sports facilities ~~are~~ available. ~~It is safe for swimming.~~ Plenty of branching Palm Hoka trees whisper and sway in the intoxicating sea breeze all day long. The virginity of the beach and serenity of the surroundings give you peace and pleasure beyond expression.



**Table No: 2.1 Tourism Resource Inventory: Nagoa Beach**

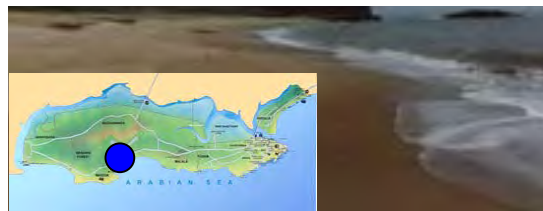
Spatial	Accessibility (Road Quality, Local Transport etc)	7kms from Diu Town
	Closeness to other spots attractions	Isolated from rest of tourist spots of Diu
Status & Quality	Appr. Beach length	800 m
	Appr. Beach width	1550 m
	Beach Quality	Beach slope has a slow gradient, clear of rocks
	Nature of Sea	Calm sea
	Aesthetic appeal & Uniqueness	In the form of a Horse Shoe
	Seasonal Characteristic	High tidal fluctuations
	Shade	Thick Palm Grove cover
	Environmental Quality	Moderate
	Solid Waste Management Level of Littering	Moderate Less
	Level of Commercialisation	Highly commercialised
	Tourist Profile & nos.	Family and weekend crowd, 80% tourists visit
Tourist infrastructure & Facilities	Water Related Recreation	Water scooter, motorised boating etc
	Changing Rms Rms. & Toilets	Available for ladies and gents
	Cloak Rooms	Not Available
	Restaurants	Couple of rest; low quality of service and food
	Hotels/ Resorts & Grades	Radhika, Hoka resort and circuit house
	Signages & Information	Very less
	Security	Moderate
	Other interesting features	Presence of hoka backdrop
	Segment oriented to	General tourists
	Constraints	CRZ a major constraint
Devel opme	Overall potential for dvpt	Good, but should not be beyond optimum
	Tourist Carrying Capacity	Already reaching optimum

	Development planned	--
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2.

## 2. GHOGHLA BEACH (Ahmedpur-Mandvi beach)

Ghoghla beach has golden sand and gives the magnificent view of the fort, panikotha and the vast expanse of water.



**Table No: 2.2 Tourism Resource Inventory: Ghoghla Beach**

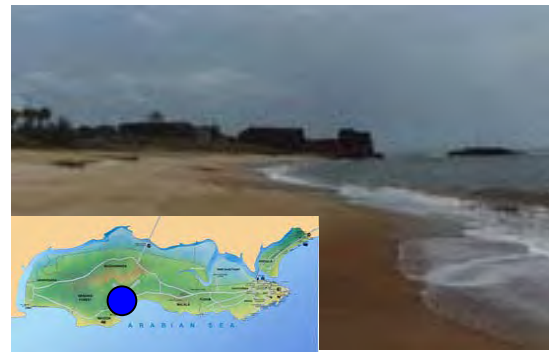
Spatial	Accessibility (Road Quality, Local Transport etc)	Good Road Quality
	Closeness to other spots/attractions	Continued to Ahmedpur Mandvi beach stretch of Gujarat
Status & Quality	Appr. Beach length	800m
	Appr. Beach width	120m/180m
	Beach Quality	Excellent beach condition, fine beach sand
	Nature of Sea	Moderate
	Aesthetic appeal & Uniqueness	Highly appealing, long stretch of beach
	Seasonal Characteristic	Mainly during weekends and holidays
	Shade	Not very shaded
	Environmental Quality Solid Waste Management Level of Littering	Good Good Less
	Level of Commercialisation	Less
	Tourist Profile & nos.	Tourists in look for good beach quality
Tourist infrastructure & Facilities	Water Related Recreation	Parasailing, motorboats, water scooters
	Changing Rms/Rms. & Toilets	Not Available
	Cloak Rooms	Not Available
	Restaurants	Suzlon, Sea view hotels with own restaurants
	Hotels/ Resorts & Grades	DOT' T.C(17rms)
	Signages & Information	Less, not catchy signages
	Security	Moderate
	Other interesting features	Excellent view of Panikotha & Fort
	Segment oriented to	General leisure tourists
	Constraints	Limitation of land for development, CRZ regulations
Devel opme	Overall potential for dvpt	Good; Advanced water sports (Kayaking, wingd surfing etc)
	Tourist Carrying Capacity	Not much limitations Adequate for development

	Development planned	More water sports
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### 3. JALLANDHAR BEACH

Jallandhar beach has small beaches enclosed between cliffs. The beach is serene and less commercialised. Jallandhar Shrine is located on a hillock close to the beach. This small shrine crowned with a dome, contains a niche where in a stone carved face of Jallandhar is seen. Nearby, there is also a temple of Goddess Chandrika. The beach is at a distance of 1 Km from Diu Town.



**Table No: 2.3 Tourism Resource Inventory: Jallandhar Beach**

Spatial	Accessibility (Road Quality, Local Transport etc)	Good road quality, approachable by private transport
	Closeness to other attractions	Close to Chakrathirth beach, town etc
Status & Quality	Appr. Beach length	In all around 400 m
	Appr. Beach width	Around 20-30 m
	Beach Quality	Moderate; slippery rocks
	Nature of Sea	Moderately calm
	Aesthetic appeal & Uniqueness	Good with enclosed between cliffs as backdrop
	Seasonal Characteristic	Pleasant evenings and mornings
	Shade	Shade of cliffs on either sides
	Environmental Quality	Good
	Solid Waste Management Level of Littering	Less Less
	Level of Commercialisation	Not commercialised
	Tourist Profile & nos.	Very few selective tourists with pure relaxation orientation
Tourist Infrastructure & Facilities	Water Related Recreation	Not Existing (N E)
	Changing Rms & Toilets	N E
	Cloak Rooms	N E
	Restaurants	Hotel Jayashankar nearby, rest in town
	Hotels/ Resorts & Grades	Hotel Jayashankar & Circuit house nearby, rest in town
	Signages & Information	N E
	Security	N E
	Other interesting features	Cliffs, virgin beach, summer house nearby
	Segment oriented to	Private relaxing beach
	Constraints	Rocky, slippery, CRZ regulations
Development	Overall potential for dvpt	Medium, theme based development possible
	Tourist Carrying Capacity	Less due to limited space on beach bed
	Development planned	--

#### 4. CHAKRATHIRTH BEACH

Chakrathirth beach is used by peace seeking tourists and is aesthetically appealing with cliffs demarcating the expanse. ~~Chakratirath Beach~~ It is centrally located and contiguous to the town at Diu. This beach serves the locals as well as domestic and international tourists, ~~providing them with an opportunity to have a worthwhile break.~~ The hill and the surrounding areas and landscape has been beautifully illuminated. The spot has been developed by constructing an ~~open~~ ~~air~~ ~~audotorium~~ ~~auditorium~~ on the ~~sea~~ ~~side~~ ~~seaside~~ of the hillock.



**Table No: 2.4 Tourism Resource Inventory: Chakrathirth Beach**

Spatial	Accessibility (Road Quality, Local Transport etc)	3.5 <del>kms</del> <del>Kms</del> from the centre of the town
	Closeness to other <del>attractionss</del> <del>spots</del>	Good road quality, approachable by private transport Close to Chakrathirth beach, town etc
Status & Quality	Appr. Beach length	Around 300 m
	Appr. Beach width	Around <del>40</del> <del>50</del> m
	Beach Quality	Good sand quality, Quiet and away from the hustle and bustle of the city.
	Nature of Sea	Moderately calm
	Aesthetic appeal & Uniqueness	Excellent view of the vast sea, land available
	Seasonal Characteristic	Pleasant evenings and mornings
	Shade	Almost no shade except cliff at the ends
	Environmental Quality	Moderate
	Solid Waste Management Level of Littering	Moderate Medium with few bottles & plastics lying around
	Level of Commercialisation	Very less
Tourist Infrastructure & Facilities	Tourist Profile & nos.	Very few selective tourists with pure relaxation orientation
	Water Related Recreation	NE
	Changing <del>Rms</del> <del>Rms</del> . & Toilets	N E
	Cloak Rooms	N E
	Restaurants	Hotel Sea village(Bunker hse)- under expn (Against CRZ)
	Hotels/ Resorts & Grades	Restaurant in hotel sea village
	Signages & Information	N E
Devel opme	Security	N E
	Other interesting features	INS Kukri, Open Air Theatre
	Segment oriented if	Private relaxing beach
	Constraints	CRZ regulations
	Overall potential for dvpt	Good potential for restricted dvpt. as cliff beach
	Tourist Carrying Capacity	Moderate

	Development planned	--
--	---------------------	----

## 5. KHODIDHAR TO GOMTIMATA STRETCH OF BEACH

-The stretch is virgin in nature with long stretch and new plantations on side. One side of the stretch has small sand dunes.



**Table No: 2.5 Tourism Resource Inventory: Khodidhar to Gomtimata Beach Stretch**

Spatial	Accessibility (Road Quality, Local Transport etc)	By 'Chakkada' from Nagoa, insufficient linkages Poor road quality
	Closeness to other <del>attractionsspots</del>	Beyond Nagoa towards farthest corner
Status & Quality	Appr. Beach length	Around 1500m
	Appr. Beach width	Around 120m
	Beach Quality	Good golden sand, virgin beach
	Nature of Sea	Moderately calm
	Aesthetic appeal & Uniqueness	Good, vast stretch of beach
	Seasonal Characteristic	--
	Shade	Growing Casuarina plantations
	Environmental Quality Solid Waste Management Level of Littering	Beach sand mixed with stones and shells
	Level of Commercialisation	Not commercialised/ developed at all
	Tourist Profile & nos.	Could target for specialised segment of tourists
Tourist infrastructure & Facilities	Water Related Recreation	N E
	Changing <del>RmsRms.</del> & Toilets	N E
	Cloak Rooms	N E
	Restaurants	N E
	Hotels/ Resorts & Grades	N E (Hoka resort and other resorts near Nagoa)
	Signages & Information	N E
	Security	N E
	Other interesting features	Hoka trees on way, growing casaurina, sand dunes nearby
	Segment oriented to	--
	Constraints	Fully new dvpt, hence high investment
Development	Overall potential for dvpt	Good potential for <del>targetted</del> targeted development
	Tourist Carrying Capacity	Good as vast stretch
	Development planned	--

## 6. SIMBOR BEACH

The virgin island is far away from Diu and near the Gujarat main land. It is a group of 3 islands accessible from Gujarat mainland or by boats from Diu in a ~~one hour~~ one-hour ride.



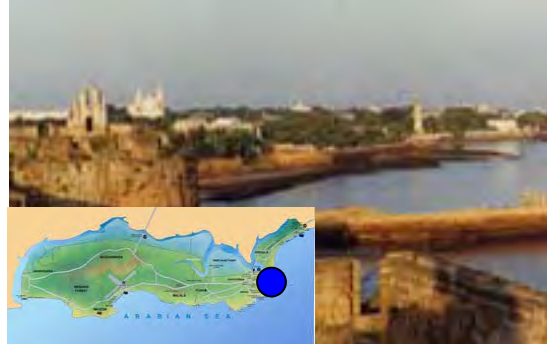
**Table No: 2.6 Tourism Resource Inventory: Simbor Beach**

Spatial	Accessibility (Road Quality, Local Transport etc)	By roads through Gujarat, over 30 <del>kms</del> <u>kms</u> .
	Closeness to other <del>attractions</del> <u>spots</u>	Poor Quality roads None
Status & Quality	Appr. Beach length	Around 750 m
	Appr. Beach width	Around 40 m from high tide line
	Beach Quality	Good fine golden sand
	Nature of Sea	Moderate
	Aesthetic appeal & Uniqueness	Good with few virgin islands
	Seasonal Characteristic	High tidal variation
	Shade	Good
	Environmental Quality	Good
	Solid Waste Management	--
	Level of Commercialisation	Not commercialised/ developed
Tourist infrastructure & Facilities	Tourist Profile & nos.	N A
	Water Related Recreation	N E
	Changing <del>Rms</del> <u>Rms</u> . & Toilets	NE
	Cloak Rooms	N E
	Restaurants	N E
	Hotels/ Resorts & Grades	N E
	Signages & Information	N E
	Security	N E
	Other interesting features	Small islands
	Segment oriented to	-
	Constraints	Fully new investment reqd, no tourist spots nearby
Development	Overall potential for dvpt	Average
	Carrying Capacity	Less due to island nature and small parcel of land
	Development planned	--

## C. TOURISM RESOURCE INVENTORY OF HERITAGE MONUMENTS

### 1. THE DIU FORT

Constructed during 1535 to 1541, the fort is skirted by the sea on the three sides. On the Fort stands a giant structure now housing a ~~Light House~~ LightHouse. Several canons are still ~~present and target stare menacingly from top and some are peeping~~ out of the holes on the walls of this gigantic structure. The main front wall is having five huge windows with stone galleries. ~~A strange mist shrouds the entire fort. It is more conspicuous during winter nights when fog spreads around, and the wick of the light house gas flame becomes meek and misty.~~

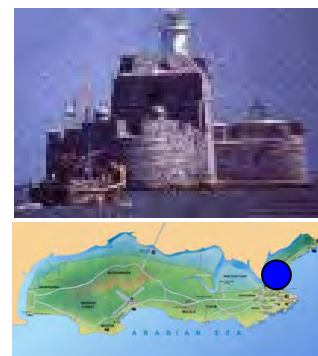


**Table No: 2.7 Tourism Resource Inventory: The Diu Fort**

General	Status	Archaeological Monument
	Accessibility (Quality of Road, Local Transport etc)	1 km from Town, by private ricks and vehicles Good quality road
	Closeness to other <del>attractions</del> <u>spots</u>	Close to town, church, museum etc
	Category	Heritage monument
	Uniqueness & Attractions	Skirted by the sea on three sides, Imposing bronze statue of Dom Nuno De Cunha, Light House, District sub jail
	Segment oriented to if any	General tourists and heritage seekers
Quality	Present Condition	Moderate
	Appr. % of tourists visiting	Around 80% of tourists
	Architectural Quality	Medium
	Environmental Quality Solid Waste Management Level of Littering	Good Good
	Current Activities & Usage	Open to tourists visit, no specific activities
Tourist infrastructure	Interpretation Centre	No
	Signages & Information	None except a plan of fort outside
	Restaurants nearby	Restaurants in town nearby
	Security	ASI office and jail inside
Management	Timings of Entry	7 am to 6 <del>pm</del> <u>PM</u>
	Entry Charges if any	No except light house entry charge (Rs 2)
	Maintenance & exp.	Done by ASI
Conservation	Constraints for planning	Under ASI; Problem of funds for conservation
	Archaeological Sensitivity	Protected Monument under ASI
	Restoration in past	Plastering of entrance areas done
	Conservation planned	Proposal for conservation of Ruin chapel submitted

## 2. PANIKOTHA (FORTEM-DE-MAR)

The old jail ~~n~~and fortress in the centre of water, with lighting is one of the most beautiful views of Diu. The Fortress of Panikota is a magnificent stone structure in the sea, built right at the mouth of the creek. It can be reached only by a canoe or a motor launch. Approximately one nautical mile from the Diu jetty, it also has a ~~light house~~lighthouse and small chapel dedicated to 'Our Lady of the Sea'. ~~T~~he fortress makes for a beautiful view whether seen from the jetty, from the Fort, from the village of Ghoghla or from Diu proper.



**Table No: 2.8 Tourism Resource Inventory: Panikotha (Fortem-De-Mar)**

General	Accessibility (Quality of Road, Local Transport etc)	Accessible through boat by 10 <del>min</del> boating from jetty, restricted time as depends on high tide for required depth
	Closeness to other <del>attractions</del> <u>spots</u>	Fort 1km from jetty
	Category	Heritage, General
	Uniqueness & Attractions	In middle of water in the form of a ship
	Segment oriented to, if any	General
Quality	Present Condition	Moderate
	Appr. % of tourists visiting	10% of tourists
	Architectural Quality	Average
	Environmental Quality Solid Waste Management Level of Littering	Moderate to Poor Poor with Birds waste lying all around Plastics and Waste in small quantity
	Current Activities & Usage	Few tourists visit
Tourist infrastructure	Interpretation Centre	N E
	Signages & Information	No visible signages and information at jetty
	Restaurants nearby	At jetty/ town
	Security	N E
Management	Timings of Entry	Tidal dependent
	Entry Charges if any	--
	Maintenance & exp.	--
	Constraints for planning	Tidal dependent, achieving required depths
Conservation	Archaeological Sensitivity	--
	Restoration in past	Plastering done
	Conservation planned	Feasibility of restaurant being examined

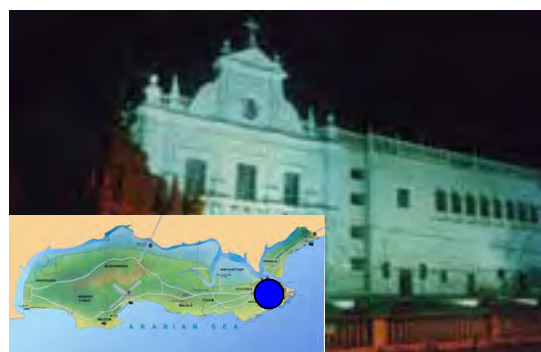


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### 3. ST. PAUL'S CHURCH

St. Paul's Church is dedicated to our Lady of Immaculate Conception. The construction of the church was during 1601 to 1610. The main facade of the church, perhaps the most elaborate of all Portuguese churches in India, is adorned with curiously treated volutes and shell-like motifs, and immediately attracts visitors. The facade has been illuminated by ~~flood lights~~floodlights adding to the evening city glow.



**Table No: 2.9 Tourism Resource Inventory: St. Paul's Church**

General	Status	Archaeological Monument
	Accessibility (Quality of Road, Local Transport etc)	Through local level town roads by private modes Good quality of road
	Closeness to other <del>attractionsspets</del>	Near Museum, fort, town etc
	Category	Religious Heritage Monument
	Uniqueness & Attractions	Old church, best wooden altar in any <del>Portugese</del> <u>Portuguese</u> church in India
	Segment oriented to if any	General tourists
Quality	Present Condition	Moderate
	Appr. % of tourists visiting	Around 65% of tourists
	Architectural Quality	Good
	Environmental Quality	Good
	Solid Waste Management Level of Littering	Less Less
Tourist infrastructure	Current Activities & Usage	Open to general tourist & liturgical services
	Interpretation Centre	No
	Signages & Information	N.A (one information personnel in church)
	Restaurants nearby	In nearby town, one new hotel adjacent
Management.	Security	One person
	Timings of Entry	6 am <del>till the services end</del> <u>till the services end</u> <del>6 pm</del>
	Entry Charges if any	-
Conservation	Maintenance & exp.	Church part by ASI
	Constraints for planning	Under ASI
	Archaeological Sensitivity	Protected monument under ASI
	Restoration in past	<del>External Whitewashing</del> <u>Painting</u> done
	Conservation planned	<del>Internal</del> Painting planned

#### 4. THE MUSEUM

The old St. Thomas Church has been converted into museum which houses the antique statues, various stone inscriptions of the earlier rulers, wooden carvings, idols, shadow-clocks and other important artifacts have been collected from various sites and displayed.



**Table No: 2.10 Tourism Resource Inventory: The Museum**

General	Status	Presently Museum (earlier St Thomas church)
	Accessibility (Quality of Road, Local Transport etc)	Through local level town roads by private modes Good quality of road
	Closeness to other attractionssps	Near St. Paul's church, fort, town etc
	Category	Heritage Monument
	Uniqueness & Attractions	Old church, houses statues of saints
	Segment oriented to if any	General tourists
Quality	Present Condition	Moderate
	Appr. % of tourists visiting	Around 65%
	Architectural Quality	Good
	Environmental Quality	Good
	Solid Waste Management Level of Littering	Less Less
Tourist infrastructure	Current Activities & Usage	Open to general tourist
	Interpretation Centre	No
	Signages & Information	Self explanatory panels near statues
	Restaurants nearby	In nearby town
Management	Security	Two security personnel
	Timings of Entry	8 am to 96 pm
	Entry Charges if any	--
Conservation	Maintenance & exp.	
	Constraints for planning	--
	Archaeological Sensitivity	Medium
	Restoration in past	Whitewashing done
	Conservation planned	--

## D. TOURISM RESOURCE INVENTORY OF RELIGIOUS SITES

### 1. GANGESHWAR TEMPLE

This is situated 3 Km away from Diu in Fudam village. The Shivlingas, known as Gangeshwar, are in the midst of the rocks on the seashore, and are washed by the waves of the sea.



**Table No: 2.11 Tourism Resource Inventory: Gangeshwar Temple**

General	Accessibility (Quality of Road, Local Transport etc)	Through Private vehicles
	Closeness to other <u>attractionsspots</u>	Near Fudam church
	Category	Religious
	Uniqueness & Attractions	Water washing the lingas while tides
	Segment oriented to if any	Religious & General
Quality	Present Condition	Good
	Appr. % of tourists visiting	Around 40%
	Space Quality	Good
	Environmental Quality Solid Waste Management Level of Littering	Moderate Presence of few plastics' wastes
	Current Activities & Usage	Religious activities
Tourist infrastructure	Interpretation Centre	--
	Signages & Information	Not leading to the place
	Basic Infrastructure	Moderate
	Restaurants nearby	--
	Security	Relatively secure
	Timings of Entry	Morning to evening
	Maintenance	Good
	Constraints for planning	--
Development	Religious Sensitivity	Moderately high
	Development in past	Overall development
	Development planned	

## E. TOURISM RESOURCE INVENTORY OF OTHER SITES

### NAIDA CAVES

Naida caves was formed as a result of quarry for fort development. The caves is very large in extent and towards the interiors have mysterious and adventurous character.



**Table No: 2.12 Tourism Resource Inventory: Naida Caves**

General	Status	Not open to general tourists
	Accessibility (Quality of Road, Local Transport etc)	No local transport taking to site Poor road quality
	Closeness to other <u>spotsattractions</u>	--
	Category	Adventure Tourism
	Uniqueness & Attractions	Huge and massive rock quarry
	Segment oriented to if any	
Quality	Present Condition	
	Appr. % of tourists visiting	<5%
	Cave Quality	Quarried reminiscent, Mysterious character
	Environmental Quality Solid Waste Management Level of Littering	--
	Current Activities & Usage	--
Tourist infrastructure	Interpretation Centre	--
	Signages & Information	--
	Restaurants nearby	--
	Security	--
Managem nt.	Timings of Entry	--
	Entry Charges if any	--
	Maintenance & exp.	Getting maintained
	Constraints for planning	Fully new development required
Developm ent	Structural Sensitivity	
	Development in past	
	Development planned	

There are other attractions as well like Seashell museum, gardens etc.

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### 2.12.3 COMPONENT WISE SWOT ANALYSIS

#### Category : WATERFRONT ATTRACTIONS

Attractions : Beaches: Nagoa, Ghoghla, Chakratirath, Jallandhar, Gomtimata, Khodidhar, Gangeshwar, Simbor etc

Analysis Aspects	Attractions	Infrastructure	Degree of Popularity	Sustainability factors
<b>Strengths</b>	<ul style="list-style-type: none"> <li>Pollution free island</li> <li>A coastal length of 21kms</li> <li>6 beaches of different character</li> </ul>	<ul style="list-style-type: none"> <li><del>Nearby</del> <u>a</u>Accommodation facilities <del>near</del></li> </ul>	Nagoa beach most popular	<ul style="list-style-type: none"> <li>Optimum usage of waterfront</li> <li>Highly fragile ecology especially with intense development</li> <li><u>Careful planning with approved concept</u></li> </ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>Fragile ecology</li> </ul>	<ul style="list-style-type: none"> <li>Waste disposal on beach</li> <li>Few accom. near beaches</li> </ul>		
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>Many unspoiled <del>virgin</del> beaches, <u>can be developed as popular attractions-</u></li> <li>Closest Beach destination for Central and Northern India</li> </ul>			
<b>Threats</b>	<ul style="list-style-type: none"> <li>Over exploitation a threat due to Ecological fragility</li> </ul>	<ul style="list-style-type: none"> <li>CRZ regulations constraint on beach front essential infra dvpt</li> </ul>		

#### Category : HERITAGE ATTRACTIONS

Attractions : Fort of Diu, Fortress of Panikota, St Paul's Church, Diu Museum

Analysis Aspects	Attractions	Infrastructure	Degree of Popularity	Sustainability factors
<b>Strengths</b>	<ul style="list-style-type: none"> <li>Captivating monuments like Imposing fort, Panikotha</li> <li>Church with best wooden altar in Indian Portuguese churches</li> </ul>	<ul style="list-style-type: none"> <li><del>Well</del> <u>accessible</u> <del>Good</del> <u>accessibility</u></li> </ul>	Medium <u>Showcasing Portuguese culture</u>	<ul style="list-style-type: none"> <li>Conservation and preservation would decide monument sustainability</li> <li>Tourism sustainability of location</li> </ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>lack of proper conservation of the heritage monuments</li> </ul>	<ul style="list-style-type: none"> <li>Absence of self explanatory signages</li> </ul>		
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>Development of Heritage Tourism etc</li> </ul>			
<b>Threats</b>	<ul style="list-style-type: none"> <li>Fading Portuguese culture</li> </ul>	<ul style="list-style-type: none"> <li>ASI restrictions</li> </ul>		



## **2.32.4 TOURISM INFRASTRUCTURE**

### **A. ACCOMMODATION**

In Diu there are a total of 549 ~~beds-rooms~~ available ~~of which 207 beds are AC and the rest non-AC~~ ~~non-AC~~ contributing to 1168 beds. The list of hotels registered with the tourism department are as follows:

**Table No: 2.13 Accommodation Availability**

Name	Category	Total Rooms
Kohinoor	A	50
Suzlon Ghoghla	A	22
Radhika Beach Resort Nagoa	A	42
Hotel Central	A/B	29
Apana Guest House	B	29
Samrat	B	24
Hotel Sea View	B	15
Hotel Ankur	B	25
Hotel Prince	B	12
Hotel Triveni	B	20
Hotel Uma Shakti	B	12
Hotel Galaxy	B	26
The Resort Hoka Nagoa	B	13
Gangasagar Guest House	C	20
15 Hotels	C/D	210
<b>Total</b>		<b>549</b>

#### **Government Guesthouses:**

There are four government guesthouses.

- Near Diu Fort
- At Jallandar Beach
- At Nagao Beach
- Circuit House.

#### **Bed & Breakfast scheme**

Hotel Jai Shankar is an example of success story of Bed & Breakfast Scheme in Diu.

There exists an opportunity in peak season for the villagers of Diu to offer a kind of bed and Breakfast scheme to the tourists who want to stay overnight at Diu. These tourists would consist of two kinds, a) those who reached Diu on weekend & no hotel accommodation is available, B) those who have come on longer visit and like to have cheap accommodation. If certain standards can be maintained, the tourists would like this experience and get a taste of local food & culture.

~~Hotel Jai Shankar is right example of success story in Diu.~~

### **Government Guesthouses:**

~~There are four government guesthouses.~~

~~a. Near Diu Fort~~

~~b. At Jallandar Beach~~

~~c. At Nagao Beach~~

~~d. Circuit House.~~

## **B. RESTAURANTS**

In addition to the restaurants associated with the above accommodation facilities, there are exclusive restaurants in various parts of Diu and light refreshment stalls near Nagao beach.

## **C. TOURIST SAFETY**

There are no Tourism Police at the any of the Tourist Sites in Diu. International tourists prefer not to visit the beaches on weekend since the beaches are crowded.

~~In the peak season of May –June and December there are tourists who come in masses are roaming around on the different beaches. The tourists who include children are involved in different activities like water sports, boating, swimming and roaming around. Within next 5-10 years there will be growth in the number of tourists, which will require Tourist Safety.~~

Presently lifeguards are there only at Nagao beach and they are mostly the water sports operating personnel.

In the peak season of May –June and December there are tourists who come in masses are roaming around on the different beaches. The tourists who include children are involved in different activities like water sports, boating, swimming and roaming around.

~~Within next 5-10 years there will be growth in the number of tourists, which will require Tourist Safety.~~

~~The tourists coming from various parts of the country may loss some of their personal belonging, so it is necessary to have a Help Desk in the nearest Police Station which will keep this information of Lost & Found articles.~~

~~The main police station~~

~~There are no Tourism Police at the any of the Tourist Sites in Diu. International tourists prefer not to visit the beaches on weekend since the beaches are crowded.~~

~~Lifeguard's~~Lifeguards are absolutely essential. As numerous tourists from different parts of the country visit Diu in large numbers and enjoy the dip in the sea and are mostly ignorant of the frequency of sea currents. Lifeguard's are must in case of weekends and during the peak visitation months of the year.

~~Tourism Department should appoint lifeguard's at all the beaches. The lifeguard's should be equipped with safety devices so that they can act as lifesavers in times of distress. The Tourism Department should also make provisions of speedboats and beach Jeep, which is handy, when drowning cases are reported.~~

~~Visitors at the Beach should be aware of their existence, so that they know whom to approach during emergencies.~~

### **~~Signage on Highways~~**

~~Proper signs are a must to facilitate the tourist in a) reaching the site and b) providing the better understanding within the site. The design for all signs should be standardised and the same design should be followed everywhere.~~

~~The locations would be at all the major intersections of all the roads leading to Diu. The signs would be of two sizes the larger ones of the major intersections, and the smaller ones to be put up at the other intersections. The signs need to be specially designed for Diu. The design should be such that it correlates with the image to be portrayed for Diu.~~

### **~~Handicrafts Centre:~~**

~~Gujarat, which is very near to Diu, is known for its handicrafts.~~

~~Shopping is a major pastime for visitors at tourist spots and hence avenues for same should be provided for. Nagoa Beach, Bunder jetty parking place, Parking place near Fort can be converted into a bazaar where interested villagers from nearby villages can come and sale their handicrafts and local items on a weekly basis.~~

~~Some of the handicraft items, souvenirs and utility items that could be sold here are as under:~~

~~1. Replicas of Fort, church, PaniKotha,~~

~~Laminated photographs (Fort, Church, PaniKotha)~~

~~Picture Post cards of the major tourist's site and other attractions such as birds.~~

~~Ties, scarves and handkerchiefs having designs from the tourist destinations of the Diu.~~

~~Caps or Hats having similar designs (This would be very popular not only in terms of design, but in terms of utility too, for protection from the sun, while moving around the tourist destinations.~~

~~Handicrafts-~~

#### **D. INFORMATION CENTRE**

There are tourist information counters at Bunker Jetty (along with the Tourism Department), and at the entry points to Diu.

#### **E. TOUR AND TRAVEL SERVICES**

##### **Bus Services:**

Private luxury buses operate from Ahmedabad, Mumbai, and Baroda on daily basis, which reach Diu via Bhavnagar, Una. In the peak season 5-6 buses operate between Mumbai & Diu each carrying about 40-50 passengers. The fare is Rs.250-300 per passenger and the travel time is 24 hours.

**Tourist Taxis:** Today tourists wanting to visit the nearby destination in Gujarat have to hire taxis or take up private buses which operate between this two destinations.

~~There is a need to set up proper bus/Taxi terminal at a suitable alternative location.~~

~~Government \_\_\_\_\_ Guesthouses:  
-There are three government guesthouses.~~

~~e.Near Diu Fort~~

~~f.At Jallandar Beach~~

~~g.At Nagao Beach~~

~~h.Circuit House.~~

#### **F. TOUR GUIDES**

There is only one tourist guide in the region inspite of heritage monuments.

## **G. SHOPPING**

There are no tourist specific shopping facilities.

## **H. BANKING AND MONEY EXCHANGE**

There are no ATM facilities and credit cards do not work other than in the Diu airport.

## **~~I. POLICE PROTECTION SERVICES~~**

## **~~J. OTHER FACILITIES AND SERVICES~~**

~~There is no credit card facility available anywhere except at Jet Airways Counter at the Diu Airport.~~

~~Hotel Classification:~~

~~Cuisine~~

~~The Bed Capacity~~

~~The present Occupancy in peak & off season~~

~~International Chains~~

~~Domestic Chains~~

~~Evening Entertainment: Discotheque~~

## **Accommodation & Food Facilities**

~~Bed & Breakfast scheme~~

~~There exists an opportunity in peak season for the villagers of Diu to offer a kind of bed and Breakfast scheme to the tourists who want to stay overnight at Diu. These tourists would consist of two kinds, a) those who reached Diu on weekend & no hotel accommodation is available, B) those who have come on longer visit and like to have cheap accommodation. If certain standards can be maintained,~~

the tourists would like this experience and get a taste of local food & culture. Hotel Jai Shankar is right example of success story in Diu.

The list of hotels registered with the tourism department is as follows:

Name	Category	Total Rooms
Kohinoor	A	50
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Hotel Central	A/B	29
Apana Guest House	B	29
Samrat	B	24
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Hotel Triveni	B	20
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Hotel Galaxy	B	26
The Resort Hoka Nagoa	B	13
Gangasagar Guest House Nagoa	C	20
15 Hotels	C/D	210
<b>Total</b>		<b>549</b>

## 2.4 DEVELOPMENT REGULATIONS

## 2.5 PLANNING EFFORTS

The development of tourism in the Diu began in the VIII ~~Five Year~~five-year Plan period after which Diu had been also identified as a Special Area for Tourism. In 1994 a plan for tourism development was prepared for Diu. The recommendations were incorporated in the next five-year plan. The Tourism Task Force of ITDC prepared a tourism plan for Diu. The approved outlay and expenditure has increased considerably over the period. The growth of tourism is closely related to development of tourist spots and its infrastructure facilities and amenities. Also the related tourist infrastructure have increased considerably over the past.

### A. STUDY OF PAST PLAN

Development of Beaches: In Diu District Jallandhar beach, Gangeshwar & Ghoghla, Nagoa beaches have been partially developed in past plan periods.

### B. STUDY OF EXISTING SCHEMES:

In the Past development plans strengthening of Tourism Department in Diu has been repeatedly asked for in the all the development plan. Number of projects like development of beaches, ponds, tanks, cottages and other tourist spots were completed during the eighth five-year plan.

The following is the list of the main projects being carried out in past five-year plan.

1. Development of maintenance of garden/parks/ponds/green areas/beaches and other tourist spots/facilities.
2. Lighting arrangement at various tourist spots
3. Strengthening of Tourism Department in Diu
4. Promotion & Publicity of Tourism

The infrastructure developed under the tourism sector in the 8<sup>th</sup> & 9<sup>th</sup> plan was privatised and this has resulted into good amount of annual revenue to the Union territory administration.

The new schemes proposed are:

1. To establish & install Tourist Information centre at various metropolitan cities such as Mumbai, Ahmedabad, Rajkot, Baroda etc.
2. Purchase of city train for Diu Darshan & construction of passenger shed, Diu.
3. Development & maintenance of Gardens.
4. Maintenance of lighting systems of monuments, gardens, fountains.
5. Development of Chakrathirth beach
6. Porta cabin for snacks at various beaches
7. Development of Simbor beach.
8. Providing changing rooms, urinals & F.R.P toilet facilities for ladies & gents separately
9. Providing children play equipment's like toy train, lighting, umbrella, seats etc.



10. Camping site at kevdi and provision of play equipment'sequipments.
11. Development of ponds at Gandhipara & other places.
12. Infrastructure facilities at Gomtimata Beach, Chakrathirth beach by provision of lighting, Umbrella, seats, play equipments.



### Destination —: Beaches

Destination	Nagoa	Goghla	Chakrathirth	Jallandhar	Khodidhar — to Gomtimata	Simbor
Accessibility						
Closeness to spots						
Beach length						
Beach width						
Beach Quality						
Nature of Sea						
Aesthetic appeal						
Shade						
Envtl. Quality						
Commercialisation						
Tourist Profile						
Water Sports etc						
Changing Rms, Toi						
Gloak Rooms						
Restaurants, Hotels						
Signages & Info						
Security						
T. Carrying Capacity						



## DEMAND ESTIMATION

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### 3.1 INTRODUCTION

To estimate the capacity of tourist's amenities to be developed at any tourist destination it is imperative to project the future inflow of tourists at that destination. In absence of a realistic estimation of future demand, the tourists amenities developed may turn out to be under-utilised or may fall short of requirement.

In tourism, as the product cannot be taken to the customer, perceptions and images are of paramount importance. Therefore, it is important to understand the behaviour and perceptions of the tourists to enable identification of the target segments. The tourist profile would provide a base for deciding the kind of amenities to be developed and the services to be provided. Keeping the above requirements into consideration it was decided to conduct a tourist survey at a destination that is similar to Diu and is at its mature state of development.

### 3.2 METHODOLOGY

The Consultants undertook a survey to achieve the following objectives:

- i. Forecasting Tourist Demand in Diu for 20 years;
- ii. Tourist Profiling

A questionnaire was prepared to elicit the following required information from the respondents:

- ◆ Demographic Data
- ◆ Travel and stay characteristics at Goa
- ◆ Utility of visiting Goa
- ◆ Preference for different kind of sites
- ◆ Motivation for travel
- ◆ Holiday activities of tourists
- ◆ Holiday making behaviour of tourists

A sample size of was decided at 400 tourists in Goa (200 Indian and 200 foreign). The respondents in Goa were randomly selected at eight destinations. The response data was coded in a computer file after data validation and subjected to analysis.

## A. METHODOLOGY FOR FORECASTING OF TOURIST DEMAND

The forecast of tourists arrival in Diu has been done based on the following two theories:

### *The theories used:*

#### *Theory of Behavioural Choice:*

A tourist's choice of a particular destination is based on the utility that he perceives for that destination. Utility for a destination, in turn, would depend on its attributes. The attributes could be attractiveness factors (number, type, quality of sites etc.) and deterrence factors (distance, travel time, cost etc.).

So, utility for a destination is a function of its attributes and can be represented by the following equation:

$$U = f(x, y, z)$$

Where x, y and z are the attributes of the destination.

During his destination selection process, a tourist would weigh the attributes of all alternatives based on the utility function, to arrive at the utility for each alternative. His probability of choosing any particular alternative can be obtained by adopting Multinomial Logit technique (As per the principles of discrete choice analysis). The probability of choosing alternative 1 is represented as-

$$\begin{aligned} \text{Prob} (c_i / C) &= \frac{\exp[U(c_i)]}{(e^{U_1} + e^{U_2} + \dots + e^{U_n})} \\ &= \frac{e^{U_1}}{\sum_{j=1}^m \exp [U(c_j)]} \end{aligned}$$

Where

$U(c_i)$  is the utility of alternative  $c_i$

$U_1, U_2, U_n$  etc. are the utilities of alternatives 1,2,3...n.

The number of tourists visiting any destination can then be arrived at by multiplying the probability of choosing that alternative with the total tourist population.

Based on this theory, the tourist population in Diu has been estimated by calculating the probability of tourists choosing Diu and multiplying it with the total number of tourists. The probability that a tourist would choose Diu is given by:

$$P_d = e^{U_d} / (e^{U_1} + e^{U_2} + \dots + e^{U_d} + \dots + e^{U_n})$$

Where  $U_d$  is the utility of Diu and  $U_1, U_2$ , etc. are the utilities of all other tourist destinations in India.

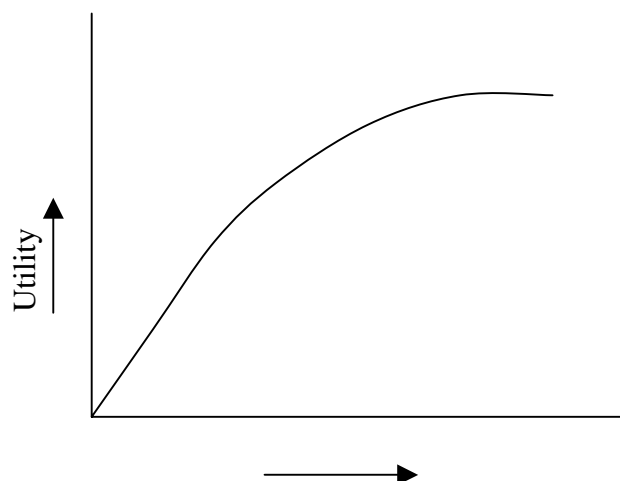
This probability when multiplied with the projected tourist population in India during 1999-2010 would give the tourist population in Diu during the forecast period.

$$N_d = N \times P_d$$

Where  $N$  is the total tourist population,  $N_d$  is the tourist population in Diu and  $P_d$  is probability of a tourist choosing Diu.

#### *Theory of Diminishing Marginal Utility*

Based on this theory, it has been assumed that as attractiveness increases, utility increases at a diminishing rate. In other words, as attractiveness across the site increases, the utility of these sites for the tourist increases at a diminishing rate. Therefore, the graph of utility v/s attractiveness would be as follows:



So, the regressed equation between utility and attractiveness would be a non-linear equation rather than a linear one.

### ***Calculations Involved***

The calculations involved in calculating the tourist projections are detailed in Annexure A.

The table below details the total domestic and foreign tourists expected in Diu for the next twenty years. The domestic tourists include the local tourists from Gujarat who are typically liquor or family tourists.

<b>Year</b>	<b>Domestic Tourists</b>	<b>Foreign Tourists</b>	<b>Total</b>
2003	114870	4640	119510
2004	119565	5521	125086
2005	128053	8071	136125
2006	136700	10892	147592
2007	145833	14254	160087
2008	158370	18211	176581
2009	169004	21064	190068
2010	175891	21927	197819
2011	196584	25095	221679
2012	214760	33017	247777
2013	232496	39281	271778
2014	251323	46003	297326
2015	282743	53210	335953
2016	292484	55392	347876
2017	308055	63911	371966
2018	337128	74847	411976
2019	379658	86573	466232
2020	393079	90123	483202
2021	406984	93818	500802
2022	421391	97664	519055



## **B. METHODOLOGY FOR TOURIST PROFILING**

The analysis undertaken for identifying the tourist profiles are explained below:

### **a. Principal Component Analysis**

Since the questionnaire had several statements to capture the holidaymaking behaviour (18 statements), holiday activities (27 statements) and vacation motivation of tourists, it was necessary to take into account the correlation amongst variables. Therefore, principal component analysis was undertaken for each category (holidaymaking behaviour, holiday activities and vacation motivation) using SAS-JMP (a statistical analysis package). Principal components are uncorrelated factors that have some loading of each variable under consideration and account for variance of the original data set along orthogonal axes. Principal components are formed so that the first component accounts for the highest % variance in the original data set and so on in the descending order. Normally one can consider such number of principal components that account for 70-80% of the variance in the original set.

### **b. Factor Rotation**

All the principal components formed for a given set of variables (as per the procedure explained above) have loadings of each of the variables. Therefore, interpretation of these principal components becomes difficult. Varimax Rotation is a process by which the orthogonal axes formed under principal component analysis are rotated such that each principal component has variable loadings close to 0 or 1. The variable, which has loading close to 1 in any principal component, would indicate its high weightage in that component. For example, if out of 20 variables, 4 of them have high loadings on any principal component, then that component can be interpreted in terms of those variables. This rotation of principal components was undertaken for each category using SAS-JMP. Rotation was done for such number of principal components, which accounted for 70-80% of variance in the original set.

### **c. Cluster Analysis**

Based on the respondents' score on the rotated factors identified as per the process explained above, clustering of respondents was done using SAS-JMP. In cluster analysis, respondents are clustered based on the proximity of their responses on the rotated factors. Proximity of responses can be viewed as distances in some type of metric space. This distance between response can be measured in terms of Euclidean distance between two points in a space of  $r$  dimensions. The formula is

$$D_{ij} = [\sum (x_{ik} - x_{jk})^2]^{1/2}$$

Where  $x_{ik}$  and  $x_{jk}$  are projections of points  $i$  and  $j$  on the dimension  $k$  ( $k = 1, 2, 3 \dots r$ )

### ***Profiling***

#### **Principal Component and Rotated Factor Analysis**

##### ***i. Holiday Making Behaviour***

Principal component and rotated factor analysis was undertaken for domestic and foreign tourists separately based on the sample's responses to 18 statements (called variables henceforth). In case of domestic tourists first four principal components accounted for 65% of the variance and in case of foreign tourists, they accounted for 71% of the variance. Therefore, only four principal components were considered in both cases and subjected to Varimax rotation. After Varimax rotation, the rotated factors were interpreted based on the weightage of each variable in those factors. The four factors are as follows:

#### *Adventure Factor*

This factor assesses the extent to which an individual likes to be adventurous and explorative during his vacation. The other end of this continuum measures the disinclination towards adventurousness (worriness).

#### *Indulgence Factor*

This factor assesses the extent to which an individual likes to be pampered during a vacation and is willing to spend money to achieve it. The other end of the continuum would indicate the extent to which a tourist economises during his vacation.

#### *Perceptiveness Factor*

This factor measures the extent to which an individual perceives and dreams about the vacation before his visit. The other end of the continuum indicates the extent of scepticism about the destination and the urge to discover more about the place.

#### *Driftiness Factor*

This factor measures the extent to which an individual likes to drift away from normal behaviour and social bindings during vacation by spending it in an uncharacteristic manner like staying with the locals for a long period of time.

### **ii. Holiday Activities**

Principal component analysis in case of holiday activities led to identification of six factors for domestic tourists and seven factors for foreign tourists. Six of these factors were common to both domestic and foreign tourists. The seventh factor namely the social factor was applicable only for foreign tourists. These factors are explained as follows:

#### *Religion/Culture Factor*

This factor measures the extent to which an individual likes to visit religious and cultural sites during vacation. In other words, it measures one's interest in visiting temples, forts, monuments, local cultural sites etc.

#### *Sea Factor*

This factor measures the extent to which an individual loves sea. It measures a person's inclination towards sea bathing, relaxing/walking on the beach etc.

#### *Nature factor*

This factor measures the extent to which an individual loves the nature. It shows a person's inclination towards such activities as watching scenery, walking in the countryside, taking photographs of mountains/valleys etc.

#### *Adventure Sports Factor*

This factor measures the extent to which an individual is interested in adventure sports like trekking, mountaineering, water sports, boating etc.

#### *Relaxation Factor*

This factor measures the extent to which an individual tends to relax during his vacation. It measures a person's inclination to relax in the resort, dine in good restaurants, go to pubs/bars/discos, and visit health clubs etc. during his vacation.

#### *Discovery/Curiosity Factor*

This factor measures the extent to which an individual tries to discover during his vacation. It measures a person's curiosity to learn about the local people, local culture, his inclination to visit new places etc.

#### *Social Factor (only for Foreign Tourists)*

This factor measures the extent to which an individual likes to spend his vacation-time in contact with people. It measures a person's inclination to spend time with his family/friends etc., make new friends, develop close relationships etc.

### **iii. Demographic Factors**

The following demographic factors were also considered for cluster analysis

#### *Age*

#### *SEC classification*

### **Cluster Analysis**

Cluster analysis was undertaken for both domestic and foreign tourists in Goa. These clusters indicate the psychographic segments of tourists visiting Goa. Since Diu is similar to Goa in terms of tourist attractions, the segments identified through cluster analysis could be targeted in Diu. The results are as follows:

#### ***Tourists Profiles***

##### **Domestic Tourists:**

#### *Explorer-Discoverer*

These are typically the adventurous, curious and explorative kind of tourists. This kind of tourist is primarily young, with 90% being less than 35 yrs of age. They are in the middle to high-income segment, SEC A1, A2 category with 50% of the cluster having income more than Rs. 10000 per month.

They are confident of themselves and like to take unplanned holidays. They believe in doing unconventional things to get a thrill in their vacation. They are interested in adventure and water sports. They do not indulge in dreamy perception making on the destination but are eager to know about the destination.

This cluster accounts for about 32% of the domestic tourist population expected to visit the Diu region.

#### *Indulgive Dreamer*

This cluster of tourists likes to get pampered and indulge themselves during their vacation. They tend to form ideas and perceptions about a destination prior to their visit. They like to avail the best possible facilities, amenities and services during their vacation and are willing to pay for the additional comforts and luxuries. They love nature and scenic tours.

70% of this cluster falls in the 26-55 age group, with 40% above 36 years of age. The income segment is similar to that of the Explorer-Discoverer cluster.

This cluster contributes 29% of the domestic tourist population expected to visit the Diu Region.

#### *Economiser*

The cluster of tourists typically economises during their vacation and looks out for value for money deals during his vacation. They are religious and cultural tourists and fall in the age group 18-35 years. They account for around 22% of the domestic population visiting India and mostly belong to the SEC B1 category.

#### *Drifter Dreamer*

This type of tourist likes to drift away from social bindings and normal behaviour and likes to spend time with local people, avoiding all kinds of tourist establishments. He forms perceptions prior to his visit and is very excited about his journey. The tourist is a typical site-seeker interested in everything the place has to offer from sea bathing to visiting religious and cultural sites. This cluster consists of young tourists with 70% in 18-35 years of age and falling in the middle income group, and accounts for 12% of the domestic tourist population expected to visit Diu.

#### *Indulger worrier*

This cluster is again an indulger and likes getting pampered with best amenities and facilities. However they prefer hassle free journey so always take package tours, and have a vacation planned much in advance. They like relaxing and prefer modern evening entertainment facilities. 90% of these tourists fall in the 18-35 age group. They contribute 5% of the domestic tourist population.

### **Foreign Tourists:**

#### *Dreamer Drifter*

This cluster of foreign tourists tends to drift away from social bindings and normal behaviour, spend their vacation with the local people and avoid all kind of tourist establishments. He dreams of the vacation and forms ideas before his visit.

The tourist likes nature, religious and cultural sites and is curious about the place, its people and its culture. 70% of the people fall in the 26-55 age group. They are in the middle income group and comprise of 38% of the foreign tourists population.

#### *Economiser Worrier*

This kind of tourist economises during his vacation and tries to get value for money. He also doesn't want any hassles during vacation and prefers a planned vacation through package tours. They fall in the low-income group and are primarily the young tourists in the 18-35 age group. This group accounts for 23% of the foreign tourists' population.

*Indulgive Explorer:*

This tourist is not only interested in adventure and water sports but also loves to indulge in the best facilities and amenities available and is ready to pay for them. He is confident of himself and is not worried about any hassles during vacation. They are primarily young tourists in the 18-35 age group, in the SEC A2 category, with more than 80% having income above \$5000 per month. This cluster accounts for around 22% if the total foreign population expected at Diu.

*Indulger Worrier:*

This tourist also likes to indulge in the best facilities the place has to offer. They do not want any hassles during the vacation, hence they have a vacation planned well in advance and prefer package tours. They love to relax in their vacation either at the resort or the beach, and prefer sites with well-developed evening entertainment. 75% of them fall in the 26-55 age group, more than 50% of them are in the SEC A2 group. They account for 9% of the foreign tourist population.

*Explorer Discoverer:*

This is an adventurous tourist who prefers unplanned vacations. He believes in doing unconventional things to get a thrill. He is very curious about the destination and does not tend to form any perceptions prior to the visit. He is not an indulger and spends only on basic necessities. 85% of them fall in the 18-35 age group and 50% of them have an income less than \$2000 per month. They account for 8% of the foreign tourist population.

## 4.1 DESTINATION ANALYSIS- DIU

The first step towards destination planning is the analysis of the destination with respect to the business environment. This involves determining the intrinsic strengths (S) and weaknesses (W) of the site and the opportunities (O) and threats (T) that the environment offers. The SWOT analysis will study the external and internal environment of the entire region of Diu as a business unit and would provide a framework as an output, for further demand projections. In general, a tourism business unit has to monitor key macro environment forces (like demographic, economic, technological, political, legal, social and cultural factors) and significant microenvironment actors (like customers, competitors, systematic factors and tourism resource suppliers) that will affect its ability to ensure sustainability and earn profits. While the External Environment Analysis aims at discerning attractive opportunities or potential threats in the environment, the Internal Environmental Analysis focuses on the necessary competencies to succeed in these opportunities.

A SWOT analysis of Diu has therefore been done and described in this section. The SWOT analysis would provide a strategy for development, which would consolidate the strengths, overcome the weaknesses, build on the opportunities and tackle the threats. The SWOT analysis is therefore logically followed by the Strategy for Planning, which describes the broad guidelines on which the planning should be done.

### A. STRENGTHS:

The strengths and weaknesses of a system are inherent to a system owing to the properties or characteristics of the system. The following are the strengths of the DIU region:

- A coastal length of 21 Kms with unspoiled virgin beaches.
- The pristine natural splendour of Diu with its serene and pollution free nature
- Rocks and sedate cliffs
- Enticing and captivating heritage sites and monuments
- The human scale traditional settlements
- An active tourism department keen on increasing tourist flow in the region with a visionary head, the Collector.
- Absence of any industries causing pollution.
- Proximity to important tourist destinations like Somnath, Sasangir, Palitana, Dwarka etc.

## **B. WEAKNESSES:**

The weaknesses critical to the tourism industry in Diu are as follows:

- Improper accessibility and poor rail and road linkages
- Lack of organised internal transport facilities connecting the various tourist attractions within the region
- Lack of awareness of the destination and improper market positioning
- The fading Portuguese culture as most people are going away in search of better opportunities
- Lack of proper conservation of the heritage monuments. The fort of Diu has been cemented at various spots for repairs but in turn degrading the heritage character of the fort. The Panikotha is also not being maintained and is filled with bats and foul smell.
- Drinking water has to be sourced from Gujarat on payment
- Absence of any tour operators/ guides to show around the heritage places
- There is a lack of awareness and identity of Diu, and even an average domestic tourist is not aware about Diu's location on the Indian map and often associates Daman- Diu as adjacent
- International tourists visiting India complete the golden triangle and proceed towards Goa/ Kerala without visiting the region.
- Lack of ATM's or credit cards to facilitate additional spending in the region.

## **C. OPPORTUNITIES:**

Major opportunities for Diu are:

- Diu is one of the closest Beach destination for the central and north eastern parts of India like Madhya Pradesh, Rajasthan, Uttar Pradesh etc.
- Diu if made a part of a tourism circuit including Veraval, Somnath, Sasangir etc it will be the only region with developed accommodation infrastructure
- Diu has been declared as Special Tourism Area for domestic and international marketing.
- Tourism potential of the region has not yet been exploited even upto its 20-30% potential. The region is gifted with amazing serenity and virgin beaches. Therefore there are latent tourism opportunities to develop Diu as a unique island destination.
- Opportunity of Tourism being the major economic driver in the absence of industries and hence more budget allocations for the same.

## **D. THREATS:**

The perceptible threats to the region are:

- Better-branded beaches exist on the western coast of India and will be marketed vigorously.
- There is a shift in tourist profile over the past few years, with fall in tourists from Western and Northern American countries (the highest spenders) and a rise in Asian and African tourists.
- Continuous disturbances in Gujarat and Indo- Pakistan tensions are dissuading tourists from venturing to Diu.

A proper tourism development strategy would warrant consolidation of strengths, capitalisation of opportunities, alleviation of weaknesses and counter measures for threats.

## **4.2 TOURISM DEVELOPMENT STRATEGY**

### **A. PRODUCT CONCEPTUALISATION**

In spite of having all the ingredients a tourism destination should hold including beaches, monuments etc, Diu today doesn't attract the expected number of tourists. The main reason is the lack of proper accessibility to the region with airways being expensive, no direct rail connectivity and long and poor quality roads.

Diu offers immense potential for being a world class tourist destination by capitalising on the natural, heritage and scenic advantages and by providing proper accessibility and infrastructure to the region.

#### ***The Unique Selling Proposition:***

Diu will be developed as a world class '**Island Destination**' in the form of a '*Serene Paradise*'. The tourism will be positioned for '*Beach and Island Experience*'. The bridges across the channel will be highlighted in a way that Diu regains its splendour as an island. The numerous beaches of Diu will be developed with specific and different character for each of them, with varying levels of intensity of activities. These would cater to the various potential segments like general tourists, site seeing tourists, peace-seeking tourists, international tourists etc.

Diu will not only be proposed to form an integral part of a tourist circuit linking Somnath, Sasangir etc and a larger tourist circuit with them and Dwarka and Palitana but also be a base camping destination for the same circuits. All the development would be effected preserving the heritage, peace and no pollution in the region. Proper accessibility and tourist infrastructure plans would be devised.

### **B. THE DEVELOPMENT STRATEGY:**

Diu Tourism Development Strategy emphasises on:

- developing Diu as a serene, quality tourist destination to attract tourists nearer to beaches and heritage
- developing tourism to ensure the overall development of the region



The following principles underpin the Tourism Strategy for Diu as outlined below.

- **A Unique Selling Proposition**

*Tourism is about uniqueness and attractiveness of the destination.*

- *Market Positioning*

Diu needs to create a unique selling proposition based on its core theme strength. This would position itself well with an advantage in the market.

- *Perspective Vision for Diu's Tourism Development*

Diu needs to develop a vision for its tourism development for a long-term time frame. This perspective vision would envisage the overall developments for making Diu an ideal and sought after tourist destination

- **Quality Experience**

*Tourism is also about quality experience*

- *Creation of a High-quality Product*

Simultaneous with the creation of brand equity for the product, a high-quality product will have to be created. The tourism industry is very sensitive toward quality and especially when Diu's speciality is in its quality environment. Therefore, it is necessary to establish a mechanism to ensure that good quality services are offered to tourists.

- *Creation of a Highly Visible Product*

An equally important aspect is the creation of a product that is highly visible. In spite of having a long coastline with beautiful beaches, heritage spots, affordable accommodation etc, Diu has not been seen as a highly attractive tourist destination.

- **Viable Business Proposition**

*Tourism is about business.* Tourism is an industry, which is made up of small businesses. If tourism businesses are not viable, the destination suffers.

*Tourism is also about partnerships.* A key element to success is a close working rapport between the private and public sectors. Such partnerships deliver real benefits for the whole community not only for the tourism industry. Also, the local community should be involved in the process of development of tourism. Their support would advance developments in tourism and provide for a better image of Diu.

- **Boost to the Economy**

*Tourism is also about local economic development.* As Diu doesn't have any major economic activity to thrive upon, tourism will become a boost to the economy providing employment and the required training for the locals.

- **Conservation of Heritage and the Environment**

*Tourism needs to be sustainable.* Any long-term diversification strategy requires careful consideration of the social and environmental effects such a strategy will have on the amenity of the area. Tourism is not different in this respect than any other industry.

- *Conservation of Heritage*

The remains of the Portuguese heritage in Diu are unique and have been cultivated diligently over the centuries. Diu district also has two of the most imposing forts and fortresses—the forts of Diu and fortress of Panikotha. The Archaeological Survey of India (ASI), and the other museums have to carry out necessary Conservation, Preservation and Restoration.

– *Conservation of Environment*

If leisure activities and adventure tourism is to thrive in Diu, it is essential to consider the impact on the environment while suggesting developments.

Hence there is the requirement for **Planned Development** of Diu region

– *Categorisation of Areas*

To plan the development of Diu, the tourist destinations should be categorised into activity zones. Also different identity should be maintained for the zones.

– *Formulation of Development Plans*

For Diu to become an important tourist destination, development of five aspects: attractions, good facilities, infrastructure, transport and hospitality are planned. These are described in the subsequent sections.

– *Standards for Maintenance of Environmental Balance*

The implementation of standards for the planning, layout, and design of accommodation or facilities will optimally blend these developments with the surroundings and minimise any degradation of the environment. This should be done keeping in mind the most appreciated features of Diu: ‘Peace and pollution free environment’.

– *Formulating Circuits*

As there are lot of tourist attractions nearby Diu and since those places do not have enough tourist infrastructure, potential of developing circuits with Diu needs to be explored. This would help in attracting more tourists to Diu. Circuit/s should be developed in a way that tourists can choose the circuits they want to visit depending on the duration of their stay.

*These measures define the Tourism Development Strategy for Diu. The strategy takes advantage of the developmental opportunities, and tries to remove the constraints to develop Diu as a tourist destination.*

## **4.3 PERSPECTIVE POLICY LEVEL PLAN**

### **A. CONTROLLED RELAXATION IN CRZ REGULATIONS**

The CRZ regulations in Diu are recommended to be relaxed in a restricted manner due to the following reasons:

- Diu is an island of just 40 sq. km, the CRZ regulations take away valuable land from development.
- Devoid of industries and other major economic activities, Tourism is the major driver expected to bring in change.
- Special incentives and regulations as part of Diu being declared a Special Tourism Zone would bring in the required investments.
- Majority of the beaches of Diu being virgin in nature, the minimum infrastructure needs to be created at the beaches to make Diu a tourism destination; a prerequisite to make Diu an island destination (beaches being the major attraction).

Thus, declaring Diu as a special tourism zone, the following activities should be permitted with proper development control guidelines which should be with the following features:

- a. On the seaward side of the road
  - Provision of facilities like changing rooms, toilets should be allowed which could be permanent in construction.(septic tanks could be provided, the soil being clayey)
  - Any development on the beach side of the road will be temporary in nature like facilities like kiosks and shades made out of wood and local material in merging colour.
  - The roofs shall be sloping in case of open platforms
  - No physical provisions shall be more than 3 m in height.
- b. On the landward side of the road, at virgin beach development areas, accommodation facilities could be permitted, but no physical development of height more than 7 m.

## **B. INCENTIVES FOR TOURISM INDUSTRY:**

### **TOURISM AS AN INDUSTRY:**

Like other industrial projects, tourism projects too involve professional management, capital investment, special skills and training. The Government of India and a number of other states have declared tourism as an industry. Though tourism is declared an industry, there have been no special incentive schemes to enable the tourism projects to be reliable to get benefits.

#### ***Land Availability:***

Availability of land is a primary requirement of any project. The process of grant of land is facilitated for the projects concerning setting up of hotels, restaurants and apartment hotels etc. Existing arrangements for grant of government wasteland to industrial units are made applicable to various tourism projects. Arrangements are made to acquire private land under Land Acquisition Act for various tourism projects by entrepreneurs registered under the Tourism Department by payment of fees.

#### ***Incentive Package***

The incentive package will have the following characteristics:

A tax holiday of 5-10 years in respect of following taxes is made available upto 100% of capital investment to various tourism projects located in Special Tourism Areas declared and located in designated areas. The scope and the extent of the benefits of tax holiday will vary according to certain considerations such as the admissible expenditure, the size of the capital investment etc.

The benefit of tax holiday is also be made available for the purpose of expansion of the existing tourism projects in these areas:

- Purchase Tax
- Electricity Duty
- Luxury Tax
- Entertainment Tax

Necessary administrative arrangements are made at the Union Territory Level to operationalize the incentive schemes. Suitable schemes are designed to market tourism products, and particularly wide publicity is secured in respect of various facilities being offered by the travel agents, tour operators etc as explained in Chapter 7.

Special youth hostels and paying guest scheme are formulated for providing adequate and inexpensive lodging and boarding facilities to take care of seasonal flows of tourists to the pilgrimage centres during festivals.

Financial assistance is provided for the preparation of feasibility reports by consultants in respect of tourism projects, which offer employment for more than 100 persons.

Structure of the taxes and tariffs, e.g. luxury tax, entertainment tax, etc., will be reviewed with reference to developmental needs of tourism sector and necessary amendments will be made.

### ***Other Facilitation***

For the first two years of expected intense planning, facilitation with the various other departments will be done for speedy clearance for tourism developments proposed in the designated areas. The tourism developments for which this would be applicable and to be taken up as priority projects are the following:

#### *Accommodation Projects:*

Hotels, Resorts, Motels, Apartment Hotels, Heritage Hotels

#### *Food Oriented Projects:*

Restaurants, Wayside Facilities on the State Highways.

#### *Other Tourism - Related Projects:*

Amusement Parks and Water Sports, Handicraft Village Complexes, Fairs and Festivals, Camps and Facilities Encouraging Adventure, Travel Projects, Sea/River Cruise Projects, Sound and Light Shows, Museums, Parks, Sports/Health Facilities Complexes, Training Schools for the managerial expertise for Hospitality Industry, Golf Courses etc.

#### *Service Oriented Projects:*

Travel Agency, Tour operation, Transport Operation

Linkage with the International Hotel Chains (Franchise)

Human Resources Development (HRD) for Tourism Industry and necessary training facilities.

## **4.4 MACRO LEVEL PLANNING**

### **A. IMPROVING THE ACCESSIBILITY**

The major constraint as expressed by all is the accessibility issue. Hence, improving the accessibility through various modes to cater to domestic tourists and international tourists will be one of the major macro level planning actions.

The major improvements will be:

**Air** : Expansion of the existing airstrip and provision of better passenger lounge for departure at the airport.

**Rail** : Extending the Girnar express from Veraval to Delwada both ways in the first phase. In the second phase extending the Delwada line to Ghoghla.

**Water** : Waterways ferry connection (catamaran service) with Mumbai to attract more tourists.

**Road** : Road Improvements on the access to Diu, upgradation of Nagoa- Vanakbara road, road leading to Naida caves etc.

*(Note: Kindly refer Chapter5 for details of Infrastructure Development Plan and Section C Feasibility of Proposed Projects and Cost Benefit Analysis)*

## **B. MAINTAINING ENVIRONMENTAL QUALITY**

Maintaining the environmental quality becomes the major macro level concern.

The proposed location of ship repair yard at Malala needs to be reconsidered. This yard would spoil the coastal quality, the environmental balance and the tourism prospects of the region. A detailed Environmental Impact Assessment has to be carried out before going ahead with any development in the Malala coastal area.

## **4.5 DEVELOPMENT PLANS**

### **A. DIU FORT DEVELOPMENT PLAN**

The Diu fort, located on the extreme coast of the Island (Fort Road), about one kilometre from the town, commands a magnificent view of the sea and its surrounding areas. It is an expansive and imposing structure constructed during 1535 to 1541 by Portuguese and Bahadur Shah, Sultan of Gujarat. As the development of this site is governed by CRZ 1 rules, this is a 'No Development Zone'. Moreover, this site is under ASI, so any development can be taken up only with ASI permission. ASI has to restore or repair the existing walls and parapets and the pathway inside the fort to preserve the monument.

#### ***Required Developments***

The Fort falls under the CRZ 1 category. As it is a major tourist attraction in the district, it has to be developed to enable tourists to experience the glory of Diu Fort and the Portuguese presence in past.

Therefore, the following measures should be undertaken:

- i. The fort walls are wearing away. This should immediately be restored retaining the character and materials of the old fort.
- ii. The Ruin Chapel has to be conserved immediately as it is at the throes of collapse.
- iii. Signages indicating various parts of the fort should be placed at important locations in the fort making the parts of the fort self-explanatory.
- iv. The attractions of the fort, such as the imposing bronze statue of Dom Nano De Cunha, should be protected and preserved to prevent them from being destroyed.

- v. A route should be devised to connect various places of interest other than the main fort part like the security channels, tunnels etc within the fort. This will facilitate the movement of tourists around the inner periphery of the fort.
- vi. To generate interest among the tourists, a documentary should be shot and literature should be made available on aspects of the fort such as construction, materials used, and reason for selection of the site to build the fort.
- vii. The local inhabitants should be encouraged to provide guide services.

It is advisable that no toilet block or refreshment stalls be constructed within the fort. The light essential refreshment can continue in the form of the existing temporary stalls.

The development costs and the phasing of development are:

Sr. No.	Development	Total Cost (in Lakh Rs.)	Phase of Development
1	Training of ASI guides in Fort history & other monuments in Diu	0.50	II
2	Restoration of Fort Walls	25.00	II,III,IV
3	Physical Conservation works (vegetation growth removal)	10.00	II
4	Structural Repair works	15.00	II,III
5	Conservation of Ruin Chapel	10.00	I
6	Signages for the Fort	1.00	I,II
7	Preservation of Bronze Statue of Dom Nano De Cunha	2.00	II
8	Cleaning & Paving for Visitor Circulation Plan	8.00	I,II,III, IV
9	Development of Tunnel system for visitors	1.25	II
10	Cleaning of Moat	2.00	I
11	Organised Parking , Landscaping & Toilet facilities in front of Fort	12.00	I,II
	<b>Total ( In Lakh Rs.)</b>	<b>86.75</b>	

*(Note: All Cost are Block Costs only- applicable wherever costs are mentioned)*

*Phase I : 2003-2004; Phase II :2005-2010; Phase III :2011-2016; Phase IV : 2017-2022*

*Refer Section on Accommodation: Page 55 for no. and cost of accommodation at various places )*

## **A. PANIKOTHA DEVELOPMENT PLAN**

The Fortress of Panikotha (Fortem- de-Mar), an ancient fortress like massive stone structure resembling a ship located right in the midst of the sea in front of the Diu fort, is approximately one nautical mile from Diu Jetty and is accessible only after a boat- ride of about 10 minutes. Inside the Fortress, there is a lighthouse and a small chapel dedicated to our Lady of the Sea. The monument is lit up on weekends which is a magnificent sight. As the development of this site is governed by CRZ 1 rules, this is a 'No Development Zone'.

### ***Required Developments***

As the Fortress falls under the CRZ 1 category, no concrete or permanent construction can take place at the site. However, as it is a major tourist attraction in the district, it has to be developed to enable tourists to experience the mysterious presence of the fortress. The present constraint is the entry to the fortress due to the tidal variations. There is no jetty or platform for the boats to moor at the fort. At the entry, the height is ideal for access by boats only during the high tide times. During low tide, it is very inconvenient to go on board or alight from a boat. Rest of the time, it can be accessed through small craft boat only.

Therefore, the following measures should be undertaken:

- i. Construction of a floating jetty outside the entrance of Panikotha making the fortress accessible at all times expecting at least 85 % of the tourists to visit the fortress. Therefore, a wooden jetty/ pier should be built adjacent to the fort with mooring facilities for boats.
- ii. Development of the inside hall of the fortress for a light and sound show with minimal construction. The theme for the light and sound show could be on the history of Diu.
- iii. The entire fortress should be cleaned up and maintained because it is totally littered with birds etc.
- iv. Prominent and effective signages about the fortress and the light and sound show there should be displayed at the jetty. Also in the fortress, there should be signages indicating various parts of the fortress making it self-explanatory.
- v. Possess Small craft boats for accessing the fortress during low tide times.
- vi. The tourist information centre at the jetty can also act as the ticketing counter for the fortress and the light and sound show.
- vii. To generate interest among the tourists, literature should be made available on all aspects of the fortress.

The development costs and the phasing of development are:

<b>Sr. No.</b>	<b>Developmental measures</b>	<b>Total Cost (in lakh Rs.)</b>	<b>Phase of development</b>
1	Construction of floating Jetty	75.00	II
2	Physical Development for Light & Sound Show	5.00	II
3	Conducting Light & Sound Show		II,III,IV
4	Cleaning & Maintenance of Fortress	1.00	I,II,III,IV
5	Signages in the Fortress	3.89	II
6	Purchase of small craft boats (3Nos.)	15.00	II
7	Ticketing provisions at information centre	0.03	II
	<b>Total ( In Lakh Rs.)</b>	<b>99.20</b>	



## B. DIU TOWN TOURISM DEVELOPMENT PLAN

Diu town is compact and agglomerated in nature. The scale and character of the town is unique with paved roads, human scale streets, old character buildings, interesting tourist spots etc.

### *Required Developments:*

The town should be promoted for its old town character as a major tourist attraction. To get the feel of the town, facilities should be so provided which bring out the intangible character of the place too.

The main highlights of the town tourism development plan would be:

- i. Diu Darshan (settlement ride) in pollution free road train using fuels like CNG with stop over at the Fort, St. Paul's Church, Museum, the typical streets, Nagar Sheth Haveli, Gangeshwar temple, other temples, Chaktrathirth and Jalandhar beaches etc
- ii. Use of Pollution free vehicles for local transport like bicycles, mopeds etc, which shall be supplied with printed road map and details of the attractions.
- iii. Development of Crafts emporium, shopping malls etc
- iv. Development of more relaxation and refreshment area in the form of plazas/ old character spaces.

One of the main plazas developed will be centered around the old Portuguese Pillar opposite to the School and outside the fort. This plaza will be positioned as a spot for 'Suryanamaskar' as this offers the best framed view of the rising sun.

The development costs and the phasing of development are:

Sr. No.	Development	Total Cost (in Lakh Rs.)	Phase of Development
1	Purchase of two buses for Diu Darshan	50.00	II
2	Regularising the renting of bicycle, bikes & mopeds	0.50	I
3	Road maps – for bike/bicycle tourists	1.50	II
4	Crafts emporium & shopping mall	2.00	II
5	Tourism Signages	0.38	I,II,III
6	Beautification & Illumination of the Diu-Ghoghla Bridge	4.00	II
7	Development and Landscaping of Plazas	3.50	II
8	Landscaping of town	6.50	II
9	Tourism Information counters at railway stations of Veraval, and Ahmedabad.	1.00	II
	<b>Total (In Lakh Rs.)</b>	<b>69.38</b>	

Yet another old pillar of greater height and majestic appeal, is hidden at the level of normal eyesight due to the warehouse between the road and the pillar. It is proposed that this building be rehabilitated and a plaza developed around this area. This is expected to



be an attraction with good view of Fort, Panikotha, Goghla, Creek etc and nearby steps leading to the water.

- v. Development of attractive and effective signages in various parts of the town showing location of destinations, directions, distances etc.

## DEVELOPMENT PLAN FOR BEACHES

Beaches will be developed in five different character stretches projecting Diu as an island destination. Ghoghla and Nagoa would be primarily catering to leisure tourists; Chakrathirth- Jallandhar stretch to the indulging, self pace loving relaxed tourists with the character of cliff beaches, Khodhidhar to Gomtimata stretch for the indulging peace seeking exclusive tourist beach and Simbor as an Eco beach where living in natural habitat becomes the theme.



## C. COASTAL TRAIL DEVELOPMENT

The main attraction will be coastal trail development along the coast of the island. Five themes define different aspects of coastal life: Maritime History, Coastal Habitats, Wildlife Migration, Historic Settlements, and Relaxation and Inspiration. The trail is intended primarily for pedestrian tourism and the main target segment would be the international tourists.



## **D. DEVELOPMENT PLAN FOR NAGOA BEACH**

### ***Required Developments***

The development at Nagoa beach would be more in visitor facility enhancement than introduction of many new activities. Nagoa being the major tourist attracting beach, should not be overloaded more.

The proposed developments in the beach stretch in the form of :

- i. An arrival plaza with Tourist reception centre facilitating the tourists in visit to other spots and information about other destinations in the circuit etc.
- ii. Floating Restaurant on the Eastern side of the Nagoa beach.
- iii. Organised Parking Space for private and other vehicles.
- iv. A taxi and autorickshaw stand should be constructed to help tourists who wish to proceed to their next destination by these means.
- v. At least two quality restaurants and refreshment stalls
- vi. Provision of Cloakrooms for keeping things.
- vii. Effective Signages about other attractions of Diu and lighting of the beach
- viii. Cleaning and maintenance of the beach with good waste disposal measures.

The development costs and the phasing of development are:

<b>Sr. No.</b>	<b>Development</b>	<b>Total Cost (In Lakh Rs.)</b>	<b>Phase of Development</b>
1	Plaza and Tourist reception centre	2.00	I
2	Construction of Floating restaurant	5.00	II
3	Construction of Hotels and Restaurants	7.50	I,II
4	Construction of Refreshment Stalls	1.25	I,II
5	Provision of Cloak rooms	0.50	II
6	Organized parking space	0.50	I
7	Organized Taxi & Autorichshaw stand	0.50	II
8	Provision of Signages	0.20	I,II
9	Lighting the Beach	4.65	II
10	Police cabin	1.00	II
	<b>Total (In Lakh Rs.)</b>	<b>23.10</b>	

## **E. DEVELOPMENT PLAN FOR KHODIDHAR TO GOMTIMATA STRETCH OF BEACH**

### ***Required Developments***

The Stretch from Khodhidhar to Gomtimata is to be developed as an exclusive beach for quality and peace seeking tourists. Keeping in view the CRZ regulations and the projected character of the beach stretch, temporary constructions should be resorted to. The

expected duration of stay of the tourists opting for this kind of development is 4 days to 15 days. The proposed developments in the beach stretch are:

- i. Accommodation close to nature giving the feeling of staying in the beach bed should be created, tented and hut kind of accommodation could be provided for 25 tourists. The design of these will have to be done keeping in mind the cyclone proneness of the region.
- ii. Accommodation should be provided on the other side of the road with around 60 beds.
- iii. The beach side should be planted with palm trees giving the Diu beachfront character. This plantation could be lined with the already planted casuarina.
- iv. Refreshment huts/ plazas should be provided.
- v. Meditation and relaxing platforms (with open character) shall be provided on the beach bed.
- vi. As nearby Vanakbara is a fishing village, deep-sea or game fishing should be taken up in big way. Local fisherman should be given financial and technical support to develop the necessary infrastructure. The local people should also be helped with the initial marketing and promotional support.
- vii. Necessary communication facilities should be established.
- viii. Proper signages will have to be provided from Nagoa to the stretch.

The development costs and the phasing of development are:

Sr. No.	Development	Total Cost (in Lakh Rs.)	Phase of Development
1	Tented accommodation near the beach- 25	6.14	II
2	Accommodation on landward side of road- 50	85.74	II, III
3	Refreshment huts near the beach	1.00	II
4	Meditation & relaxing platforms on the beach bed	1.00	II, III
5	Planting of palm trees along the beach	10.00	II,III
6	Finance for Angling equipment's	2.50	III
7	Signage from Nagoa to the Gomtimata stretch	0.38	II
8	Lighting of the Beach	4.65	II
	<b>Total (In Lakh Rs.)</b>	<b>91.14</b>	

- ix. Development control should be enforced for any development for retaining the character of the exclusive beach with the following features:
  - Any development on the beach side of the road will be temporary in nature.
  - The roofs shall be sloping in case of open platforms etc
  - No physical provisions shall be more than 3 m in height.
  - The land ward side of the road shall have physical development of height not more than 7 m.

- There should be no motorised water sports operating from the beach stretch.

## **F. DEVELOPMENT PLAN FOR GHOGHLA BEACH**

### ***Required Developments***

Major development is envisaged at Ghoghla beach, which would be developed as the main leisure segment oriented beach along with Nagoa. This would be by introduction of more activities, facilities and promotion. Ghoghla being one of the major entry points to Diu should be promoted in a big way. The magnificent view to the Fort and Panikotha are additional attractions to the beautiful long beach. The proposed developments in the beach stretch are:

- Tourist reception centre facilitating the tourists in visit to other spots and information about other destinations in the circuit etc as this is also an entry point.
- Provision of Changing rooms, Toilets and Cloakrooms on the beachfront.
- Organised Parking Space for private and other vehicles.
- Development of many more motorised and other water sports
- Few quality restaurants and refreshment stalls
- Visible and attractive Signages and lighting of the beach
- Bold neon signs welcoming tourists to the tourism district of Diu should be installed. The signs should also be able to give the distance and direction of all the important destinations
- Cleaning and maintenance of the beach with good waste disposal measures with a ban on use of plastics on the beach

The development costs and the phasing of development are:

<b>Sr. No.</b>	<b>Development</b>	<b>Total Cost (In Lakh Rs.)</b>	<b>Phase of Development</b>
1	Entrance Plaza and Tourist Reception centre	2.00	I
2	Construction of Changing rooms	2.00	I
3	Construction of Toilets	1.20	I
4	Construction of Cloak rooms	1.20	II
5	Organised parking space	1.00	I
6	Development of Water Sports	23.00	I
7	Ticketing cabin for water sports	1.00	II
8	Construction of hotels and restaurants	18.00	II, III
9	Construction of temporary refreshment stalls	2.00	I
10	Provision of signages	0.15	II
11	Lighting of the Beach	4.65	II
	<b>Total (In Lakh Rs.)</b>	<b>33.20</b>	

## **G. DEVELOPMENT PLAN FOR CHAKRATHIRTH- JALLANDHAR STRETCH**

The Chakrathirth – Jallandhar stretch is presently mainly used by the peace, quality and relaxation seeking tourists. This beach stretch has a very different character with the cliffs and hence to be developed as cliff beaches. This stretch from on top of the cliffs offer the best view of sea. The beach would be developed primarily aiming at day activities, with less provision for accommodation at the beachfront. The proposed developments in the beach stretch are:

- i. Hanging ropes and ancillary facilities should be provided for Cliff climbing. The beach just beneath the cliff should be cleared to stones.
- ii. Provision for angling from mid cliffs should be provided.
- iii. Meditation and relaxing platforms (with open character) shall be provided on the beach bed. In addition to this, there will be provision to conduct Yoga classes here.
- iv. The small cave kind of inserts in the cliff should be developed as relaxing space.
- v. Refreshment huts should be provided with basic essential facilities like drinking water.
- vi. Use of plastics should be prohibited on the beach
- vii. Cultural performances and plays should be conducted on a regular basis at the open-air auditorium. The stretch could also be used for shootings.
- viii. Proper directional signages will have to be provided from the town to the beach stretch.

The development costs and the phasing of development are:

<b>Sr. No.</b>	<b>Development</b>	<b>Total Cost (in Lakh Rs.)</b>	<b>Phase of Development</b>
1	Purchase of Hanging ropes & ancillary facilities for cliff climbing	3.00	III
2	Provision of Angling equipments	0.45	III
3	Construction of Meditation & relaxing platform	1.00	II
4	Conversion of cave into relaxing space	0.50	II
5	Provision of Refreshment huts	1.00	II
6	Signages on the beach stretch	0.40	I,II
7	Lighting of the Beach	4.65	II
8	Landscaped Pathways along the road	16.00	II,III
9	Police Cabin	1.00	II
	<b>Total (In Lakh Rs.)</b>	<b>28.00</b>	

## **H. DEVELOPMENT PLAN FOR SIMBOR BEACH**

Simbor Island is a 90 hectares island, located around 35-km from Diu town. Surrounding Simbor is the beautiful creek. As this island is situated in a creek, it falls under CRZ I, and no developmental activities can be undertaken in an area of 200 m from the high tide line. This island has a very thin population with a floating fishermen population. About 20 hectares of land is available for the purpose of development outside CRZ. It is proposed to develop rural tourism at Simbor in line with the Simbor Development Plan provided by the Daman & Diu Administration.

### ***Required Developments***

Simbor Island considering its eco-sensitivity and virgin nature should be developed as a complete eco tourism spot. Since the environmental and tourist carrying capacity of the island is very small, the development should be minimal. And this development would take place in the last phase. The following development is envisaged in Simbor:

- i. Accommodation close to nature giving the feeling of staying in a natural habitat should be created, the maximum people staying at the island at a given time should not be more than 15 people.
- ii. Angling facilities should be provided and this should be done in participation with the local floating fishing population.
- iii. The mode of access to the island should be through non motorised boats from the jetty.
- iv. Boating facility will be provided in the creek. Boating in this creek could be an enchanting experience for visiting tourists in the non-monsoon season. Tourists can go on backwater cruises from Simbor. Local fishermen should be encouraged to develop this facility.
- v. Boathouses will be an attraction for the international tourists to stay in.
- vi. Villagers should be encouraged to take up 'Bed and Breakfast' schemes. This kind of scheme is becoming popular the world over as it gives the tourists, especially foreign tourists, the enjoyment of associating themselves with the local people, customs, culture, and cuisine. This also becomes a major source of revenue to the local people. The fishermen could also take up Deep sea or game fishing.
- vii. Nature Cure Facilities would also be provided for a maximum of 15 tourists at a time.
- viii. The other amenities that should be developed here are:
  - Refreshment huts
  - Toilet blocks and Drinking water facility
  - Small jetty
  - Signage



The development costs and the phasing of development are:

Sr. No.	Development	Total Cost (in Lakh Rs.)	Phase of Development
1	Ecolodging accommodation for 15 people	15.00	IV
2	Provision of Angling facilities	0.45	IV
3	Provision of Boating facilities from Bunder jetty to simbor	10.00	III,IV
4	Community based tourism development & Nature Cure Facilities	10.00	IV
5	Construction of refreshment huts	1.00	III
6	Construction of Toilet blocks	1.20	III
7	Construction of landing platform	5.20	III
8	Provision of signage near the beach & on the highway	0.60	III
	<b>Total (In Lakh Rs.)</b>	<b>43.45</b>	

## I. NAIDA CAVES DEVELOPMENT

Naida caves offer good scope for Cave Tourism. The initial few caves would be for general tourists visiting. The interior caves could be developed for adventure tourism, organised treasure hunt, haunting light shows etc. However structural stability tests need to be conducted before they are put for mass usage. Security arrangements and required railings should be provided in view of the children visiting. Drinking water facility needs to be provided.

The development costs and the phasing of development are:

Sr. No.	Development	Total Cost (in Lakh Rs.)	Phase of Development
1	Structural Stability tests	10.00	II
2	Provision of drinking water facilities	0.40	III
3	Provision of toilet facilities	2.00	III
4	Signages in the caves	0.63	III
5	Entrance steps to the cave	0.50	III
6	General site development	4.00	III
7	Ticketing booth with security	0.03	III
8	Sitouts inside the caves	1.00	III
9	Development of Adventure Cave Sports	6.00	III, IV
	<b>Total (In Lakh Rs.)</b>	<b>24.56</b>	

## 4.6 CIRCUIT INTEGRATION

This section discusses the need for forming tourist circuits with Diu as an integral part of the same.

A tourist survey conducted by the Director General of Tourism, Government of India (GOI), indicated that most tourists prefer to visit more than one type of destination while on vacation. Therefore, the strategy underlying the development of circuits is to provide varied experiences (secondary interests) to tourists around a central theme (primary interest).

The circuit development is formed to meet the following objectives:

- To develop Diu as a base destination for a larger tourist visitation circuit.
- To provide a varied experience to tourists.
- To attract the varying type of tourists like religious tourist, forest and wildlife oriented tourists etc and thereby increase tourist arrivals in Diu

### ***Formation of Circuits – Criteria***

Diu, though unique in character, is a small island with accessibility constraints. Hence in addition to attracting new tourists specifically to Diu, tapping the tourist visitation to nearby destinations would change the tourism scenario in Diu considerably.

One of the critical parameters considered for the formation of various circuits are duration of Stay and distance between destinations. Time is one of the most important determinants of the destinations that can be visited and the activities that tourists can undertake either on the way to the destination, or at the destination itself.

### ***Presence of Necessary Conditions***

This refers to the conditions that contribute to make a tourist destination attractive. Some such conditions are:

- Presence of a tourist node in the circuit- Diu being developed as a tourist node
- Proper accessibility to the circuit from node.
- Travel convenience between destinations.

#### ***Case 1:***

##### **Diu- Somnath- Sasan Gir- Diu Circuit**

The Diu- Somnath- Sasan Gir- Diu circuit will be for tourist with a duration of stay of around 3 days.

#### ***Case 2:***

##### **Diu- Somnath- Sasan Gir- Dwarka- Palitana- Diu Circuit**

The Diu- Somnath- Sasan Gir- Dwarka- Palitana- Diu circuit will be for tourist with a duration of stay of around 6 days.

#### ***Case 3:***

##### **The Temple Circuit : Ahmedabad – Rajkot – Dwarka – Porbander – Somnath – Diu – Giranar – Palitana – Ahmedabad Circuit**

The *Temple Circuit* would typically target the domestic religious tourists and the foreign tourists interested in the Indian religions. The trip duration would be around 9 days.

## **4.7 PROJECTS PRIORITISED BY MOT, GOVT OF INDIA**

For Diu, the following projects have been prioritised by the Ministry of Tourism, Government of India, New Delhi for the year 2001 – 2002. Proposals for the same have also been submitted accordingly.



No	Project Name	Cost (Rs Lacs)
1	Retro reflective Signage for easy and fair stay for tourists in Diu	8.00
2	Catamaran Sail Boat at Nagoa to facilitate water sports at the attraction	3.20
3	Construction of Fish Aquarium in water channel connected with the sea creek	80.00
	<b>TOTAL COST</b>	<b>91.20</b>

## 4.8 FACILITIES PLAN

The total facilities and amenities proposed to be developed in Diu can be summarised as;

### A. ACCOMMODATION

Accommodation facilities are projected for and over:

- The different tourist markets

The three different tourist markets are the neighbouring tourists especially from Gujarat; the other domestic tourists and the international tourists.

- The different grades of accommodation

Grades of accommodation ranging from Star facilities to economy facilities and youth hostels.

- The different phases of development

The development is phased into four phases:

Phase I : the first two years.

Phase II : 2005 to 2010 (6years)

Phase III : 2011 to 2016 (6years)

Phase IV : 2017 to 2022 (6years)

Notes:

The accommodation requirement for each target market is calculated as

- **Demand for beds** =  $\frac{\text{Effective addnl. tourists (per period)} \times \text{average length of stay in nights}}{\text{No of nights per period} \times \text{Accommodation Occupancy factor}}$

The effective additional tourists is the number of tourists out of the total incoming tourists who will avail the paid accommodation facilities (excluding some who would stay with relatives/ religious accommodation etc)

- Average accommodation occupancy rate taken as 65% to 75% in last phase
- **Demand for rooms** =  $\text{No of beds demand} / \text{Average room occupancy}$
- **Average room occupancy**

For Neighbouring & Domestic tourists: 2.2persons/room

For International tourists: 1.7 persons/ room

- **Average length of stay in nights:**

For Neighbouring tourists: 1.5 nights

For Domestic tourists : 2.1 nights

For International tourists: 4 nights

<b>Tourist Category</b>	Effective addnl tourists E	Addnl no of beds (occupancy increases to 75% in P III& IV) B	No of rooms	% tourists in each type of accommodation			
				Star	Standard	Economy	Youth Hostel
<b>NT</b> ( <i>Neighbouring Tourists</i> )	Total Tourists* 0.95	$= (E*1.5)/(365*.65)$	$=B/ 2.2$	25%	55%	20%	0%
<b>DT</b> ( <i>Other Domestic Tourists</i> )	Total Addnl Tourists* 0.95	$= (E*2.1)/( 365*.65)$	$= B/2.2$	25%	45%	20%	10%
<b>IT</b> ( <i>International Tourists</i> )	Total Addnl Tourists	$= (E*4.5)/( 365*.65)$	$= B/ 1.7$	25%	35%	25%	15%

	<b>Tourist Category</b>	<b>Additional tourists</b>	<b>Effective Additional tourists</b>	<b>Addnl. no of beds</b>	<b>No of rooms</b>	<b>Star</b>	<b>Standard</b>	<b>Economy</b>	<b>Youth Hostels</b>
<b>Phase I</b> till 2004	<b>NT</b>	9648	9166	58	26	7	14	5	0
	<b>DT</b>	1376	1307	12	5	1	2	1	1
	<b>IT</b>	2309	1760	30	17	4	6	4	3
	<b>Total</b>	<b>11148</b>	<b>12233</b>	<b>99</b>	<b>49</b>	<b>12</b>	<b>23</b>	<b>11</b>	<b>3</b>
<b>Phase II</b> 2005-10 6 yrs	<b>NT</b>	28376	26957	170	77	19	43	15	0
	<b>DT</b>	27951	26553	235	107	27	48	21	11
	<b>IT</b>	16406	16407	277	163	41	57	41	24
	<b>Total</b>	<b>122593</b>	<b>69917</b>	<b>682</b>	<b>347</b>	<b>87</b>	<b>148</b>	<b>78</b>	<b>35</b>
<b>Phase III</b> 2011-16 6 yrs	<b>NT</b>	29099	27644	151	69	17	38	14	0
	<b>DT</b>	87494	83119	638	290	72	130	58	29
	<b>IT</b>	33465	33465	489	288	72	101	72	43
	<b>Total</b>	<b>199771</b>	<b>144228</b>	<b>1278</b>	<b>646</b>	<b>162</b>	<b>269</b>	<b>144</b>	<b>72</b>
<b>Phase IV</b> 2017-22 6 yrs	<b>NT</b>	31350	29783	163	74	19	41	15	0
	<b>DT</b>	97557	92679	711	323	81	145	65	32
	<b>IT</b>	42272	42272	618	363	91	127	91	55
	<b>Total</b>	<b>244587</b>	<b>164734</b>	<b>1492</b>	<b>761</b>	<b>190</b>	<b>313</b>	<b>170</b>	<b>87</b>
<b>Total additional accom. in 20 years</b>					<b>1803</b>	<b>451</b>	<b>753</b>	<b>402</b>	<b>197</b>

Thus, the total no of rooms required over 20 years is 1803 for the projected tourists.

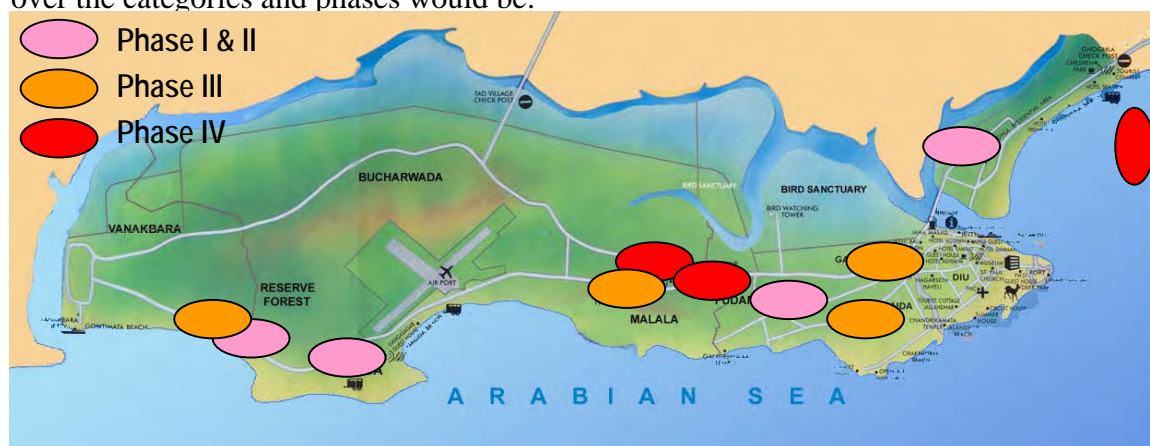
### Indicative Carrying Capacity of Diu for Accommodation:

Diu is a small region of just 40 sq. km with a long coastal strip. An indicative carrying capacity of the region was carried out to find out the optimum level of planning. The optimum level of accommodation that could be provided in Diu was done in terms of the space carrying capacity.

Area of accommodation	Max no of Rooms	Phase				Cost (Rs. Lakhs)
		1	2	3	4	
Near Nagoa	100	50	50			200
Khodidhar- Gomtimata stretch	200		100	100		350
Town-Nagoa stretch	150		50	100		300
Fudam area	200			100	100	350
Nr Naida caves	100			50	50	175
Jallandar- Chakrathirth area	40		40			80
Diu town	50				50	100
Goghla	100		100			200
Simbor	10				40	20

Diu is proposed to be developed as a quality destination without overcrowding. Hence, for an optimum level of development, an optimum of only 950 rooms can be developed. If some of the development is proposed to be dormitories and multi storey accommodation, the effective optimum maximum level of rooms should be only 1300. This would mean not facilitating for full fledged accommodation for the no of tourists beyond this level. With 1250 new rooms in 20 years in addition to the existing accommodation facilities, the maximum tourists that could be accommodated is around 4,00,000 tourists. This would mean that the tourism in Diu will attain its peak by 2018 as far as accommodation carrying capacity is concerned, beyond which there will not be further incremental growth. However it is assumed that the Ahmedpur- Mandvi beach adjoining Ghoghla beach which has sufficient development and land for development nearby will have new developments and a percentage of Diu bound tourists could be accommodated there.

Distributing these required rooms over Diu, the projected accommodation availability over the categories and phases would be:



## **B. RESTAURANTS**

Other than the restaurants associated with the hotels, independent restaurants would also come up in various place like Floating Restaurant at Nagoa, Light refreshment kiosks at the beaches, More quality restaurants at different affordability segments in various parts of Diu etc.

## **C. TOUR AND TRAVEL SERVICES**

Tour and travel agents in the target markets be encouraged to conduct package tours with Diu as a main destination. Also, local agents could conduct Diu Darshan tour. Local people could be trained to be tour guides and for interpretation at heritage sites like Diu fort.

## **D. TOURIST INFORMATION SERVICES**

Tourist information services should be strengthened at the target market locations and at important entry points. (Details are given in Chapter 7)

## **E. BANKING AND MONEY EXCHANGE**

To respond to the needs of the tourists, banks are encouraged to provide ATM facilities. Also use of credit card by tourists facilitated.

## **F. TOURIST SAFETY**

The tourists who include children are involved in different activities like water sports, boating, swimming, enjoying the dip in the sea etc and are mostly ignorant of the currents and tides. LifeGuards are absolutely essential in the beaches and they should be equipped with safety devices. They should be stationed at visible locations on the beach bed itself where visitors at the Beach can be aware of their existence, so that they know whom to approach during emergencies. It would enhance the brand equity of Diu as a ‘safe’ beaches destination.

## **G. TOURISM POLICE**

There is no Tourism Police prevalent at the any of the tourist sites in Diu. There should be deployment of tourism police personnel at Police assistance booths located at the major tourism spots and beaches in Diu, eg. at Nagoa Beach, Goghla Beach, Jallandhar-Chakrathirth Beach etc. During the peak seasons the police patrol vehicles should be located at major nodes and strategic points near the beaches throughout the region with sub regions allocated to each patrolling vehicle.

The tourism police would be an integral part of the local police administration consisting of men and women especially trained and competent to offer tourist information and help. These tourist officers would be groomed by the professionals in tourism industry and the police department to assist, protect and benefit visitors staying in the region. These officers will also be responsible for protecting the government properties in the region.

There will also exist a Help Desk facility in all police stations in the region to assist tourists get back lost belongings.

## **H. SIGNAGE ON HIGHWAYS**

Proper signs are a must to facilitate the tourist in a) reaching the site and b) providing the better understanding within the site. The design for all signs should be standardised and the same design should be followed everywhere. The proposal for implementation of retro reflective signages for easy and fair stay for the tourists has submitted. This project has been prioritised by the Ministry of Tourism, Govt. of India for the year 2001 – 2002.

The locations would be at all the major intersections of all the roads leading to Diu. The signs would be of two sizes the larger ones of the major intersections, and the smaller ones to be put up at the other intersections. The signs need to be specially designed for Diu. The design should be such that it correlates with the image to be portrayed for Diu.

## **I. HANDICRAFTS CENTRE:**

Shopping is a major pastime for visitors at tourist spots and hence avenues for same should be provided for. Nagoa Beach, Bunder jetty-parking place, Parking place near Fort can be converted into a bazaar where interested villagers from nearby villages can come and sale their handicrafts and local items on a weekly basis.

Some of the handicraft items, souvenirs and utility items that shall be sold here are:

- Replicas of Fort, PaniKotha, Church etc.
- Laminated photographs ( Fort , Church, PaniKotha )
- Picture Post cards of the major tourist's attractions.
- Ties, scarves and handkerchiefs having designs of the tourist destinations of the Diu.
- Caps or Hats having similar designs (This would be very popular not only in terms of design, but in terms of utility too, for protection from the sun, while moving around the tourist destinations.

## **J. EMERGENCY MEDICAL FACILITIES:**

In order to avoid any inconvenience to the tourists, it is proposed to keep provision for emergency medical services at Nagoa and Ghoghla beach where there are water sports activities at the reception centre. A first aid box at the site is essential in case of medical emergencies. The guides who are at the destinations and other tourism officials need to be given a course in first aid as a part of their training.

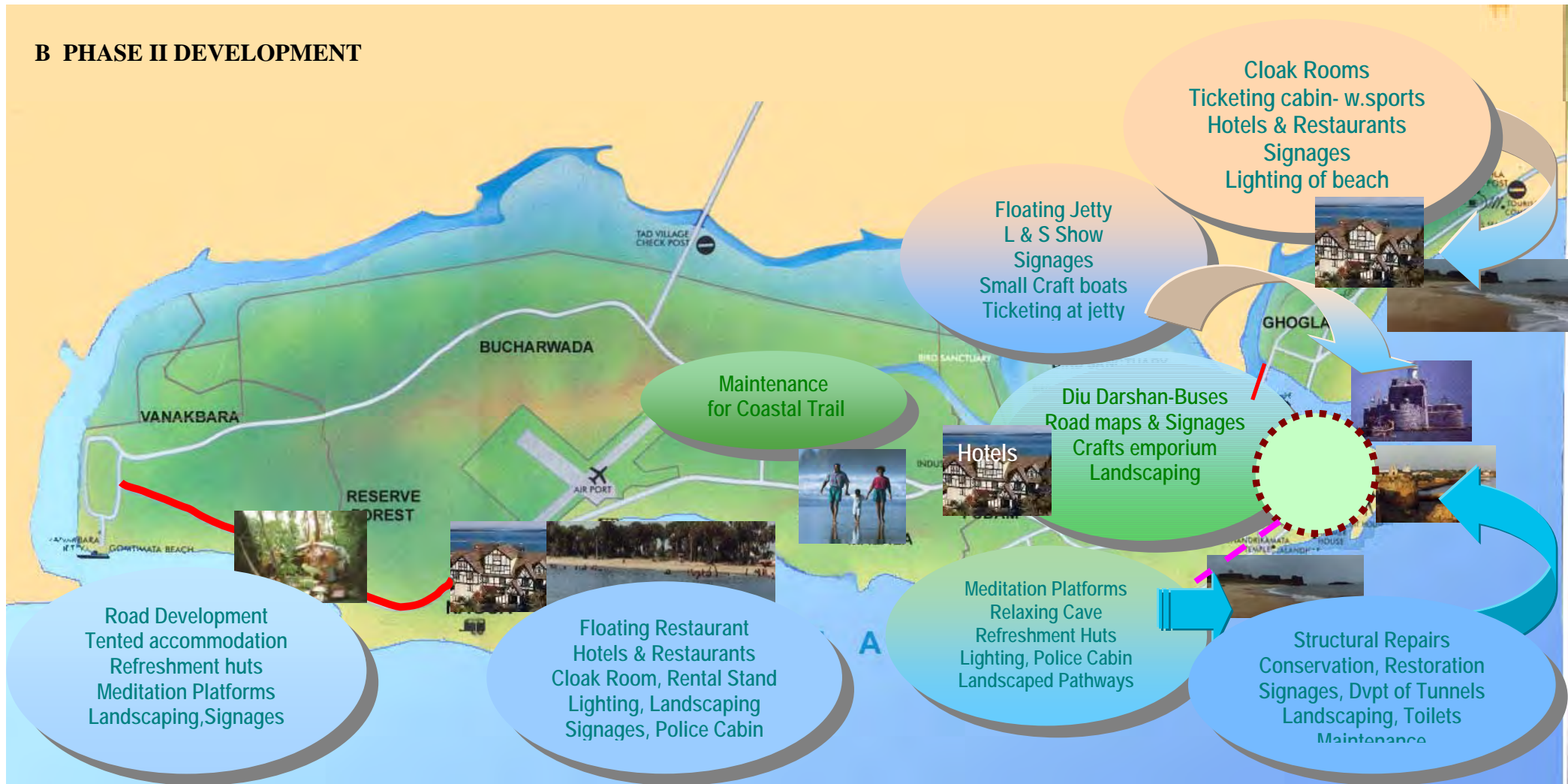
## 4.9 DEVELOPMENT SCHEME AND PHASING

### A PHASE I DEVELOPMENT





## B PHASE II DEVELOPMENT



## C PHASE III DEVELOPMENT





## INFRASTRUCTURE

### 5.1 INTRODUCTION

Every tourist destination, in addition to natural and cultural beauty, requires a stable infrastructure to make the destination attractive to tourists.

Infrastructure in the context of tourism could be classified as:

- Core infrastructure like ensuring accessibility (i.e. rail, road, air & water), improving communication, power, water supply and sewerage, etc. The core infrastructure development benefits the local population directly, and achieves the broader aim of regional development.
- Tourist Infrastructure relating to development like accommodation, tourist information centres, restaurants, (facilitating the tourist arrival and stay at the tourist destination). The tourism infrastructure is a prerequisite for attracting tourists to the site and is utilised mainly by the tourists. Infrastructure development cannot follow tourism growth, but must proceed in parallel if growth has to be sustained. Adequate infrastructure is critical to keep the promise to visitors and ensuring the quality of the visitor experience.

#### **Tourism Core Infrastructure**

Aircraft  
Accommodation  
Buses/coaches  
Tourism activities & attractions  
Trains, ferries  
Conference & convention facilities

#### **Wider Infrastructure**

Roads  
Train stations, ferry terminals  
Water & sewerage systems  
Telecommunications  
Airports  
Taxis

### APPROACH & METHODOLOGY

In order to arrive at the Infrastructure Plan for Diu the following steps were taken:

1. The existing infrastructure at site was studied. It also included a study of plans and proposals, which are under or due for implementation.
2. The infrastructure was assessed for capacity to handle the additional tourist traffic & the additional capacity requirements were calculated.
3. Block costs associated with each development was estimated.
4. The plans were then prioritised for short and medium term and phased over 20 years.

The tourist inflow to Diu in 2022 is taken from the demand estimation model in chapter-3. The present tourist inflow is about 436,752, (which include registered & unregistered tourist) which are expected to touch 519,055.

### 5.2 ACCESSIBILITY

The state of infrastructure considered for Diu is given below:

1. Accessibility in terms of roads, rails, air & water ways.
2. Water Supply & Sewerage system
3. Power supply
4. Telecommunication
5. General facilities

#### **A. DIU- LOCATION**

Diu main land is bounded by Chassi river in the north admeasuring 19.2 km and by Gulf of Cambay (Arabian Sea) to the three sides admeasuring 21.7 Kms. Chassi river separates the village Ghoghla connected with the main land from Diu. The village Simbor is divided into three segments having 1.8km of Land boundary & 2.88 Km of sea boundary. The accessibility to Diu is via road, airport and nearby railhead in Gujarat.

#### **B. ROADS TO DIU:**

The tourists access Diu via Gujarat mainly from Ahmedabad, Baroda, Rajkot, Bhavnagar, Surat, and Junagadh.

The table 5.1 shows the distances & road travel time from the important centres to Diu

**Table No: 5.1 Distances & Road travel time from the important centres to Diu**

State	Centres	Approx.Distance in Kms	Approx. Travelling time (in hrs )
Maharashtra	Mumbai	1,000.0	21.0
Gujarat	Ahmedabad	400.0	8.0
Gujarat	Dwarka	342.0	7.0
Gujarat	Bhavnagar	207.0	4.0
Gujarat	Veraval	96.0	2.0
Gujarat	Keshod	135.0	3.0
Gujarat	Rajkot	200.0	4.0
Gujarat	Sasangir	100.0	3.0
Gujarat	Somnath	80.0	2.0
Gujarat	Una	14.0	0.5

Public Works Department (PWD) Gujarat is the department dealing with the construction and maintenance of road upto the Gujarat boundary. Gujarat government has improved & maintained roads leading to Somnath & Junagadh, while the road from Bhavnagar to Una needs to be improved since large number of tourists enter Diu using private vehicle or private/government buses.

Highway Amenities: Number of restaurants, light refreshment stalls, toilet & drinking water needs to be developed & maintained properly by these restaurant owners. Good signage infrastructure on the highway needs to be developed.

#### **C. ROADS IN DIU**

Fudam, Bhucharvada, Vanakbara and Ghoghla have been well connected with roads. The village Simbor is inhabited for only a part of the year and is connected by a kuchcha road.

The total length of metallic road in Diu is 78kms. While total length of non-metallic roads is 5kms. Roads from primary school to church at Fudam and Dhobi Falia to soldawadde at Ghoghla are under the management of the panchayat.

Public works Department Diu is the department dealing with the construction and maintenance of roads. Traffic on the roads is not very heavy in the off season. In the tourist season the private vehicles move around the internal roads.

Monsoon every year erodes the road surface of many major & minor roads and in particular, the incoming roads from Gujarat.

Tourist taxis should be made available from Diu to enable tourists to visit to nearby tourist/pilgrim centres of Gujarat and undertake their return journey.

There are no walkways/footpaths for the tourists to move around safely on the main roads. It is necessary to provide footpaths on both/one end of the road on all the major roads leading to Nagoa Beach, Jallandar Beach, Chakrathri Beach etc. The investment required for roads, which will be used as tourist infrastructure is as shown in Table: 5.2.

**Table No: 5.2 Investment Required for Roads**

Sr. No.	Description	Implementing Agency	Total Cost (in Lakh Rs.)
1	High way Directional Signage's	PWD/DOT	0.20
2	Improvement of road from Khodhidhar-Gomtimata stretch of beach (7.5mt width*4km)	PWD	80.00
	<b>Total (in Lakh Rs.)</b>		<b>80.20</b>

The roads which are covered under tenth five year plan (2002-2007) and which will have a impact on tourism growth in the region are as shown in the Table: 5.3

**Table No: 5.3 Proposed Roads under Tenth five year plan (2002-2007)**

Sr. No.	Description	Implementing Agency	Total Cost (in Lakh Rs.)
1	Road Improvement for road to Diu ( Una-Diu-14kms)	PWD (Gujarat)	140.00
2	Construction of parallel bridge across the creek between Diu-Ghoghla in Diu	PWD	1,500.00
3	Recarpeting of existing major district roads and minor district roads in Diu District by providing 40mm thick paver finish carpet	PWD	500.00
4	Construction of new bridge at Tad Check Post	PWD	500.00
5	Construction of Bridge between Kotada (Gujarat) and Vanakbara(Diu)	PWD	1,500.00
	<b>Total (in Lakh Rs.)</b>		<b>4,140</b>

#### **D. RAILWAY:**

There is no railway line directly reaching Diu. Veraval (96kms) is the nearest Junction having train connections with Ahmedabad & Mumbai. The nearest railway station is Delwada, which is around 7km away from Diu. Only passenger train runs on narrow gauge between Delwada–Talala-Veraval & Delwada-Junagadh.

The work for conversion of meter gauge to broad gauge line from Rajkot-Junagadh-Veraval is in progress, Rajkot-Junagadh stretch will be completed by March-2003 and Junagadh-Veraval stretch by March-2004. After this line is converted there will be direct fast trains running from Ahmedabad-Veraval. The survey work for Veraval-Kodinar line is also in progress.

It is necessary to check the possibility of increasing the existing 60kg track line to 90kg track line between Delwada-Veraval.

The major constraint as expressed by all is the accessibility issue. Hence, improving the accessibility through various modes to cater to domestic tourists and international tourists will be one of the major macro level planning actions.

The major improvements will be extending the Girnar express from Veraval to Delwada both ways in the first phase. In the second phase extending the Delwada line to Ghoghla.

There is a need to have Tourism Information booths at Veraval, Rajkot, Bhavnagar, and Ahmedabad railway stations.

#### **E. AIRPORT:**

Diu airport became operational in year 1992. In year 1995 Gujarat Airways was flying four flights (18-seat capacity) a month from Mumbai and its capacity was increased subsequently.

Jet Airways runs daily flight Mumbai-Diu-Porbunder route except on Saturday. Average number of passengers flying both to & fro is approximately 1000 (monthly). The mix of tourists coming to Diu by Jet Airways is 50% Businessmen, 30% Tourists and 20 % locals going to villages nearby who come from European/Portugal countries. The business class visitors are either from big companies like L&T Cement Kovaya, port of Pipavav, Gujarat Ambuja Cement, Indian Rayon, Gujarat Heavy Chemicals, Siddhi Cement, Narmada Cement which are located near Veraval.

The lack of connectivity with tourist circuit's like Delhi, Ahmedabad, Jaipur, Goa and inadequate infrastructure significantly impedes tourism growth of this region.

The terminal building has a very less handling capacity and no more than 60 passengers can be accommodated in building. The airport infrastructure and runway length of 6000 ft is inadequate to cater to wide-bodied aircraft and charter flight operations. Support infrastructure, like customs clearance and visa facilities are also not available.

The airstrip at Keshod is 135kms from Diu and Bhavnagar Airport is 200kms away from Diu. Both of them also lack infrastructure and runway facilities to land charter flights. There is a great potential for an upgraded Airport Infrastructure to market Diu as chartered destination on similar lines of Goa. The investment required for the development of Airport Infrastructure is as follow shown in Table: 5.4

**Table No: 5.4 Investment Required to Develop Diu Airport**

<b>Sr. No</b>	<b>Developmental Measures</b>	<b>Implementing Agency</b>	<b>Total Cost (in Lakh Rs.)</b>
1	Construction of Toilet facilities at Diu Airport	AAI	1.00
2	Provision of parking Space for Private vehicles near Diu Airport	AAI	9.00
3	Provision of Restaurants & Cafes	AAI/ DOT DIU	7.50
	<b>Total (In Lakh Rs.)</b>		<b>17.50</b>

The UT Administration has already engaged M/s RITES Airport Division New Delhi for the preliminary project report for the expansion and Upgradation of the Diu Airport. The work packages of construction of compound wall for airport security, re-carpeting of runway of Diu Airport and extension of Airport Building at Diu have already been included in the tenth five-year plan (2002-2007).

The work packages as shown in Table: 5.5 have been covered under the 10<sup>th</sup> five-year plan and execution of which will make the Airport Infrastructure as sufficient.

**Table No: 5.5 Proposed Airport related works covered under Tenth five year plan (2002-2007)**

<b>Sr. No.</b>	<b>Developmental Measures</b>	<b>Implementing Agency</b>	<b>Total Cost (in Lakh Rs.)</b>
1	Recarpeting of runway of Diu airport	AAI*	300.00
2	Construction of compound wall for airport security	AAI	80.00
3	Extension of Airport Building Diu	AAI	20.00
	<b>Total (In Lakh Rs.)</b>		<b>400</b>

\* figure modified

## **F. SEA ROUTE:**

Sea route is utilised for fishing purpose and also some small ships are routed through sea route.

Travelling by sea will not only reduce the travel distance and time, but will also make the journey more pleasurable & economical. Although this option has not been very successfully implemented in the past, private participation and the use of modern water transport modes will make this option feasible.

There is a need for sea link between Mumbai-Diu, since the road distances are too long and there is no direct rail connection to Diu. Mumbai-Diu sea link will reduce the travel time from Mumbai to Diu. International and domestic tourists can also use these ferry services.

Four Seasons Marine & Air Services Ltd. (FSMAL) is already in process of implementing a mass transit water transport project in & around Mumbai both on the west coast & cross harbour routes. They have also submitted a feasibility report for implementing the project.

FSMAL has proposed to cater to the transport demand of Mumbai-Daman-Jafrabad –Diu by setting up a Water Transport System. The total trip time from Mumbai-Daman-Diu using Mass Transit Water Transport Services (MTWTS) would be 8 hours, which will result in saving of 16-17 hours, compared to bus.

This route can also provide connection to main locations in Saurashtra, which have both tourism & commercial traffic. For e.g. Mumbai-Daman-Jafrabad-Diu could be further extended to Mumbai-Daman-Jafrabad-Diu-Veraval-Porbunder-Ohka-Mandvi.

The water transport service will help the tourists in saving their time. This time can be utilised by the tourists in other tourism activities at the tourist's destinations or enroute. The lists of the works are as shown in Table: 5.6

**Table No: 5.6 Investment Required for Sea Route**

<b>Sr. No.</b>	<b>Developmental Measures</b>	<b>Implementing Agency</b>	<b>Private Sector Cost (in Lakh Rs.)</b>	<b>Total Cost (in Lakh Rs.)</b>
1	Catamaran service from Diu -Mumbai	Private Sector/Port	5,250.00	0.00
2	Jetty at Bunder Chowk	Port		10.00
	<b>Total (In Lakh Rs.)</b>		<b>5,250.00</b>	<b>10.00</b>

#### **G. INTERNAL TRANSPORT:**

There is no state transport service, which runs throughout the Diu. Buses ply from Collector office to Ghoghla and back. The Gujarat State Transport Corporation has different routes connecting Diu, which ply on daily basis. Private buses run in Diu to nearby villages.

The tourists who visit Diu either come by their private vehicles or hire private vehicles to roam around in Diu. Private richshaw operates in Diu, which take tourists from one destination to another. However the local transportation system is highly unorganised and could lead to dissatisfaction of tourists.

It is proposed Starting of Diu Darshan (settlement ride) in pollution free road train using fuels like CNG with stop over at the Fort, St. Paul's Church, Museum, the typical streets, NagarShethHaveli, Gangeshwar temple, other temples, Chakrathirth and Jallandhar beaches etc. A private operator on a daily basis can operate these facilities.

Mopeds, bikes, cycle and scooty are being given on rent to the tourists after taking deposit from them. These facilities should be promoted and bikemaps should also be made available to tourists. These bikemaps should be printed along with the advertisements.

### **5.3 WATER SUPPLY & SANITATION:**

At present Diu district gets water from Raval dam near Una in Gujarat state. The Raval dam is never filled-up due to scarce rainfall in this region. The water supply is not sufficient for the present population of the Diu district. In the tourist season due to large number of floating population the situation is worst. The water available from the borewells is salty, which cannot be used for drinking. Today majorities of Hotel owners have to purchase water from Gujarat.

There is Narmada water pipeline passing from Una Gujarat. There is possibility of procuring the raw water from this pipeline. The administration has already included the work package as shown in Table:5.7 of the procurement of water from the Narmada river in the tenth five-year plan at the cost of 7.5 Cr. The work package of construction of various different water supply infrastructural units like ground water sumps, overhead

water tanks and extension of existing water supply network has also been included in the tenth five year plan.

The water supply infrastructure for tourist floating population will become sufficient once the above work package is completed by 2007.

#### Sewerage System:

The Residential & Commercial establishments, located within Diu town and the other villages do not have access to an underground sewerage system. The disposal of excreta is through septic tanks and soak pits and the effluent is passed into the storm water drainage line.

With potential contamination of drinking water increasing, as dependence on bore wells and open wells increase, it is pertinent that the 'Soak pit' based sewerage system, at Diu town to start with, be modified to a planned sewerage system.

The sewerage system developed in the Portuguese regime needs to be checked for its reusability. There is need to design and implement the sewerage scheme for Diu town at the earliest.

**Table No: 5.7 Proposed Water & Sanitation Works under Tenth five year plan (2002-2007)**

Sr. No.	Developmental Measures	Implementing Agency	Total Cost (in Lakh Rs.)
1	Construction of overhead tanks, sumps in Bucharwada & Vanakbara Panchayat area of Diu District	PWD Water Supply (Rural)	150.00
2	Construction of overhead tanks, sumps in Diu, Ghoghla & Fudam Municipal area of Diu District	PWD Water Supply (Urban)	100.00
2	Providing safe water supply from Narmada river for Diu district	PWD Water Supply	750.00
3	##Sewerage system in Diu	PWD Water Supply	300.00
4	Procurement & installation of Pumping machineries & generator sets & pumps	PWD Water Supply	200.00
5	Laying of rising mains & distribution lines including replacement in Vanakbara & Bucharwada Panchayat in Diu	PWD Water Supply (Rural)	150.00
6	Laying of rising mains & distribution lines including replacement in Diu, Ghoghla & Fudam Municipal area in Diu District	PWD Water Supply (Urban)	100.00
	<b>Total (In Lakh Rs.)</b>		<b>1,750.00</b>

## This scheme is not in tenth five-year plan (2002-2007)

## 5.4 POWER SUPPLY

There are no power generation stations in the union territory of Diu. The total power need is met from the central sector power stations in the western region through Gujarat



Electricity Board Grid. Today Diu gets power from 66KV Una sub-station through 66KV single circuit line.

The present Infrastructure is as shown in Table: 5.8

**Table No: 5.8 Present Infrastructure- Power Supply**

High Tension Lines 11KV	53.00Kms
Kansari-Diu Line 66 KV	27.50Kms
Una-Diu Line 66 KV	19.00Kms
<b>Low Tension Lines</b>	
3 Phase -6 wire	47.00Kms
3 Phase -4 wire	28.00Kms
1 Phase -3 wire	32.42Kms
1 Phase -2 wire	13.00Kms
<b>Transformer centre</b>	
315 KVA Distribution transformer centre	02 Nos.
200 KVA Distribution transformer centre	37 Nos.
150 KVA Distribution transformer centre	06 Nos.
100 KVA Distribution transformer centre	34 Nos.
63 Distribution transformer centre	03 Nos.
25KVA Distribution transformer centre	-
<b>Total</b>	<b>82 Nos.</b>

The various work packages already proposed in the tenth five-year (2002-2007) plan are as shown in Table: 5.9

**TABLE NO: 5.9 Few of Proposed Power related works covered under Tenth five year plan (2002-2007)**

	<b>Proposed works</b>	<b>Cost in Lakh</b>
1	Augmentation of 66/11KV Diu S/S capacity from 10MVA to 20 MVA & erection of 66 KV second circuit from Kansari to Diu district. ( In Progress)	190.00
2	11KV Underground Cabling (8kms)	120.00
3	Street Lighting (5kms)	25.00
	<b>Total (In Lakh Rs.)</b>	<b>335.00</b>

The above works once completed will meet the pending power demand of the entire area of Diu and also solve the staggering problems. The tourists visiting the region will be greatly benefited from this scheme.

By 2022 the new rooms to be added as calculated in Chapter: 4 is 1250. The infrastructure gaps will be filled up once all the works of tenth five-year plan are completed.



## 5.5 POST & TELEGRAPH

In the district of Diu there are 4 sub-offices, 3 combined offices & 2 branch offices. The sub-offices are located at Diu, Diu Zampa (T.S.O), Ghoghla and Vanakbara. The combined offices are at Diu, Vanakbara and Ghoghla and the branch offices are at Fudam and Bhucharvada.

Telegraph Facilities: There are three sub-offices, one each at Diu, Ghoghla and Vanakbara, which extend telegraph facilities to the district of Diu.

## 5.6 TELEPHONE

At present there are frequent breakdowns in the telephone services in Diu. The telephone services should be regularised at the earliest. The faults in telephone services also affect the Internet services, which is very important for the Hotel business.

## 5.7 PORT & LIGHT HOUSES

During 14<sup>th</sup>-16<sup>th</sup> Century Diu was a seaport & Naval Base of considerable strategic importance & also a vital link with the rest of India for overseas traders.

Diu Port was handling cargo passenger vessels for exporting salt, dry & fresh fish products of exquisite handicrafts made of ivory, etc and importing of bamboo, molassess, mangalore tiles, liquor, timber wood, etc, which since has reduced due to improved infrastructure like landing, navigational channel, etc, available nearby area of Gujarat.

The maritime states Development Council lay emphasis on development of infrastructure at Minor Ports to promote coastal shipping. Construction of lighthouse, widening of the navigational channel, construction of dry dock and construction of Landing facilities for cargo & fishing Vessels are the works needed to be carried at port. The proposed works covered under the 10<sup>th</sup> five-year plan are as shown in Table: 5.10

**TABLE NO: 5.10 Proposed Port related works covered under Tenth five year plan (2002-2007)**

Sr. No.	Developmental Measures	Implementing Agency	Total Cost (in Lakh Rs.)
1	Dredging, widening, deepening of navigable channel at Ghoghla-Diu	Port	250.00
2	Dredging, widening, deepening of navigable channel at Vanakbara creek at Vanakbara Diu	Port	580.00
	<b>Total (In Lakh Rs.)</b>		<b>830.00</b>

## 5.8 STUDY OF EXISTING SCHEMES:

In the Past development plans strengthening of Tourism Department in Diu has been repeatedly asked for in the all the development plan.

Number of projects like development of beaches, ponds, tanks, cottages and other tourist spots were completed during the eighth five-year plan.

The following is the list of the main projects being carried out in past five-year plan.

1. Development of maintenance of garden/parks/ponds/green areas/beaches and other tourist spots/facilities.
2. Lighting arrangement at various tourist spots
3. Strengthening of Tourism Department in Diu
4. Promotion & Publicity of Tourism

The infrastructure developed under the tourism sector in the 8<sup>th</sup> & 9<sup>th</sup> plan has been privatised, which has resulted into good amount of annual revenue to the Union territory administration. The expenditure incurred in the ninth five-year plan for Daman & Diu Union territory is as shown in Table: 5.11

**Table No: 5.11 Expenditure incurred in ninth five year plan**

Year	Plan Allocation ( In Lakh)	Expenditure ( In Lakh)
1997-1998	215.00	247.00
1998-1999	181.00	216.58
1999-2000	82.00	102.18
2000-2001	65.00	61.18
2001-2002	65.00	48.52
Total	<b>608.00</b>	<b>675.46</b>

The new schemes proposed in the tenth five-year plan (2002-2007) are as in Table: 5.12

**TABLE NO: 5.12 Tourism Schemes Proposed In 10<sup>th</sup> Five Year Plan (2002-2007)**

1	Grant-in-aid to Tourism Development Authority
2	To establish & install Tourist Information centre at various metropolitan cities such as Mumbai, Surat, Delhi, and Vapi.
3	Catamaran sail boat at Nagoa
4	Retroreflective Signage
5	Construction of fish aquarium at Diu
6	Purchase of city train for Diu Darshan & construction of passenger shed, Diu.
7	Walking plaza Bunder Chowk to Diu Fort
8	Development & maintenance of Gardens/parks/ponds/beaches/other tourist spots/facilities/beautification and Promotion & publicity of Tourism
9	Construction of Paryatan bhavan with all amenities
10	Strengthening of Tourism Department in Diu

## INITIAL ENVIRONMENTAL EXAMINATION

The natural and socio-cultural environments of a region are important for its development as a tourist destination. If, however, the development is not planned well, it will not only damage the environment, but also have a negative impact on development of Diu as a tourist destination. Tourism projects, though mostly smaller in magnitude than other type of development projects, need to be screened for probable environmental impacts.

This chapter examines the environmental quality of the region and an initial examination into the probable impacts of the proposed developments on the environment.

The features of the natural and socio-cultural environment are most important resources for tourism development because of their aesthetic, recreational, or historical value. Many of the same features, however, are particularly sensitive to disturbance by human activities. Increased vigilance will, therefore, be necessary to protect the environment from damage, which would in turn not only protect its tourism value but the resource itself.

### 6.1 OBJECTIVES OF IEE

The purpose of environmental assessment is to ensure that development is environmentally sound and sustainable, and that any environmental consequences are recognised early and taken into account in project design. It should also include avoiding, mitigating or compensating for adverse impacts.

Environmental analysis has to be integrated with all stages of the tourism project life cycle, to facilitate incorporation of the findings into selection of sites, designs and implementation plans. Environmental review includes monitoring the project's environmental performance and compliance with relevant conditions. After implementation, evaluation of the impacts that actually occurred and the effectiveness of mitigation measures should be done.

Integration of the IEE with feasibility studies and design work is essential so that alternatives which might be desirable from an environmental view point can be considered realistically. At a later stage, making a major design change or selecting an alternative site, or even deciding not to proceed at all with a project, becomes very expensive. Similarly, an early consideration of the environmental issues enable formulation of implementation and operating plans designed to respond to critical environmental issues in the most costs- effective manner. Delays in implementation of a project because of environmental issues which were not considered at the design stage can be very costly.

In brief, role of an IEE is to influence or modify project planning so that the project will, within the limits of feasibility, avoid environmental damage and use positive measures to offset unavoidable damage. The feasibility of the project should be determined based on an assessment of all costs, including the specific provisions needed for minimising or offsetting the adverse effects on the environment

The objective of an initial environment examination (IEE) is to identify and assess the adverse impacts of a development in the planning stages itself, so that measures to mitigate adverse impacts can be planned. In view of this, the specific objectives of this IEE were as follows:

- To assess the existing environmental quality of Diu and examine the environmental issues.
- To identify the environmental impact potential of the proposed development.
- To recommend mitigation to protect the environment of Diu.

## **6.2 APPROACH AND METHODOLOGY**

A participatory approach was adopted for IEE of tourism development of Diu. Various alternatives were discussed with the project team keeping in view their relative impact on the environment. The methodology followed for IEE was:

- Review of existing environmental quality of the Diu region
- Identification of environmental issues
- Preliminary screening of tourism sites (and sub-regions) on the basis of environmental issues
- Environmental evaluation of the developments and probable impacts.
- Suggestions on possible environmental mitigation measures

## **6.3 ENVIRONMENTAL QUALITY OF THE REGION**

The consultants visited the sites in the project area. Information was collected, mainly through discussions with the local people, Tourism Department of Diu. The consultants collected information on:

- The natural environment (air, water, land, noise, flora, fauna and so on)
- The socio-economic status of the population
- Ecologically-sensitive habitats

Field visits to various sites in the project area were made for familiarisation. During these visits, information on the following aspects was collected, mainly through visual observations and discussions with local people and officials from Forestry Department, Planning Department, Diu Tourism Department, and various local government bodies.

- Existing environmental conditions (air, water, land, noise, flora, fauna, etc.)
- Existing socio-economic status of the population around potential tourism development sites
- Ecologically sensitive habitats

## **A. METEOROLOGY**

### ***Temperature***

- Diu is generally warm to hot and dry with maritime climatic conditions throughout the year.. The hottest temperatures, occurring in May, are around 30<sup>0</sup>C with a mean daily minimum of 27<sup>0</sup>C. The coolest month is generally December where lowest temperature is around 15<sup>0</sup>C with maximum of about 30<sup>0</sup>C. Occasional cold spells occur after a lapse of many years, where the temperature may drop down to 5<sup>0</sup>C.

### ***Rainfall***

- The average annual rainfall is 60 cm varying from 50 cm to 80 cm which is concentrated from June to Sept. The region is arid and dry than Daman
- The relative humidity varies between 80% and 50%, and is low during the drier winter months. The mean annual rainfall in Diu is about 60 cms but the variation in annual rainfall is appreciable. June and July are the heaviest rainfall months.

### ***Wind Speed & Direction***

Cyclonic storms occur generally in the months of September, October, every four years or so. The winds during the monsoon season are mostly from South- West to West. There is change of direction during October to March when they prevail between North- West and North- East.

## **B. AMBIENT AIR QUALITY**

The ambient air quality in various parts of Diu is very good. Diu is almost a pollution free area. This could be attributed to various factors like presence of very few industries, presence of very few vehicles, ordered settlement, proactive administration and conscious people.

The only evident form of air pollution is from the 'chakkada' (three wheeler bigger rickshaws) which is the main local form of transportation within Diu, which is devoid of public transportation.

## **C. WATER QUALITY**

### ***Water bodies***

The region being an island is surrounded by Chassi river on the north and Arabian sea on the other three sides. The inland water bodies are very less, there are a few small creeks in marshy areas in the north of the region, which meet the river Chassi. All those creeks are essentially tidal channels. There are also 5 small seasonal tanks dotted over the region. During the rainy season water accumulates in these tanks, but for the remaining part of the year, these remain dry.

The narrow Chassi River is navigable only for fishing boats and small crafts. Ferryboats between Ghoghla and Diu across this river are also plying. There is a silting problem in the river, which makes difficult the navigation of fishing boats, particularly during the low tides. Dredging and desilting of the river will certainly increase the navigability of the river in Diu and Ghoghla on a better scale. On the eastern side of the region is Vanakbara the riverbanks are used for fish landing and berthing the vessels. Development and construction of fishing harbour is proposed to boost the fishing activities. The

Arabian sea which encompasses the region on three sides is least used for navigation purposes and for use of fishing vessels due to the existence of sand stone cliffs in south east side, where the water is deep and thrust of sea water tide is very severe. Few areas are safe like Nagoa beach, but the latter being a tourist interest spot, has not been declared as landing place.

The waterfronts of river Chassi could be beautified, landscaped and developed for tourism purposes.

### ***Water Quality***

Diu being an island, the water quality near the coast is slightly saline.

Most of the surface water bodies (lakes, tanks, rivers) and groundwater sources are used as primary source of drinking water. Water quality in the region is suitable for domestic consumption and water is supplied after primary treatment and chlorination.

## **D. NOISE**

The region is generally devoid of noise pollution with very few industries. The only noise is from the 'Chakkadas' which are used for transportation

## **E. LAND DISTRIBUTION**

The total area of Diu is 40 sq km. 17.76 sq km falls under Urban area while 22.20sq.km falls under Rural area. The region is mostly devoid of industrial use. The area near Nagoa, Ghoghla, Diu town etc have land under accommodation and tourist facility usage. Other than the settlement area, the rest of the region falls under agriculture.

The Agricultural land use (Ha):

Net cultivation : 3500

Fallow land other than current fallow : 944

Culturable waste land : 162

Permanent pasture and grazing land : 162

## **F. COASTAL ENVIRONMENT**

The shoreline is characterised by cliffs, caves, embankments, submerged shoals, and offshore islands. A number of rivers flowing west form estuaries, bays, mud flats, creeks, backwaters, and tidal marshes. There are both small, isolated beaches, as well as long sandy stretches. Seabeds at a depth of up to 100 m. are clayish, whereas those between 100 m. and 200 m. deep are sandy. The beaches are very stable and regain their original profile by February to April

The dissolved oxygen levels in the seawater showed large variations in space and time. In general, the shelf waters are well-aerated for most of the year except during the monsoons (July to September). Dissolved oxygen content is important in controlling the distribution of fish.

## **G. SOIL QUALITY**

Geologically the rock strata of Diu belongs to the Palaeozoic Era, as prevalent in the Saurashtra region. The rocks are of sedimentary nature consisting of sandstones and limestones. The soils of the region are loamy, clays and sandy which are very adhesive in character. In the Northern part of the region along the river Chassi, the soils are of marshy nature due to the influence of tides. In the south west part of the region, the rock strata contains sandstone and limestone. At present it is devoid of vegetation cover. The central portion of the region covers a layer of productive soils and is the only area available for agriculture. Sea beaches are having golden sands and sheet rocks.

Sand for construction purpose is available along the sea beaches of Nagoa, Jallandhar, Malala. Generally sand was taken from Nagoa beach as it was available in good quality and quantity. All construction works in the region are done with sand, sandstone and cement. No clay or bricks are available for construction works. In some pockets of marshy areas, salt is extracted. The seawater is rich in saline contents and due to favourable climatic conditions in Diu, the salt is of good quality than many other places.

### **Minerals:**

The only minerals in the existing rock strata are black balla, sand stones and lime stones.

## **H. BIOLOGICAL ENVIRONMENT (FLORA & FAUNA)**

### **Vegetation:**

Diu is generally an arid region with scanty rainfall. The region comes under the forest classification of tropical thorn forests. The region is generally devoid of natural vegetation. Due to absence of vegetative growth and effects of strong maritime winds, the soil conditions are not very conducive to the growth of natural vegetation.

With the establishment of the forest department in Diu in 1968, some efforts have been made towards afforestation. As a measure of soil conservation programme, casurina plantation along the sea beach and in sand dunes areas have been started.

The island of Diu has an area of about 3850 Ha, where the area under cultivation is about 1350 ha. About 520 ha has been declared as forestland, in the villages of Vanakbara and Bucharwada. The natural vegetation of the island is confined to various habitats as rocky creeks, sandy sea- shores, swampy backwater areas, salt pans and fallow fields.

The most striking and most abundantly occurring tree is the branched palm, *hyphoene indica*, locally known as “Orka”. The tree grows abundantly in Diu especially along the sea beach of Nagoa giving it a unique character not replicated anywhere in India and Vanakbara road. In the agricultural belt of the region coconut trees are dominating the landscape.

A variety of bird species, migratory and non- migratory, are found in the island, which is a natural bird sanctuary, especially in the Chassi River backwaters. Apart from a large flock of Parrots, rock Pigeons, Hynas, Koels, Sparrows and Doves, migratory birds like the Flamingo, Flamingos, Sorks, Egrets and the Great Indian Bustards flock to the Chassi creek from august to March. But over the years, the bird population has decreased in the area.

The coastal waters of Diu are rich fishing grounds. The waters abound in Promfret, Dara, Prawns, Hilsa, Seerfish; the Bombay Duck is most abundant in and around Diu.

## 6.4 ENVIRONMENTAL ISSUES

The environmental issues and parameters were selected considering the close relationship between tourism and environmental quality, and the linkages between tourism and other sectors.

The impact of tourism development on the environment may not be significant, but the impact of secondary activities (as a result of this development) can be damaging. The associated environmental impact can be both short-term as well as long-term.

### Classification of Environmental components:

The various environmental components that have been considered for conducting the IEE are classified in table below

**Table No: 6.1 Environmental Components**

Components	Sub-component	Parameters
<b>Physical</b> <ul style="list-style-type: none"> <li>Water</li> <li>Air</li> <li>Land</li> </ul>	Surface water Ground water Sea water Air, noise <ul style="list-style-type: none"> <li>Soil</li> </ul>	Hydrology, quality  Air quality, noise Erosion, quality
<b>Ecological</b> <ul style="list-style-type: none"> <li>Aquatic</li> <li>Terrestrial</li> </ul>	Fisheries (inland/ marine) Aquatic Biology Forests, vegetation Wildlife	Species, diversity, economic value Density, species, Species, population Species, population
<b>Infrastructure</b> <ul style="list-style-type: none"> <li>Water Supply</li> <li>Electricity</li> <li>Transport</li> <li>Land use</li> <li>Drainage</li> </ul>	Surface/ground water — Highways/Roads Rail Air Water —	Frequency, quality Generation, Transmission, requirement, power gap Access, availability, type, utility of each mode — Flooding, drainage
<b>Quality of Life</b> <ul style="list-style-type: none"> <li>Socio-economic</li> <li>Cultural</li> <li>Aesthetics</li> </ul>	Public health Public safety Economic and social structure Human ecology Resettlement Historical Archaeological Recreation and aesthetics	Demographic, amenities, occupational pattern  Locations and importance — —

The major environmental issues involved in developing Diu as a tourist destination are:

- Increased demand on local infrastructure** — transportation, water supply, wastewater collection and treatment, solid waste disposal, and health-care facilities



- **Indirect effect of tourism** on the local culture, business, population, and workforce

The magnitude and scale of the impact will depend on the magnitude and kind of development proposed. For example, projects that involve the setting up of a large hotel complex and a sports and recreation facility will do more damage to fragile ecosystems, than projects with tourist attractions such as bird watching, nature photography.

*Eco-tourism projects combine conservation of the environment with economic benefits. Comprehensive environmental and land use planning can identify options and alternatives in the long run and balance single- or multiple-use concepts.*

## **6.5 ENVIRONMENTAL ASSESSMENT OF THE PROPOSED DEVELOPMENT**

The following assessment is based on the preliminary survey conducted and the availability of data. The assessment also includes recommendations to protect the environment.

*The following are some of the important environmental issues to be considered.*

### **(a) Unplanned Physical Development**

Unplanned development can have serious repercussions on the coastal environment. If the proposed activities do not take into consideration the need to have adequate setback areas from the beaches, stability of the beachfronts, and aesthetic building concepts, it will result in problems such as soil erosion and loss of beachfronts. In addition, the residential estates along the coast do not conform to the local planning requirements.

The primary consideration in the layout of a beach-fronted hotel, resort or other tourist development should be to ensure that the development would have no harmful effects on the coast. In this respect, the following should be considered:

- To protect the scenic beauty of the beaches, cluster development should be given priority over ribbon development.
- Provision should be made for adequate open spaces.
- Rubbish should not be dumped into the sea. Sewage and wastewater must be treated before it is dumped. Provision should be made for the disposal of solid waste.

### **(b) Erosion of the Coastline**

To prevent the coastline from getting eroded, construction activities should conform to CRZ regulations except where relaxations are specified. Sand is mined on a large-scale from beaches for use in the construction of hotels and resorts. This is another cause of soil erosion. Proper care needs to be taken to prevent this.

In the cliff area development, the slopes could be exposed and can be dangerous. Suitable slope stabilisation measures must be adopted to prevent erosion. The sunset point is a hillock with steep slopes. Proper fencing and railings must be provided to ensure the safety of the tourists, and to prevent the flora from being disturbed.

### **(c) Fort deterioration**

The Fort will deteriorate if suitable conservation measures are not adopted. Also, if not restored to its original condition, the archaeological relevance will be lost. In addition, facilities should be provided for the collection of waste, such as wrappers, plastic bags and empty bottles so that it is not dumped into the sea.

### **(d) Natural and Social Environmental Impacts**

The environmental concerns and possible mitigating measures are considered here in the more specific context of the type of natural or cultural resource, which may be affected. These categories are, however, interrelated, and not mutually exclusive.

The impact magnitude and scale of the impacts of tourism development depend on the type and size of the development proposed. Recreational tourism, involving a variety of sporting activities and a large hotel complex and infrastructure, has a greater potential to degrade fragile ecosystems than projects, which attempt to attract tourists with special interests such as wildlife viewing or archaeology.

Generally many projects or project components have a potential impact on archaeological sites, building complexes, architecture, monumental sculpture, painting, inscriptions and other physical remains considered part of a country's cultural heritage. In numerous cases, cultural property sites coincide with important natural sites. Cultural resources are a part of the tourism resource base and therefore, it is essential to screen development projects for potential impacts on cultural property.

Various types of impacts that disturb the Archaeological and historic sites, settlements and structures are:

- flooding,
- changes in water table,
- deterioration of air quality,
- vibration caused by construction activities or airplanes and
- human intrusion.

The possible natural and social environmental impacts, which have to be considered in the initial environmental examination, are as follows:

- Changes in physical resources including air quality, soil, water quality, and topography.
- Impact on the ecological/ biological resources including aquatic biology, fisheries, and wildlife.
- Changes in the land use pattern i.e. the activities performed by the people inhabiting the region such as agriculture, irrigation and industry.
- Impact on the quality of life and values of the local population. This would include employment patterns, noise levels, cleanliness, cultural values, population density, and public safety.

### ***(e) Environmental Impacts of Infrastructure Development***

Tourism development projects require not only development of tourism related facilities, but also development of the associated infrastructure such as highways and roads, water supply and power. Initial environmental examinations of the sites include the examination of impacts due to the infrastructure development projects. Some of the environmental problems often connected with such projects, and which require special attention, are discussed here.

#### ***Construction Stage Problems***

Certain construction stage problems would be common to the various components of the project. These are:

- 1) Runoff erosion during rains from unprotected excavated areas resulting in excessive soil erosion can be very damaging.

Mitigation measures include:

- Careful planning of cut-and-fill to minimize erosion, including resurfacing/revegetation of exposed areas.
  - Provision of dikes to hold runoff to settle out soil particles.
- 2) Pollution of groundwater by dumping of construction spoils can be mitigated by careful planning for spoils disposal.
  - 3) Noise and vibrations, which are hazardous or nuisances to workers or nearby residents require appropriate planning and controls.
  - 4) Cultural hazards due to differences in customs of imported workers and local villagers also require appropriate planning at the construction stage.
  - 5) Slum hazards can arise if workers decide to stay after construction is completed, unless appropriate planning provides for acceptable permanent housing in such cases.

#### ***Problems Due to Water Supply Projects***

Water supply projects involve any of the following construction, expansion or rehabilitation of dams and reservoirs, wells and intake structures, transmission mains and pumping stations, and treatment works and distribution systems.

Environmental problems commonly identified are;

- 1) Problems Related to Project Siting
  - Pollution of water supply source by upstream waste inflows from communities, industries, agricultural runoff and soil erosion runoff;
  - Abstractions of raw water for water supply conflicting with other beneficial water uses (for both surface and groundwater's)
  - For groundwater sources, hazard of land subsidence caused by excessive groundwater pumping.

## 2) Problems Related to Design Phase

- inadequate protection of water source (intakes or wells) from surface runoff pollution.
- Polluted/contaminated water in distribution system, which may be due to:
  - inadequate filters and chlorinators, or
  - fluctuation pressures due usually to excessive leaking in the distribution system causing inflow of pollutants/contaminants.
- excessive growth of algae in distribution reservoirs;
- inadequate disposal of sludges from water treatment plants; these can generally be satisfactory disposed of by engineered landfills.
- Inadequate buffer zone around pumping and treatment plants as needed for alleviating noise and other possible nuisances to neighbouring properties and for protecting these facilities from damage by outsiders.

### ***Problems Due to Highways and Road Projects***

Direct impact of highways and roads projects result from construction, maintenance and traffic use. The most significant construction-related impacts are those related to clearing, grading or roadbed construction: loss of vegetative cover, foreclosure of other land uses, modifications of natural drainage patterns, changes in groundwater elevation, and interference with movements of wildlife.

Environmental problems associated with new major highways and roads projects include:

- encroachment on precious ecological resources, such as forests,
- unwarranted depreciation of environmental aesthetic (scenic) values.
- Highway runoff pollution
- Air pollution due to vehicle emissions
- Traffic congestion and hazards at access and exit points

*Socio-economic benefits provided by highway and road projects include all-weather reliability, reduced transportation costs, increased accesses to markets for local produce and products, access to new employment centres, employment of local workers on the project itself, better access to health care and other social services and strengthening of local economics.*

## **6.6 MEASURES TO PROTECT THE ENVIRONMENT**

Developing Diu as a tourist destination will have both positive and negative results. The negative results can be minimised by enforcing suitable measures to protect the environment such as fixing the carrying capacity of the beaches and appropriate waste-management practices.

The various problems that will accompany the development of Diu as a tourist destination, and measures suggested to protect the environment are summarised in the following table

**Table No: 6.2 Measures to Protect the Environment**

ENVIRONMENTAL ISSUE	RECOMMENDATIONS
<b>Direct</b>	
Sand mining and depletion of coastal resources for infrastructure development	<ul style="list-style-type: none"> <li>• Supervision of the activities of the construction contractor</li> <li>• Submission of plans in accordance with local ordinances on sand mining</li> </ul>
Destruction of wetlands, forests, other sensitive habitats, and cultural, historical and archeologically-important sites	<ul style="list-style-type: none"> <li>• Areas considered for development should have zoning plans to account for natural, geographic and socio-economic conditions</li> <li>• Development to be based on an inventory of resources</li> </ul>
Erosion resulting from uncontrolled clearing, and infrastructure development, such as roads and marinas.	<ul style="list-style-type: none"> <li>• Formulation of erosion and sediment control plans</li> <li>• Afforestation along the slopes</li> </ul>
Loss of 'free' environmental services from natural systems and degradation of air, water, and land resources	<ul style="list-style-type: none"> <li>• Definition of carrying capacity so that the tourist segment targeted can be sustained without overburdening existing infrastructure and resources</li> </ul>
Water pollution from inappropriate sewage or solid waste disposal <ul style="list-style-type: none"> <li>• Marine effluent disposal</li> <li>• Residential sewage disposal</li> <li>• Marinas</li> <li>• Contamination of groundwater</li> </ul>	<ul style="list-style-type: none"> <li>• Upgrade of existing municipal/regional collection and disposal system, or construction of a sewage treatment plant onsite</li> <li>• Liquid wastes should not be discharged on the beaches, into the sea, or other sensitive areas</li> <li>• Strengthening of local capacity to monitor and enforce pollution regulations</li> </ul>
Solid and liquid waste disposal next to amenities	<ul style="list-style-type: none"> <li>• Appropriate waste disposal options</li> <li>• Landfill versus incineration alternatives, as well as waste minimization</li> </ul>
Problems created by: <ul style="list-style-type: none"> <li>• Traffic congestion</li> <li>• Noise</li> <li>• Air pollution</li> <li>• Demand for services exceeding supply</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated planning to reduce traffic, overcrowding and noise</li> </ul>
Displacement of local population	<ul style="list-style-type: none"> <li>• Implementation of compensation and resettlement programs after proper planning</li> <li>• Implementation of a rehabilitation plan</li> </ul>

<b>Indirect</b>	
Conflicts that arise with the use of other resources, such as fisheries, agriculture	<ul style="list-style-type: none"> <li>• Tourism development in a framework of national, regional, local socio-economic development plans to integrate new objectives into development strategies</li> <li>• Identification of zones suitable for tourism</li> </ul>
Capacity to manage the “tourist or related environment” <ul style="list-style-type: none"> <li>• Legislation and polling constraints</li> <li>• Lack of agency support</li> <li>• Absent/reduced human and financial resources to alleviate environmental problems</li> <li>• Inadequate training in Environment Management</li> </ul>	<ul style="list-style-type: none"> <li>• Periodic and comprehensive action to address direct and indirect problems and their monitoring and evaluation</li> <li>• Staffing and equipment support must be budgeted. This will include training needed to alleviate environmental problems and monitor the Environmental Management Plan or any other alleviation plan.</li> </ul>
Multiplier effect on other industries increases the burden on natural resources and public services	<ul style="list-style-type: none"> <li>• Provision of adequate infrastructure and services to meet physical, social and economic needs of the region</li> <li>• Recognition that overbuilding may be a persistent problem</li> </ul>
Congestion, overcrowding	<ul style="list-style-type: none"> <li>• Design of urban areas, transport network according to the carrying capacity of the natural setting</li> </ul>
Natural hazards peculiar to developed sites such as coastal storms, flooding, landslides and earthquakes may damage infrastructure and reduce long-term benefits	<ul style="list-style-type: none"> <li>• Design of facilities: <ul style="list-style-type: none"> <li>– for natural hazard management</li> <li>– to take advantage of natural resources such as wetlands to act as a buffer against storms or absorb treated wastewater</li> </ul> </li> </ul>

A detailed assessment of environmentally sensitive sites will be helpful in developing Diu as a tourist destination that is environmentally sound and sustainable.

### **Guidelines for Construction of buildings and basic Infrastructure**

**Table No: 6.3 Negative Impacts and Mitigative measures**

<b>Problem</b>	<b>Impact</b>	<b>Mitigation measures.</b>
	<b>Negative</b>	
Noise pollution	Creates problem to the nearby habitants and residents	- Planning and control of the construction phase should be done properly

Air pollution	Smoke and dust.	<ul style="list-style-type: none"> <li>- Planting trees is one of the mitigation measures.</li> <li>- Construction should be away from the local habitants and tourist traffic.</li> </ul>
Groundwater pollution	Due to dumping of construction spoils	<ul style="list-style-type: none"> <li>- Planning should be done to dispose the spoils properly.</li> </ul>
Runoff erosion	Excessive soil erosion from unprotected excavated areas	<ul style="list-style-type: none"> <li>- Careful planning of cut-and-fill to minimize erosion, including resurfacing/revegetation of exposed areas.</li> <li>- Provision of dikes to hold runoff to settle out soil particles.</li> </ul>

**Table No: 6.4 Positive socio-economic benefits**

Problem	Impact	Mitigation measures.
	Positive	
Socio economic benefits	<ul style="list-style-type: none"> <li>- Creates employment to the local population</li> <li>- Long term benefit from the construction of the roads.</li> <li>- Improvement in the quality of life</li> <li>- Better accessibility to the health care, social service centres.</li> </ul>	-

***Guidelines for floating restaurant development:***

Indiscriminate disposal of solid as well as liquid waste from the canteen will lead to increase in the pollution levels of the river. Thus careful waste management, such as holding the sullage until it reaches the shore of, is required to reduce the impact on the surface water quality. This wastewater may be reused for greenbelt along the sides of the river. Solid waste such as food waste, packaging waste, etc. may be disposed of at public waste-bins.

**Table No: 6.5 Negative Impacts due to other projects and mitigation measures**

Problem	Impact	Mitigation measures.
	Negative	
Coastal Trail/Camping	Indiscriminate liquoring of the trekking routes	<ul style="list-style-type: none"> <li>- Trail walkers &amp; campers should be cautioned about the pollution</li> <li>- Waste disposal measures should be taken properly by providing waste bins at appropriate intervals.</li> </ul>
Waterfront development	May pollute the river bank	Should enhance the strength of the riverbanks and in no case should weaken the riverbank.

Camping site at sea front	<ul style="list-style-type: none"> <li>- Spreading dust during construction stage</li> </ul> <p>Effect of construction of facilities on aquatic organisms</p>	<ul style="list-style-type: none"> <li>- Care should be taken to see it that the natural habitats of marine creatures should not get affected due to the construction.</li> <li>- Habitate should be identified prior to the construction, and active constructive zones should be away from such sensitive habitats.</li> <li>- Care should be taken to preserve the fresh water balance of the ocean park area.</li> <li>- Stability of the beachfront should be considered while planning theme park arrangements.</li> </ul>
Coastal erosion	Coastal erosion due to the construction of facilities	<ul style="list-style-type: none"> <li>- Buffer areas of vegetation should be planned not only to minimise the coastal erosion but also to provide protection from low depressions and cyclonic storms.</li> </ul>

## 6.7 SUMMARY

As indicated in this chapter, the tourism development in Diu could result in a wide range of environmental and social impacts, some positive and some negative. In order to minimise the negative impacts and enhance the positive ones, a detailed environmental impact assessment of sensitive sites and carrying capacity studies of this region may be helpful in environmentally sound and sustainable tourism development of the region.



Thus the impacts and broad mitigative measures can be summarised as under:

**Table No: 6.6 Summary of Impacts and Mitigative Measures**

<b>Sr. No.</b>	<b>Activity</b>	<b>Environmental Issue</b>	<b>Impact</b>	<b>Scale of impact</b>	<b>Mitigative Measures</b>
1	Increased tourist activity	<ul style="list-style-type: none"> <li>• Inadequate potable water supply during summer</li> <li>• Threat to ecology</li> </ul>	<ul style="list-style-type: none"> <li>• Water-borne diseases to tourists as well as local people</li> <li>• Destruction of exotic flora</li> </ul>	Moderate Negative	<ul style="list-style-type: none"> <li>• Modernisation of existing water treatment facilities or supply of groundwater after chlorination</li> <li>• Demarcation of restricted zones for tourist activities at locations where exotic species exist</li> </ul>
		<ul style="list-style-type: none"> <li>• Vehicular pollution</li> <li>• Disposal of untreated sanitary waste</li> <li>• Unscientific disposal of solid waste</li> </ul>	<ul style="list-style-type: none"> <li>• Deterioration of air quality</li> <li>• Health hazards due to untreated sanitary waste and solid waste</li> </ul>	Low Negative	<ul style="list-style-type: none"> <li>• Better traffic planning</li> <li>• Provision of septic tank and soak pit system at each site</li> <li>• Provision for sanitary landfill facility for solid waste disposal</li> </ul>
		<ul style="list-style-type: none"> <li>• Cultural change</li> </ul>	<ul style="list-style-type: none"> <li>• Preservation of Fort</li> <li>• Training of new craftsmen to cater to the increased tourist activity</li> </ul>	Low Positive	
		<ul style="list-style-type: none"> <li>• Socio-economics of the region</li> </ul>	<ul style="list-style-type: none"> <li>• Generation of direct employment</li> <li>• Availability of better amenities</li> <li>• Secondary growth such as small scale industries, handicrafts, commercial establishments, etc.</li> <li>• Improvement in quality of life</li> </ul>	High Positive	
			<ul style="list-style-type: none"> <li>• Loss of cultural identity and commercialisation of traditions</li> </ul>	Low Negative	

Sr. No.	Activity	Environmental Issue	Impact	Scale of impact	Mitigative Measures
2	Construction of facilities	<ul style="list-style-type: none"> <li>Land use change</li> <li>Cutting of trees (approx. 300 trees) for proposed accommodation &amp; other facilities and threat to sand dunes etc</li> <li>Disposal of sanitary waste</li> </ul>	<ul style="list-style-type: none"> <li>Urbanisation</li> <li>Potential loss of agriculture</li> <li>Sedimentation, loss of topsoil, soil erosion</li> <li>Health hazards to tourists</li> <li></li> </ul>	Low Negative	<ul style="list-style-type: none"> <li>Implementation of area development plan to regulate the secondary growth</li> <li>Compensatory afforestation</li> <li>Disposal of sanitary wastewater into septic tanks and soak pits</li> </ul>
	Construction	<ul style="list-style-type: none"> <li>Noise</li> <li>Fugitive dust</li> <li>Machinery emissions</li> <li>Congestion traffic</li> <li>Structural addition to coast and landscape</li> </ul>	<ul style="list-style-type: none"> <li>Ecosystem impact</li> <li>Disturbance of animals</li> <li>Poison environment</li> <li>Water quality degradation</li> <li>Lower oxygen in land/ water</li> <li>Human Impact</li> <li>Worker safety</li> <li>Public health risk</li> <li>Respiratory irritation</li> <li>Welfare losses (quality of life, subsistence)</li> <li>Aesthetics</li> </ul>		<ul style="list-style-type: none"> <li>Noise and emission control ordinances</li> <li>Toxic substance controls</li> <li>Timing to avoid migratory or spawning</li> <li>Improve over original</li> </ul>
	Landscaping construction	<ul style="list-style-type: none"> <li>Introduction of exotic species</li> <li>Fertiliser/ pesticides</li> <li>Toxicity: species/ habitat loss</li> <li>Downstream eutrophication</li> </ul>	<p>Ecosystem impact</p> <ul style="list-style-type: none"> <li>Displacement of indigenous, rare species</li> </ul> <p>Human Impact</p> <ul style="list-style-type: none"> <li>Natural/ cultural resource loss</li> <li>Welfare loss (subsistence, recreation)</li> </ul>	Low	<ul style="list-style-type: none"> <li>use of native plants</li> <li>management of chemical products</li> </ul>

Sr. No.	Activity	Environmental Issue	Impact	Scale of impact	Mitigative Measures
3	Solid waste disposal	<ul style="list-style-type: none"> <li>Waste from human activities pollutes water and soil</li> <li>Drainage from landfills or dumps</li> <li>Smoke and fumes from burning</li> </ul>	<p>Ecosystem impact</p> <ul style="list-style-type: none"> <li>Water and air quality reduced</li> <li>Species/ habitat poisoned</li> <li>Fish caught in trash</li> <li>Clean up costs</li> </ul> <p>Human Impact</p> <ul style="list-style-type: none"> <li>Public Health risk</li> <li>Economic loss (tourism)</li> <li>Aesthetics</li> </ul>	<ul style="list-style-type: none"> <li>High Negative</li> </ul>	<ul style="list-style-type: none"> <li>Lots of trash cans</li> <li>Routine clean-up</li> <li>Adequate treatment and disposal technology</li> </ul>
4	Sewage disposal	<ul style="list-style-type: none"> <li>Suspended solids</li> <li>Fish and plants need oxygen</li> <li>Bacteria and germs</li> <li>Chlorine</li> <li>Freshwater demand</li> <li>Toxic Industrial waste</li> </ul>	<p>Ecosystem impact</p> <ul style="list-style-type: none"> <li>Water quality goes down</li> <li>Oxygen in water decreases</li> <li>Environment poisoned</li> <li>Ground water contamination</li> <li>Drainage from landfills or dumps</li> <li>Smoke and fumes from burning</li> </ul> <p>Human Impact</p> <ul style="list-style-type: none"> <li>Public Health risk</li> <li>Welfare loss (subsistence, recreation, economic- fisheries and tourism)</li> <li>Aesthetics</li> <li>Increased local infrastructure costs</li> </ul>	<ul style="list-style-type: none"> <li>High Negative</li> </ul>	<ul style="list-style-type: none"> <li>Waste management</li> <li>User/ impact fees</li> </ul>

Sr. No.	Activity	Environmental Issue	Impact	Scale of impact	Mitigative Measures
5	Land Use Changes	<ul style="list-style-type: none"> <li>• Secondary development</li> <li>• Enhanced access/ high density</li> </ul>	<p>Ecosystem impact</p> <ul style="list-style-type: none"> <li>• Urbanisation</li> <li>• Overfishing/ resources depletion</li> <li>• Change in ecosystem structure</li> </ul> <p>Human Impact</p> <ul style="list-style-type: none"> <li>• Public Health risk (air and water pollution)</li> <li>• Welfare losses (Quality of life, loss of agricultural land, overburdening of infrastructure)</li> <li>• Aesthetics</li> </ul>	<ul style="list-style-type: none"> <li>• Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• Land use planning</li> <li>• Resource management (Catch limits, education)</li> <li>• Appropriate site selection avoiding sensitive areas</li> </ul>
6	Tourist Activities (sight seeing, souvenir collecting, reef walking)	<ul style="list-style-type: none"> <li>- More people in area</li> <li>- Increased contact different cultures and lifestyles</li> </ul>	<p>Ecosystem impact</p> <ul style="list-style-type: none"> <li>• Resource depletion</li> <li>• Change in ecosystem structure</li> <li>• Degradation of important cultural/ historic or recreational areas</li> </ul> <p>Human Impact</p> <ul style="list-style-type: none"> <li>• Welfare losses</li> <li>- Commercialisation of culture/ religious practices</li> <li>- Quality of life</li> <li>- Subsistence</li> <li>- Economic (fisheries)</li> </ul>	<ul style="list-style-type: none"> <li>• Low</li> </ul>	<ul style="list-style-type: none"> <li>• Education/ information</li> <li>• Ensure compatibility with community through</li> <li>• Compensation in money or land</li> </ul>

## 7.1 THE MARKETING AUDIT:

### A. MARKET AUDIT:

Tourism has become an important industry of the Indian Economy contributing substantially to its foreign exchange earnings. The foreign exchange earnings in the year 2001 is estimated to be Rs. 14006 crores. The domestic tourism industry is also developing at a speedy pace, and becoming a large contributor to the Indian economy not only by providing a large number of direct and indirect employment opportunities to the local population but also contributes significantly to the GDP of India. It is indisputable that the volumes of domestic tourists are large and will continue to grow as described in the previous section.

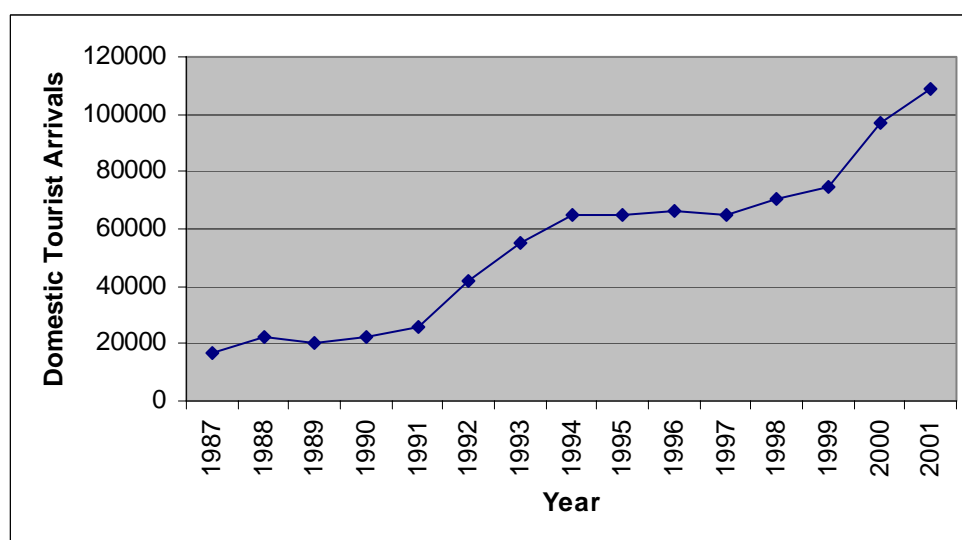
#### *Product Situation:*

- The product today has the following perceptions:
  - The domestic tourists from the nearby state of Gujarat visualize it as a weekend/holiday's destination typically restricting the tourists to a specific set of days in a year.
  - The domestic tourists from other states in India are unaware about the location and its tourism potential and perceive it as a part of Goa and Daman.
  - The international tourists as a destination close to disturbances of Gujarat, Afghanistan and Pakistan, which is geographically true, but is actually untouched by all the disturbances.
- The Diu fort and the Panikotha are deteriorating to a large extent due to lack of any concentrated conservation efforts as mentioned in the environmental analysis above in Chapter 4. Conservation measures need to be adopted for preserving and restoring these heritage monuments.
- Accessibility, one of the major weaknesses identified for the Diu region needs to be strengthened to make the destination more attractive to the tourists. The details of and solutions for the accessibility problem is discussed in detail in Chapter 5.

#### Domestic Tourists:

The graph figure 7.1 given below shows the domestic tourist arrival trends in Diu over the past 15 years. These figures exclude the day tourists and take into account only the tourists staying over in Diu for atleast one night. It is observed that the number of domestic tourists, typically the weekend tourists has gradually but continuously increased. The last five years have seen a compounded growth rate of 10% per annum.

**Figure 7.1 Domestic Tourists Arrivals Trends**



#### International Tourists:

However the international tourist arrival trends as seen in the graph given as figure 2.1 of Chapter 2 shows a marginal compounded growth in the past 15 years. It is also observed that there was a continuous growth till the year 1993, however in 1994 there was a negative growth of 66%. A similar trend is again witnessed with continuous growth from 1994 to 2000 and again 2001 witnesses a negative growth of 63%.

Table 7.1 shows that the non-registered or the day tourists contribute around 75% of total number of tourists visiting Diu. This is inspite of the fact that there is no proper hotel accommodation available in the other tourist spots near Diu. This implies that the competitive destinations around Diu are attracting these tourists to spend their precious tourist nights.

**Table No: 7.1 Tourists Registration**

Year	Registered	Unregistered	Percentage of Unregistered
1999	80,387	265,000	76.73%
2000	105,932	300,000	73.90%
2001	111,752	325,000	74.41%

Clearly there exists a need to develop a marketing strategy that will help increase tourists from the target group, increase their stay duration in this region, maintain the serenity of the region.

#### **B. COMPETITIVE SITUATION:**

Diu's competitors may be broadly classified into the international destinations and the domestic destinations competing for the respective international and domestic tourist segments.

#### The international destinations:

For both the domestic and the international tourist segments Diu will compete with the South East Asian destinations like Mauritius, Indonesia, Malaysia. These destinations

have a great edge against Diu as not only are they already developed destinations with better infrastructure, facilities and tourist amenities, but also are quite affordable. For the domestic tourists visiting these destinations also implies an increase in their status.

The domestic destinations:

In the domestic market Diu will mainly compete with the coastal destinations on the western coast. Destinations like Goa, Kerala are already attracting tourists both domestic and international. Both these destinations have a well-defined brand image in the tourist's perception. Kerala branded as "Gods own country" has a strategic marketing plan and is being implemented in accordance with out any deviation. It has distribution tie-ups with major tour operators and leading hotels for both the domestic and international tourists. Goa also has major tour operators promoting the destination. Even though Goa today is approaching saturation, it has been able to maintain growth even though a small one.

### **C. DISTRIBUTION SITUATION:**

The analysis of available and potential distribution channels is of utmost importance for the tourism products as the end-users and the products are often at the extreme ends of the globe. So the endeavor of any distribution channel should be to at locations convenient to the user, so as to enable easy access of any information and relevant facilities to inject positive buying behaviour.

Today Diu has no distribution set up at all. The publicity material is distributed only if either a tourist or travel operator or an hotelier approaches the tourism department at Diu. Due to this there is very low awareness on Diu and the region is not able to attract quality tourists.

Hence there is a need for a proper design of the channel system considering the customer needs, establishing channel objectives, identifying the major channel alternatives and evaluating them.

*A proper tourism marketing strategy would warrant consolidation of strengths, capitalization of opportunities, alleviation of weaknesses and counter measures for threats as discussed in the Tourism Perspective Plan in Chapter 4 of this document.*

## **7.2 THE MARKETING OBJECTIVES:**

Setting objectives is mandatory and vital to any planning process and so is the case with marketing plan.

- To create awareness about Diu and position it a serene island destination.
- To increase the number of tourists from the identified target segment and market.
- To increase the stay duration of the tourists.
- To attract various tourism distributors, the tour operators, hotels in states like Gujarat, Rajasthan, Madhya Pradesh, Maharashtra, etc to sell Diu as a destination.

### 7.3 THE MARKETING STRATEGY:

<i>Target Market</i>	<p><u>International Market:</u></p> <p>Category A- Western European Countries</p> <p>Category B- Asian Countries</p> <p><u>Domestic Market:</u></p> <p>Existing Tourists: Gujarat</p> <p>New Segment: Madhya Pradesh, Uttar Pradesh, Delhi, Rajasthan, Punjab, Maharashtra &amp; West Bengal.</p> <p><u>Socio Economic Classification:</u></p> <p>SEC A1, SEC A2, SEC B1</p>
<i>Positioning</i>	<b><i>One of the best island beach destination in the country, known for its serenity, and pristine beaches.</i></b>
<i>Product Line</i>	<ol style="list-style-type: none"> <li>1) Leisure beach and island experience for the local domestic tourists</li> <li>2) Leisure, Cliff Beaches &amp; Diu town trails for the typical site seeing tourist.</li> <li>3) Exclusive leisure beach for the SEC A1 domestic and foreign tourists.</li> <li>4) Coastal trails with five themes defining different aspects of coastal life: Maritime History, Coastal Habitats, Wildlife Migration, Historic Settlements, and Relaxation and Inspiration, for the international tourists.</li> <li>5) Eco beach at Simbor for select Eco tourists</li> </ol>
<i>Price</i>	<p><u>For the end user:</u></p> <p>Would be decided by the tourism service provider with some restrictions by the government.</p> <p><u>For the tourism providers/ stakeholders:</u></p> <p>To be competitive enough to attract quality private investors vis-a-vis the product to be developed for specific target segments.</p>
<i>Distribution Outlets</i>	<p><u>Conventional:</u> Travel Agents, tour operators, GOI offices in India &amp; abroad, ITDC offices &amp; affiliates, Information centers at the domestic and international terminals, travel web sites and guides</p> <p><u>Non Conventional:</u> Tie ups with other states specially UP, MP, Delhi, Rajasthan, Punjab, West Bengal &amp; Maharashtra, Tie ups with major Corporations for their for reaching out to their employees and customers, Tie ups with major hotel chains.</p>



<i>Advertising</i>	<ul style="list-style-type: none"> <li>- Develop an advertising campaign that supports the said positioning theme reaching the target customers through the print media.</li> <li>- Emphasis in the advertisements on the developing product lines.</li> <li>- Phase 1 (1<sup>st</sup> two years) – Emphasis on building awareness about Diu as a serene beach island destination.</li> <li>- Phase 2 to Phase 4 – To be done every for 1 year after every 2 years as a revitalizer to the phase 1 campaign and to create awareness on any new product developments in Diu.</li> </ul>
<i>Sales Promotion</i>	<ul style="list-style-type: none"> <li>- To participate in consumer and trade promotion exhibitions in the targeted domestic states and international countries.</li> <li>- Promotion emails to various corporate for their employees and customers.</li> <li>- Cooperative promotions with the local tourism providers like the hotels.</li> <li>- Special incentives at government policy level to attract tourism providers.</li> </ul>

#### **A. THE TARGET MARKET:**

The target markets would be broadly classified under international and domestic tourist markets. The international markets would include all countries of tourist generation outside India. Domestic market would consist of all States and Union territories in India including Daman and Diu.

##### **➤ International Market**

Section B.2.1.B of this document indicates that more than 30% of tourists are contributed by West European countries like UK, France and Germany and more than 15% by the USA. The tourists from this region are not only the highest per capita spenders according to the WTO statistics, but also show an increase in outbound tourism. It is therefore imperative to target these countries as prospects for increasing tourism. These form Category ‘A’ market, where advertising should aim at increasing the brand and product awareness showcasing Diu as an island destination, promising the experience of a serene beach and island experience.

It is also observed that the Indian inbound tourism market has around 40% contribution from the Asian countries. The specific Asian countries targeted in the plan are Iran, Sri Lanka, Nepal, Israel, Oman, UAE, and Saudi Arabia. These form Category ‘B’ market, where advertising should aim at providing Diu as must "experience" destination in their itinerary during their visit to India, generating interest among the tourists along with increasing brand awareness and recall.

##### **➤ Domestic Market**

The analysis in Sections B.3.3 suggests that the maximum number of tourist generating states for the country are Maharashtra, West Bengal, Andhra Pradesh, Gujarat, Karnataka

and Madhya Pradesh. Other major tourist generating states in India include Uttar Pradesh, Tamil Nadu and Delhi. Of these the maximum tourists to Diu are from Gujarat, with them accounting for 70-75% of the total number of domestic tourists. Tourists generated in Gujarat would be most day tourists or weekend tourists and would spend less than tourists from other states – primarily because their period of stay is less than outside state tourist and almost all of them stay in hotels with cheapest rates, accounting for a lesser per capita expenditure.

This trend needs to be altered by making the ratio 30:70 for Gujarat and outside Gujarat tourists. The major states of focus in the country should be states which lack a nearby beach destination. These include Madhya Pradesh, Uttar Pradesh, Delhi, Rajasthan, Punjab and West Bengal. It is evident that the above mentioned tourist generating states at present have very little knowledge and interest about Diu and its offerings. The advertisement strategy for these states should therefore focus at increasing awareness and interest providing more information about the products and services offered and creating brand identity.

## **B. PRODUCT:**

The region has the potential to be an all year and all week destination due to its pollution free, pleasant climate all the year around; virgin beaches; beautiful and captivating heritage structures; proximity as a beach destination to various Central and Northern Indian regions; proximity to other tourists spots like Somnath, Sasangir, which can be combined as a single circuit with Diu. These all need to be integrated as part of destination experience for tourists from different segments.

The entire 40 square kilometers of Diu will be developed in three different grades catering to different tourists segments described as follows:

- The Ghoghla region will be typically developed as leisure beach spot mainly catering to the general and the weekend tourists from nearby regions in Gujarat. This would include developing of the Ghoghla Beaches with variety of water sports activity. The details of development plan for the same are described in Chapter 4.
- The Diu district, Jallandhar, and Chakratirth Beach area will be developed as leisure and cliff beaches typically for tourists coming in with the tourist circuit of Sasangir, Somnath, etc. This region will provide the typical site seeing tourists a variety of offerings of picturesque beaches with intermittent distribution of small cliffs, the massive Fort, the Panikotha, typical Portuguese Church and settlement pattern of Diu district. This will also be developed as a nodal point for the tourists visiting other tourist regions in Gujarat. The details of the development and facilities planned are detailed in Chapter 4.
- The third region would be the Nagao to Gomtimata stretch which is an exclusive beach stretch, and is to be developed for the high income SEC A1 group of International and Domestic Tourists. This region is close to the Diu airport. The development details are in Chapter 4.
- In a later phase a small stretch of land cut off from the main Diu land, Simbor, is to be developed as an Eco beach attraction.

- Lastly a coastal trail, the main attraction along the coast of the island is to be developed. Five themes define different aspects of coastal life: Maritime History, Coastal Habitats, Wildlife Migration, Historic Settlements, and Relaxation and Inspiration. The trail is intended primarily for pedestrian tourism and the main target segment would be the international tourists.

### **C. PRICE:**

Proper pricing of the products is an iterative process involving a variety of market forces i.e. the tourists perception and psychology; the local government taxes; the impact of price on other stakeholders of the business and the influence of other elements of marketing mix.

### **D. DISTRIBUTION CHANNELS:**

In tourism, distribution channels are of utmost importance as the product and the end-user (the tourist) are at different places, often at the two extremes of the globe. Presently the entire tourism organisation functions on direct marketing or a one level channel system, i.e. from the local government tourist department to the end user. However it is experienced that this kind of a channel is inadequate to reach out to the target tourist segment. This calls for the design of a proper channel system based on the customer needs, established channel objectives, identified channel alternatives and evaluation.

#### *Analysing Customer Needs:*

For the Department of Tourism in the local administration there are two categories of customers, the tourists and the private tourism service providers and supporters (the investors - existing or potential).

The potential tourists' needs include complete product information, product variety, lesser waiting time (for information and services), and better service from channel intermediaries. Hence the channel intermediaries should be able to provide complete information about India, the location of and the tourism attractions in Diu. They should also provide key details like travel to and within Diu, Accommodation and entertainment facilities in Diu, etc. If the tourism distributors are in a position to package Diu with other attractions nearby, it would be an added advantage to the channel as well as the tourists.

The potential tourism providers needs include complete product information, government plans for development, incentives available, single window approvals, etc. This kind of need has to be fulfilled through one level channel, the level being the administration or the government representative.

#### *Establishing Channel objectives and Constraints:*

The objective here would be to select the optimum length of the channel to enable reaching out to the maximum target tourists segment with minimum costs; the right type of intermediaries and their placement to facilitate availability of information and services at the tourists convenience.

#### *Identifying Major Channel Alternatives:*

The next step would be to identify the right channel alternatives. Channel alternatives are described by three elements: i. Types of business intermediaries, ii. Number of intermediaries, iii. Terms and Responsibilities of Channel Participant

### ***Types of Business Intermediaries:***

Business intermediaries may either be conventional or unconventional. Suggested conventional intermediaries would include:

- Travel Agents,
- Tour Operators,
- GOI Tourist Offices in India and Abroad,
- Information centers at various Domestic and International Terminals.
- Travel Web sites
- Travel Guides

Non conventional business intermediaries would include innovative partners like:

- Tourist offices of target international countries with similar interests,
- Corporate organisations for their employees and customers,
- Hotels in the nearby target states in India,
- Other State Tourism Departments like TCGL, MTDC, to create packages with their tourism attractions.
- Tie-ups with other states tourism corporations and information centres in the target states.

### ***Number of Intermediaries:***

The number of intermediaries depends on the area and the size of the market targeted. The target market is as defined earlier in the chapter. As this plan is spread over a period of 20 years, the appointment of intermediaries should be done in a phased manner. The friendly and high tourists generating markets should be tapped to start with and then slowly diversify to other markets.

The appointed intermediaries should be equipped with the following to make their recruitment effective:

- Proper promotion material.
- Information on all the infrastructure in the region i.e. list of Hotels, their grade, number of rooms, contact details; list of tour operators, their contact details, their existing itinerary; lay out of tourism resources in the region and available modes of local transport; location and contact details of local information and service centers in the Diu.
- One point contact with the local administration for any approvals and support like immigration check, booking in government resorts, etc.

### ***Terms and Responsibilities of Channel participants:***

It is mandatory that the functional and financial terms and responsibilities are agreed upon between the Government Department and the recruited channel partners. The

channel partners are all the intermediaries involved in enabling the customer reach the Diu tourism product with ease. The functional responsibilities would typically include extent of distribution of publicity material, activities to be taken up for promotion of Diu in lines with the media strategy and objectives, facilitation of tourists from the target countries and states to come to Diu and organising tours for them. The financial terms would include mutually agreed upon monetary benefits that would accrue to the channel partners if they indulged into such activities for Diu.

## **E. PROMOTION STRATEGY:**

### ***The Promotion Mix:***

There exist a variety of ways by which tourism can be promoted to the tourists, advertising, point of sale displays, sales promotions, public relations and personal selling. So there exist an armoury of promotion techniques that may be used either singly or in combination (“the promotion mix”) to achieve the maximum benefit within given budget constraints. Promotion through advertising is believed to be necessary for creating brand awareness, and other elements like public relations create an interest in the brand and point of sale displays, sales promotion and personal selling pull the customer for the action for purchase. All the elements if used in the right mix towards achieving the same set of objectives periodically add on to the brand equity of the tourist destination.

At present the Diu region has a very low level of awareness, not only in the international tourists but also amongst the domestic tourists. Hence the first phase of the promotion mix would be to increase the awareness of the destination with a specific unique selling theme of a “*Serene Paradise offering Beach and Island Experience*” among select countries and select categories of domestic tourists. An appropriately designed advertising campaign for international and domestic markets will be launched and spread over a period of 20 years with constant support of the other elements of promotion mix.

### ***Advertising:***

The advertising campaign launched in the first two years would focus on building awareness about Diu around a well-defined theme, whereas subsequent advertising would be done periodically every three years for fifteen years for remaining around in the tourist memory and strengthening of the brand equity of Diu. The first step would be the study and selection of media vehicle vis-à-vis the audience size and cost incurred per tourist of target segment. The various media vehicles available for promotion of the region are as follows:

- Print advertising in dailies, weeklies, and fortnightly publications.
- Advertorials in dailies, weeklies, fortnightly publications.
- Outdoor advertising like billboards, translites, etc at Airports, important road junction in the targeted states and countries, outside theatres/ movie halls, shopping malls, etc.
- Posters, calendars,
- Leaflets, brochures, handouts at various retail stores, information kiosks at hotels, airports, railway stations, shopping malls, etc.
- Guidebooks

- Audio tapes/ CD's/VCD's with audio video clips on the region
- Television/ radio advertising
- Documentary Films that could be aired in theatres travel programmes, special interest channels like Discovery, National Geographic, etc.
- Commercial films displaying various tourism spots in Diu.

The media vehicles need to be evaluated for suitability depending on the target market and audiences for the same at the time of implementation of the plan. It is recommended that the services of a professional advertising agency be hired to prepare and implement a detailed media plan.

## 7.4 PROMOTION STRATEGY

The target market analysis reveals that there should be different promotion strategies with a combination of promotion mixes, depending on the market situation and the type of promotion required. This is classified as:

### International Market

**Category 'A'** – These targets should be subjected to extensive advertising for building brand awareness in the first 3 years of the marketing campaign. PR activities should commence from 2<sup>nd</sup> year of the campaign and continue till the 5<sup>th</sup> year as new products will be ready for commencement and subsequently for launch. This is expected to be a growing market with huge potential, which would not stagnate for the next few years. However, this is a market, which every destination and tourism development agency would like to target for attracting tourists. Therefore after the initial brand building, there has to be sales promotions in the form of lucrative packages, from the 3<sup>rd</sup> year onwards.

**Category 'B'** – These targets should also be subjected to extensive advertising, though the advertising should be highlighted as a must "experience" destination with in their Indian visit itinerary. As information dissemination is a key activity, it is imperative to maintain a strong network of travel agents and tour operators in these select Asian Countries, namely Iran, Sri Lanka, Nepal, Israel, Oman, UAE, and Saudi Arabia, whereby prospective tourists can gather information regarding the places of visit, stay, means of visit and planning complete tours. PR activities should also be extensively undertaken in this category to publish more information about Diu, its proximity to other must see destinations and maintain the image of the products. As this is a price sensitive segment, it should be subjected to different modes of sales promotion like attractive package tours and special packages targeted towards different classes of tourists.

### Domestic Market

The tourists coming from Madhya Pradesh, Uttar Pradesh, Delhi, Rajasthan, Punjab and West Bengal and Gujarat have little awareness about Diu but are interested in this kind of destination. Unlike international markets, television advertisement is affordable in domestic market. These tourists should be therefore subjected to advertisements in TV and print media along with extensive sales promotion campaigns, mostly focussed on price. It has been observed that the domestic market is highly price sensitive and hence

any price advantage over other destinations would attract more tourists. This market should also be supported by favourable PR campaigns at regular intervals to maintain the brand as top of the mind recall. Direct marketing campaigns targeted to specific class of high-end potential tourists can also be undertaken for this purpose.

## **A. MEDIA VEHICLES**

The vehicles adopted for media would vary with the type of information dissemination required and the type of market. This is detailed broadly under international and domestic markets.

### **International Markets**

The Category 'A' tourists are clearly those people who need be made aware about the existence of the product and brand. These people therefore need to be addressed by highest coverage media vehicles with a great impact and preferably with a long shelf life. Audio-visual media, mainly through different channels in TV, creates the highest impact in the minds of people, but has a very limited shelf life. TV advertisements therefore need to be repeated for a sufficient number of times to register them in the minds of the prospects. This incurs a substantial expenditure, especially in the developed economy markets that fall in Category 'A'. It is therefore advisable to adopt visual media with a longer shelf life. This can include advertisements and advertorials in international or country specific magazines, Billboards and Banners, Posters, Desk Diaries and Calendars as add-ons and inserts to magazines.

The Category 'B' tourists would need moderate level of advertisement, therefore limited advertisements in local magazines and advertorials can be published. This need to be essentially supplemented with information material in the form of leaflets, brochures and handouts, which can be provided in sequence to the advertisements as inserts, or can be kept in the offices of the GOITO and the travel agents of the respective countries and periodical sales promotion schemes for the price sensitive tourists. These are the places, which are often visited by prospective tourists for information on tours and for finalising the same.

### **Domestic Market**

The primary medium of communication would be advertisements in print media in the form of national and local newspapers and general interest magazines. Advertorials should also be undertaken on a regular scale in the print media. In addition, leaflets, brochures, handouts, posters and calendars should be provided as inserts to the print media. Billboards and banners should be used at key locations like airports and railway stations to provide greater visibility and catch the attention of the discerning tourist.

*These tourists may also be effectively tapped through travel agents who plan their travel itinerary. This can be done by participating in the travel exhibitions held in the target markets. The Department of tourism should participate in such events jointly with the private tourism providers like the hoteliers to help showcase Diu more effectively.*



## **B. MEDIA MATERIALS FOR DIU:**

The different media materials, which could be used as part of media planning, are described in brief as follows:

- **BROCHURES/GUIDE BOOKS/LEAFLETS**

### *Comprehensive Guidebooks*

This brochure would be to enhance experience of tourists during their stay in the region as well as while visiting the tourist spots.

There would be detailed booklets and brochures, which would be comprehensive for self-interpretation by the tourists and would cover all tourist spots, giving exhaustive information about the spots i.e. historical, geographical, religious and cultural information in forms of secondary attractions covering all the tourist attractions. The books and brochures would also include information of festivals held in Diu and detail n the special attractions at the time. Pictorial and geographical maps giving complete details of tourist spot layout, amenities, etc would accompany all booklets.

### *Leaflets by spot/theme and comprehensive*

These would be some separate leaflets detailing the services, attractions, facilities and infrastructure of the spot, which when combined can form a brochure pack.

- ♦ Ghoghla Beach
- ♦ Diu District, including the forts and the nearby beaches
- ♦ Nagao Beach to the Gomtimata stretch

The brochures would provide readers with knowledge on the spots so as to create awareness and a desire to visit them and the accompanying information on the various facilities would hasten their decision making process. The salient points to be incorporated are as follows:

- The brochures should epitomize the history of Diu and its splendid heritage. It would have comprehensive information in short form on the respective spots, accommodation, means of travel and other available facilities.
- The brochure should be picture based and created in the form of a jacket with supplementary inside brochures on the various nearby tourist spots making them use Diu as a node for visiting other spots and increase their stay.

These Brochures would be distributed through channels such as hotels, tourist offices (Indian and International), Airlines, Airports and Bookshops, Travel Agencies and Tour Operators.

### *In-flight Brochures*



The in flight brochure would contain basic information that the tourist would require on arrival at Diu e.g. names of hotels and addresses, restaurants, tourist offices, etc. besides information on Diu and the various tourist spots.

The brochure would also have a small pictorial map of Diu region showing these places to help the tourist when he lands in Diu.

It can be distributed as an in-flight magazine.

- **MAPS**

The maps would be to enhance experience of the tourists.

*Pictorial Maps*

The maps would give the following indications:

- Tourist spots
- Refreshment places
- Rest places & picnic spots
- Nature walks
- Road map directions to the tourist spots with details on wayside amenities
- Toilets
- First aid centres
- Security & Emergency services
- Inquiry and information booths.

The maps would depict all these facilities in the form of diagrams and pictures. These would be large maps folded to look like a small booklet, which is handy to carry. At the back of the map there would be historic and cultural information about that tourist spot. The addresses of hotels and their phone numbers would also be mentioned.

These would be available at the tourist site, they could be part of the travel kit and could also be available at the hotel book shop.

- **SIGNAGE**

The signs are to enhance experience.

*Welcome/invitation Boards*

This sign would carry a message welcoming the tourist to:

- Main destination point e.g. at the entrance from both the Ghoghla Bridge and the main bridge, at the beaches, at the fort, etc.
- Tourist sites
- Transit points & Hotels.
- Wayside amenities

### To Diu:

This could have an eye-catching visual of Diu. There could be boards at all the nearest rail heads, at various destinations near Diu in Gujarat, at the Airport.

### To Tourist sites

At the entrance of every tourist site there would be a welcome board inviting tourists to the spot. The board would be pictorial and would have visual of the tourist spot. There would be two types of boards such as 1) the larger hoarding type which would be at the access roads to the tourist site and 2) the smaller one at the entrance of the tourist spot.

### To Transit points & hotels

There would be an invitation board at the entrance of every hotel that would contain a welcome message to the tourists. The board would be pictorial and will display frescoes, photographs, sculptures, murals, etc.

### *Information Boards*

There would in the form of Signage/ information board for:

- At the city entry and exit routes
- At the entrance of tourist spot
- At key locations around the tourist sites and region.

### All around the region

These would be in the form of direction boards and would indicate the distances from various points in the region to places of tourist interest. They would also indicate directions to various places of accommodation. Boards would be of different sizes depending on the text but will follow standard highway code for the colour, background, letter size and physical size and height of the board.

### *Direction Board.*

There would be direction Boards all around and in the tourist sites which would indicate locations in and around the tourist sites.

- Direction board within the tourist site i.e. within the Diu fort, Panikotha, would indicate the visitor flow directions.
- Direction boards within beaches indicating the rough or rocky sea zone and safety zone etc.
- Facility boards around the site, which would indicate locations of various facilities such as Toilets, Refreshment rooms, Dustbins etc.
- Signage indicating route, distances and title description to various tourists sites on the arterial and branch roads in the Diu Region.

## INTRODUCTION

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### A.1 BACKGROUND:

The union territory of Daman and Diu, are known for their beaches, churches with ancient Portuguese architecture, exotic liquor. Within its small area, there is everything a tourist looks for: gentle winds, soft sand, inviting waters, historic churches, majestic forts in their imposing splendor, coconut groves, stately palms and sleepy villages nestled on the creeks.

The Union Territory of Daman and Diu was a colony held by the Portuguese for a long period even after India got independence. In 1961, it was made an integral part of India and was a part of the erstwhile Union Territory of Goa, Daman and Diu. After Goa was given statehood in 1987, Daman and Diu was made a separate Union Territory. The towns of Daman and Diu are separated by the Arabian Sea and are at a distance of 768 kms from each other by road. Daman and Diu is a melting pot of different cultures and its Portuguese and Indian connections give it a multi-faceted identity. The languages spoken in Daman and Diu are Gujarati, Hindi, English and Portuguese. The urbanization rate is 46.80% and the literacy rate is 81.09%. The main economic activity is fishing. Tourism is an upcoming industry.

The Ministry of Tourism, Government of India, is the nodal agency for promotion and development of tourism in the Union territory of Daman and Diu. The main objective of the ministry is to develop tourism, the achievement of which is measured in terms of tourists' arrivals. The MOT is in the process of initiating measures aimed at the integrated tourism development in the region. As a part of these efforts MOT has invited Tata Consultancy Services (TCS) to prepare a comprehensive 20 year perspective plan for tourism development in the region. Such a plan would provide a strategic direction for phased development of tourism in Daman & Diu. It would also recommend guidelines for coordinated implementation of the proposed perspective plan.

While some tourism planning has been accomplished by the MOT, the region does not have an overall tourism plan. There is a need for detailed planning as a basis for integrated and controlled development.

### A.2 SCOPE OF PROJECT:

The study will consider the natural, historical and cultural products available in the district for developing a 20-year perspective Plan. The study:

- Will Cover the entire region of Daman & Diu
- Will identify and evaluate the sites to be included in the touring circuit, keeping in mind the relevant environmental and developmental (CRZ) regulations.
- Will provide a plan for development of infrastructure, tourism services, facilities, etc.

## **A. OBJECTIVES:**

The 20-year tourism perspective plan preparation exercise will enable the Government to realise the following visionary goals such as to:

- To develop the region as the unique tourist destination.
- To increase the number of tourists in the region during the week.
- To develop, improve and maintain the facilities, services and core infrastructure in the region.
- To develop, improve and maintain the attractions in the identified tour circuits.
- To promote the region extensively in the target markets using various marketing tools.

Keeping in view the above visionary goals, the objectives of this project as set in the terms of reference provided are as follows:

- To assess the existing tourism scenario in the region with respect to the tourist traffic, tourism resources, services & infrastructure available.
- To project tourist traffic to the region.
- To recommend the services, facilities and core infrastructure needed for the development of tourism that will coexist with the environment and socio economic culture of the region
- To conceptualise products in the region and package it for external agency funding.
- To recommend better visitor services & amenities not only to enrich the tourist's experience but also increase the stay duration.
- To develop a plan to showcase the best of the local heritage, culture, art, crafts, cuisine and the natural attractions, and make it part of the tourist's itinerary.
- To prepare a perspective plan for a duration of 20 years for developing sustainable tourism giving year- wise phasing of investment; indicating short-term and long-term plans, targets and ground realities.
- To suggest proper implementation structure indicating all activities to be undertaken by different agencies with the time frame for each activity.

## **B. TERM OF REFERENCE**

The terms of reference for preparation of 20 years perspective plan are:

1. Assess the existing tourism scenario in the U.T with respect to existing traffic levels and inventory of :
  - Natural resources
  - Heritage and other socio- cultural aspects
  - Quantitative/ demographic factors like population, employment, occupation, income levels etc

- Services and infrastructure already available
2. Review the status of existing development/ investment plans of schemes for the development of tourism in the region.
  3. List down and evaluate existing potential tourist destinations and centres and categorise them on the basis of inventory of attractions, infrastructure availability, degree of popularity, volume of traffic flow etc.
  4. Analyse and categorise exiting/ potential destination s and centres, as a stand alone destination, part of a circuit and / or major attractions for special interests groups etc
  5. Assess the existing infrastructure levels at identified destinations/ centre in terms of quality of roads/ transportation facilities, civic amenities, enroute transit facilities, boarding and lodging facilities etc.
  6. Broadly assess the traffic flow to identified destinations & centres for assessment of infrastructure requirements taking into account past growth trends, suggested linkages and integration, future expected developments including likely investments by the State and investments climate/ incentive for the private sector, etc.
  7. Attempt and arrive at an indicative cost configuration of likely investment on infrastructure development under different heads and to prioritise investment needs by drawing up a phased investment plan covering the next 20 years.
  8. Identify the existing as well as new tourism projects for expansion/ augmentation, upgradation of facilities and services, destinations & centres, which have potential for development.
  9. Undertake product conceptualisation cum feasibility exercise inter-alia for identified projects covering aspects like locational evaluation, schematic product planning & conceptualisation including quantification of individual project parameters, assessment of overall investment levels and of project viability cum feasibility study exercises etc.
  10. Prepare an action plan for implementation of identified potential development schemes/ projects/ products and for development of infrastructure in conformity with the policy objectives & guidelines provided by the concerned state/ central agencies/ departments and the requirements of national development and funding agencies. The overall development plan to also take into account WTO's Bali declaration on tourism development.
  11. Calculate project- wise potential for employment generation; a reasonable percentage of potential employment is to be reserved for women.
  12. Indicate the actual and the projected number of domestic and foreign tourist arrivals for each proposed tourist place.
  13. Prioritise the scheme on the basis of employment potential of the project and the tourist arrivals at the proposed place.
  14. Provide An inventory of existing infrastructural facilities (including paying guest facility), after which, the proposed infrastructure needs to be split up into various segments concerning different State Government departments, such as PWD, Forest, Culture, Handicrafts etc., and dovetailed with the Tourism Plans.

15. Identify and suggest foreign funding agencies for financial assistance.
16. Recommend sources of funding and incentives for private sector participation.
17. Prepare the institutional framework in the State to oversee/ co-ordinate the development of tourism infrastructure considering the available institutional machinery.
18. List down facilities for performance by local artists and cultural troupes including cultural complexes
19. Suggest handicraft shops at various tourist places, which could be run by women.
20. Assess potential developing health resorts at/near the tourist places. Yoga classes, nature cure facilities, ayurvedic system of medicines should be available at these places to attract tourists.
21. Incorporate attractive packages/schemes to attract private sector investment in development of resorts, water sports centres etc.
22. Assess environmental quality and Carry out Initial Environmental Examination for recommended projects.

### **A.3 REPORT STRUCTURE**

The report is divided into two parts other than the initial two **Sections A & B** of Introduction and the Tourism Trends for Daman & Diu. **Part A** covers the tourism development of Daman and **Part B** that of Diu. Each of these parts has seven chapters covering the following sections: Regional Analysis, Tourism Scenario, Demand Forecasting, Product Conceptualisation, Infrastructure, Requirements Study, Initial Environmental Examination, Marketing Strategy. Finally the detailed implementation plan and Cost Benefit Analysis of the recommendations phased over twenty years for Daman & Diu are provided in the last **Section C** of the report.

## TOURISM TRENDS

Analysis of the tourism trends would consist of an extensive analysis of the various aspects of tourist buyer behaviour – in terms of the arrival patterns in the international scenario, domestic trends, and existing trends in Daman and Diu. This analysis would provide a base for setting the vision and goals for the destination i.e. twenty years perspective plan. This further would give a base for developing a competitive tourism strategy that would consist of the tourism marketing strategy, the destination development strategy, and the service mix strategy. The products and recommendations related to destination development and service mix has been discussed in detail in Chapter 4, the tourism promotion strategy are discussed in the Chapter 7 of the report.

### B.1 TOURIST ANALYSIS

As a start, a comparison has to be made between the demand and supply side of the destination and the sites. For the purpose of understanding the tourist trends over the years, the tourists have been classified broadly into international and domestic tourists. The following sections will discuss about international tourism in India, Daman and Diu, followed by domestic tourism trends in the region.

### B.2 INTERNATIONAL TOURISM

#### B.2.1 INTERNATIONAL TOURISTS TO INDIA

##### A. Tourist Arrivals

In estimating foreign tourist arrivals to India, it is appropriate that the figures of arrivals from Pakistan and Bangladesh are excluded, as they include cross-border movements that are not necessarily related to tourism. Bangladesh and Pakistan account for approximately 18-19% of total arrivals to India. Table B.1 gives a summary of international tourist traffic to India during the year 1991 to 2001:

**Table No B.1 Average Annual Growth of Overseas Arrivals to India**

Year	Number	Percent Change
1991	16,77,508	-1.7
1992	18,67,651	11.3
1993	17,64,830	-5.5
1994	18,86,433	6.9
1995	21,23,683	12.6
1996	22,87,860	7.7
1997	23,74,094	3.8
1998	23,58,629	-0.7
1999	24,81,928	5.2
2000	26,49,378	6.7
2001	25,37,282	-4.2

(Source: Department of Tourism, Government of India)

\*\* In 2001, a decline of 4.2% is observed in foreign tourist arrivals to India primarily after the 11<sup>th</sup> September events, against a growth of 6.7% in 2000. In

2001, prior to September 11 event growth of 5.8 % is observed and post September 11 to December which includes the three most important tourism months for foreign tourists a decline of –20.3% is observed.

### **B. Major Tourist Generating Regions**

The major tourism-generating regions for India are (based on 2001 figures and excluding arrivals from Pakistan and Bangladesh):

**Table No B.2 Ranks of Major Tourist Generating Regions to India**

<b>Rank</b>	<b>Regions</b>	<b>Percentage of total</b>
1	Western Europe	32.3
2	South Asia	26.5
3	North America	16.5
4	South East Asia	5.5
5	East Asia	5.1
6	West Asia	3.8
7	Africa	3.6
8	Australasia	2.6
9	Eastern Europe	1.5
10	Central and South America	0.9

(Source: Department of Tourism, Government of India)

West Asia in the above table refers to countries of the Middle East region, while East Asia refers to Japan, China, Taiwan, South Korea and Hong Kong.

It is noteworthy that in the international scenario, the countries generating the maximum number of tourist's i.e. more than 50% belong to the Europe and America. The same scenario used to prevail in India as late as 1992.

### **C. Major Tourist Generating Countries**

Amongst these regions, the major tourists generating countries (based on 2001 arrivals) are as shown in Table B.3

**Table No B.3 Rank of Major Tourist Generating Countries to India**

<b>Rank</b>	<b>Countries</b>	<b>Percentage of total</b>
1	UK	19.7
2	USA	16.0
3	Sri Lanka	5.5
4	France	5.0
5	Canada	4.3
6	Japan	3.9
7	Germany	3.9
8	Malaysia	2.8
9	Australia	2.6
10	Singapore	2.1

(Source: Department of Tourism – Government of India)

A comparison with past years reveal that the percentage tourists from the top four countries i.e. UK, USA, Sri Lanka, France have been contributing around 40% of total tourists arrivals in India. Canada, Japan and Germany have also been steady tourists providers over the past 2-3 years. As per WTO data, the outbound tourism in Europe has



increased by an annual average of 4.6% in 1995-98, clearly indicating a need for fresh efforts for capitalising on the trend of the increasing number of tourists, who are also high spenders.

#### ***D. Repeat Visitation Factor***

According to 1996-97 figures, 22% of visitors had visited India on an earlier occasion as compared to a figure of 42% in 1992. This shows a decline in the repeat visitation figures.

*(Source: Department of Tourism, Government of India)*

#### ***E. Ports of Disembarkation In India***

The major international airports for entry and exit were Mumbai, Calcutta, Delhi and Chennai. Most of the international tourists have Delhi as their entry point (33.7%), followed by Mumbai (26.7%), Chennai (12.0%) and Calcutta (4.4%). The minor international airports identified for entry and exit were Goa, Varanasi, Trivandrum, Ahmedabad, Calicut, Trichy, Hyderabad and Bangalore. The land exit points were identified as Raxaul, Sonauli and Haridaspur, while the only rail exit point was Attari. Bombay has traditionally been the major port of entry for international tourists, followed by Calcutta and Madras. *(Source: Department of Tourism, Government of India)*

#### ***F. Seasonality of Foreign Tourism to India***

The seasonal pattern of foreign tourism to India has remained more or less constant over the years. Table B.4, which is based on 1999 statistics, shows the seasonality pattern in 1999.

**Table No B.4 Seasonal Fluctuation of Foreign Visitors arrival to India**

<b>Nationality</b>	<b>Lean Month</b>	<b>Peak Month</b>
UK	June	January
USA	May	November
Sri Lanka	May	August
France	May	February
Germany	May	January
Canada	May	November
Japan	June	February
Australia	June	November
Singapore	May	December
Malaysia	June	December

*(Source: Department of Tourism, Government of India)*

The table shows the months of largest visitors are November to February, which represent the best season for tourism in India. The temperature increases from the month of April and continues till the month of June, making it unpleasant for the tourists to visit any part of the country except a few places in the Himalayas. Rains take over from summers in June and continue till September, again affecting the tourist inflow. The tourist inflow starts primarily after this period in October and continues till the middle of March. Though tourism is prevalent throughout the year, the effective period of tourist inflow stays restricted to six months.

### ***G. Demographic Profile***

Male tourists outnumbered females, in the ratio of 62.6:37.4. The maximum numbers of tourist were in the age group of 25-44 years (41.2 per cent), while the number of tourists in the age group of 15-24 was 10.8 percent. This clearly indicates that there is a predominance of young group with almost 50% of tourist in the less than 44-age category. However it is observed that the 45-64 age group also contributes a significant number of tourists, more than 30% of the tourists. This implies that India's tourist products cater to all age group segments.

Classification of tourists made according to activity status revealed that 32 percent tourists were self-employed, while 41 percent were employed in the private sector. Occupational classification revealed the predominant categories as Professionals (22 percent), Entrepreneurs (19 percent) and Executives (16 percent). (Source: Department of Tourism, Government of India).

### ***H. Economic Profile***

According to per capita household income, nearly 41 percent of international tourists were in the highest income group (> Rs. 400,000), while 26 percent were in the lower income group (< Rs. 50,000). Nearly 6 percent of all tourists travelled on package tours dominated by UK and German nationals. This is particularly important, because this indicates the lesser degree of involvement of tour operators and travel agents as far as inbound tourism is concerned in India. The consultants' studies at other heritage destinations within India also show similar figures, with most of the tourists coming in-groups of 2 to 4 and not as a package tour. The tickets are booked mainly through travel agents, but their roles end there as far as India is concerned.

The major items of interest while shopping are Textiles (26 percent), Jewellery, Gems and Precious Stones (22 percent) and Handicrafts (19 percent). This gives a rough picture of the items of interest for the international tourists at India.

## **B.2.2 INTERNATIONAL TOURISTS TO DAMAN:**

### **A. Total Visitors**

As per the discussions with the tourism stakeholders and the officials in the region the international tourists constitute less than 1% of total visitors (Domestic & international) to Daman. It has further declined in year 2001, which could be attributed to an overall reduction in tourist arrivals in 2001 due to the September 11 event.

### **B. Rank of Major Tourist Generating Markets**

The Western European countries top the list of major tourist generating market in the Daman Region. This could be attributed to the special attraction that these tourists have due to the historical rule by the Portuguese for four and a half century.

### **C. Duration of Stay**

A recent qualitative survey conducted by the consultants with the assistance of the Department of Tourism, Daman and Diu, indicates that the few foreign tourists visiting the region are typically either the Europeans interested in the legacy left behind by the Portugal or the tourists disembarking from Mumbai and are in need of a value for money accommodation nearby. These tourists typically stay back on an average for 2-5 days.

### B.2.3 INTERNATIONAL TOURISTS TO DIU:

#### A. Total Visitors

As per the tourism statistics, the international tourists constitute approximately 8% of total visitors (Domestic & international) to Diu in 1999 and 2000. However it has declined to less than 3% in year 2001 which could attribute to an overall reduction in tourist arrivals in 2001 due to the September 11 event.

#### B. Growth Rate

The growth rate of foreign tourists visiting the region can be divided into three troughs and three droughts as can be observed in the figure B.1 below. The peaks observed are in 1993, 1997 and 2000. All these years are also India's years of economic prosperity at peak. The low in year 2001 may be however attributed to the September 11 events.

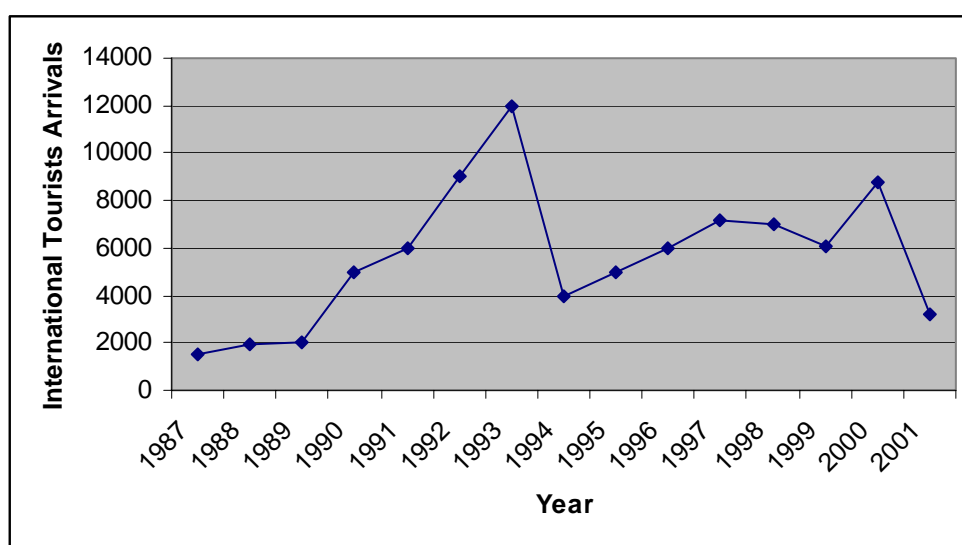


Figure B.1 International Tourist Arrivals to Diu

#### Share of India Tourism

Successive foreign tourist surveys of the Government of India have estimated the share of foreign tourism to Diu, as a percentage of total international tourism to India from 1998 onwards is shown in Table B.5. It is observed that it showed an increasing trend upto year 2000. However 2001 shows a sharp decline not only in the number of tourists but also % share. This could be attributed to the tourist's perception of Diu's proximity to the area of disturbances, i.e. Pakistan and Afghanistan.

Table No B.5 Share of Foreign Visitors to the Region in India Tourism

Year	Percentage share of Diu
1998	0.36%
1999	0.30%
2000	0.40%
2001	0.16%

### **C. Rank of Major Tourist Generating Markets**

The Western European countries top the list of major tourist generating market in the Diu Region. The other countries contributing to tourism in Diu are Australia, New Zealand, USA, Canada and Israel.

It is apparent that of all the nationalities of foreign tourists who visit India, tourists from the Western European Region have a special predilection for the Diu region, evidently due to its historical rule by the Portuguese for around four and a half century and serene virgin beaches. Certain countries of USA and Canada region also show a special preference for the region due to its pleasant weather and pristine beaches.

### **D. Duration of Stay**

A recent qualitative survey conducted by the consultants with the assistance of the local administration revealed that the foreign tourist typically stayed at Diu for a period between 2 - 7 days.

## **B.3 DOMESTIC TOURISM**

### **B.3.1 DOMESTIC TOURISTS TO INDIA**

Domestic Tourism in India is a phenomenon that is particularly remarkable, for given its immense magnitude, its dimensions and characteristics have never been systematically studied. It has generally been given low priority by the Department of Tourism, Government of India, for the focus has been on foreign tourism and foreign exchange earnings. Hence, only feeble attempts have been made by the Department of Tourism to study domestic tourism. The first survey of domestic tourism by the Department of Tourism was a limited pilot survey carried out in 1981-82. However after understanding the importance of domestic tourism in the Indian scenario, there are studies conducted regularly by the Department.

In India, with its ethnically diverse population of more than 1000 million and the rapid economic and social changes that it is seeing, domestic tourism is developing at a particularly speedy pace. This transformation is mostly a manifestation of societal changes that India is seeing - disposable incomes have grown with rise in wages, two income households and smaller families. Social values are changing, with a move away from the puritan work ethic to one that recognises the contribution and need for leisure to ensure a better quality of life. Other influences are increasing urbanisation, the advent of the advertising age, the influence of television, the loosening of the joint family, the woman's increasing role in family decision making, a general move away from conservatism, changes in transportation, extra disposable income, sponsored holiday plans and the emerging meetings and conventions market, amongst innumerable other influences.

### **A. Size of the Domestic Tourism Market**

As per the estimates of the Department of Tourism, the total number of domestic tourists is 176082442 in 1999. This constitutes around 17% of the population of India. It is indisputable that the volumes of domestic tourists are large and will continue to grow larger.

## **B. Frequency of Vacations**

64% of urban middle and higher income class Indians take at least one vacation every year. 22% take more than one vacation every year. On an average, every household takes one vacation every year.

## **C. State-Wise Origin of Tourists**

According to a survey by the Department of Tourism, around 70% to 75% of domestic tourists in India originate from eight main states. These are West Bengal, Maharashtra, Tamil Nadu, Uttar Pradesh, Gujarat, Karnataka, Madhya Pradesh and Delhi.

## **D. Sources of Information**

When planning a vacation, domestic tourists use the information sources shown in Table B.6.

**Table No B.6 Source of Information for Domestic Tourists**

<b>Source</b>	<b>%</b>
Word of Mouth	54.0
Government Tourist Office	29.0
Magazines/Newspaper Articles	29.0
Guide Books	27.0
Advertisements	24.0
Travel Agents	21.0

## **E. Purpose of Visit**

From the past surveys, it is estimated that domestic tourists to any region have the purposes shown in Table B.7.

**Table No B.7 Purposes of Domestic Tourists**

<b>Purpose</b>	<b>%</b>
Vacation	75.0
Visit Friends and Relatives	28.0
Vacation-cum-Business	19.0
Pilgrimage	14.0
Transit	5.0

## **Destination Preferences**

The destination preferences of domestic tourists (non-exclusive categories) are as indicated in Table B.8.

**Table No B.8 Rank of Destination Preference of Domestic Tourists**

<b>Rank</b>	<b>Destination Type</b>	<b>%</b>
1	Hill Station	71.50
2	Seaside/Beach Area	<b>48.40</b>
3	City	44.50
4	Religious	35.00
5	Cultural/Historical	34.10
6	Other types	47.90

This suggests that domestic tourism is greatly recreation or leisure oriented and displays a lesser interest in culture. Interest in historical-cultural destinations is greater amongst those who do not take frequent vacations and those who take longer vacations. The domestic visitor to historical-cultural destinations tends to be somewhat older than those to other destination types, as also has a higher family income. Amongst ethnic groups, the greatest interest in historical/cultural destinations is amongst Andhraites, Bengalis, Maharashtrians, Gujaratis and Kannadigas.

#### **F. Activities Engaged in by Domestic Tourists**

'Sightseeing' is the most popular activity amongst domestic tourists, at 59%. All popular activities rank-ordered are listed in Table B.9.

A review of these activities reveals domestic tourists' interests while on vacation, which can be characterised as outdoors, active (as opposed to rest and relaxation), and recreation oriented.

**Table No B.9 Rank of Activity of Domestic Tourists**

<b>Rank</b>	<b>Activity</b>	<b>% Participation</b>
1	Sightseeing	59
2	Visiting temples and religious places	51
3	Walking on the beach	44
4	Going for scenic walks	42
5	Going for shopping	40
6	Taking photographs of people in group	40
7	Visiting monuments	40
8	Trying the local food	38
9	Picnicking	37
10	Visiting museums	37
11	Taking photographs of tourist attractions	36
12	Visiting parks/zoos	34

13	Listening to music	30
14	Strolling in the market, window shopping	29
15	Going for a boat ride	28
16	Eating different snacks	29
17	Sitting and relaxing	26
18	Animal watching in a wildlife sanctuary	25
19	Swimming in the sea	25
20	Watching TV/Video	23

### **G. Average Length of Stay**

The average length of stay of a domestic tourist is 3.5 days. According to the survey by the Department of Tourism, the average length of stay of domestic tourists at various destination types is as shown in Table B.10 below:

**Table No B.10 Average Length of Stay of Domestic Tourists**

<b>Destination Type</b>	<b>Average Length (days)</b>
Metropolitan Cities	7.6
Other Business Centers	4.3
Hill Stations and Beach Resorts	6.0
Historical Sites	2.8
Pilgrim Centres	2.4

### **H. Group Size**

Domestic tourists typically travel as families (approximately 64%). In general, 25% are found to travel in groups of larger than 7 (larger than a large nuclear family). The average group size is 4.

### **I. Touring Patterns**

While on vacation, 55% of domestic tourists 'tour around', staying overnight at more than one destination. This preference for touring around is prevalent to a great extent, regardless of frequency or duration of vacation.

### **J. Mode of Transport**

According to the survey by the Department of Tourism, the modes of transport used by domestic tourists for inter-city travel are as shown in Table B.11. It is possible that with the introduction of large number of luxury buses and cars some shift may have taken place towards this mode since 1981, however rail will still remain the dominant mode with 'Private/ self driven transport' making an entry but not yet an appreciable figure.

**Table No B.11 Mode of Transport of Domestic Tourists**

Mode	%
Rail	49.7
Bus	38.6
Taxi	6.4
Air	4.7

**K. Factors Impacting Tourist Satisfaction**

In a survey of domestic and foreign tourists in India, certain factors were identified which were of concern to tourists, which were major factors of dissatisfaction, and served to inhibit greater vacationing. Both foreign and domestic tourists were dissatisfied with the availability of roadside amenities, the availability of highway signboards, the quality of roads, the availability of car repair facilities. For domestic tourists, other prominent factors were restricted destination choices and concern for physical safety and security, as well as dissatisfaction with guide services. For foreign tourists, important factors were concern for physical safety and security and, to a lesser extent, lack of satisfactory accommodation. Foreign tourists were also dissatisfied with the availability of transportation services and the variety of recreational facilities.

**B.3.2 DOMESTIC TOURISM TO DAMAN:****A. Number of Domestic Visitors**

The figures obtained from the Daman administration are tabulated in the table B.12.

**Table No B.12 Tourist Arrivals Daman**

Year	Tourists	% Growth
1991-92	192599	-
1992-93	203772	6%
1993-94	272080	34%
1994-95	373000	37%
1996-97	413000	11%
1997-98	438380	6%
1998-99	463350	6%
1999-00	470550	2%
2000-01	531339	13%

It is observed that there has been a significant increase in tourist arrivals here. A CAGR of 11.94% with 1991-1992 as the base period is calculated over the next 10 years. It is observed that most of these tourists are typically the weekend tourists and are from the nearby areas of Maharashtra and Gujarat states.

**B. Growth of Domestic Tourism to Daman**

The CAGR of tourism for Daman over the past ten years was approximately 11.94%, which, on the basis of available data from the Department of Tourism, Daman, is somewhat higher than the growth rates of Goa. It indicates the rapid increase in



tourism in the region with lesser development in comparison, will have given rise to unplanned and unorganised development of tourism infrastructure and services.

### **C. Purpose of Visit**

The survey conducted by the Consultants estimates that domestic tourists to Diu have the purposes shown in Table B.13

**Table No B.13 Purposes of Domestic Tourists**

<b>Purpose</b>	<b>%</b>
Vacation	83.0
- Main Vacation	20.0
- Weekends	63.0
Visit Friends and Relatives	3.0
Vacation-cum-Business	14.0

### **D. Average Length of Stay**

The average length of stay of a domestic tourist is 2.2 days. However the domestic tourist trends in other beach destinations is observed to be around 6 days. The endeavour of the development and marketing plan should also be to increase the average length of stay.

### **E. Group Size**

Domestic tourists typically travel as families (approximately 77%) or with friends (around 20%). In general, more than 55% are found to travel in groups of 2-4 (the size of nuclear family). The average group size is 3.9.

### **F. Tourist preferences**

The tourists coming to Daman prefer to spend their time at beaches, theme parks, and visit heritage and cultural sites. It may be deduced that Daman does attract a number of domestic tourists by the prevailing Portuguese culture left behind by the their four and a half century rule in the region.

More than 85% of the tourists in Daman go on vacations to relax mentally and physically, and more than 70% tourists vacation to spend time with their families. These are typically tourists from commercial cities who want to get away from the hectic routine to a nearby destination. These tourists are just curious about culture in the region but are not keen on cultural interaction or learning. More than 60% of the tourists prefer to go to picturesque landscapes or scenic destinations for vacations.

More than 70% of the tourists like to be pampered during vacations and are willing to pay for it. Around 68% of the tourists prefer to visit new and exotic destinations that are not frequented by tourists. This could be a threat to Daman tourism in case of development of new alternatives in the vicinity. Availability of package tours is not an important decision criteria for deciding a destination for vacationing.

## G. Mode of Transport

According to the survey by the Consultants with the help of Department of Tourism, the modes of transport used by domestic tourists for reaching Daman are as shown in Table B.14. Private vehicles are used by more than 50% tourists and the rail mode by more than 35%. This highlights the following,

- a) The visitation to Daman is mainly from the nearby states of Maharashtra and Gujarat.
- b) The roads and rail infrastructure are well developed and hence have made Daman very accessible.
- c) The local transport system needs strengthening.

**Table No B.14 Mode of Transport of Domestic Tourists**

Mode	%
Private Vehicle	51.5
Taxi	6.1
Rail	36.4
Air	6.1

## L. Tourist Satisfaction

The survey brought out the following points:

- More than 90% of the tourists felt the accommodation to be above average and value for money.
- However the local transportation facility in Daman was considered to be a sore point by more than 70% of these tourists.
- Around 55% of these tourists were more than satisfied by the evening entertainment facilities in Daman.
- Most of the tourists were satisfied with the food in Daman. In fact only 3% felt the food required improvement, the rest were more or less satisfied with it.
- Around 55% of the tourists found the wayside amenities to be satisfactory.

In general all the tourists found Daman to be a value for money experience and 97% found it to be a good destination.

## H. General profile of the existing tourists

- More than 90% of the tourists fall in the 18-55 years age group with around 70% less than 35 years of age.
- 53.3% of these tourists are from the SEC A2 category and 20% from the SEC A1 category.
- 33% tourists stayed in the 2-3 star hotels and more than 50% tourists in resorts.

- Around 80% of the tourists were in Daman without any guidance from any kind of tour operators, 17.6% were assisted by some private tour operator.

#### *International-Domestic Mix*

The mix of international and domestic tourist markets to the region today is approximately 1: 99. On the basis of the visitor projections made till the year 2022, it is estimated that this ratio will gradually change over the years to become 2.4% international and 97.6% domestic.

### **B.3.3 DOMESTIC TOURISM TO DIU:**

A recent survey conducted by the Consultants with the help of the officials of the state tourism department, the information provided by them and the local inquiries revealed the following characteristics on domestic tourism in Diu.

#### **A. Number of Domestic Visitors**

As per the hotel occupation figures provided by all the hotels in Diu to the State tourism department in a standard format, a total of 108540 tourists visited Diu in 2000-2001. The registration of tourists entering Diu however shows a figure of 325000. These would be typically the day tourists from Gujarat. The foreign tourists in the period, was 2.9%, while in year 2000 it was 8.3%.

#### **B. Growth of Domestic Tourism to Diu**

The CAGR of tourism for Diu over the past five years was approximately 10%, which, on the basis of available data from the Department of Tourism, is somewhat higher than the growth rates of other Beach destinations in India, like Goa. It indicates that as compared to Goa if planned products are developed Diu has a good opportunity to attract tourists from Goa. Data is not available on the growth of Indian domestic tourism in general, or growth rates of other destination types.

#### **C. Major Tourist Generating Regions for Domestic Tourists Diu**

Data is not available on State-wise source markets to Diu. However, local inquiries and a recent survey conducted by the Consultants revealed that approximately 85% of the domestic arrivals at Diu are from the Gujarat State, while the rest are from other States. Local inquiries also show that the majority of domestic arrivals from other states to the region are from Maharashtra, Delhi, and Punjab.

#### **D. Sources of Information**

56% of the tourists visiting Diu were aware about Diu as a tourist destination through friends. This implies that word of mouth publicity has been the key source of increasing tourism in Diu, emphasising on the necessity of increasing the destination experience for the tourist. 7% of the tourists in the survey sample got information on Diu from the State tourism board, reiterating the need of increasing and strengthening the distribution network of the Diu tourism product by the state tourism department. 37% tourists got information on Diu through newspapers and magazines.

#### **E. Purpose of Visit**

The survey conducted by the Consultants estimates that domestic tourists to Diu have the purposes shown in Table B.15.

**Table No B.15 Purposes of Domestic Tourists**

<b>Purpose</b>	<b>%</b>
Vacation	70.0
- Main Vacation	20.0
- Weekends	50.0
Visit Friends and Relatives	11.0
Vacation-cum-Business	11.0
Study Tour	11.0

**F. Average Length of Stay**

The average length of stay of a domestic tourist is 2 days. However the domestic tourist trends in other beach destinations is observed to be around 6 days. The endeavour of the development and marketing plan should also be to increase the average length of stay.

**G. Group Size**

Domestic tourists typically travel as families (approximately 54%) or with friends (around 26%). In general, more than 50% are found to travel in groups of 2-4 (the size of nuclear family). The average group size is 3.7.

**H. Mode of Transport**

According to the survey by the Consultants with the help of Department of Tourism, the modes of transport used by domestic tourists for reaching Diu are as shown in Table B.16. The use of private vehicles by 40% of the tourists indicates at two points,

- a) The visitation to Diu is mainly from the nearby state of Gujarat.
- b) The lack of a proper local transport system in Diu.

The usage of rail and air is minimal due very expensive air travel and lack of complete rail connection to Diu. This highlights the accessibility problem of Diu.

**Table No B.16 Mode of Transport of Domestic Tourists**

<b>Mode</b>	<b>%</b>
Private Vehicle	40.0
Taxi	7.0
Rail	9.0
Air	4.0
Private Bus	7.0
Govt Bus	31.0

## **I. Tourist Satisfaction**

The survey brought out the following points:

- More than 84% of the tourists felt the accommodation to be above average and value for money.
- Around 65% of these tourists were highly unsatisfied with the local transport facilities in Diu.
- Around 60% of these tourists felt that the evening entertainment amenities were average or below average.
- More than 70% of the tourists found the wayside amenities unsatisfactory.
- More than 80% tourists in the survey sample were more than happy with the food in Diu.
- Around 65% of the tourists found the accessibility to Diu average or below average.

In general more than 85% of the tourists found Diu to be a value for money experience and a good destination.

## **J. General profile of the existing tourists**

- More than 90% of the tourists fall in the 18-55 years age group with 56% less than 35 years of age.
- More than 45% of these tourists are from the SEC A1 category and 32% from the SEC A2 category.
- 73% of the tourists surveyed were married and 56% were travelling with their families. The 27% unmarried tourists were travelling with their friends.
- 34% tourists stayed in the guesthouses and 30% tourists in 2-3 star hotels and 34% in other hotels and resorts.
- Around 90% of the tourists were in Diu without any guidance from any kind of tour operators.

### *International-Domestic Mix*

The mix of international and domestic tourist markets to the region today is approximately 3: 97. On the basis of the visitor projections made till the year 2022, it is estimated that this ratio will gradually change over the years to become 18.8% international and 81.2% domestic.

## IMPLEMENTATION PLAN

### C.1 INTRODUCTION

The tourism development plan involves complex activities by many government agencies. Thus, there is a need for proper direction and co-ordination in implementing the recommendations of the project.

The Union territory administration is constrained with limited budget allocation for the maintenance of its core infrastructure. This has resulted in the non-arterial roads and the village roads being re-carpeted much later than their serviceable lifespan.

The proposed water supply schemes are being implemented in phases, each phase is sanctioned with a meager annual budgets compared to the total cost projections, which results in the projects overshooting budgeted cost and time.

The Union territory administration being directly under the Central Government requires all major proposals to be routed through New Delhi for approval, which results in substantial project delays.

At present Administrator (U.Ts) has Collector Daman, Collector Diu, Development Commissioner, Finance Secretary and various other heads working under him. All the above IAS officers hold various portfolios and are secretaries to various departments. Administrator is in charge of Home, Personnel, Vigilance, Parliamentary affairs, Revenue, Social welfare, Tourism Information & Publicity. Similarly Secretary (Finance) has charge of Finance Accounts, Taxation (including excise), Industries, Official Language, PWD (I&WS), Election, Power, Transport. These responsibilities are finalised by the Administrator.

This chapter presents the imperatives and proposed institutional framework for implementing the recommendations of the study. It also presents the project outlay estimates and discusses the implementation schedule.

### C.2 APPROACH

The proposed plan for the development of the Daman-Diu Union Territories accords a dominant role to tourism in the overall economy. Tourism is expected to boost the economic development of the area. Viewed in this context, the successful implementation of the tourism development project assumes crucial importance.

The plan proposed earlier in the report has to be executed in four phases, depending on the time taken for execution and the expected volume of tourists. As is evident from the projections, there is bound to be an increase in the number of tourists visiting Daman-Diu territories, starting from the year 2003. Therefore, the developments have been phased into the following:

- i. Development to start by 2003 and finish by 2005
- ii. Development to start by 2006 and finish by 2010
- iii. Development to start by 2011 and finish by 2016
- iv. Development to start by 2017 and finish by 2022

### **C.3 INSTITUTIONAL SET-UP**

The Project will be implemented using an organisation consisting of two functions:

- (1) Management and Co-ordination Function; and
- (2) Implementing Function, in order to ensure smooth implementation in a given time frame.

### **C.4 PROPOSED PROJECT IMPLEMENTATION SET-UP**

Management and co-ordination will be assumed by the Project High Power Committee (PHP) and the Project Management Unit (PMU). The PMU will compose of staff from major implementing agencies.

- **Project High Power Committee (PHP)**

The PHP will consist of members nominated by the Administrator of Union territory. It can be chaired by the Administrator and will have representation from the Heads of all implementing departments such as Collector, Tourism, PWD, Forest, Archaeological survey of India, Airport, Port, Fisheries, Police, Town Planning & Village Heads. The DG, ASI and Joint Secretary Ministry MOT will be the special members. The PHP will function as the apex body for Project implementation.

The PHP meetings will be held periodically (quarterly) and on other occasions as requested by Administrator. The meetings will consider important aspects such as changes of sub-projects/project packages, annual budget provision, and other crucial matters including implementation progress.

- **Project Management Unit (PMU)**

Beside the roles of the PHP, day-to-day decisions for smooth execution of work will be made by the PMU in co-ordination with the related implementing agencies.

In order to manage the implementation of the Project, PMU will be organised as (1) Daman Unit (PMU-Daman) and (2) Diu Unit (PMU-Diu).

A definite system for monitoring the project progress and the fund disbursement is essential to achieve the successful implementation of the Project, which requires close and constant co-ordination with relevant agencies. The PMU-Daman will co-ordinate and advice the local offices of the implementing agencies in Daman district for the management of the sub-projects/project packages. The PMU-Diu will co-ordinate and advice the local offices of the implementing agencies in Diu district for the management of the sub-projects/project packages.

The PMU, should be given a charter which will enable it to solve various problems relating to the project management, such as:

- Delay in completion of detailed design due to lack of local budget and/or manpower;
- Lack of co ordination and co operation between implementing agencies at ground level;
- Improper design from technical and tourism promotion viewpoints.

- Unsuccessful tendering and setting norms for short listing of contractors for creating tourism infrastructure hardware and software;
- Improper quality control on sites;
- Delay in fund disbursement from the funding agency in case of international funding.

## **C.5 IMPLEMENTING FUNCTIONS**

The implementing agencies shall function as the responsible body for actual implementation of the sub-project/project package(s). The implementation will include the following activities:

### **(1) Preparation stage**

Ensuring budget provisions and preparatory activities such as survey, detailed design (DD) and detailed implementation programme (DP).

### **(2) Tendering and contract stage**

For implementation of project packages contractor should be selected through tender procedures. The adherence to the stipulated tender procedures will be the responsibility of the implementing agency.

### **(3) Implementation stage**

All the implementing agencies will be responsible to execute the project packages including the following works with the co-ordination of PMU:

- Site supervision; and
- Arranging and confirmation of the budget from the respective governments for the counter Rupee portion for the sub-project implementation in case project is financed by an international agency; and
- Providing necessary documents for the disbursement request.

Besides, the implementing agencies shall exchange information with PMU to maintain a timely co-ordination in respect of:

- Reporting the monthly progress of the sub-project/project package implementation for the above activities
- Reporting disbursement situations; and

Consulting for any changes taking place in the sub-project/project package such as budget, scope implementation schedule and other problems relating to the sub-project/project package implementation.

## **C.6 FINANCIAL INSTITUTIONS:**

Table: C.1 contain list of International Financial institutions where tourism funding is available.



**Table No. C.1 Sources of Financing for Tourism Development**

<b>Sr. No</b>	<b>Name of the Funding Agency</b>	<b>Name of the Country</b>	<b>Form of assistance</b>
1	Asian Development Bank	Manila, Philippines	Concessional loans, equity investment & technical assistance.
2	Belgian Administration for Development Co-operation	Belgique/Belgian diplomatic mission in the country	Grants, technical co-operation activities, project investment, capital participation, subsidies for education & training purposes.
3	Danish International Development Agency(DANIDA) an integral part of the Danish government	Denmark	Grants, technical assistance's including related operations & services.
4	Communication and Information Department or CFD local office	France	Loans on various terms, subsidies, shareholdings, and technical assistance.
5	KFW	Germany	Soft loans, grants, guarantees, consultancy services & training.
6	German Investment & Development company	Germany	Long term loans, equity-type loans, equity participation, guarantees within the scope of project finance
7	Directorate General for Development Co-operation (DGCS)	Italy	Grants, soft loans, mixed credits, equity financing in joint ventures education & training
8	Japan International Co-operation Agency	Japan	Technical co-operation through; (a) training in Japan; (b) dispatch of Japanese experts; (c) provision of equipment; (d) project -type technical co-operation; (e) development studies. Support for Grant Aid Program.
9	Japan Bank for International Co-operation (JBIC)	Japan	Soft loans to foreign government, government organizations with government guarantees & other eligible organizations; loans, equity & debt financing to the private sector usually with collateral security or guarantees.
10	BANCOMEXT	Mexico	Credits on favourable terms, guarantees, financing of tourism promotion activities & training.

11	The Netherlands Development Finance Company	The Netherlands	Long term loans, share participation, guarantees within the scope of project finance, terms of lending are market oriented without government, subsidies, soft loans.
12	Norwegian Agency for Development Co-operation (NORAD)	Norway	Soft loans, grants, guarantees & mixed credits.
13	Swedish International Development Co-operation agency	Sweden	grants, credits
14	Common wealth Development Corporation	London	Loans, equity investments at market terms without government guarantee, financial advice & consultancy services.
15	United States Agency for International Development	Washington	grants to governmental & non-governmental organizations.
16	Overseas Development Administration (ODA)	London	Grants, technical assistance, training & research & similar activities.

## C.7 PROJECT OUTLAY

The investment requirements for various agencies to implement the study recommendations are given below.

## C.8 MARKETING FOR DAMAN & DIU

Table: C.2 give the details of the investment requirements for Department of Tourism for Marketing Daman & Diu Union territories.

**Table No. C.2 Expenditure on Marketing phase wise**

Sr. No	Developmental Measures	Phase-1	Phase-2	Phase-3	Phase-4	Total Cost (in Lakh Rs.)
		2003-2005	2005-2010	2011-2016	2017-2022	
1	Press	120.00	165.00	100.00	260.00	645.00
2	Outdoor Advertising	100.00	130.00	80.00	190.00	500.00
3	Publicity Material (Brochures,CD, Maps)	70.00	70.00	40.00	110.00	290.00
4	Public Relations ( International & Domestic)	200.00	250.00	150.00	365.00	965.00
5	Events & Exhibitions	110.00	135.00	80.00	160.00	515.00
	<b>Total (In Lakh Rs.)</b>	<b>600.00</b>	<b>750.00</b>	<b>450.00</b>	<b>1115.0</b>	<b>2915.00</b>

## C.9 PHASING OF DEVELOPMENT IN DAMAN

The proposed developments are spread over 4 phases.





## C.10 IMPLEMENTATION OF TOURIST FACILITIES FOR DAMAN

Table: C.3 gives the investment requirement for the implementation of tourist facilities in Damam by various government agencies. All costs are indicative and needs to be finalised after doing detailed design for all the project packages.

**Table C.3**

### A. MOTI DAMAN FORT (& SURROUNDINGS) DEVELOPMENT

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Implementing Agency
1	Cleaning & Maintaining the Roads for Heritage Walk in the Fort Area	5.00	ASI
2	Conservation of Fort Walls	15.00	ASI
3	Conservation of Churches	10.00	ASI
4	Maintenance of Heritage Buildings	4.00	ASI
5	Development of Heritage Homes	10.00	ASI
6	Beautification of Moat	4.00	ASI
7	Landscaping in the Moti Damam Fort area	5.00	ASI
8	Provision of Relaxing spaces & seating	0.60	DOT
9	Signage's for Heritage walk	0.60	DOT
10	Museum of Portuguese Antics	4.00	ASI
11	Parking arrangement (including landscaping) for Heritage Walk	1.60	ASI
12	Floodlighting of the fort, gardens	2.00	ASI/DOT
	<b>The Memorial garden-cultural activities</b>		
1	Repair, Plastering & Painting of the Beams	2.00	PWD
2	Paving of the walkway	0.15	PWD
3	Signage at the Memorial	0.10	DOT/ASI
4	Kiosks, changing rooms at memorial garden	1.80	DOT
5	Maintenance of garden	1.20	DOT
	<b>The LightHouse</b>		
1	Arrangements for Public viewing (ticket sale counter)	1.20	Port/DOT
2	General Site Clearance and Development	0.60	Port
	<b>Total (In Lakh Rs.)</b>	<b>68.85</b>	

### B. NANI DAMAN FORT DEVELOPMENT

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Implementing Agency
1	Restoration of Fort Wall	6.00	ASI
2	Restoration of entrance gate & Statue of St. Jerome into original character	3.00	ASI

3	Conservation of Church	4.00	ASI
4	Maintenance of the Jetty & garden	5.00	Port/DOT
5	Signage in the Nani Daman fort	0.20	DOT
	<b>Total (In Lakh Rs.)</b>	<b>18.20</b>	

### C. DAMAN DARSHAN

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Implementing Agency
1	Purchase of two open faced mini coach for Daman Darshan	40.00	DOT/Private
2	Regularizing the renting of bicycle, bikes & mopeds	0.10	DOT/Collector
3	Providing different types of signage's in Daman	0.40	DOT
4	Construction of Crafts emporium	0.60	DOT
5	Tourist Information centre at Vapi station	1.00	DOT
6	Purchase mechanised Beach cleaning equipment's	20.00	DOT
	<b>Total (In Lakh Rs.)</b>	<b>62.10</b>	

### D. DEVKA BEACH DEVELOPMENT

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Implementing Agency
1	Plaza and Tourist reception centre	2.00	DOT
2	Organized parking space	0.50	DOT
3	Provision of Cloak rooms	0.50	DOT
4	Provision of signage	0.20	PWD/DOT
5	Lighting arrangement at beach	4.65	DOT
6	Cleaning & maintenance of the beach	5.00	DOT
7	Police Cabin	1.00	DOT
	<b>Total (In Lakh Rs.)</b>	<b>13.85</b>	

### E. JAMPORE BEACH DEVELOPMENT

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Implementing Agency
1	Plaza and Tourist reception centre	2.00	DOT
2	Construction of Changing rooms	2.00	PWD
3	Construction of Toilets	1.20	PWD
4	Construction of Cloak rooms	1.20	PWD
5	Organized parking space	1.00	DOT
6	Development of Water Sports	10.6	DOT/Private
7	Ticketing cabin for water sports	1.00	DOT

8	Construction of hotels and restaurants	7.00	Private
9	Temporary refreshment huts/plazas/kiosks	2.00	DOT
10	Provision of signage's	0.15	DOT
11	Lighting of the Beach	4.65	DOT
12	Cleaning & maintenance of the beach	5.00	DOT
13	Police Cabin	1.00	DOT
	<b>Total (In Lakh Rs.)</b>	<b>38.80</b>	

#### F. THE 'SANGAM' AREA DEVELOPMENT

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Implementing Agency
	<b>Band Stand Area Development</b>		
1	Seating and beautification	2.00	DOT
2	Landscaping	9.00	DOT
3	Temporary Kiosks	2.00	DOT
4	Parking	0.50	DOT
	<b>Ghat &amp; Jetty Development</b>		
5	Renovation of Steps	0.50	DOT
6	Partly covered Ghat development	2.00	DOT
7	Repair & renovation of Jetty	3.50	Port
	<b>Ferry Service</b>		
8	Purchase of ferry with arrangement of playing music & other basic facilities	20.00	Port/Private
9	Ferry Service between the two forts	5.00	Port
	<b>Bridge beautification</b>		
10	Structural analysis to test capacity	4.00	PWD
11	Cantilevering of bridge	15.00	PWD
12	Seating and viewing area development	4.00	PWD
13	Lighting	4.00	DOT
	<b>Total (In Lakh Rs.)</b>	<b>71.50</b>	

#### G. UPSTREAM OF RIVER DEVELOPMENT

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)	Implementing Agency
1	Construction of Club House	50.00	DOT/Private
2	Facilitation for boating facilities in the river	1.00	Port/Locals
3	Provision of restaurants	5.00	DOT/PWD
4	Amusement Park	20.00	DOT/Private
5	Tourist information centre	2.00	DOT
6	Handicraft emporium & Souvenir Shop	2.50	DOT
7	Drinking water & Toilet facilities	3.00	DOT

8	Water sports facilities (row boats, paddle boats)	7.00	DOT
9	Parking space	1.00	DOT
	<b>Total (In Lakh Rs.)</b>	<b>91.50</b>	

#### H. TOTAL INVESTMENT FOR PROPOSED PROJECTS

Sr. No.	Developmental Measures	Total Cost (in Lakh Rs.)
A	Moti Daman Fort (& surroundings) Development	68.85
B	Nani Daman fort development	18.20
C	Daman Darshan	62.10
D	Devka beach development	13.85
E	Jampore beach development	38.80
F	The 'Sangam' area development	71.50
G	Upstream of river development	91.50
	<b>Total (In Lakh Rs.)</b>	<b>364.80</b>

#### I. PROPOSED ROAD WORK UNDER TENTH FIVE YEAR PLAN (2002-2007)

Sr. No.	Development	Total Cost (in Lakh Rs.)	Implementing Agency
1	Construction of four lane road for coastal Highway passing through Daman District	2,000.00	PWD
2	Parallel Bridge on Damanganga joining shama talkies Nani Daman near khariwad - Ambawadi Moti Daman	3,000.00	PWD
3	High level Bridge on Damanganga River Patlara Zari village Moti Daman side-kachigam Industrial Estate Nani Daman side	1,500.00	PWD
4	Widening & strengthening of Major District Roads/Other District roads in Daman. 1. Suruchi Hotel-Kaleri check post 2. Road leading to Jampore Beach.	1,100.00	PWD
	<b>Total (In Lakh Rs.)</b>	<b>7,600.00</b>	

#### J. PROPOSED WATERSUPPLY & SANITATION WORKS UNDER TENTH FIVE YEAR PLAN (2002-2007)

Sr. No.	Development	Total Cost (in Lakh Rs.)	Implementing Agency
1	Development of existing ponds for storage of rain water and raw water from irrigation canal to use the same for drinking water purpose by treatment and augmentation of the existing drinking water supply scheme.	300.00	PWD (Water Supply)



2	Development of various infrastructural unit like ground water sumps overhead water tanks extension/conversion of existing water supply network..	135.00	PWD (Water Supply)
3	Construction of compact Non-Conventional water treatment plant at Bhim Talav, Magarwada for Rural water supply to Moti Daman side of Daman district & Dunetha pond for rural water supply on Nani Daman side of Daman District.	250.00	PWD (Water Supply)
4	Consultancy charges for preparation of Master Plan for infrastructural development for water supply & sewerage in Daman.	18.00	PWD (Water Supply)
<b>Total (In Lakh Rs.)</b>		<b>703.00</b>	

**K. PROPOSED POWER WORKS UNDER TENTH FIVE YEAR PLAN (2002-2007)**

Sr. No.	Development	Total Cost (in Lakh Rs.)	Implementing Agency
1	Strengthening/Augmentation of sub-station capacity of 220/66KV and 66/11KV S/S in Daman	1,409.00	Electricity Dept.
2	Installation of New 66KV S/S at Ringanwada Nani Daman 30MVA (2X15 MVA) (10th & 11th Plan)	550.00	Electricity Dept.
3	Augmentation of 66/11KV Dabhel sub-station from 40MVA to 60MVA	160.00	Electricity Dept.
<b>Total (In Lakh Rs.)</b>		<b>2,119.00</b>	

**L. PROPOSED PORT RELATED WORKS COVERED UNDER TENTH FIVE YEAR PLAN (2002-2007)**

Sr. No.	Development	Total Cost (in Lakh Rs.)	Implementing Agency
1	Widening and Dredging of Damanganga navigable channel by 1000mt length & 10mt depth.	125.00	Port
<b>Total (In Lakh Rs.)</b>		<b>125.00</b>	

**M. LIST OF PROPOSED PROJECTS FOR PRIVATE SECTOR PARTICIPATION**

Sr. No.	Development	Total Cost (in Lakh Rs.)	Implementing Agency
1	Purchase of two Open faced mini coach for Daman Darshan	40.00	DOT/Private
2	Development of Water Sports at Jampore beach	10.60	DOT/Private

3	Construction of Clubhouse at Upstream river development.	50.00	DOT/Private
4	Amusement Park at Upstream river development.	20.00	DOT/Private
5	Purchase of ferry with arrangement of playing music & other basic facilities	20.00	DOT/Private
<b>Total (In Lakh Rs.)</b>		<b>140.60</b>	

The requirement of extra rooms by 2022 for Daman is discussed in the chapter-4, which will require huge private sector participation.

## N. IMPLEMENTATION SCHEDULE

It is essential to execute the projects in time to provide the increasing tourist traffic a quality experience. Table: C.4 provides the implementation schedule

**Table No. C.4 Implementation Schedule**

Sr. No.	Developmental Measures	2003 to 2005	2005 to 2010	2011 to 2016	2017 to 2022
A	Moti Daman Fort (& surroundings) Development				
B	Nani Daman fort development				
C	Daman Darshan				
D	Devka beach development				
E	Jampore beach development				
F	The 'Sangam' area development				
G	Upstream of river development				

## C.11 COST BENEFIT ANALYSIS- DAMAN

The break even of the project has been done for the purpose of Cost benefit Analysis.

### A. COSTS

The cost of the project includes:

1. Cost of developing tourism infrastructure
2. Accommodation
3. Marketing
4. Core infrastructure
5. Human Resource Development

The gross cost have been tabulated below

The detailed break up of costs have been presented in the earlier section. Cost of the project consists of cost incurred in developing tourism infrastructure (including

accommodation), basic or core infrastructure and marketing. These have been tabulated below as Table 9.4.

## B. CALCULATION OF BENEFITS

The costs and benefits from the present project have been tabulated below.

Per day expenditure is Rs 566 as per the primary survey. Average stay of tourists is assumed to be 1 day. In the present calculation per day expenditure of domestic and foreign tourists have been assumed to be equal.

**Table No. C.5 Detailed cluster wise costs (in Rs. Lacs)**

	Phase	Moti Daman	Nani Daman Dvpt Plan	Daman Development	Devka Beach Development	Jampore beach Development	Sangam area Development	Bridge Beautification	Upstream River Development	Total
2003	P 1	6		9	2.85	9	7			33.85
2004		3.65		2.4	1	5.75	3.5			16.3
2005	P 2	18		10		12	12			52
2006		14		7		6	10			37
2007		9	4	6	3	0.05	10			32.05
2008		3.4	3	6	2.5		7			21.9
2009		2	2.77	1.77	2		7			15.54
2010		2					6.5			8.5
2011	P 3	1		6	1.25	2.75		4	20	35
2012		0.65	1	5		2		3	15	26.65
2013			0.67	5				2.5	15	23.17
2014				4					5.5	9.5
2015										0
2016										0
2017	P 4	6							20	26
2018		3.15	3.77		1.25	1			10	19.17
2019			2			0.25			5	7.25
2020			1							1
2021										0
2022										0

TOURISM INFRASTRU CTURE	ACCOMODATION	MARKETI NG	HUMAN RESOURCE DEVELOPME NT	TOTAL COSTS (in Rs. Lakhs)
33.85	175.00	107.50	0.65	1596.75
16.30	175.00	107.50	1.34	1579.20
52.00	50.00	0.00	1.34	680.29
37.00	200.00	0.00	1.34	815.29
32.05	125.00	127.50	1.34	735.34
21.90	200.00	0.00	0.84	800.19
15.54	200.00	0.00	0.84	793.83
8.50	125.00	150.00	0.84	711.79
35.00	50.00	0.00	1.58	431.98
26.65	50.00	0.00	0.98	423.63
23.17	100.00	175.00	0.98	470.15
9.50	50.00	0.00	1.55	406.48
0.00	75.00	0.00	0.98	421.98
0.00	50.00	0.00	0.98	396.98
26.00	110.00	217.50	1.38	995.73
19.17	50.00	0.00	0.72	928.90
7.25	75.00	0.00	0.72	941.98
1.00	50.00	217.50	1.35	910.73
0.00	0.00	0.00	0.72	859.73
0.00	0.00	0.00	0.72	859.73
364.88	1910.00	1102.50	21.18	15760.68

## COST BENEFIT ANALYSIS

**Table No. C.6 Benefits**

		Total No of tourists	Per day Expenditure	Average duration stay	Percent of availing benefits	Benefits in Rs Lakhs
2003	Phase 1	579007	556	2.2	1%	71
2004		602899			1%	74
2005	Phase2	627776			1%	77
2006		653680			2%	160
2007		680654			5%	416
2008		708742			5%	433
2009		739323			10%	904
2010		768907			10%	941
2011	Phase3	799675			20%	1956
2012		832677			30%	3056
2013		841424			30%	3088
2014		850275			45%	4680
2015		859232			45%	4730
2016		870065			45%	4789
2017	Phase4	879314			65%	6991
2018		888677			65%	7066
2019		898157			65%	7141
2020		907757			90%	9993
2021		917477			90%	10100
2022		927322			90%	10209

## COST BENEFIT ANALYSIS

**Table No. C.7 Cost Benefit Analysis**

	Costs	Benefits	Profit
2003	317	71	-246
2004	300	74	-226
2005	103	77	-27
2006	238	160	-78
2007	286	416	130
2008	223	433	211
2009	216	904	688
2010	284	941	656
2011	87	1956	1870
2012	78	3056	2978
2013	299	3088	2789
2014	61	4680	4619
2015	76	4730	4654
2016	51	4789	4738
2017	355	6991	6636
2018	70	7066	6996
2019	83	7141	7058
2020	270	9993	9723
2021	1	10100	10100
2022	1	10209	10208

Break Even is reached in Year 2007.

The direct and indirect employment generation for the project has been calculated taking the tourism employment multiplier of India. It is based on the assumption that per day expenditure of tourists in DNH would be similar to national figure. The Employment Multiplier is 2.36. The employment generated due to tourism have been tabulated below.

**Table No. C.8 Estimated employment generated**

Employment Generation		
Phase 1	2003	18517
	2004	19281

Phase2	2005	20076
	2006	20905
	2007	21768
	2008	22666
	2009	23644
	2010	24590
Phase 3	2011	25574
	2012	26629
	2013	26909
	2014	27192
	2015	27479
	2016	27825
Phase4	2017	28121
	2018	28420
	2019	28723
	2020	29030
	2021	29341
	2022	29656

## C.12 PHASING OF DEVELOPMENT IN DIU

The proposed developments are spread over 4 phases.









### C.13 IMPLEMENTATION OF TOURIST FACILITIES FOR DIU

Table: C.5 give the investment requirement for the implementation of tourist facilities in Diu by various government agencies.

Table: C.9

#### A. DIU FORT DEVELOPMENT PLAN

Sr. No.	Development	Total Cost (in Lakh Rs.)	Implementing Agency
1	Training of ASI guides in Fort history & other monuments in Diu	0.50	ASI
2	Restoration of Fort Walls	25.00	ASI
3	Physical Conservation works (vegetation growth removal)	10.00	ASI
4	Structural Repair works	15.00	ASI
5	Conservation of Ruin Chapel	10.00	ASI
6	Signage's for the Fort	1.00	ASI/DOT
7	Preservation of Bronze Statue of Dom Nano De Cunha	2.00	ASI
8	Cleaning & Paving for Visitor Circulation Plan	8.00	ASI
9	Development of Tunnel system for visitors	1.25	ASI
10	Cleaning of Moat	2.00	ASI
11	Organized Parking , Landscaping & Toilet facilities in front of Fort	12.00	ASI
	<b>Total (In Lakh Rs.)</b>	<b>86.75</b>	

#### B. PANIKOTHA DEVELOPMENT PLAN

Sr. No.	Developmental measures	Total Cost (in Lakh Rs.)	Implementing Agency
1	Construction of floating Jetty	75.00	PORT
2	Physical Development for Light & Sound Show	5.00	DOT
3	Conducting Light & Sound Show	100.00	DOT
4	Cleaning & Maintenance of Fortress	1.00	DOT
5	Signage's in the Fortress	3.89	DOT
6	Purchase of small craft boats (3Nos.)	15.00	DOT
7	Ticketing provisions at information centre	0.03	DOT
	<b>Total (In Lakh Rs.)</b>	<b>199.92</b>	

#### C. DIU TOWN TOURISM DEVELOPMENT PLAN

Sr. No.	Development	Total Cost (in Lakh Rs.)	Implementing Agency
1	Purchase of two buses for Diu Darshan	50.00	DOT/Private

2	Regularizing the renting of bicycle, bikes & mopeds	0.50	DOT/collector
3	Road maps – for bike/bicycle tourists	2.50	DOT
4	Crafts emporium & shopping mall	1.00	DOT
5	Tourism Signage's	0.38	DOT
8	Beautification & Illumination of the Diu-Ghoghla Bridge	4.00	DOT
9	Landscaping of town	10.00	DOT
12	Tourism Information counters at railway stations of Veraval, and Ahmedabad.	1.00	DOT
<b>Total (In Lakh Rs.)</b>		<b>69.38</b>	

#### **D. DEVELOPMENT PLAN FOR NAGOA BEACH**

<b>Sr. No.</b>	<b>Development</b>	<b>Total Cost (in Lakh Rs.)</b>	<b>Implementing Agency</b>
1	Plaza and Tourist reception centre	2.00	DOT
2	Construction of Floating restaurant	5.00	DOT
3	Construction of Restaurants	7.50	DOT
4	Construction of Refreshment Stalls	1.25	DOT
5	Provision of Cloak rooms	0.50	DOT
6	Organized parking space	0.50	DOT
7	Organized Taxi & Autorichshaw stand	0.50	DOT
8	Provision of Signage's	0.20	DOT
9	Lighting the Beach	4.65	DOT/Electric Dept.
10	Police cabin	1.00	DOT/Police
<b>Total (In Lakh Rs.)</b>		<b>23.10</b>	

#### **E. DEVELOPMENT PLAN FOR KHODIDHAR TO GOMTIMATA STRETCH OF BEACH**

<b>Sr. No.</b>	<b>Development</b>	<b>Total Cost (in Lakh Rs.)</b>	<b>Implementing Agency</b>
1	Tented accommodation near the beach- 25	6.14	DOT/Private
2	Accommodation on landward side of road- 50	85.74	DOT/Private
3	Refreshment huts near the beach	1.00	DOT
4	Meditation & relaxing platforms on the beach bed	1.00	DOT
5	Planting of palm trees along the beach	10.00	Forest
6	Finance for Angling equipment's	2.50	Collector/Fish eries

7	Signage from Nagoa to the Gomtimata stretch	0.38	DOT
8	Lighting of the Beach	4.65	DOT
	<b>Total (In Lakh Rs.)</b>	<b>111.41</b>	

#### **F. DEVELOPMENT PLAN FOR GHOGHLA BEACH**

<b>Sr. No.</b>	<b>Development</b>	<b>Total Cost (in Lakh Rs.)</b>	<b>Implementing Agency</b>
1	Entrance Plaza and Tourist Reception centre	2.00	DOT
2	Construction of Changing rooms	2.00	PWD
3	Construction of Toilets	1.20	PWD
4	Construction of Cloak rooms	1.20	PWD
5	Organized parking space	1.00	PWD
6	Development of Water Sports	23.00	DOT/Private
7	Ticketing cabin for water sports	1.00	DOT
8	Construction of hotels and restaurants	18.00	Private
9	Construction of temporary refreshment stalls	2.00	PWD
10	Provision of signage's	0.15	DOT
11	Lighting of the Beach	4.65	DOT
	<b>Total (In Lakh Rs.)</b>	<b>56.20</b>	

#### **G. DEVELOPMENT PLAN FOR CHAKRATHIRTH- JALLANDHAR STRETCH**

<b>Sr. No.</b>	<b>Development</b>	<b>Total Cost (in Lakh Rs.)</b>	<b>Implementing Agency</b>
1	Purchase of Hanging ropes & ancillary facilities for cliff climbing	3.00	DOT
2	Provision of Angling equipment's	0.45	DOT
3	Construction of Meditation & relaxing platform	1.00	DOT
4	Conversion of cave into relaxing space	0.50	DOT
5	Provision of Refreshment huts	1.00	DOT
6	Signage's on the beach stretch	0.40	DOT
7	Lighting of the Beach	4.65	DOT
8	Landscaped Pathways along the road	16.00	PWD
9	Police Cabin	1.00	Police
	<b>Total (In Lakh Rs.)</b>	<b>28.00</b>	

#### **H. DEVELOPMENT PLAN FOR SIMBOR BEACH**

<b>Sr. No.</b>	<b>Development</b>	<b>Total Cost (in Lakh Rs.)</b>	<b>Implementing Agency</b>
1	Ecolodging accommodation for 15 people	15.00	DOT/Private

2	Provision of Angling facilities	0.45	DOT
3	Provision of Boating facilities from Bunder jetty to Simbor	10.00	Port
4	Community based tourism development	10.00	DOT/Collector
5	Construction of refreshment huts	1.00	DOT
6	Construction of Toilet blocks	1.20	PWD
7	Construction of landing platform	5.20	Port
9	Provision of signage near the beach & on the highway	0.60	PWD/DOT
<b>Total (In Lakh Rs.)</b>		<b>43.45</b>	

#### **I. NAIDA CAVES DEVELOPMENT**

<b>Sr. No.</b>	<b>Development</b>	<b>Total Cost (in Lakh Rs.)</b>	<b>Implementing Agency</b>
1	Structural Stability tests	10.00	PWD/Engg.col lege
2	Provision of drinking water facilities	0.40	DOT
3	Provision of toilet facilities	2.00	DOT
4	Signage's in the caves	0.63	DOT
5	Entrance steps to the cave	0.50	DOT
6	General site development	4.00	DOT
7	Ticketing booth with security	0.03	DOT
8	Sitouts inside the caves	1.00	DOT
9	Development of Adventure Cave Sports	6.00	DOT
<b>Total (In Lakh Rs.)</b>		<b>24.56</b>	

#### **J. INVESTMENT REQUIRED FOR WATERWAYS**

<b>Sr. No.</b>	<b>Development</b>	<b>Total Cost (in Lakh Rs.)</b>	<b>Implementing Agency</b>
1	Catamaran service from Diu –Mumbai	5250.00	DOT/Private
2	Jetty at Bunder Chowk	10.00	Port
<b>Total (In Lakh Rs.)</b>		<b>5260.00</b>	

#### **K. INVESTMENT REQUIRED FOR ROADS**

<b>Sr. No.</b>	<b>Development</b>	<b>Total Cost (in Lakh Rs.)</b>	<b>Implementing Agency</b>
1	Walking Plaza (Bunder chowk to Diu Fort)	10.00	PWD
2	High way Directional Signage's	0.20	PWD/DOT
3	Improvement of road from Khodidhar-Gomtimata stretch of beach (7.5mt width*4km)	80.00	PWD
<b>Total (In Lakh Rs.)</b>		<b>90.20</b>	

**L. INVESTMENT REQUIRED FOR AIRPORT**

Sr. No.	Development	Total Cost (in Lakh Rs.)	Implementing Agency
1	Construction of Toilet facilities at Diu Airport	1.00	AAI
2	Provision of parking Space for Private vehicles near Diu Airport	9.00	AAI
3	Provision of Restaurants & Cafes	7.50	AAI/DOT
	<b>Total (In Lakh Rs.)</b>	<b>17.50</b>	

**M. TOTAL LIST OF PROPOSED PROJECTS**

Sr. No	Developmental Measures	Total Cost (in Lakh Rs.)
A	Diu Fort Development Plan	86.75
B	Panikotha Development Plan	199.92
C	Diu Town Tourism Development Plan	69.38
D	Development Plan for Nagoa Beach	23.10
E	Development plan for Khodidhar to Gomtimata stretch of beach	111.41
F	Development Plan for Ghoghla Beach	56.2
G	Development Plan for Chakrathirth- Jallandhar Stretch.	28.00
H	Development Plan for Simbor Beach	43.45
I	Naida Caves Development	24.56
J	Investment Required for Waterways	5260.00
K	Investment Required for Roads	90.20
L	Investment Required for Airport	17.5
	<b>Total (In Lakh Rs.)</b>	<b>6010.47</b>

**N. PROPOSED ROAD WORK UNDER 10TH FIVE YEAR PLAN (2002-2007)**

Sr. No.	Development	Total Cost ( Lakh Rs.)	Implementing Agency
1	Road Improvement for road to Diu ( Una-Diu-14kms)	140.00	PWD (Gujarat)
2	Construction of parallel bridge across the creek between Diu-Ghoghla in Diu	1500.00	PWD
3	Recarpeting of existing major district roads and minor district roads in Diu District by providing 40mm thick paver finish carpet	500.00	PWD
4	Construction of new bridge at Tad Check Post	500.00	PWD
5	Construction of Bridge between kotada (Gujarat) and Vanakbara(Diu)	1500.00	PWD
	<b>Total (In Lakh Rs.)</b>	<b>4140.00</b>	

**O. PROPOSED AIRPORT WORKS UNDER TENTH FIVE YEAR PLAN (2002-2007)**

Sr. No.	Development	Total Cost (in Lakh Rs.)	Implementing Agency
1	Recarpeting of runway of Diu airport	300.00	AAI*
2	Construction of compound wall for airport security	80.00	AAI
3	Extension of Airport Building Diu	20.00	AAI
	<b>Total (In Lakh Rs.)</b>	<b>400.00</b>	

**P. PROPOSED WATERSUPPLY & SANITATION WORKS UNDER TENTH FIVE YEAR PLAN (2002-2007)**

Sr. No.	Development	Total Cost (in Lakh Rs.)	Implementing Agency
1	Construction of overhead tanks, sumps in Bucharwada & Vanakbara Panchayat area of Diu District	150.00	PWD Water Supply (Rural)
2	Construction of overhead tanks, sumps in Diu, Ghoghla & Fudam Municipal area of Diu District	100.00	PWD Water Supply (Urban)
2	Providing safe water supply from Narmada river for Diu district	750.00	PWD Water Supply
3	Sewerage system in Diu	300.00	PWD Water Supply
4	Procurement & installation of Pumping machineries & generator sets & pumps	200.00	PWD Water Supply
5	Laying of rising mains & distribution lines including replacement in Vanakbara & Bucharwada Panchayat in Diu	150.00	PWD Water Supply (Rural)
6	Laying of rising mains & distribution lines including replacement in Diu, Ghoghla & Fudam Municipal area in Diu District	100.00	PWD Water Supply (Urban)
	<b>Total (In Lakh Rs.)</b>	<b>1750.00</b>	

**Q. PROPOSED POWER WORKS UNDER TENTH FIVE YEAR PLAN (2002-2007)**

Sr. No.	Development	Total Cost (in Lakh Rs.)	Implementing Agency
1	Augmentation of 66/11KV Diu S/S capacity from 10MVA to 20 MVA & erection of 66 KV second circuit from kansari to Diu district. ( In Progress)	190.00	Electricity Dept.
2	11KV Underground Cabling (8kms)	120.00	Electricity Dept.



3	Street Lighting (5kms)	25.00	Electricity Dept.
<b>Total (In Lakh Rs.)</b>		<b>335.00</b>	

**R. PROPOSED PORT RELATED WORKS COVERED UNDER TENTH FIVE YEAR PLAN (2002-2007)**

Sr. No.	Development	Total Cost (in Lakh Rs.)	Implementing Agency
1	Dredging, widening, deepening of navigable channel at Ghoghla-Diu	250.00	Port
2	Dredging, widening, deepening of navigable channel at Vanakbara creek at Vanakbara Diu	580.00	Port
<b>Total (In Lakh Rs.)</b>		<b>830.00</b>	

**S. LIST OF PROPOSED PROJECTS FOR PRIVATE SECTOR PARTICIPATION**

Sr. No.	Development	Total Cost (in Lakh Rs.)	Implementing Agency
1	Purchase of two buses for Diu Darshan (settlement ride)	50.00	DOT/Private
2	Provision of 25 tented accommodation near the Khodhidhar-Gomtimata stretch of beach	6.14	DOT/Private
3	Provision of 50 bed accommodation on landward side the other side of the road at Khodhidhar-Gomtimata stretch of beach	85.74	DOT/Private
4	Development of water sports equipment's at Ghoghla beach	23.00	DOT/Private
5	Construction of Hotel and Restaurants at Ghoghla beach	18.00	DOT/Private
6	Ecolodging accommodation for 15 tourists at Simbor beach	15.00	DOT/Private
7	Provision of Boating facilities from Bunder jetty to Simbor beach	10.00	Port/Private
8	Catamaran service from Diu -Mumbai	5250.00	Port/Private
<b>Total (In Lakh Rs.)</b>		<b>5457.88</b>	

The requirement of extra rooms by 2022 for Diu is discussed in the chapter-4, which will also require private sector participation.

**T. IMPLEMENTATION SCHEDULE**

It is essential to execute the projects in time to provide the increasing tourist traffic a quality experience. Table: C.6 provides the implementation schedule

**Table C.10 Implementation Schedule for Diu**

Sr. No.	Developmental Measures	2003 to 2005	2005 to 2010	2011 to 2016	2017 to 2022
A	Diu Fort Development Plan				
B	Panikotha Development Plan				
C	Diu Town Tourism Development Plan				
D	Development Plan for Nagoa Beach				
E	Development plan for Khodidhar to Gomtimata stretch of beach				
F	Development Plan for Ghoghla Beach				
G	Development Plan for Chakrathirth- Jallandhar Stretch.				
H	Development Plan for Simbor Beach				
I	Naida Caves Development				
J	Investment Required for Waterways				
K	Investment Required for Roads				
L	Investment Required for Airport				

## C.14 COST BENEFIT ANALYSIS- DIU

The break even of the project has been done for the purpose of Cost benefit Analysis.

### A. COSTS

The cost of the project includes:

1. Cost of developing tourism infrastructure
2. Accommodation
3. Marketing
4. Core infrastructure
5. HRD Costs

The gross cost have been tabulated below

The detailed break up of costs have been presented in the previous section Cost of the project consists of cost incurred in developing tourism infrastructure (including accommodation), basic or core infrastructure and marketing. These have been tabulated below

### B. CALCULATION OF BENEFITS

The costs and benefits from the present project have been tabulated below.

Per day expenditure is Rs 332.64 as per the primary survey. Average stay of tourists is assumed to be 2 day. In the present calculation per day expenditure of domestic and foreign tourists have been assumed to be equal.

**Table No. C.11 Cost**

In Rs. Lacs	Basic Infrastructure	Tourism Infrastructure	Accommodation	Marketing	HRD	Total
2003	0.00	37.10	100.00	192.50	0.65	330.25
2004	0.00	2651.75	0.00	192.50	1.34	2845.59
2005	0.00	113.82	100.00	0.00	1.34	215.16
2006	0.00	71.79	100.00	0.00	1.34	173.13
2007	40.00	56.44	90.00	222.50	1.34	410.28
2008	0.00	2689.54	115.00	0.00	0.84	2805.38
2009	0.00	14.29	100.00	0.00	0.84	115.13
2010	0.00	5.29	0.00	250.00	0.84	256.13
2011	40.00	53.03	125.00	0.00	1.58	219.61
2012	0.00	29.28	100.00	0.00	0.98	130.25
2013	0.00	23.28	175.00	275.00	0.98	474.25
2014	0.00	15.29	100.00	0.00	1.55	116.84
2015	0.00	7.54	200.00	0.00	0.98	208.52
2016	0.00	5.54	75.00	0.00	0.98	81.52
2017	0.00	21.37	70.00	340.00	1.38	432.75
2018	0.00	8.37	175.00	0.00	0.72	184.09
2019	0.00	8.37	100.00	0.00	0.72	109.09
2020	0.00	5.37	50.00	340.00	1.35	396.72
2021	0.00	5.62	0.00	0.00	0.72	6.34
2022	0.00	0.62	0.00	0.00	0.72	1.34
	80.00	5823.67	1775.00	1812.50	21.18	9512.35

**Table No. C.12 Benefits**

	Total No of Tourists	Per Day Expenditure	Average Duration Stay	Percent of availing Benefits	Benefits (in Rs. Lakh)
2003	119510	332.64	100%	1%	0.04
2004	125086			2%	0.17
2005	1326125			15%	99.25
2006	147592			15%	11.05
2007	160087			25%	33.28
2008	176581			25%	36.71
2009	190068			30%	56.90
2010	197819			30%	59.22
2011	221679			35%	90.33
2012	247777			35%	100.97
2013	271778			50%	226.01
2014	297326			50%	247.26
2015	335953			60%	402.31
2016	347876			60%	416.58
2017	371966			75%	695.99
2018	411976			75%	770.85
2019	466232			80%	992.56
2020	483202			90%	1301.93
2021	500802			95%	1503.45
2022	519055			95%	1558.24

**Table No. C.13 Break Even Analysis**

	<b>Benefits (in Rs. Lakh)</b>	<b>Costs (in Rs. Lakh)</b>	<b>Profit (in Rs. Lakh)</b>
2003	8	330	-322
2004	17	2846	-2829
2005	136	215	-79
2006	147	173	-26
2007	266	410	-144
2008	294	2805	-2512
2009	379	115	264
2010	395	256	139
2011	516	220	297
2012	577	130	447
2013	904	474	430
2014	989	117	872
2015	1341	209	1132
2016	1389	82	1307
2017	1856	433	1423
2018	2056	184	1872
2019	2481	109	2372
2020	2893	397	2496
2021	3165	6	3159
2022	3281	1	3279

Break even is reached in Year 2009.

### **C. EMPLOYMENT GENERATION**

The direct and indirect employment generation for the project has been calculated taking the tourism employment multiplier of India. It is based on the assumption that per day expenditure of tourists in Diu would be similar to national figure. The Employment Multiplier is 2.36. The employment generated due to tourism have been tabulated below

**Table No. C.14 Estimated Employment generated**

<b>Employment Generation</b>		
Phase 1	2003	2079
	2004	2176
Phase2	2005	2368
	2006	2567
	2007	2784
	2008	3071
	2009	3306
	2010	3441
Phase 3	2011	3856
	2012	4310
	2013	4727
	2014	5172
	2015	5843
	2016	6051
Phase4	2017	6470
	2018	7166
	2019	8109
	2020	8405
	2021	8711
	2022	9028



## IMPLEMENTATION PLAN

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## ACTION PLAN

Section D discusses the Action Plan of Daman and Diu Phase wise. Phase I is spread over two years and the Phases II, III and IV of 6 years each.

### D.1 ACTION PLAN FOR TOURISM DEVELOPMENT IN DAMAN

The Action Plan discusses the areas of development, approach to development in the phase and the agency to carry out the action/ implementation

#### A. PHASE I- DAMAN

##### MOTI DAMAN FORT DEVELOPMENT

The fort and the buildings inside will be cleaned and maintained for heritage walk. Creating relaxing spaces, seating and proper signages will further enhance the ambience for heritage walk. Conservation work in the churches needs to be carried out.

1	Cleaning & Maintaining the Buildings for Heritage Walk in the Fort Area	ASI
2	Conservation of Churches	ASI
3	Landscaping in the Moti Daman Fort area	ASI
4	Provision of Relaxing spaces & seating	DOT
5	Signages for Heritage walk	DOT

##### NANI DAMAN FORT DEVELOPMENT

1	Cleaning and Maintenance of Fort	ASI
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##### DAMAN DEVELOPMENT

In the first phase, Daman needs to made more visible to the tourists and potential tourists by providing different types of signages and information centre.

1	Providing different types of signages in the Daman	DOT/Private
2	Tourist Information centre at Vapi station	DOT

##### DEVKA BEACH DEVELOPMENT

Devka beach will see more of creation of facilities than introduction of activities. The lack of plazas, parking and reception centre will be catered to in the first phase.

1	Plaza and Tourist reception centre	DOT
2	Organized parking space	PWD
3	Provision of signage	PWD/DOT
4	Cleaning & maintenance of the beach	DOT

##### JAMPORE BEACH DEVELOPMENT

Jampore Beach is to be developed in a major way in the first phase. This will include improving road to Jampore, creation of facilities at Jampore beach area etc as follows:

1	Plaza and Tourist reception centre	DOT
2	Construction of Changing rooms	DOT/PWD



3	Construction of Toilets	PWD
4	Organised parking space	DOT
5	Development of Water Sports	DOT/Private
6	Temporary refreshment huts/plazas/kiosks	DOT
7	Cleaning & maintenance of the beach	DOT
8	Improvement of Road from Moti Daman to Jampore Beach	PWD

#### **Coastal Walk- IA Study for Retaining Wall**

An Impact Assessment needs to be initiated to see the impact of a Protection wall from Kadaiya to Jampore and of the Coastal walk.

#### **SANGAM AREA DEVELOPMENT**

The Sangam Area needs to be positioned as a main tourist attraction. The action plan for the first phase for this area are:

	<b>Band Stand Area Development</b>	
1	Seating and beautification	DOT
2	Landscaping	DOT
	<b>Bridge beautification</b>	
1	Structural analysis to test capacity	PWD

### **B. PHASE II- DAMAN**

#### **MOTI DAMAN FORT DEVELOPMENT**

In the second phase, conservation activities and development of heritage homes need to be carried out. The detailed action plan for the area with the agency to take charge are as follows:

1	Cleaning & Maintaining the Buildings for Heritage Walk in the Fort Area	ASI
2	Conservation of Fort Walls	ASI
3	Conservation of Churches	ASI
4	Maintenance of Heritage Buildings	ASI
5	Development of Heritage Homes	ASI
6	Beautification of Moat	ASI
7	Signages for Heritage walk	DOT
8	Museum of Portuguese Antics	ASI
9	Parking arrangement (including landscaping) for Heritage Walk	ASI
10	Floodlighting of the fort, gardens	ASI/DOT
	<b>The Memorial garden-cultural activities</b>	
1	Repair, Plastering & Painting of the Beams	PWD
2	Paving of the walkway	PWD
3	Signage at the Memorial	DOT/ASI
4	Kiosks, changing rooms at memorial garden	DOT
5	Maintenance of garden	DOT
	<b>The LightHouse</b>	
1	Arrangements for Public viewing (ticket sale counter)	Port/DOT
2	General Site Development	Port

#### **NANI DAMAN FORT DEVELOPMENT**

Conservation measures need to be carried out at Nani Daman Fort in the Second Phase.

1	Restoration of Fort Wall	ASI
2	Restoration of entrance gate & Statue of St. Jerome into original character	ASI
3	Conservation of Church	ASI
4	Maintenance of the Jetty & garden	PWD/DOT
5	Signage in the Nani Daman fort	DOT/PWD

### **DAMAN DEVELOPMENT**

Lack of organised site seeing in Daman needs to be catered to in the Second Phase. Crafts emporium should be developed in the town in the Second Phase.

1	Purchase of two Open faced mini coach for Daman darshan	DOT/Private tour Operator
2	Regularising the renting of bicycle, bikes & mopeds	DOT/Collector
3	Construction of Crafts emporium	DOT/Private

### **DEVKA BEACH DEVELOPMENT**

More facilities will be provided at Devka beach and proper maintenance and lighting done.

1	Provision of cloak room	PWD
2	Provision of signage	PWD/DOT
3	Lighting arrangement at beach	DOT
4	Cleaning & maintenance of the beach	DOT
5	Police Cabin	DOT
6	Purchase of mechanised Beach cleaning equipment's	DOT

### **JAMPORE BEACH DEVELOPMENT**

In the second phase, Integrated Development of Jampore Beach will be taken up.

1	Plaza and Tourist reception centre	DOT
2	Construction of Changing rooms	DOT/PWD
3	Construction of Toilets	PWD
4	Construction of Cloak rooms	PWD
5	Organised parking space	DOT
6	Development of Water Sports	DOT/Private
7	Ticketing cabin for water sports	DOT
8	Construction of restaurants & light refreshments.	DOT/Private
9	Temporary refreshment huts/plazas/kiosks	DOT
10	Provision of signages	DOT
11	Lighting of the Beach	DOT
12	Cleaning & maintenance of the beach	DOT
13	Police Cabin	DOT
14	Improvement of Road from Moti Daman to Jampore Beach	PWD

### **SANGAM AREA DEVELOPMENT**

Integrated Development of Sangam Area needs to be undertaken in Second Phase: this will have various facets like Band Stand Area Development, Ghat & Jetty Area Development, Ferry Service and Bridge Beautification.

	<b>Band Stand Area Development</b>	
1	Landscaping	DOT

2	Temporary Kiosks	DOT
3	Parking	DOT
	<b>Ghat &amp; Jetty Development</b>	
4	Renovation of Steps	DOT
5	Partly covered Ghat development	DOT
6	Repair & renovation of Jetty	DOT/Port
	<b>Ferry Service</b>	
7	Purchase of ferry with arrangement of playing music & other basic facilities	Port/Private
8	Ferry Service between the two forts	Port/Private
	<b>Bridge beautification</b>	
9	Cantilevering of bridge	PWD
10	Seating and viewing area development	PWD
11	Lighting	PWD/DOT

#### UPSTREAM RIVER DEVELOPMENT

1	Facilitation for boating facilities in the river	Port/Locals
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### C. PHASE III-DAMAN

#### MOTI DAMAN FORT DEVELOPMENT

1	Cleaning & Maintaining the Buildings for Heritage Walk in the Fort Area	ASI
	<b>The Memorial garden-cultural activities</b>	
2	Maintenance of garden	DOT

#### NANI DAMAN FORT DEVELOPMENT

1	Maintenance of the Jetty & garden	PWD/DOT
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#### DAMAN DEVELOPMENT

1	Purchase of Open faced mini coach for Damam Darshan	DOT/Private tour Operator
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#### DEVKA BEACH DEVELOPMENT

1	Cleaning & maintenance of the beach	DOT
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#### JAMPORE BEACH DEVELOPMENT

1	Construction of restaurants & light refreshments.	DOT/Private
2	Cleaning & maintenance of the beach	DOT

#### SANGAM AREA DEVELOPMENT

	<b>Bridge beautification</b>	
1	Cantilevering of bridge	PWD
2	Seating and viewing area development	PWD

### UPSTREAM RIVER DEVELOPMENT

The new thrust of development in Damán in the third phase will be on the development Upstream of the River. DOT should initiate and facilitate Private entrepreneurs to set up a full fledged Clubhouse.

1	Construction of Club House	DOT/Private
2	Provision of restaurants	DOT/Private
3	Amusement Park	DOT/Private
4	Tourist information centre	DOT
5	Handicraft emporium & Souvenir Shop	DOT
6	Drinking water & Toilet facilities	DOT
7	Water sports facilities (row boats, paddle boats)	DOT
8	Parking Space	DOT

### KHURASIYA DUNGAR DEVELOPMENT

In the third phase DOT should develop Khurasiya Dungar with proper lighting as an evening relaxation spot and for group activities.

## D. PHASE IV-DAMÁN

### MOTI DAMÁN DEVELOPMENT

1	Cleaning & Maintaining the Buildings for Heritage Walk in the Fort Area	ASI
2	Conservation of Fort Walls	ASI
	<b>The Memorial garden-cultural activities</b>	
3	Maintenance of garden	DOT

### NANI DAMÁN FORT DEVELOPMENT

1	Restoration of Fort Wall	ASI
2	Conservation of Church	ASI
3	Maintenance of the Jetty & garden	PWD/DOT
4	Signage in the Nani Damán fort	DOT/PWD

### DEVKA BEACH DEVELOPMENT

1	Cleaning & maintenance of the beach	DOT
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### JAMPORÉ BEACH DEVELOPMENT

1	Cleaning & maintenance of the beach	DOT
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### UPSTREAM RIVER DEVELOPMENT

1	Construction of Club House	DOT/Private
2	Amusement Park	DOT/Private

In addition to these developments, the DOT needs to facilitate and attract private entrepreneurs to invest in accommodation facilities in all the Phases.

## **D.2 ACTION PLAN FOR TOURISM DEVELOPMENT IN DIU**

### **A. PHASE I- DIU**

#### **DIU FORT DEVELOPMENT**

Focus should be on cleaning and maintenance of the fort and the moat around. In addition to this, proper visitor circulation plan should be made and organised facilities created outside.

1	Conservation of Ruin Chapel	ASI
2	Signages for the Fort	ASI & DOT
3	Cleaning & Paving for Visitor Circulation Plan	ASI
4	Cleaning of Moat	ASI
5	Organised Parking , Landscaping & Toilet facilities in front of Fort	ASI

#### **PANIKOTHA DEVELOPMENT**

1	Cleaning & Maintenance of Fortress	DOT
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#### **DIU TOWN DEVELOPMENT**

1	Regularising the renting of bicycle, bikes & mopeds	DOT/Collector
2	Tourism Signages	DOT

#### **COASTAL TRAIL DEVELOPMENT**

In order to attract foreign tourists to enjoy coastal trail and project Diu as an island destination, the entire coast needs to be cleaned and maintained.

#### **NAGOA BEACH DEVELOPMENT**

Better facilities refreshment and other facilities like Plaza and reception centre should be provided at Nagoa in the first phase itself.

1	Construction of Tourist reception centre & Plaza	DOT
2	Construction of Hotels & Restaurants	Private/ DOT
3	Construction of refreshment stalls	DOT
4	Providing organised parking space	DOT
5	Provision of Signages	DOT

#### **GHOGHLA BEACH DEVELOPMENT**

1	Providing organised parking space	PWD
2	Development of water sports equipments	DOT/Private

#### **CHAKRATHIRTH-JALLANDHAR STRETCH**

1	Signages on the beach stretch	DOT Diu
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#### **DEVELOPMENT OF WATERWAYS**

1	Catamaran service from Diu -Mumbai	Private Sector/Port
2	Jetty at Bunder Chowk	Port

#### **DEVELOPMENT OF ROADS**

1	High way Directional Signages	PWD/DOT
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## DEVELOPMENT OF DIU AIRPORT

1	Construction of Toilet facilities at Diu Airport	AAI
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## B. PHASE II-DIU

### DIU FORT DEVELOPMENT

Conservation work needs to be undertaken in the fort in a major way in the second phase.

1	Training of ASI guides in Fort history & other monuments in Diu	ASI
2	Restoration of Fort Walls	ASI
3	Physical Conservation works (vegetation growth removal)	ASI
4	Structural Repair works	ASI
5	Signages for the Fort	ASI & DOT
6	Preservation of Bronze Statue of Dom Nano De Cunha	ASI
7	Cleaning & Paving for Visitor Circulation Plan	ASI
8	Organised Parking , Landscaping & Toilet facilities in front of Fort	ASI

### PANIKOTHA DEVELOPMENT

Panikotha should be developed as a main tourist attraction. In the second phase, a floating jetty should be constructed outside the fortress and the fortress be developed for light and sound show.

1	Construction of floating Jetty	Port/DOT
2	Physical Development for conducting Light & sound show	DOT
3	Conducting Light & sound show	DOT
4	Cleaning & Maintenance of Fortress	DOT
5	Signages in the Fortress	DOT
6	Purchase of small craft boats (3Nos.)	DOT
7	Ticketing provisions at information centre	DOT

### DIU TOWN DEVELOPMENT

Diu town should be landscaped, illuminated and beautified in the second phase. The means of seeing the town should be improved through better vehicles, maps etc.

1	Buses/ Vehicles for Diu Darshan (settlement ride)	DOT/Private
2	Road maps-for bike/bicycle tourists	DOT
3	Provision of Crafts emporium & shopping malls	DOT
4	Tourism Signages	DOT
5	Beautification & Illumination of the Diu-Ghoghla Bridge	DOT
6	Landscaping of town	DOT
7	Tourism Information counters at railway stations of Veraval, Rajkot, Bhavnagar, and Ahmedabad.	DOT

### NAGOA BEACH DEVELOPMENT

1	Construction of Floating restaurant	Private/DOT
2	Construction of Hotels & Restaurants	Private/ DOT
3	Construction of refreshment stalls	DOT
4	Provision of Cloak rooms	DOT
5	Provision of organised taxi & autorickshaw stand	DOT
6	Provision of Signages	DOT
7	Basic Lighting on/near the Beach	DOT/Electric Dept.

8	Providing Tourism Police station ( with patrolling vehicle for Nagoa to Gomitmata stretch Beach)	DOT/Police Dept.
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### **KHODIDHAR-GOMTIMATA DEVELOPMENT**

Khodidhar- Gomitmata Stretch needs to be developed as exclusive beach targeting foreign tourists with the following developments in phase II:

1	Refreshment huts near the beach	DOT
2	Meditation & relaxing platforms on the beach bed	DOT
3	Planting of palm trees along the beach	Forest Dept./DOT
4	Signage from Nagoa to the Gomitmata stretch	DOT
5	Basic Lighting on/near the Beach	DOT Diu

### **GHOGHLA BEACH DEVELOPMENT**

More water sports and other activities should be introduced in Ghoghla in the second phase. Also more refreshment and other facilities should be developed.

1	Provision of Entrance Plaza & Tourist Reception centre	DOT
2	Construction of Cloak rooms	PWD
3	Ticketing cabin for water sports	DOT
4	Construction of hotel and restaurants	Private
5	Construction of temporary refreshment stalls (2)	PWD
6	Provision of signages	DOT
7	Basic Lighting on/near the Beach	DOT

### **CHAKRATHIRTH-JALLANDHAR STRETCH**

The serenity of Chakrathirth- Jallandhar Stretch needs to be enhanced by construction of temporary relaxation huts, meditation platforms etc.

1	Construction of Meditation & relaxing platform	DOT
2	Conversion of cave into relaxing space	DOT
3	Provision of Refreshment huts	DOT
4	Signages on the beach stretch	DOT
5	Basic Lighting on/near the Beach	DOT
6	Landscaped pathways along the road	PWD
7	Providing Tourism Police cabin	DOT/Police Dept.

### **NAIDA CAVES DEVELOPMENT**

1	Structural Stability tests	Geotech. Institute
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### **DEVELOPMENT OF WATERWAYS**

1	Catamaran service from Diu -Mumbai	Private Sector/Port
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### **DEVELOPMENT OF ROADS**

1	Walking Plaza (Bunder chowk to Diu Fort)	PWD
2	Improvement of road in Khodidhar-Gomitmata stretch (7.5mt*4km)	PWD

### **DEVELOPMENT OF DIU AIRPORT**

1	Provision of parking Space for Private vehicles near Diu Airport	AAI
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2	Provision of Restaurants & Cafes	AAI/ DOT DIU
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### **C. PHASE III-DIU**

#### **DIU FORT DEVELOPMENT**

1	Restoration of Fort Walls	ASI
2	Structural Repair works	ASI
3	Cleaning & Paving for Visitor Circulation Plan	ASI

#### **PANIKOTHA DEVELOPMENT**

1	Conducting Light & sound show	DOT
2	Cleaning & Maintenance of Fortress	DOT

#### **KHODIDHAR-GOMTIMATA DEVELOPMENT**

1	Meditation & relaxing platforms on the beach bed	DOT
2	Planting of palm trees along the beach	Forest Dept./DOT
3	Finance for Angling equipments	Collector Office/ Fisheries Dept.

#### **GHOGHLA BEACH DEVELOPMENT**

1	Construction of Changing rooms	PWD
2	Construction of Toilet	PWD
3	Construction of hotel and restaurants	Private

#### **CHAKRATHIRTH-JALLANDHAR STRETCH**

1	Purchase of Hanging ropes & ancillary facilities for cliff climbing	DOT Diu
2	Provision of Angling equipments	DOT Diu
3	Landscaped pathways along the road	PWD

#### **SIMBOR DEVELOPMENT**

1	Provision of Boating facilities from Bunder jetty to Simbor	Port/Private
2	Community Based tourism development	
3	Construction of refreshment huts	PWD
4	Construction of Toilet blocks	PWD
5	Construction of landing platform	Port
6	Provision of signage near the beach & on the highway	PWD

#### **NAIDA CAVES DEVELOPMENT**

1	Provision of drinking water facilities	DOT
2	Provision of toilet facilities	DOT
3	Signages in the caves	DOT
4	Entrance steps to the cave	DOT
5	General site development	DOT
6	Ticketing booth with security	DOT
7	Sitouts inside the caves	DOT
8	Development of Adventure Cave Sports	DOT



## DEVELOPMENT OF ROADS

1	Walking Plaza (Bunder chowk to Diu Fort)	PWD
2	Improvement of road from Khodidhar- Gontimata stretch of beach (7.5mt width*4km)	PWD

## D. PHASE IV-DIU

### DIU FORT DEVELOPMENT

1	Restoration of Fort Walls	ASI
2	Cleaning & Paving for Visitor Circulation Plan	ASI

### PANIKOTHA DEVELOPMENT

1	Conducting Light & sound show	DOT
2	Cleaning & Maintenance of Fortress	DOT

### SIMBOR DEVELOPMENT

1	Provision of Angling facilities	DOT Diu
2	Provision of Boating facilities from Bunder jetty to Simbor	Port/Private
3	Community Based tourism development	

### NAIDA CAVES DEVELOPMENT

1	Development of Adventure Cave Sports	DOT
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In addition to these developments, the DOT needs to facilitate and attract private entrepreneurs to invest in accommodation facilities in all the Phases.

## D.3 MEDIA PLAN – DAMAN & DIU FOR PHASE I (2003 – 2004)

### A. THE MEDIA STRATEGY

The media strategy proposed for the destination includes the following features:

Develop a media campaign that supports the positioning theme reaching the target customers through the print media.

- The Phase I campaign will emphasis on building awareness about **Diu** as a serene beach island destination in Domestic and International target markets; **Daman** as an affordable and easily accessible water based tourist destination with a heritage backdrop.
- Phase II to Phase IV will to be done for 1 year after every two years to revitalize the Phase I campaign and to create awareness on the new products developed.
- The first year of Phase I will witness only a few exclusive media activities like Public Relations activities and trade relation through exhibitions in the target states and countries focusing on initiatives and developments taking place and planned in region.

- Public Relations will be a support for the advertising campaign in phase 1 (year 2003 & 2004) and an advertising, sales & promotion support in the year 2 (year 2004) on the destination.
- Press advertising in 2 bursts, pre-summer and pre-Diwali/Christmas in year 2 (year 2004) in India and targeted international countries.
- Active participation in travel exhibitions & trade fairs in target states and countries to tap the major travel industry players in year 1 & year 2 (year 2003 & 2004).
- Liaison with tour operators, hotels and airlines will be need to be developed in joint venture with Dadra & Nagar Haveli Administration to support the media strategy.
- Billboards and translights in major towns & cities, & airports (domestic and international) of the domestic target states and international countries.

## B. THE MEDIA PLAN

The media plan for the first two years is summarized in the table below detailing the monies to be spent in the first two years of implementation of the plan. It is observed that the first year 2003 doesn't witness much marketing activities as a new tourism product range is being proposed to be developed in the destination development strategy in the 1st year of the phase I, hence tourists from target market will be attracted 2nd yr onwards.

The Media Plan is summarized followed by category wise details:

MEDIA VEHICLE	YEAR 2003	YEAR 2004
<b>PRESS – DOMESTIC, (DAMAN &amp; DIU)</b>	-	30 lacs
<b>PRESS – INTERNATIONAL (DIU)</b>	-	90 lacs
<b>OUTDOOR ADVERTISING – DOMESTIC (DAMAN &amp; DIU)</b>	-	100 lacs
<b>EVENTS &amp; EXHIBITIONS</b> (FICCI, CII, Assocham, IATA/ TAAI/ FHRI/IMC/BMC)	55 lacs	55 lacs
<b>PUBLIC RELATIONS DOMESTIC (DIU, DAMAN)</b>	15 lacs	15 lacs
<b>PUBLIC RELATION INTERNATIONAL (DIU)</b>	85 lacs	85 lacs
<b>PUBLICITY MATERIAL (BROCHURES, CD, MAPS, SIGNAGES, EVENTS BROCHURES &amp; ADVERTISING, SALES PROMOTION)</b>	35 lacs	35 lacs
<b>TOTAL</b>	190 lacs	410 lacs

The media plan in detail is as follows:

**Press:**

***Domestic***

The features:

- The press campaign to be undertaken in 2004.
- The Media plan for India in Press should essentially consist of qualitative and cost effective high reach magazines.
- The launch campaign should be on general interest and travel magazines to reach out the target segment.
- The campaign should focus on the target states of Maharashtra, Gujarat (for Daman & Diu), Madhya Pradesh, Uttar Pradesh, Delhi, Rajasthan, Punjab & West Bengal (for Diu).
- Other than the advertising bursts, one-off insertions should be taken in local dailies/ weekly/ magazines to address the local people and announcing special promos for tourists from Gujarat & Maharashtra.
- The ads will appear in the 1<sup>st</sup> week of the month in case of weekly, daily and fortnightly.

The press media vehicles are detailed below in table

Publication	Edition	Language	Freq	Inserts	Circulation	SCHEDULE
Maharashtra Times	Maharashtra	Marathi	Daily	-	200000	Announcement of special promos
The Times of India (Spl Feature)	Mumbai	English	Daily	1	1600000	October 2004
Chitra Lekha	Maharashtra	Marathi	Weekly	4	103204	April, May, October, November
Hotel & Restaurants Guide	Mumbai	English	Annual	1	-	-
Outlook	Mumbai	English	Weekly	2	215385	June, October
Desh	West Bengal	Bengali	Monthly	4	69029	April, May, Oct, Nov.
Gujarat Samachar	Gujarati	Gujarati	Daily	-	1009972	Announcement of special promos
Chitra Lekha	Gujarati	Gujarati	Weekly	6	263907	April, May, October, November

Outlook Traveller	National	English	Monthly	2	55000	June, Nov
Femina	National	English	Fortnightly	2	128348	April, October
Srishti	Delhi	English	Qrtly	1	-	October
India Today	MP, Rajasthan, Delhi	Hindi	Weekly	4	330750	March, April, October, November
Jetwings	Inflight	English	Monthly	2	120000	April, September

### ***International***

- The press campaign to be undertaken in 2004.
- The campaign like domestic advertising will be undertaken in year 2 of Phase I.
- The launch will be on general interest and travel magazines (including inflight magazines).
- The advertisements will be half page colour ads with 4 inserts, two in March, April and two in October and November.
- Campaign will focus on UK, France & Germany(Western European Countries) and Middle East Asian countries.

<b>Publication</b>	<b>Edition</b>	<b>Language</b>	<b>Freq</b>	<b>Inserts (half page)</b>	<b>Circulation</b>	<b>SCHEDULE</b>
British Airways (Hi Life)	UK	English	Monthly	4	285000	March, April, October, November
Condast Travel	UK	English	Monthly	4	100000	March, April, October, November
Vogue	France	French	Monthly	4	150000	March, April, October, November
Air France	France	French	Monthly	4	419595	March, April, October, November
Geo Sasion	Germany	German	Monthly	4	155000	March, April, October, November
Lufthansa	Germany	German	Monthly	4	580000	March, April, October, November
Holiday Asia	Hongkong	English	Monthly	4	-	March, April, October, November
Emirates	Middle East	English	Monthly	4	80000	March, April, October, November
Silver Kris	Singapore	English	Monthly	4	55000	March, April, October, November
Khaleej Times	Middle East	English	Annual	1 (full pg)	-	-

## **Outdoor Advertising:**

The features:

### ***Domestic***

- Billboards, translites, etc will be used for outdoor advertising at airports (International arrival in Mumbai); at select spots on the NH 8 Highway; the Shatabdi train; the CBD's (Central business districts) at the major cities in Maharashtra & Gujarat.
- Key residential areas, CBD's and railway stations at the main cities of the targeted states i.e. Madhya Pradesh, Uttar Pradesh, Delhi, Rajasthan, Punjab & West Bengal.
- Creatives to be prepared by the advertising agency hired.
- The outdoor advertising campaign to be taken up in 2004 for the entire year.

The outdoor media is detailed below:

<b>Type</b>	<b>Place</b>	<b>Numbers</b>	<b>Schedule</b>	<b>Advt for</b>
Airport	International Arrival and domestic departures at Mumbai, Calcutta, Delhi	2 per city	Jan, Feb, Oct, Nov, Dec- 2004	Daman & Diu
NH 8 Highway	Between Mumbai Vapi, and Vapi Surat	2	Entire Year 2004	Daman
Shatabdi Train	Mumbai-Ahemdabad	-	May, June, Sept, Oct- 2004	Daman & Diu
Billboards in CBD's in Maharashtra & Gujarat	Pune, Mumbai, Nasik, Nagpur, Surat, Baroda, Ahemdabad, Vapi,	1 hoarding per city, Mumbai – 3	May, June, Sept, Oct- 2004	Daman
Billboards in MP, UP, Delhi, Rajasthan, Punjab & WB	CBD's, Key residential area and/or railway station of three main towns in the states	2 per city	Feb, March, April, Sept, Oct, Nov, 2004	Diu

### ***International***

- Billboards to be put up in October and November in the year 2 of Phase I.
- The locations displaying the Diu creatives will be key residential locations in London, Paris, Berlin, Dubai & main commercial towns of Oman, UAE, Israel, and Saudi Arabia.
- Each of the towns will have one hoarding.

## **Public Relations:**

The features:

- Public Relations will be one of the main media activities in year 1(year 2003).

- Public Relations to be carried out in 2003 for general awareness creation to capture the attention of the tourists targeted.
- In 2004 the PR activity will act as a support to the destination development and the advertising activity done by the destination.
- The immediate plan of action would include hiring of a Public Relations agency for both the years in phase 1 (year 2003-2004).
- For the domestic market a common PR agency will be hired for both Daman & Diu
- For the international market a PR agency will be hired for Diu in UK, France and Middle East countries.

### **Events & Exhibitions:**

- Along with Public Relations, trade relations will also be developed through participation in trade events and exhibitions will happen in both years of Phase II.
- The administration will need to identify specific trade events in the target states of Gujarat, Maharashtra, Madhya Pradesh, Uttar Pradesh, Delhi, Rajasthan, Punjab & West Bengal and participate jointly with the hoteliers, tour operators in them and the Dadra & Nagar Haveli Administration.
- Some of the main exhibitions that may be participated in are FICCI, CII, Assocham, IATA, TAAI, FHRI, IMC, BMC, et al.

### **The Publicity Material (brochures, leaflets, maps,):**

The features:

- To compensate for the lesser advertisement in the international markets, distribution of brochures, leaflets, publication inserts and sales promotion will be used. These will be distributed through the GOI offices in the target countries, direct mailers and through tour operators liaised with. Each of the target countries will have a distribution outlet at key location with 10,000 leaflets & brochures, 15,000 posters, which will be used to create awareness on existing facilities and a few attractions in the pipeline.
- Sales promotion activities in these target countries and states like small gifts or tour package to Diu as inserts in publications or jointly with hotels and tour operators will also be taken up.
- For the domestic markets 25,000 brochures, 10,000 posters and 1,000,000 leaflets will be printed annually. These will be kept at the GOI tourist offices and state tourism development corporation outlets in the target states, hotels in Daman & Diu, Tour operators in the target states. The leaflets will be used as inserts in various vernacular, national publications.

## **D.4 HUMAN RESOURCE DEVELOPMENT**

The plan for human resource development for the first phase includes the following immediate points of action.

### **A. Travel and Tourism Course:**

The travel and tourism course offered will be a year long course conceptualised and provided by private parties, with the space for the course being provided by the local administration. The first year (2003) of the phase I will witness development of the course for the local people. The course will commence in the second year (2004). It is proposed that the administration should provide a scholarship of an amount of Rs. 12000/- each to two students in the merit each from Daman and Diu.

### **B. Travel Agents Course:**

This is proposed to be a six weeks course. In the first year (2003), the administration shall invite a professional to design the curriculum and content of the course for a sum of Rs. 70,000/- (Rs 35,000 for Daman and Rs 35,000 for Diu). Hereafter professionals will be called in the next year to conduct the course. An amount of Rs. 20,000/- each for Daman and Diu has been allocated for the same in the perspective plan.

### **C. Hotel Management Course:**

The hotel management course offered will be a year long course conceptualised and provided by private parties, with the space for the course being provided by the local administration. The first year (2003) of the phase I will witness development of the course for the local people. The course will commence in the second year (2004). It is proposed that the administration should provide a scholarship of an amount of Rs. 12000/- each to two students in the merit each from Daman and Diu.

### **D. Guide Course:**

This is proposed to be a two months course. In the first year (2003), the administration shall invite a professional to design the curriculum and content of the course for a sum of Rs. 60,000/- (Rs. 30,000/- for Daman and Rs. 30,000/- for Diu). Hereafter professionals will be called in the next year to conduct the course. An amount of Rs. 30,000/- each for Daman and Diu has been allocated for the same in the perspective plan.

### **E. Entrepreneurship Development Programme:**

In the first year the administration shall identify some good courses being provided by the colleges in the nearby areas. From the second year onwards the administration will sponsor two students from Daman and two students from Diu for the course. An amount of Rs. 16000/- for each student has been allocated for the course.

## SUMMARY OF RECOMMENDATIONS

Section D summarises the recommendations, costs and the implementation schedule for Daman and Diu.

## E.1 SUMMARY- DAMAN

Table E.1 Summary of Recommendations- Daman

Table E.1 Summary of Recommendations- Daman							
Moti Daman Fort Development Plan							
Investment Required to Develop Moti Daman Fort							
Sr. No.	Developmental Measures	Implementing Agency	Phase-1	Phase-2	Phase-3	Phase-4	Total Cost (in Lakh Rs.)
			2003 to 2005	2005 to 2010	2011 to 2016	2017 to 2022	
1	Cleaning & Maintaining the Buildings for Heritage Walk in the Fort Area	ASI	1.25	1.25	1.25	1.25	5.00
2	Conservation of Fort Walls	ASI		7.50		7.50	15.00
3	Conservation of Churches	ASI	5.00	5.00			10.00
4	Maintenance of Heritage Buildings	ASI		4.00			4.00
5	Development of Heritage Homes	ASI		10.00			10.00
6	Beautification of Moat	ASI		4.00			4.00
7	Landscaping in the Moti Daman Fort area	ASI	2.50	2.50			5.00
8	Provision of Relaxing spaces & seating	DOT	0.60				0.60
9	Signages for Heritage walk	DOT	0.30	0.30			0.60
10	Museum of Portuguese Antics	ASI		4.00			4.00
11	Parking arrangement (including landscaping) for Heritage Walk	ASI		1.60			1.60
12	Floodlighting of the fort, gardens	ASI/DOT		2.00			2.00
	Total ( In Lakh Rs.)		9.65	42.15	1.25	8.75	61.80
	The Memorial garden-cultural activities						
1	Repair, Plastering & Painting of the Beams	PWD		2.00			2.00
2	Paving of the walkway	PWD		0.15			0.15
3	Signage at the Memorial	DOT/ASI		0.10			0.10
4	Kiosks, changing rooms at memorial garden	DOT		1.80			1.80
5	Maintenance of garden	DOT		0.40	0.40	0.40	1.20
	Total ( In Lakh Rs.)		0.00	4.45	0.40	0.40	5.25
	The LightHouse						
1	Arrangements for Public viewing (ticket sale counter)	Port/DOT		1.20			1.20
2	General Site Development	Port		0.60			0.60
	Total ( In Lakh Rs.)		0.00	1.80	0.00	0.00	1.80
			9.65	48.40	1.65	9.15	68.85
Nani Daman Fort Development Plan							
Investment Required to Develop Nani Daman Fort							
1	Restoration of Fort Wall	ASI		3.00		3.00	6.00
2	Restoration of entrance gate & Statue of St.Jerome into original character	ASI		3.00			3.00
3	Conservation of Church	ASI		2.00		2.00	4.00
4	Maintainence of the Jetty & garden	PWD/DOT		1.67	1.67	1.67	5.00
5	Signage in the Nani Daman fort	DOT/PWD		0.10		0.10	0.20
	Total ( In Lakh Rs.)		0.00	9.77	1.67	6.77	18.20
Daman Development Plan							
Investment Required to Develop Daman							
1	Purchase of two Open faced mini coach for Daman darshan	DOT/Private tour Operator		20.00	20.00		40.00
2	Regularising the renting of bicycle, bikes & mopeds	DOT/Collector		0.10			0.10
3	Providing different types of signages in the Daman	DOT/Private	0.40				0.40
4	Construction of Crafts emporium	DOT/Private		0.60			0.60
5	Tourist Information centre at Vapi station	DOT	1.00				1.00
6	Purchase of mechanised Beach cleaning equipment's	DOT	10.00	10.00			20.00
	Total ( In Lakh Rs.)		11.40	30.70	20.00	0.00	62.10



Sr. No.	Developmental Measures	Implementing Agency	Phase-1	Phase-2	Phase-3	Phase-4	Total Cost (in Lakh Rs.)
			2003 to 2005	2005 to 2010	2011 to 2016	2017 to 2022	
Sr. No.	Developmental Measures	Implementing Agency	Phase-1	Phase-2	Phase-3	Phase-4	Total Cost (in Lakh Rs.)
			2003 to 2005	2005 to 2010	2011 to 2016	2017 to 2022	
Devka Beach Development Plan							
Investment Required to Develop Devka Beach							
1	Plaza and Tourist reception centre	DOT	2.00				2.00
2	Organized parking space	PWD	0.50				0.50
3	Provision of cloak room	PWD		0.50			0.50
4	Provision of signage	PWD/DOT	0.10	0.10			0.20
5	Lighting arrangement at beach	DOT		4.65			4.65
6	Cleaning & maintenance of the beach	DOT	1.25	1.25	1.25	1.25	5.00
7	Police Cabin	DOT		1.00			1.00
Total ( In Lakh Rs.)			3.85	7.50	1.25	1.25	13.85
Jampore Beach Development Plan							
Investment Required to Develop Jampore Beach							
1	Plaza and Tourist reception centre	DOT	2.00				2.00
2	Construction of Changing rooms	DOT/PWD	2.00				2.00
3	Construction of Toilets	PWD	1.20				1.20
4	Construction of Cloak rooms	PWD		1.20			1.20
5	Organized parking space	DOT	1.00				1.00
6	Development of Water Sports	DOT/Private	5.30	5.30			10.60
7	Ticketing cabin for water sports	DOT		1.00			1.00
8	Construction of restaurants & light refreshments.	DOT/Private		3.50	3.50		7.00
9	Temporary refreshment huts/plazas/kiosks	DOT	2.00				2.00
10	Provision of signages	DOT		0.15			0.15
11	Lighting of the Beach	DOT		4.65			4.65
12	Cleaning & maintenance of the beach	DOT	1.25	1.25	1.25	1.25	5.00
13	Police Cabin	DOT		1.00			1.00
14	Improvement of Road from Moti Daman to Jampore Beach	PWD	30.00				30.00
Total ( In Lakh Rs.)			44.75	18.05	4.75	1.25	68.80
Coastal Walk- IA Study for Retaining Wall			PWD	4.00			4.00
Sangam Area Development Plan							
Investment Required for Sangam Area Development							
Band Stand Area Development							
1	Seating and beautification	DOT	2.00				2.00
2	Landscaping	DOT	4.50	4.50			9.00
3	Temporary Kiosks	DOT		2.00			2.00
4	Parking	DOT		0.50			0.50
Total ( In Lakh Rs.)			6.50	7.00	0.00	0.00	13.50
Ghat & Jetty Development							
5	Renovation of Steps	DOT		0.50			0.50
6	Partly covered Ghat development	DOT		2.00			2.00
7	Repair & renovation of Jetty	DOT/Port		3.50			3.50
Total ( In Lakh Rs.)			0.00	6.00	0.00	0.00	6.00
Ferry Service							
8	Purchase of ferry with arrangement of playing music & other basic facilities	Port/Private		20.00			20.00
9	Ferry Service between the two forts	Port/Private		5.00			5.00
Total ( In Lakh Rs.)			0.00	25.00	0.00	0.00	25.00
Bridge beautification							
10	Structural analysis to test capacity	PWD	4.00				4.00
11	Cantilevering of bridge	PWD		7.50	7.50		15.00
12	Seating and viewing area development	PWD		2.00	2.00		4.00
13	Lighting	PWD/DOT		4.00			4.00
Total ( In Lakh Rs.)			4.00	13.50	9.50	0.00	27.00
Grand Total ( In Lakh Rs.)			10.50	51.50	9.50	0.00	71.50

Sr. No.	Developmental Measures	Implementing Agency	Phase-1 2003 to 2005	Phase-2 2005 to 2010	Phase-3 2011 to 2016	Phase-4 2017 to 2022	Total Cost (in Lakh Rs.)
Sr. No.	Developmental Measures	Implementing Agency	Phase-1 2003 to 2005	Phase-2 2005 to 2010	Phase-3 2011 to 2016	Phase-4 2017 to 2022	Total Cost (in Lakh Rs.)
	<b>Upstream River Development</b>						
1	Construction of Club House	DOT/Private			25.00	25.00	50.00
2	Facilitation for boating facilities in the river	Port/Locals		1.00			1.00
3	Provision of restaurants	DOT/PWD			5.00		5.00
4	Amusement Park	DOT/Private			10.00	10.00	20.00
5	Tourist information centre	DOT			2.00		2.00
6	Handicraft emporium & Souvenir Shop	DOT			2.50		2.50
7	Drinking water & Toilet facilities	DOT			3.00		3.00
8	Water sports facilities (row boats, paddle boats)	DOT			7.00		7.00
9	Parking Space	DOT			1.00		1.00
	<b>Total ( In Lakh Rs.)</b>		<b>0.00</b>	<b>1.00</b>	<b>55.50</b>	<b>35.00</b>	<b>91.50</b>
	<b>Khurasiya Dungar Illumination &amp;Development</b>	DOT			8.00		8.00
	<b>Tourism Infrastructure Grand Total (In Lakh Rs.)</b>		<b>80.15</b>	<b>170.92</b>	<b>102.32</b>	<b>53.42</b>	<b>406.80</b>
	<b>Accommodation Grand Total (In Lakh Rs.)</b>	Private	<b>350.00</b>	<b>900.00</b>	<b>375.00</b>	<b>285.00</b>	<b>1,910.00</b>
	<b>Marketing Grand Total (In Lakh Rs.)</b>	DOT	<b>215.00</b>	<b>277.50</b>	<b>175.00</b>	<b>435.00</b>	<b>1,102.50</b>
	<b>HRD Grand Total (In Lakh Rs.)</b>	DOT	<b>1.99</b>	<b>6.54</b>	<b>7.04</b>	<b>5.61</b>	<b>21.18</b>
	<b>GRAND TOTAL (In LAKH Rs.)</b>						<b>3,440.5</b>
1	PWD (tenth five year plan)						7,600.00
2	Water Supply (tenth five year plan)						685.00
3	Power (tenth five year plan)						2,119.00
4	Port (tenth five year plan)						135.00
5	Tourism (tenth five year plan)						432.00

## E.2 SUMMARY- DIU

Table E.2 Summary of Recommendations- Diu

Diu Fort Development Plan							
Investment Required to Develop Diu Fort							
Sr. No.	Developmental Measures	Implementing Agency	Phase-1 2003 to 2005	Phase-2 2005 to 2010	Phase-3 2011 to 2016	Phase-4 2017 to 2022	Total Cost (in Lakh Rs.)
1	Training of ASI guides in Fort history & other monuments in Diu	ASI		0.50			0.50
2	Restoration of Fort Walls	ASI		8.00	8.00	9.00	25.00
3	Physical Conservation works (vegatation growth removal)	ASI		10.00			10.00
4	Structural Repair works	ASI		7.50	7.50		15.00
5	Conservation of Ruin Chapel	ASI	10.00				10.00
6	Signages for the Fort	ASI & DOT	0.50	0.50			1.00
7	Preservation of Bronze Statue of Dom Nano De Cunha	ASI		2.00			2.00
8	Cleaning & Paving for Visitor Circulation Plan	ASI	2.00	2.00	2.00	2.00	8.00
9	Cleaning & Paving for Visitor Circulation Plan	ASI		1.25			1.25
10	Cleaning of Moat	ASI	2.00				2.00
11	Organised Parking , Landscaping & Toilet facilities in front of Fort	ASI	6.00	6.00			12.00
	<b>Total ( In Lakh Rs.)</b>		<b>20.50</b>	<b>37.75</b>	<b>17.50</b>	<b>11.00</b>	<b>86.75</b>

Sr. No.	Developmental Measures	Implementing Agency	Phase-1	Phase-2	Phase-3	Phase-4	Total Cost (in Lakh Rs.)
			2003 to 2005	2005 to 2010	2011 to 2016	2017 to 2022	
Sr. No.	Developmental Measures	Implementing Agency	Phase-1	Phase-2	Phase-3	Phase-4	Total Cost (in Lakh Rs.)
			2003 to 2005	2005 to 2010	2011 to 2016	2017 to 2022	
Panikotha Development Plan							
Investment Required to Develop Panikotha							
1	Construction of floating Jetty	Port/DOT		75.00			75.00
2	Physical Development for conducting Light & sound show	DOT		5.00			5.00
3	Conducting Light & sound show	DOT		25.00	50.00	25.00	100.00
4	Cleaning & Maintainece of Fortress	DOT	0.25	0.25	0.25	0.25	1.00
5	Signages in the Fortress	DOT		3.89			3.89
7	Purchase of small craft boats (3Nos.)	DOT		15.00			15.00
8	Ticketing provisions at information centre	DOT		0.03			0.03
	Total ( In Lakh Rs.)						0.00
Diu Town Tourism Development Plan			0.25	124.17	50.25	25.25	199.92
Investment Required to Develop Diu Town							
1	Purchase of two buses for Diu Darshan (settlement ride)	DOT/Private		50.00			50.00
2	Regularising the renting of bicycle, bikes & mopeds	DOT/Collector	1.00				1.00
3	Road maps-for bike/bicycle tourists	DOT		2.50			2.50
4	Provision of Crafts emporium & shopping malls	DOT		1.00			1.00
5	Tourism Signages	DOT	0.12	0.26			0.38
6	Beautification & Illumination of the Diu-Ghoghla Bridge	DOT		4.00			4.00
7	Landscaping of town	DOT		10.00			10.00
8	Tourism Information counters at railway stations of Veraval, Rajkot, Bhavnagar, and Ahmedabad.	DOT		1.00			1.00
	Total ( In Lakh Rs.)		1.12	68.76	0.00	0.00	69.88

Sr. No.	Developmental Measures	Implementing Agency	Phase-1	Phase-2	Phase-3	Phase-4	Total Cost (in Lakh Rs.)
			2003 to 2005	2005 to 2010	2011 to 2016	2017 to 2022	
Coastal Trail Development							
Nagoa Beach Development Plan							
Investment Required to Develop Nagoa Beach							
1	Construction of Tourist reception centre & Plaza	DOT	2.00				2.00
2	Construction of Floating restaurant	Private/DOT		5.00			5.00
3	Construction of Hotels & Restaurants	Private/DOT	3.75	3.75			7.50
4	Construction of refreshment stalls	DOT	0.63	0.63			1.25
5	Provision of Cloak rooms	DOT		0.50			0.50
6	Providing organised parking space	DOT	0.50				0.50
7	Provision of organised taxi & autorickshaw stand	DOT		0.50			0.50
8	Provision of Signages	DOT	0.10	0.10			0.20
9	Basic Lighting on/near the Beach	DOT/Electric Dept.		4.65			4.65
10	Providing Tourism Police station ( with patrolling vehicle for Nagoa to Gomtimata stretch Beach)	DOT/Police Dept.		1.00			1.00
	Total ( In Lakh Rs.)		6.98	16.13	0.00	0.00	23.10
Khodidhar to Gomtimata stretch of Beach Development Plan							
Investment Required to Develop Khodidhar to Gomtimata stretch							
3	Refreshment huts near the beach	DOT		1.00			1.00
4	Meditation & relaxing platforms on the beach bed	DOT		0.50	0.50		1.00
5	Planting of palm trees along the beach	Forest Dept./DOT		5.00	5.00		10.00
6	Finance for Angling equipments	Collector Office/Fisheries Dept.			2.50		2.50
7	Signage from Nagoa to the Gomtimata stretch	DOT		0.38			0.38
8	Basic Lighting on/near the Beach	DOT Diu		4.65			4.65
	Total ( In Lakh Rs.)		0.00	11.53	8.00	0.00	19.53
Ghoghla Beach Development Plan							
Investment Required to Develop Ghoghla Beach							
1	Provision of Entrance Plaza & Tourist Reception centre	DOT Diu		2.00			2.00
2	Construction of Changing rooms	PWD			2.00		2.00
3	Construction of Toilet	PWD			1.20		1.20
4	Construction of Cloak rooms	PWD		1.20			1.20
5	Providing organised parking space	PWD	1.00				1.00
6	Development of water sports equipments	DOT/Private	23.00				23.00
	Ticketing cabin for water sports			1.00			
7	Construction of hotel and restaurants	Private		9.00	9.00		18.00
8	Construction of temporary refreshment stalls (2)	PWD		2.00			2.00
9	Provision of signages	DOT Diu		0.15			0.15
10	Basic Lighting on/near the Beach	DOT Diu		4.65			4.65
	Total ( In Lakh Rs.)		24.00	20.00	12.20	0.00	56.20
Chakrathirth-Jallandhar Stretch Beach Development Plan							
Investment Required to Develop Chakrathirth-Jallandhar Stretch							
1	Purchase of Hanging ropes & ancillary facilities for cliff climbing	DOT Diu			3.00		3.00
2	Provision of Angling equipments	DOT Diu			0.45		0.45
3	Construction of Meditation & relaxing platform	DOT Diu		1.00			1.00
4	Conversion of cave into relaxing space	DOT Diu		0.50			0.50
5	Provision of Refreshment huts	DOT Diu		1.00			1.00
6	Signages on the beach stretch	DOT Diu	0.20	0.20			0.40
7	Basic Lighting on/near the Beach	DOT Diu		4.65			4.65
8	Landscaped pathways along the road	PWD		8.00	8.00		16.00
9	Providing Tourism Police cabin	DOT/Police Dept.		1.00			1.00
	Total ( In Lakh Rs.)		0.20	16.35	11.45	0.00	28.00
Simbor Beach Development Plan							
Investment Required to Develop Simbor Beach							
2	Provision of Angling facilities	DOT Diu				0.45	0.45
3	Provision of Boating facilities from bunder jetty to simbor	Port/Private			5.00	5.00	10.00
	Community Based tourism development				5.00	5.00	10.00
4	Construction of refreshment huts	PWD			1.00		1.00
5	Construction of Toilet blocks	PWD			1.20		1.20
6	Construction of landing platform	Port			5.20		5.20
7	Provision of signage near the beach & on the highway	PWD			0.60		0.60
	Total ( In Lakh Rs.)		0.00	0.00	18.00	10.45	28.45

Sr. No.	Developmental Measures	Implementing Agency	Phase-1	Phase-2	Phase-3	Phase-4	Total Cost (in Lakh Rs.)
			2003 to 2005	2005 to 2010	2011 to 2016	2017 to 2022	
Naida Caves Development Plan							
Investment Required to Develop Naida Caves							
		PWD/Geotechnical Institute					
1	Structural Stability tests			10.00			10.00
2	Provision of drinking water facilities	DOT			0.40		0.40
3	Provision of toilet facilities	DOT			2.00		2.00
4	Signages in the caves	DOT			0.63		0.63
5	Entrance steps to the cave	DOT			0.50		0.50
6	General site development	DOT			4.00		4.00
7	Ticketing booth with security	DOT			0.03		0.03
8	Sitouts inside the caves	DOT			1.00		1.00
9	Development of Adventure Cave Sports	DOT			3.00	3.00	6.00
	Total ( In Lakh Rs.)		0.00	10.00	11.55	3.00	24.55
Investment Required for Waterways							0.00
		Private Sector/Port					
1	Catamaran service from Diu -Mumbai		2,625.00	2,625.00			5,250.00
2	Jetty at Bunder Chowk	Port	10.00				10.00
	Total ( In Lakh Rs.)		2,635.00	2,625.00	0.00	0.00	5,260.00
Investment Required for Roads							0.00
1	Walking Plaza (Bunder chowk to Diu Fort)	PWD		5.00	5.00		10.00
2	High way Directional Signages	PWD/DOT	0.20				0.20
3	Improvement of road from Khodidhar-Gomtimata stretch of beach (7.5mt width*4km)	PWD		40.00	40.00		80.00
	Total ( In Lakh Rs.)		0.20	45.00	45.00	0.00	90.20
Investment Required to Develop Diu Airport							
1	Construction of Toilet facilities at Diu Airport	AAI	0.60				0.60
2	Provision of parking Space for Private vehicles near Diu Airport	AAI		9.00			9.00
3	Provision of Restaurants & Cafes	AAI/ DOT DIU		7.50			7.50
	Total ( In Lakh Rs.)		0.60	16.50	0.00	0.00	17.10
	Tourism Infrastructure Grand Total (In Lakh Rs)		2,688.85	2,991.18	173.95	49.70	5,903.67
	Accommodation Grand Total (In Lakh Rs.)	Private	100.00	505.00	775.00	395.00	1,775.00
	Marketing Grand Total (In Lakh Rs.)	DOT	385.00	472.50	275.00	680.00	1,812.50
	HRD Grand Total (In Lakh Rs.)	DOT	1.99	6.54	7.04	5.61	21.18
	GRAND TOTAL (In LAKH Rs.)		3,175.84	3,975.22	1,230.99	1,130.31	9,512.35
1	Road Infrastructure (tenth five year plan)						4,140.00
2	Airport Infrastructure(tenth five year plan)						400.00
3	Water Supply & Sanitation Works(tenth five year plan)						1,750.00
4	Power(tenth five year plan)						335.00
5	Port Related Works(tenth five year plan)						830.00

## DEMAND FORECASTING FOR DIU - CALCULATIONS

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### *Calibration of the Utility Function*

The coded computer file containing the data of each respondent was subjected to analysis using linear multiple regression procedure of SAS statistical package. The utility function for Goa was calibrated separately for Indian and Foreign tourists with the following variables:

- ◆ Utility (dependent variable)
- ◆ Attractiveness Index
- ◆ Travel Cost
- ◆ Travel Time
- ◆ Distance
- ◆ Travel Mode
- ◆ Deterrence Factor (A principal component of travel cost, travel time and distance, which accounts for 84% of the total variance in the above three variables)

Attractiveness Index of Goa for each respondent was calculated by multiplying his weighted preference for each kind of site, with the number of sites of that kind in Goa. For example, if there are 10 beaches and 5 lakes in Goa, and a respondent's weighted preference for beaches and lakes are 5 and 4 respectively, his Attractiveness Index has been calculated as  $10 \times 5 + 5 \times 4 = 70$ . The numbers of sites of different kind in Goa are mentioned in Table 3.1.

The model was run with all the above independent variables one by one and then with various combinations of these variables. The intercept of the model was suppressed since the value of utility was assumed to be zero for zero Attractiveness Index. Only the models having Attractiveness Index as one of the variables showed high value of  $R^2$ , the rest showing  $R^2$  of less than 0.5. Even in the models having high  $R^2$ , all variables except Attractiveness Index were insignificant predictors since their corresponding regression coefficients had high standard errors.

Therefore, it was decided to consider only Attractiveness Index out of the above-mentioned dependent variables. Since, the concept of diminishing marginal utility has been assumed, it was decided to have a polynomial regression with Attractiveness Index as the dependent variable. Attractiveness Index (AI),  $AI^2$ ,  $AI^3$  etc were added to the regression model one after the other.  $AI^3$  and higher powers of AI were found to insignificant predictors at 0.05 significance level, since their corresponding regression coefficients had high standard errors. The model having AI and  $AI^2$  as variables had a high  $R^2$  of 0.96 and both the variables were significant at the 0.0001 significance level. NLIN growth model was also applied but the value of  $R^2$  was slightly less at 0.92.

Due to higher value of  $R^2$ , it was decided to accept the polynomial model. The regressed polynomial equation for domestic and foreign tourists is as follows:

$$\text{Utility (Domestic)} = 0.109328 \text{ AI} - 0.000377 \text{ AI}^2$$

$$\text{Utility (Foreign)} = 0.125590 \text{ AI} - 0.000491 \text{ AI}^2$$

### *Calculation of Utilities of Goa and Diu*

The sample's average utilities of Goa ( $U_g$ ) and Diu ( $U_d$ ) have been calculated using the above equations. For this purpose, the sample's average Attractiveness Indexes of Goa and Diu have been calculated by multiplying the sample's average weighted preference for different type of sites with the number of sites of each kind in these two places (shown in Tables 3.1 and 3.2 respectively). The weightages of very attractive, attractive and not-so-attractive sites has been considered as 1, 0.5 and 0.25 respectively.

**Table 1 Type of Sites in Goa**

Type of Sites	Very (VA)	Attractive (A)	Not Attractive (NA)	So Attractive (NA)	Total Weight for a type of Site
Beaches	10	8	8		16
Lakes			1		0.25
Historical site		1	2		1
Hill Station					0
Cultural site	4				4
Island					0
Religious site	2	4	4		5

**Table 2 Type of Sites in Diu**

Type of Sites	2003-2004				2004-2010				2010-2016				2016-2022			
	VA	A	NA	T	VA	A	NA	T	VA	A	NA	T	VA	A	NA	T
Beaches	3	2	3	4.75	4	2	2	5.5	5	2	1	6.25	6	2		7
Lakes		1		0.5		1		0.5		1		0.5		1		0.5
Historical site		3	1	1.75	1	2	1	2.25	2	1	1	2.75	2	1	1	2.75
Hill Station				0				0				0				0
Cultural site		2		1		2		1	1	1		1.5	1	1		1.5
Island			1	.25		1		0.5	1			1	1			1
Religious site		2	1	1.25	1	1	1	1.75	1	1		1.5	1	1		1.5

VA – Very Attractive, A – Attractive, NA – Not Attractive, T – Total.

### *Calculation of $E^U$ (sum) for all Tourist Destinations*

The utilities of Goa and Diu (as calculated above) have been used to calculate  $e^{U_g}$  and  $e^{U_d}$  respectively, both for domestic and foreign tourists. Based on the multinomial logit equation explained earlier, the probability of a tourist choosing Goa would be :

$$Pg = e^{U_g} / (e^{U_1} + e^{U_2} + \dots + e^{U_g} + \dots + e^{U_n})$$

$$\text{So, } \sum \exp [U] = (e^{U_1} + e^{U_2} + \dots + e^{U_g} + \dots + e^{U_n}) = e^{U_g} / Pg$$

The value of Pg has been calculated both for domestic and foreign tourists. In case of foreign tourists, the value of Pg(f) was calculated from the following formula:

$$Pg(f) = \frac{\text{Number of foreign tourists coming to Goa}}{\text{Number of foreign tourists coming to India}}$$

For domestic tourists, same formula has been used to calculate Pg(d).. The value of Pg(f) was found to be around 0.1165 and Pg(d) was around 0.01. These probabilities are calculated on the 1998 figures, being the latest available on domestic tourism. Using these values of Pg(d) and Pg(f), the values of  $\sum \exp [U(\text{domestic})]$  and  $\sum \exp [U(\text{foreign})]$  have been calculated.

### ***Forecast of Total Domestic and Foreign Tourists in India***

The past data on total number of domestic and foreign tourists in India was extrapolated at a growth of 4.1%, the world average growth expected as per the World Tourism Organization, to forecast the respective numbers for the period under consideration (2003-2022). The projections are given in the following table.

**Table 3 Projected tourist arrivals in India till 2022.**

Year	Domestic Tourists	Foreign Tourists
2003	206189621	2749604
2004	214437206	2862338
2005	223014694	2979694
2006	231935282	3101861
2007	241212693	3229038
2008	250861201	3361428
2009	260895649	3499247
2010	271331475	3642716
2011	282184734	3792067
2012	293472123	3947542
2013	305211008	4109391
2014	317419448	4277876
2015	330116226	4453269
2016	343320875	4635853
2017	357053710	4825923
2018	371335859	5023786
2019	386189293	5229761
2020	401636865	5444182
2021	417702339	5667393
2022	434410433	5899756

### ***Calculation of the Probability of Choosing Diu***

Having calculated  $E^U(\text{newsum})$  for domestic and foreign tourists, the probabilities of choosing Diu was calculated as follows:



$$Pd(\text{domestic}) = e^{U_d}(\text{domestic}) / \sum \exp [U_{\text{new}}(\text{domestic})]$$

$$Pd(\text{foreign}) = e^{U_d}(\text{foreign}) / \sum \exp [U(\text{foreign})]$$

Since the number of sites being developed in Diu have been assumed to increase (as per Table 3.2) during the period under consideration, the value of  $e^{U_d}$  would increase for both domestic and foreign tourists during this period. Correspondingly, the value of Pd would also increase during the period under consideration.

### Local tourists

The above model would give the number of tourists that can be attracted from the other states in the country whose awareness level and probability to choose Diu would be built upon with the various developments proposed. In addition to this, there would be certain people who would be visiting Diu who are already aware about Diu i.e. from the nearby state of Gujarat with the current state of development. A small survey conducted by the consultants with a sample size of 50 indicated that lots of tourists from nearby districts like Rajkot, Rajula, Bhavnagar, Veraval, etc. visit Diu as a day and a half-long weekend get away. Such tourists would not be covered under the model explained above. To estimate the number of such tourists, the total current tourist population in Diu, which is visiting the district without its being developed, has been projected to grow at the rate of growth of domestic tourism in India. It is further assumed that only 85% of these tourists are from Gujarat. The local tourist population and the total tourist population (sum of domestic, foreign and local tourists) during the forecast period is as follows.

**Table No 4. Domestic, Local and Foreign Tourist projections till year 2022.**

Year	Domestic Tourists	Foreign Tourists	Local tourists	Total
2003	14891	4640	99979	119510
2004	15486	5521	104078	125086
2005	19708	8071	108346	136125
2006	23912	10892	112788	147592
2007	28421	14254	117412	160087
2008	36144	18211	122226	176581
2009	41767	21064	127237	190068
2010	43437	21927	132454	197819
2011	58699	25095	137885	221679
2012	71222	33017	143538	247777
2013	84652	39281	147844	271778
2014	99043	46003	152279	297326
2015	125895	53210	156848	335953
2016	130931	55392	161553	347876
2017	141655	63911	166400	371966
2018	165737	74847	171392	411976
2019	203125	86573	176534	466232
2020	211250	90123	181830	483202
2021	219700	93818	187284	500802
2022	228488	97664	192903	519055

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**HUMAN RESOURCE DEVELOPMENT and TRAINING**

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The tourism industry is a major source of employment. It is a highly labour-intensive industry that offers employment to educated, semi-skilled and unskilled workers, especially the locals. Hotels, resorts, travel agents, and tour operators are some of the jobs that the local people can take up. As employment opportunities in Daman & Diu are currently very few, most of the semi-skilled and unskilled workers are taking European visa and migrating abroad to earn a living. The development of tourism will provide employment to the people in their native district.

People are undoubtedly the most important resource in any organisation. This is especially true for organisations that provide highly personalised service to customers. As the tourism industry is customer-driven, it is imperative that tourism development be integrally linked with human resource development (HRD) in Daman & Diu.

This chapter discusses the means of developing human resources in Daman & Diu with an objective to provide trained and qualified persons to the tourism industry.

**Objectives**

The objectives of the HRD Plan for the region are as follows:

- To provide additional job opportunities to the local people.
- To provide trained and qualified persons to the tourism sector.
- To ensure that the quality of service in tourism and allied sectors is excellent.

To maintain high standards of professionalism in any industry, it is very important to have trained personnel. Training improves the knowledge, skill and attitude of an employee, which in turn improves job performance.

Keeping in mind the objectives of the HRD Plan, the following aspects have been covered in this chapter:

- The quality of trained personnel and the training courses currently available
- The requirement for trained personnel in the tourism sector, especially in the Hotel and Tour Operation sectors.
- The type of training to be imparted and the institutional set-up for imparting training.

**Current Employment Situation in Daman & Diu*****Hotel and Accommodation***

Currently, most hotels in Daman and Diu have no trained personnel. There is hardly any awareness about the importance of training in hotels. In fact working in hotels is actually

looked down upon by the locals here. Even at the managerial level, there are very few trained people serving only in the top hotels like Cidade Daman.

### ***Guides***

Currently, no authorised guide service exists in Daman & Diu.

### ***Travel and Tourism***

Currently, there is no Travel and Tourism Management course in Daman & Diu.

## **Employment Opportunities in the Tourism Industry**

### ***Hotels***

The hotel industry is one of the most important segments in the tourism industry. It has been estimated that this sector, along with the catering sector, accounts for more than 50 percent of the total employment generated by the tourism industry.

Hotels require trained personnel for housekeeping and front office, and in the kitchen. Trained personnel can ensure customer satisfaction. Owing to the rising standard of living, customer service has become a crucial differentiating factor in the hotel industry. While most up-market hotels realise the importance of providing quality service, budget hotels hardly focus on customer service.

### ***Caterers***

The catering sector includes all outlets that retail eatables. Customer service is very important in this sector; therefore, trained personnel would be required here. While most good restaurants provide some kind of formal and on-the-job training to their employees, the smaller establishments rarely do so.

### ***Travel Agents***

Travel agents play a key role in promoting and developing tourism because they are responsible for enthusing tourists to visit a particular tourist destination.

The main activities of travel agents are:

- To advise potential tourists on the relative merits and demerits of tourist destinations and provide the necessary travel information.
- To make the necessary travel arrangements for its customers. Such arrangements include accommodation, transport and other services. For this purpose, travel agents enter into contracts with hoteliers, transport companies and so on.

Of late, the role travel agents play in determining and influencing the vacation plans of tourists has become more important. Tourists may have only vague ideas of where they want to vacation, and they seek guidance from the travel agent. After selecting a destination, they rely on the travel agent to choose a carrier for travelling. Many tourists

seek the travel agent's advice and guidance to settle such issues as hotels, package tours, and car rentals.

Most of the travel agents in India are members of the Travel Agent Association of India (TAAI). Many of them are also approved by the Department of Tourism, GOI. This approval adds to their credibility. However, there is no legislation in India to regulate the business of travel agents.

### ***Tour Operators***

Tour operators plan, organise and retail tours. They make all the necessary arrangements for travel, such as accommodation, sightseeing and transport as part of the package. They either own or contract transport, hotel accommodation and other facilities to be able to deliver the services promised to tourists.

### ***Guides***

Guides play an important role in making tourists' trip more informative and enjoyable. The services provided by well-trained guides help in projecting a good image of the region to domestic or international tourists. On the other hand, self-appointed guides are a nuisance, because they often trouble tourists and in some cases cheat them.

### **Recommendations**

Based on the appraisal of the current situation in Sindhudurg and the level of trained personnel required, the following are the recommendations:

#### ***Travel and Tourism Course***

According to the 2001 census, there are 84735 literate people in Daman & 27204 in Diu, which constitutes 83.6% and 74.14% respectively of the total population of the union territory. However, around 50% of the literate people are unemployed in the Daman and Diu.

Diploma courses in Travel and Tourism are proposed to be started at the local colleges/vocational centres at Daman & Diu. The course content should be the same as for the programme conducted by Indian Institute of Travel and Tourism Management in association with TAAI.

The faculty should be professionally qualified, experienced and enthusiastic. Students can be sent for summer training to provide them with practical working experience.

In addition, the following certificate courses should be introduced to take tourism to new heights in the district:

This year long course is proposed to be run by the interested private parties at a reasonable fee. The administration would provide scholarship to top two students in merit in Daman and two students from Diu. The cost incurred for the same would be

approximately Rs. 48,000/- per annum from year 2004 to 2010(phase I & II), Rs. 57,600 per annum in phase III and Rs. 72,000 /- per annum in phase IV.

- **Basics of Computers**

This course will help people to learn basic computer applications. This will, in turn, help them to learn the Computerised Reservations System (CRS).

- **Financial Management**

People should be taught financial management, especially the management of finance in the tourism industry.

- **Spoken English and Hindi**

People need to be fluent in spoken English and Hindi to interact with customers and to obtain higher positions in the corporate environment.

### ***Travel Agents Course***

- A new course should be developed to train people in the travel sector. This course should cover all aspects of travel agency and tour operator business. It should include the legal and regulatory formalities of setting up this business, financing aspects, need for the highest level of customer service, the ethical standards required, tour planning and logistics.
- To enable travel agencies to attract corporate clients, employees should be trained in the use of CRS. In addition to booking regular business trips, they can also book conventions; business meetings and incentive travel trips for corporate client groups. Business travellers have an itineraries that are considerably more rigid than those of pleasure travellers. However, in some cases, travel agents' advice and guidance may be sought on such aspects as the trip itinerary and choice of hotels.
- A travel agent must have the approval of the Department of Tourism to claim publicity and promotional benefits for tour operators handling inbound tourists. This approval is not necessary for travel agents that do not propose to service inbound traffic, although it would be helpful. As the approval adds to their credibility, travel agents should be encouraged to get an approval from the Department of Tourism.
- This course will be of duration 6 weeks. An initial sum of Rs. 70,000/- (Rs 35000 for Daman and Rs. 35000 for Diu) would be required to design the course in the first year 2003, followed by minor course modification expenditure of Rs. 6000/- in the years 2011 and 2017 each. Rs. 40,000/- per annum from 2004 to 2007, Rs. 45,000/- in the years 2011 and 2014 each, Rs. 50,000/- in the years 2017 and 2020 each may be budgeted for conducting the course.

### ***Hotel Management Course***

Professional managers are required in the tourism industry. Currently, there is no institutional framework to develop such professionals and, therefore, a course in Hotel Management should be started.

Courses in basic areas of hotel operations such as Housekeeping, Catering, Room Service and Front Office operations should be conducted both in Hindi and English. This is with a view to enable rural youth from remote areas to have access to employment opportunities in the region.

This is proposed to be a year long course proposed to be provided by a private party. The administration shall however provide scholarship for the top two students each from Daman and Diu from the merit list. An amount of Rs. 48,000/- per annum from 2004 to 2010 (phase I), Rs. 57,600 per annum in phase III and Rs. 72,000 /- per annum in phase IV. is proposed to be budgeted for the same.

### ***Guide Course***

- The training course for guides should be revamped to cover areas such as the history of Daman & Diu, myths and legends about various places, and aspects of hospitality. This training should be conducted in Gujarati, Hindi and English so that the guides can handle domestic as well as international tourists.
- There should be some regulatory authority to certify and regulate the profession. There should be some basic eligibility criteria that a person has to meet to become a guide, such as HSC or a relevant certificate course.
- The course content for this two months training will be professionally designed. An amount of Rs. 60,000/- is budgeted for designing the course content and curriculum for both Daman and Diu. For conducting the course Rs 60, 000 /- per annum for years 2004 to 2007, Rs. 70,000/- for years 2011 and 2014 each and Rs, 76,000/- for years 2017 and 2020 each may be allocated

### ***Entrepreneurship Development Programme***

A new entrepreneurial class is required to develop tourism in Daman & Diu, which in turn will lead to economic growth, dispersal of economic activities, development of backward areas, creation of employment opportunities, improvement in the standard of living and involvement of all sections of society in the process of growth.

In this regard, an Entrepreneur Development Programme (EDP) can play a big role in the identification and promotion of entrepreneurs in this sector. EDP is a programme designed to help people strengthen their entrepreneurial abilities and acquire skills and capabilities necessary to be effective entrepreneurs.

EDP can help in tapping skills and channelising them for the growth of tourism in particular. This programme will mainly develop first-generation entrepreneurs, that is the local youth, who would otherwise have found it difficult to do so on their own.

It is proposed that the administration should sponsor two students each from both Daman and Diu for the programme each year for taking up this course offered by colleges in the

neighboring areas. An amount of Rs. 74,000/- per annum for year 2004 to year 2010 and Rs 80,000/- per annum for year 2011 to 2016 may be allocated for the same.

## STRATEGY OF PRIVATIZATION OF ADMINISTRATION OWNED TOURISM PROPERTIES

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### Introduction:

Tourism is envisaged to be a strategic industry for the Union territory of Daman & Diu. Tourism offers the potential to provide jobs and hard currency, foster development of small businesses, and attract private investment. Privatization will transfer assets into productive hands that can attract needed capital and skilled management. Privatization may also produce revenue but this is a secondary consideration. Opponents of rapid privatization will argue that current conditions will result in decreased selling prices and delay will increase revenues when political uncertainties resolve or when stability returns and tourists again flock to the region. In reality moving rapidly offers the best solution to attract capital that will make the assets productive. The value of the asset is the economic activity it generates not the selling price it brings. This calls for private sector investment both Indian & Overseas, JV's between Government and the private sector with primacy towards the private sector. The Consultants have evolved a broad strategy for achieving the objective of privatization.

### Mechanisms of Privatization:

Various mechanisms exist to transfer the administration owned properties into private hands. These include:

- Asset Sales
- Management Contracts
- Leases
- Franchises

**Asset sales** offer a good possibility of privatization. Here the focus would be on attracting “good owners”. The selection criteria should concentrate on proven performance of the chosen operator and the proposed business plan should emphasize on the brand standards and be less weighted toward price.

**Management Contracts** are another vehicle of attracting capital and prominent players with marketing power to attract tourists. For such agreements the administration should publish an open offer. The selection criteria should be tailored to individual property or group of properties, primarily based on the operators ability to generate revenue and not the solely on the fee structure. Management of properties by an experienced and professional operator enhances the valuation of the asset.

One of the other vehicles for privatization is the **license** to operate and lease that is also very popularly used by most government owned tourism-related properties. The properties are envisaged to be developed under the Build Operate and Transfer (BOT)



structure wherein the government can retain the title of the land while the private operator will have the property leased on his name and have the right to operate and earn profit for a specified period. Here the government benefits from a yearly stream of rent revenue and the new owner requires a smaller initial cash outlay.

The selection criteria for the above mentioned vehicles will favour potential owners backed by prominent operators. However local operators will also play an important role as they compete for the available assets. These operators can enhance their potential by obtaining **franchises** with hotel chains that offer professional management as well as brand recognition.

### **Do's and Don'ts:**

- The Government should continue to entertain offers until the deal is signed.
- The Government should reserve the right to reject all offers if the Privatization committee feels that an acceptable offer was not received.
- A suitable marketing plan should be a part of the process to have a competitive process. A brief overview of the promotion strategy is as given in Chapter 9, The Implementation Plan in section 9.10 & 9.11.
- The Government will need to address several legal issues to attract private investment like title documents, a proper framework on land leases which protects both the Government and the new owner.
- The Government should select a financial advisor preferably an investment banker with a proven record in structuring such deals and have the ability to identify both investors and operators.

### **Key Strategy Components:**

- Selection of a Financial Advisor
- Offer the properties for sale/ long-term lease by national tenders.
- Publish an open/continuous announcement inviting offers for management contracts.
- Develop selection criteria which include past performance of the operator, business plan with brand strategies and price.
- Establish an administrative center for marketing and contact with potential investors.
- Develop and document detailed property profiles for each asset.
- Draw a land use map with recommendations on areas for redevelopment, new development.
- Address all legal issues such as asset titles, land leases and land restitution issues that may impede private investment.

### **Attracting Investors, Lenders and Management Companies:**

To attract potential private operators it is imperative to firstly understand their perceptions when evaluating properties. They show preference for:

- Separate ownership and management
- Large properties

- New development projects
- Target specific industry segments like resorts, health resorts, business travel, water sports, etc.

Secondly access to comprehensive, easy to understand information on properties for privatization is also a crucial component. Hence availability of detailed property profiles and an active administrative center of contact are imperative.

Finally, investment bankers active in this field should be engaged as advisors for the privatization process.

### **Selection of Potential Investors, Lenders and Management Companies:**

In addition to the financial concerns, the private operators should be evaluated on their level of brand recognition and market identification in the desired market segments and class. These points would form an important part of the technical proposal evaluation that would form the first level of screening of the privatization bid participants. The second level of screening would be done at the business proposal evaluation stage. The final and the deciding stage of the process would be the financial proposal evaluation.

### **Evaluation Level 1 Technical proposal evaluation:**

#### Eligibility for bidding:

Bidders may be individuals, proprietorship firms, partnership firms, private limited companies, or public limited companies and may bid individually or as a consortium.

#### Evaluation of relevant experience:

##### *Points for evaluation:*

- Bidders should have financed/ developed/ managed atleast one property with the project cost being not less than 50% in a related field of activity or not less than 80% in an unrelated field of activity.
- The image and reputation of the individual/ company/ consortium nationally and in the target markets.
- Quality of references provided by the bidder.
- Quality and experience of field/ management support staff, industry professionals
- Turnover of top management in properties operated and managed
- Number of years of experience in the field
- Operating returns generated in the past projects.

#### Evaluation of Financial Capability:

##### *Points for evaluation:*

- The minimum net worth of the bidder should not be less than 100% of the project cost.
- The bidder should provide the required amount of bank guarantee as bid security.

- The following substantiating documents need to be submitted
  - Net worth statement (Assets minus liabilities) duly certified by Chartered Accountant for individuals, proprietorship and partnership firms.
  - IT/WT returns statements filed the immediate preceding year for individuals and proprietorship firms.
  - Previous three years audited financial statements.
  - Bank statement of the individual/ proprietorship/ partnership firms certified by the bank manager as on date less than 15 days prior to submission of proposal.
- In case of a consortium, the name of the members, shareholding percentage, tangible net worth of entity should be provided.
- Details of projects financed, developed and managed earlier should be provided.

### **Evaluation Level 2 Business proposal evaluation:**

*The bidders will be evaluated on the following points on the project concept submitted:*

- Proposed quality and technology used for major facilities and utilities.
- Site Utilization and architectural and design plan.
- Uniqueness of the concept evolved
- Reasonableness and practicality of the project costs, envisaged revenues and the underlying assumptions for the same.
- Marketing arrangements envisaged.
- Safety and Environment Management
- Adherence to specifications.

### **Evaluation Level 3 Financial proposal evaluation:**

The successful bidder would be one with highest present value of the financial offer.

For the implementation of the perspective plan for Daman and Diu, there is a need to arrange for finances over and above plan allocations. International financial institutions' contribution would be required for the mobilization of resources. Loans can be obtained from multilateral and bilateral lending agencies under heads of various socio-economic development schemes, provided benefits of tourism are widely spread in society and that the poor benefit from tourism development. There is a widespread acknowledgement that tourism is making significant contributions to the socio-economic development of many countries in the Asian and Pacific region through its role in expanding their economic base, increasing foreign exchange earnings, providing employment and enhancing standards of living.

## **TOURISM AND SOCIOECONOMIC DEVELOPMENT**

### **World Tourism Report**

The WTTC (World Trade and Travel Council) has measured that, directly and indirectly, the Travel & Tourism industry constitutes: 11 per cent of global GDP (US\$3,575 billion); supports 200 million jobs world wide; 8% of total employment or and 1 in every 12.4 jobs. By 2010, the Travel & Tourism Economy contribution is estimated to grow to 11.6% (US\$ 6,591 billion) of global GDP and will support 250 million jobs, 9% of total employment or 1 in every 11 jobs.

### **Multiplier effect of tourism**

Other than direct benefits from tourist expenditure, indirect benefits also accrue to the economy. This is because tourism has strong backward, forward and lateral linkages with other sectors of the economy. The direct, indirect and induced impacts of tourist expenditures are quantified with the help of multipliers. When an injection of expenditure into an economy leads to an increase in production more than the original injection, it is called the multiplier effect.

The employment multiplier for the leisure industry is 2.36 i.e., a direct employment of one person in tourism creates job for 1.36 persons in other sectors of economy. Normally, a foreign tourist produces job for one person and 6.5 domestic tourists generate one job. The sector provides direct employment of 7.8 million or 2.4 per cent of total labour force. (Source The Hindu (May 13, 1998))

TCS had conducted an extensive tourist survey and calculated Tourism Multipliers for the state of Kerala. The results from the study have been tabulated below.

Tourism Multipliers for Kerala				
Multiplier type		Domestic	Foreign	Total
Output	Open Model	2.07	2.08	2.07
	Closed model	8.68	9.65	8.83
Income	Open Model	1.39	2.32	1.54
	Closed Model	5.29	7.15	5.57
Employment	Open Model	4.62	2.41	4.62
	Closed model	15.77	11.95	15.19

## Employment

The tourism industry is a major employer of skilled labour and also provides much scope for unskilled and semi-skilled employment.

## Employment for women

This industry employs a number of educated uneducated, skilled unskilled, semi-skilled women, who have outnumbered men in hotels, airlines, travel agencies, handicraft and cultural services.

## Employment Output Ratio

The employment- output ratio in tourism is 71, leather 51, textiles 27, electricity 14, beverages 12 and cement 6. Tourism is therefore a highly labour intensive industry. (source: [www.datamatics.com](http://www.datamatics.com))

## Labour Capital Ratio

Capital - labour ratio per million rupee of investment at 1985-86 prices in the hotel and restaurant sector is 89 jobs as against 44.7 jobs in agriculture and 12.6 jobs in the manufacturing sector. It is apparent that the investment required to create one job in manufacturing is around Rs.79,000. It should be evident that Tourism holds out great promise for the country to create additional jobs at a much lower cost and consequently ease the country's unemployment problems. (source [www.datamatics.com](http://www.datamatics.com)).

## Infrastructural Development

Tourism has been a major factor in the infrastructural development of the country, especially in coastal regions, and its contribution to the transport infrastructure has been undoubted.

## Exports

The tourism industry is one of the world's fastest growing export industry in one of the world's fastest growing sections. It is claimed to be the third largest export industry in India, next to gem jewellery and garment industries

## Environment

Various ecotourism projects work towards maintaining an amicable environment in the tourist destinations. They aim towards responsible travel to natural areas that conserves the environment and sustains the well-being of local people.

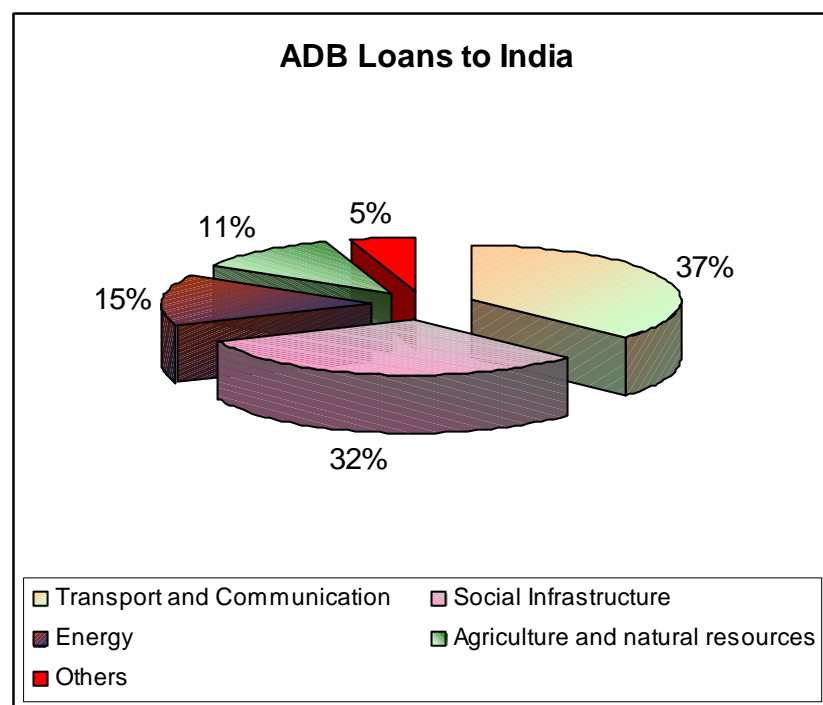
## MULTILATERAL FUNDING AGENCIES

This section describes the focus areas of various multilateral agencies. **Tourism industry would help in achieving growth in the areas which have been marked with a ✓.** The section gives a detailed description of agencies which have frequently been approached by India for social development projects:

### Asian Development Bank

The Asian Development Bank, is a development finance institution with 56 members and loan projects in 30 countries. China, India and Indonesia are the top 3 borrowers.

ADB has provided loans for specific tourism projects in Meckong, Nepal and Srilanka. Below given is a brief picture on ADB loans to india.



### Focus area of the bank

- Poverty alleviation ✓
- Accelerating human development ✓
- Promoting State level reforms in rural and urban areas
- Resettlement
- Child labour
- Gender equality ✓
- Environment ✓

## **World Bank**

Founded in 1944, the World Bank Group is one of the world's largest sources of development assistance. The Bank, which provided US\$19.5 billion in loans to its client countries in fiscal year 2002.

### Focus area of the bank

- Poverty ✓
- Education
- Gender Equality ✓
- Child Mortality
- Maternal Health
- HIV/AIDS, other diseases
- Environment ✓
- Global Partnership ✓

## **UNDP**

UNDP helps developing countries plan and implement national strategies and solutions for reducing poverty

These assist in:

- Support for National Poverty Eradication Efforts ✓
- Poverty Strategies Initiative & Strategies to Overcome Poverty (STOP) ✓

## **UNICEF**

### Focus area in India

- Health and nutrition
- Child protection
- Gender equality
- Education
- Water supply and sanitation
- Environment ✓

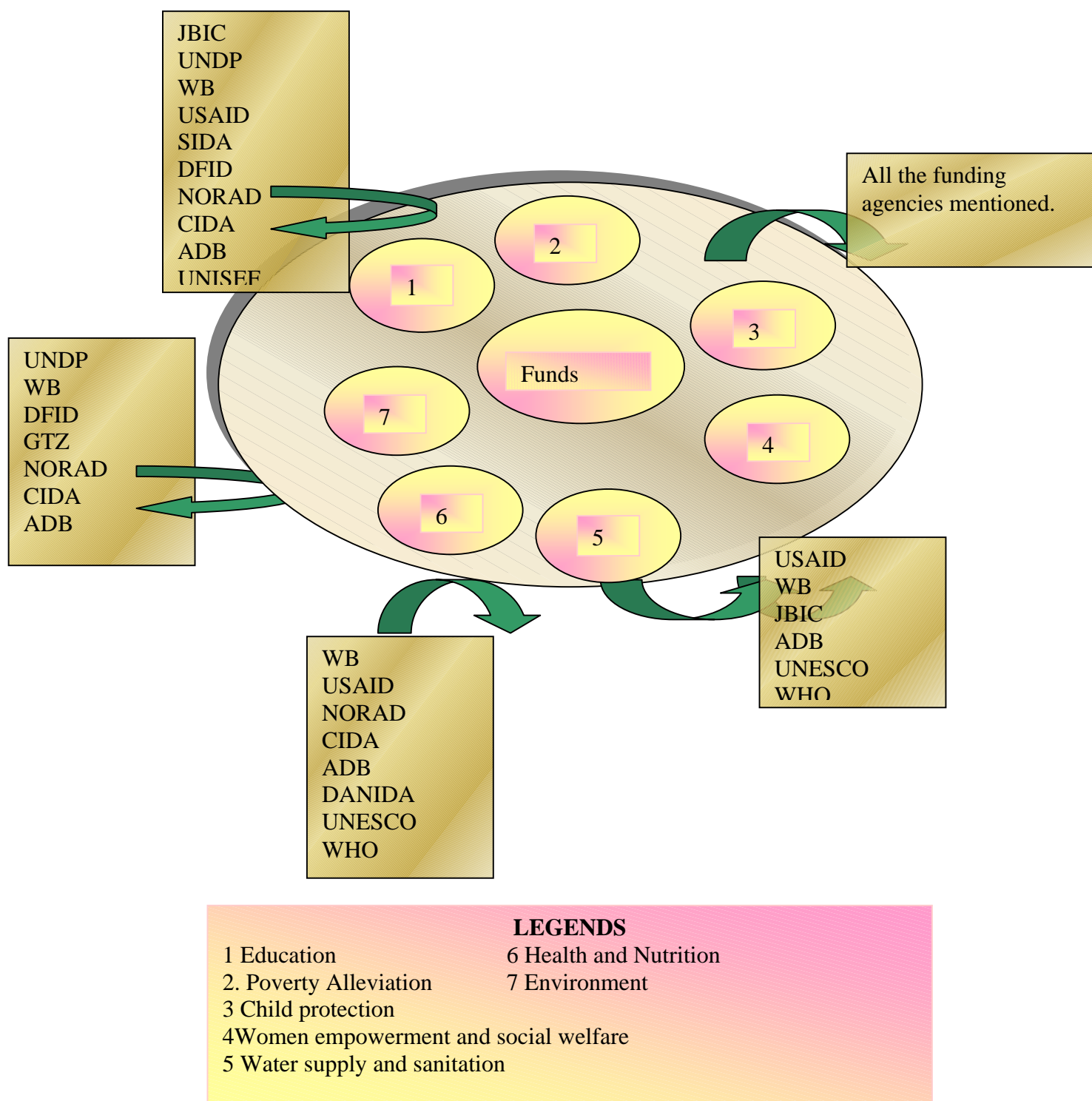
## **UNFPA**

### **United Nations Population Fund**

### Focus area in India

- Promotion of policy support and inter sectoral linkages between reproductive health and other services. ✓





**Figure Number D.1: Sector specific funding of various funding agencies**

## **USAID**

United States Agency for International Development

### Focus area in India

- Enhancing child survival



- Establishing population growth
- Preventing spread of infectious diseases
- Improved status of women ✓
- Protecting the environment ✓

## **NORAD**

### Focus area in India

- To combat poverty and contribute towards lasting improvements in living standards and quality of life, thereby promoting greater social and economic development and justice nationally, regionally and globally. In such development, priority must be given to employment, health and education. ✓
- To contribute towards promoting peace, democracy and human rights.
- To promote responsible management and utilisation of the global environment and biological diversity. ✓
- To contribute towards preventing hardship and alleviating distress arising from conflicts and natural disasters.
- To contribute towards promoting equal rights and opportunities for women and men in all areas of society. ✓

## **DANIDA**

Danish Agency for International Development

### Focus area in India

- Health
- Agriculture
- Water Supply and Sanitation
- Environment ✓

## **Department for International Development (DFID)**

DFID is the British government department responsible for promoting development and the reduction of poverty.

## **Japan Bank for International Cooperation (JBIC)**

JBIC has provided loan for tourism development in India (Ajanta Ellora tourism and Conservation Project). Focus area of the bank

Sector-specific Information for Incorporating Social Dimensions

- Economic Infrastructure ✓
- Irrigation
- Flood Control
- Agriculture
- Forestry ✓

- Fishery
- Water Supply, Sewerage and Sanitation ✓
- Health
- Education
- Urban/Rural Community Infrastructure ✓
  - \* Rural Electrification
  - \* Rural Roads
  - \* Microfinance
  - \* Housing

Figure No. D.1 gives a brief description of the funding agencies and sectors funded by them.

### **INTERNATIONAL FUNDING FOR DAMAN & DIU:**

For the tourism development of the Union Territory, the major players will be the private entrepreneurs. Diu Tourism Development has potential for international funding from the Asian Development Bank.

### **FUNDING PROCEDURE**

The generic funding procedure adopted by the funding multilateral and bilateral funding agencies has been presented in a flow chart given below:

**Figure Number D.2: Funding Procedure**

