

REPORT

Sustainable Tourism Development in Support of the GIZ project “Conservation and Sustainable Management of Coastal and Marine Protected Areas (CMPA)”



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1 Introduction

Nature tourism has been one of the fastest-growing segments of the international tourism market. Developing countries have established themselves as particularly important nature tourism destinations. It is safe to assume that the global demand for nature-based recreational tourism and nature experience products will continue to increase in the future. Active involvement by the tourism sector and the tourism destinations in biodiversity conservation efforts and activities to protect environmental health and natural areas in the long term is not only essential, but is also in the industry's own interest. This is most especially true of areas which are protected and which are particularly popular (such as national parks, wildlife sanctuaries and biosphere reserves) because of their ecological importance.

As early as the mid-1990s, the term ‘ecotourism’ came into frequent use in the international debate on sustainable forms of nature tourism. It is crucial to note that this term is not regarded as synonymous with ‘nature tourism’. Conceptually, it is based on the definition of sustainable tourism, which means that it implies the aim of implementing sustainable forms of tourism, especially in protected areas. **Thus, ‘ecotourism’ is not used to denote a tourism product, but rather a conceptual approach to responsible travel within natural areas.** At the heart of the debate on ecotourism is the question of under what conditions and how tourism in natural and (large-scale) protected areas can be developed and managed in an ecologically and socially responsible way.

True to its motto “**Protection through Sustainable Use**”, the German development cooperation strives to ensure that the natural resources of protected and natural areas that may be affected by tourism development are protected and that appropriate action is taken to avoid potential conflicts between nature conservation and tourism (destruction of plants, disturbance of animals, trampling damage, and erosion). The focus of activities in this area is on supporting a cooperative and sustainable protected-area management (tourism zoning, visitor direction and information, creation of an appropriate infrastructure, visitor monitoring). In addition, tourism is used to create new sources of income that are intended to benefit the local population and to provide more financial flexibility for sustainable protected area management.

In India, the Government of Germany, through its Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) supports a collaboration with the Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India through the project “**Conservation and Sustainable Management of Coastal and Marine Protected Areas**” (CMPA). The project is implemented in selected coastal states in India in close collaboration with respective State Governments. The pilot areas are:

- Goa Dr. Salim Ali Bird Sanctuary (Chorao)
- Gujarat Gosa Bara Wetland / Madhavpur (Porbandar)
 Khijadiya Bird Sanctuary (Jamnagar)
- Maharashtra Thane Creek (Mumbai)
 Velas Coast (Ratnagiri)
 Ansure Creek (Ratnagiri)
- Tamil Nadu Palk Bay (Ramanathapuram)

The overall objective of the CMPA Project is to contribute to the conservation and sustainable use of biological diversity in marine and coastal areas, while taking into account the economic well being of the local population.

This will be achieved through inclusive and participatory processes. It is well appreciated that the involvement of stakeholders at local, state, and national level can make a significant contribution to the conservation of areas rich in biodiversity. At the same time there is need to show that through the development of environment-friendly business opportunities such as tourism, nature conservation can have a positive impact on resource use and livelihood options of the local population.

The purpose of this consultancy was a thorough analysis of the potential of nature-based recreational tourism to have a positive impact on the economic situation of the Project’s stakeholders in selected pilot areas. For the purpose of this study the focus was on the following pilot sites:

- Tamil Nadu Palk Bay
- Goa Dr. Salim Ali Bird Sanctuary and adjacent communities (bird watching, traditional farming systems) – Chorao
- Gujarat Gosa Bara (Mokarsagar) Wetland, Madhavpur and Khijadiya Wildlife Sanctuary (bird watching, turtle conservation)
- Maharashtra Thane Creek

The specific objectives of the consultancy were to assess the feasibility, market potentials, gaps and needs of sustainable tourism at selected pilot sites in four states. The aim was to identify appropriate measures for improving sustainable tourism planning, marketing and management, both site-specific and in the wider context of tourism development policies of the state concerned. The methodological approach and analysis applied should be such that it can be applied to other project sites not included in the current study.

The **expected results of the assignment** can be summarized as follows:

- Overview about the current status, future development, market potentials as well as gaps and needs of sustainable tourism development in the CMPA pilot areas.
- Profound assessment of the feasibility of sustainable tourism development as well as sustainable use and valorization of biodiversity through tourism in the CMPA pilot areas.
- Recommendations on whether and how GIZ should support sustainable tourism development in the CMPA pilot areas.

This report is based on the findings of the consultants as well as background information provided by the state tourism experts. The consultants appreciate the support and inputs of the following state tourism experts: Marirajan, Tamil Nadu; Saltanat Kazi, Goa; Dhaval Vargiya, Gujarat and Anirudh Chaoji, Maharashtra.

2 Methodological Approach

The study was designed to be carried out as a combined work of an international and a team of five Indian tourism experts. In view of the specificities of each of the four states, where the project maintains pilot sites, it was considered essential to carry out this study with one individual national tourism expert per state concerned. For reasons of efficiency a national team coordinator was also required to liaise with the International Tourism Expert and coordinate the application of a standardized methodology among the Indian team. Thus, consulting team consisted of the following experts:

- One International Tourism Expert for tourism development (international context)
- One national expert and team coordinator for tourism development (Indian context)
- Four national experts for tourism development, one for each of the four States concerned by the Project (State and site context)

The study was carried out in four phases:

- Phase 1:** Methodological and organizational preparation of the feasibility study (4 weeks, August 2015)
- Phase 2:** State specific preparation of the feasibility study (4 weeks, September 2015)
- Phase 3:** Implementation of the feasibility study through field research at five selected sites in four States (4 weeks, October 2015)
- Phase 4:** Post-processing of the feasibility study (3 weeks, November 2015)

The methodological approach for the implementation of the field research was based on a rapid destination appraisal matrix that has been developed for this assignment by aiming to facilitate a profound and quick estimation of the tourism feasibility of each CMPA pilot area. The matrix includes the following focus areas of investigation:

- General Facts;
- Access;
- Attractiveness;
- Security;
- Infrastructure;
- Acceptability at the community level;
- Tourism services/products;
- Management (tourism, protected area, sustainability, acceptance at the community level).

For each focus area a quality standard as well as a set of criteria have been determined recognizing existing international guidelines and criteria for sustainable tourism development (in protected areas)¹. All criteria have been concretized through a number of indicators to estimate the current performance and status quo of the assessed sites during the field trip (see table 12). The final evaluation of each indicator was realized through scoring-system ranging from “insufficient” (= 1 point) to “accomplished” (= 5 points). The proportion between the

¹ Based on the Guidelines on Biodiversity and Tourism Development, which were developed 2004 as part of the Convention on Biological Diversity (CBD) (<https://www.cbd.int/doc/publications/tou-gdl-en.pdf>), and the Global Sustainable Tourism Council (GSTC) Criteria for destinations (<http://www.gstcouncil.org/gstc-criteria/sustainable-tourismgstc-criteria.html>).

² Source: Matthias Beyer (2015)

achieved and the total number of achievable points (converted into percentage) represents the current performance of each focus area which has been classified as follows:

- High performance: 80-100%
- Reasonable performance: 60-79%
- Low performance: 40-59%
- Insufficient performance: Less than 40%

Table 1: Rapid Destination Appraisal Matrix

A. General Facts				
A.1	Location of the area			
A.2	Size of the area			
A.3	Total visitor numbers per year		2014:	2013: 2012:
A.4	Origen of visitors		International: %	National: %
A.5	Origen of international visitors		Asia: % Europe: % Australia: % U.S.: % Other Regions: %	
A.6	Type of guests		Individuals: %	Package guests: %
A.7	Total number of accommodation facilities			
A.8	Composition of accommodation facilities		Hotels: % Guesthouses: % Ecolodges: % Campsites: %	
A.9	Classification of accommodation facilities		1-Star: 2-Star: 3-Star: 4-Star: 5 Star:	
A.10	Number of certified accommodation facilities		Service Quality: Sustainability:	
A.11	Total number of other tourism suppliers			
A.12	General observations/comments			
A.13	Main stakeholders			
B. Access				
Standard: The area can be reached under acceptable conditions and in a reasonable time				
Criteria		Indicators		
B.1	Traffic hub	In the surrounding (max. 200 km) exists a local or international airport		
B.2	Road Infrastructure/ driving conditions	The road network provides acceptable driving conditions		
		The area can be reached from different cardinal points		
B.3	Signage	The access to the area is appropriately and bilingually depicted through signage		
B.4	Means of transportation	The area can be reached by public means of transportation (e.g. bus, train)		
		The area can be reached by (rented) car, private busses and/or taxi		
B.5	Travel time	The area can be reached in reasonable time (up to 2 hours from the next accommodation opportunity)		
		The area is accessible over the whole year (incl. rainv season)		

C. Attractiveness

Standard: The area provides interesting attractions for visitors

Criteria	Indicators
C.1 Unique Selling Proposition (USP)	The area provides an unique attraction
	The area provides animals of specific interest
	The area provides plants of specific interest
	The area provides cultural assets of specific interest
C.2 Natural attractions	The area provides rich biodiversity (animals, birds and other fauna and/or plants)
	The area provides a diverse and attractive landscape scenery (e.g. mountains, hills, highlands, plains, canyons, volcanoes)
	The area provides water-based attractions (e.g. sea, rivers, lakes, creeks, beaches, waterfalls, lagoons, cliffs, coral reefs)
C.3 Cultural attractions	The area provides a diverse and attractive living culture experience (e.g. architecture, villages, indigenous communities, community based tourism projects)
	The area provides a diverse and attractive historical and religious heritage (e.g. historic sites, monuments, religious sites)
	The area provides a diverse and attractive intangible cultural heritage (e.g. music, dance, drama, skills, cuisine, crafts, festivals, ceremonies)

D. Infrastructure

Standard: The area disposes of adequate (tourism) infrastructure conditions for visitors

Criteria	Indicators
D.1 Basic infrastructure	The area disposes of water supply
	The area disposes of energy supply
	The area provides access to telecommunication (e.g. landline, mobile phone, internet, WLAN)
	The area disposes of other daily life services (e.g. ATMs, shops, gas stations)
	The area disposes of basic medical/emergency aid (e.g. medical stations, hospitals)
D.2 Tourism-related infrastructure	The area provides an acceptable road network
	The area provides adequate infrastructure conditions for nature- and/or cultural related activities (e.g. hiking trails, observation points/ platforms, bothies/shelters, museums)
	The area provides appropriate, bilingual information infrastructure (e.g. signs, signboards, visitor/information centre, educational trails)

E. Security

Standard: There are no safety concerns for visitors with the use of and stay in the area

Criteria	Indicators
E.1 Health risks	Water supply in the area is potable
	Adequate sanitation standards in the area are in place
	There are no or very limited disease-transmitting animals in the area (e.g. mosquitos)
	There are no or very limited dangerous or aggressive animals in the area (e.g. tigers, poisonous snakes)
	There are no dangerous diseases or epidemics occurred in the area within the last years
E.2 Danger to life	The risk of road accidents to or in the area is reasonable
	The risk of robberies or other crimes (e.g. rapes, kidnapping) in the area is low
	There are no terrorist attacks occurred in the area within the last years
	There is no ongoing (armed) conflict in the area (e.g. regional war)

F. Services and Products

Standard: The area offers diverse tourism services and products for visitors in an acceptable quality

Criteria	Indicators
F.1 Accommodation and catering	The area provides adequate accommodation facilities (e.g. hotels, guesthouses, ecolodges,

	campsites)
	The area provides adequate catering facilities (e.g. restaurants, cafés, bars)
F.2 Activities	The area disposes of adequate local transport services (e.g. bus, trains, taxis, rental cars, bikes)
	The area provides good opportunities for diverse nature-related activities (e.g. hiking, biking, swimming, rafting, kayaking, horseback riding)
	The area provides good opportunities for diverse cultural-related activities (e.g. museums, exhibitions)
F.3 Tours and excursions	The area disposes of attractive guided tours (e.g. by local tour guides)
	The area disposes of attractive excursion offers (e.g. by local tour operators)
F.4 Information	Adequate information materials about the area is available (e.g. guidebooks, brochures, maps)

G. Management

Standard: The area disposes of adequate management structures and tools for sustainable tourism development

Criteria	Indicators
G.1 Tourism management	A professional tourism strategy for the area is in place and applied
	A professional tourism marketing plan for the area is in place and applied
	A functioning Destination Management Organization (DMO) is in place
	Private tourism suppliers have organized themselves (e.g. in a local hotel or tour operator association)
	Relevant public and private stakeholders of the area dispose of technical knowledge and operational experience in tourism management
G.2 Protected area management	The Limits of Acceptable Change (LAC) through tourism have been analysed in the area
	A professional zoning concept for the area is in place and applied
	A professional visitor management strategy for the area is in place and applied
	A professional strategy for generating revenues through tourism is in place and applied to foster conservation efforts
	The area disposes of sufficient and skilled staff (park rangers) to manage tourism
G.3 Sustainability management	The area disposes of a waste disposal system
	The area disposes of a sewage treatment system
	International guidelines and standards for sustainable tourism development in protected areas are recognized and applied in the area (e.g. GSTC, ESOI Guidelines, CBD Guidelines, IUCN Guidelines, certification schemes)
	Environmental impact assessments are mandatory and applied in the area (e.g. before permitting new infrastructure)
	Tourism/ visitor impact assessments are conducted frequently in the area
G.4 Stakeholder und community participation	Relevant public and private stakeholders working together on tourism development
	Private tourism suppliers of the area respect each other and are willing to collaborate
	There is a general acceptance at the community level of tourism related activities
	Local communities are involved in tourism development and decision making

Source: Beyer

The National Coordinator and the International Consultant travelled to all the four states and visited all the sites. The tourism experts accompanied the team in their respective states. The itinerary for each site included visits to the sites and interaction with relevant stakeholders (Annexures 1-4). The experts also had a final workshop with the tourism experts to finalize the findings and conclusions on October 29, 2015. A debriefing with relevant GIZ personnel was also held on the same day.

3 Concept of Ecotourism

The recognition of the ill effects of tourism led to the need to develop an industry that was sensitive to the environment and that which could provide some benefits to the local community. This is how the concept of 'ecotourism' came into being. The term itself was coined by a marketing agency that was promoting Costa Rica as a rainforest destination in the early 1970s. There are previous references to use of the term ecotourism. As Blamey (2001)³ writes, apparently it was Hetzer who identified four principles of responsible tourism as early as 1965.

The first formal definition of ecotourism was given by the IUCN (the World Conservation Union), which states that ecotourism is:

"...Is environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features - both past and present) that promotes conservation, has low negative visitor impact, and provides for beneficially active socioeconomic involvement of local populations." [IUCN, *Tourism, Ecotourism and Protected Areas*, Hector Ceballos-Lascurain, 1996⁴]

The International Ecotourism Society defines ecotourism as, *"responsible travel to natural areas that conserves the environment and improves the welfare of local people"*.

Honey (1999)⁵ in her book has seven defining points: 1) Involves travel to natural destinations 2) Minimizes impacts 3) Builds environmental awareness 4) provides direct financial benefits for conservation 5) provides financial benefits and empowerment to local people 6) respects local culture 7) supports human rights and democratic movements.

3.1 Ecotourism in India

In India, ecotourism has come to be mistaken synonymously with tourism in protected areas and/or areas of significant ecological values like wildlife; though the kind of tourism being promoted and practiced is very much mainstream tourism; only the locations have become much more fragile than the cultural and resort-tourism destinations that had been developed in previous decades. Ecotourism has been classified as a sub-component of sustainable tourism practice by international organizations like the UNEP and WTO-OMT, and therefore it was believed that it would ensure sustainable development and use of natural resources. Sustainability concerns should address environmental and social concerns equally. Any nature-based or community-based tourism, should initiate the evolution of principles, guidelines and, in some cases, certifications that are based on standards of sustainability drawn from national, cultural, traditional and scientific concerns at specific sites.

Ecotourism is a form of speciality tourism and is an important niche in the tourism sector. It is not a homogenous term when it comes to practical application on the ground, and very often it overlaps with nature based tourism, wildlife tourism, cultural and heritage tourism, rural tourism, adventure tourism and sometimes health tourism when tourists visit say natural hot springs for health reasons.

³ Blamey, R.K. 2001. 'Principles in Ecotourism' in Weaver, David, B. eds. The Encyclopaedia of Ecotourism. CABI Publishing, Oxon, UK.p.5

⁴ Ceballos-Lascurain, Hector.1996. Tourism, Ecotourism and Protected Areas. IUCN. The World Conservation Union. Gland, Switzerland.

⁵ Honey, M. 1999. Ecotourism and Sustainable Development. Who Owns Paradise. Island Press, Washington DC.

Ecotourism was integrated in the official policy in 1998 with the release of the National Ecotourism Policy & Guidelines that laid out the key principles of ecotourism and recognized the country's potential to become one of the leading ecotourism destinations in the world. India with its rich natural and cultural heritage has tremendous potential in becoming one of the leading ecotourism destinations in the world, but the situation on the ground is challenging. Majority of the tour operators consider ecotourism merely as travel to natural locations. Ecotourism, by and large has become a fashionable punch line to promote travel without adhering to its principles.

The Ministry of Tourism, Government of India has developed a framework on sustainable tourism criteria called the Sustainable Tourism Criteria for India (STCI). The framework is based the Global Sustainable Tourism Criteria (GSTC). In addition, revised approval guidelines for hotels have made certain 'green' and eco-friendly practices mandatory.

Legal and Policy Framework for Ecotourism in India

At the national level, there exists a legal and policy framework that supports or has the potential to support ecotourism. At the state level, there are several states that have developed their own ecotourism policies or that have tourism policies with specific reference to ecotourism. This chapter presents an analysis some of the key national legal and policy instruments in the context of ecotourism. It then goes on to analyse some selected state tourism/ecotourism policies. There are great variations in the state policies. Analysis of these policies reveals that each state seems to interpret ecotourism in its own way. This brings to the fore the need for a common understanding of the concept and its implementation.

Legal Framework

Wild Life (Protection) Act, 1972: The word tourism occurs just once in the Wild Life (Protection) Act 1972. Tourism has come a long way since the time these laws were framed. There is thus an urgent need to make amendments in the Act or at least bring out elaborate set of guidelines that define tourism and the way it should be carried out in and around protected areas.

Forest (Conservation) Act, 1980: Although this Act has the potential to regulate tourism development in forest areas, there are clauses in the Act that have been used for large-scale promotion of ecotourism that can actually be destructive. There is an urgent need to clarify these matters in the context of implementation of this Act.

Biodiversity Diversity Act 2002: The Act does not explicitly mention tourism. However, tourism could actually play a significant role as an activity related to the sustainable, non-consumptive use of biological resources. Ecotourism in particular could benefit from this Act, if specifically recognized as an activity where resources are used and benefits from this use equitably distributed.

Environment (Protection) Act, 1986: Under the implementation of this Act, there are two very important Notifications that are closely linked to the development of ecotourism. These are the Coastal Regulation Zone Notification, 1991 and Environmental Impact Notification, 1994.

Coastal Regulation Zone Notification, 1991: This is the most significant and specialised legislation guiding anthropogenic activities along the coast. However, the many amendments to the provisions of the Notification over the years, has diluted and render many of the protective clauses meaningless.

Environmental Impact Assessment Notification, 1994, 2006: The new Notification has totally neglected Environmental Impact Assessments for tourism projects and mentions tourism only in passing.

Policy Framework

National Environment Policy 2006: The Policy while promoting ecotourism in many fragile ecosystems overlooks tourism as an impacting agent.

National Forest Policy 1988: The Policy focuses on addressing community rights over forest for access and use of resources. Through this, it can facilitate local decision making to influence the tourism development process.

National Tourism Policy 2002: The Policy has emphasized the role of the private sector and foreign investment in supporting the tourism sector. The policy realizes sustainability as an important objective and also recognises the environmental impacts of tourism.

National Biodiversity Strategy and Action Plan: The report deals with gross impacts of tourism activities in major ecosystems and also focuses on principles in relation to tourism and biodiversity.

Ecotourism Policy and Guidelines 1998: These guidelines have been formulated to ensure regulated growth of ecotourism with its positive impacts of environmental protection and community development.

Some State Tourism/Ecotourism Policies: Andaman and Nicobar Islands, Chhatisgarh, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Tamil Nadu, Uttaranchal.

3.2 Ecotourism in Coastal and Marine India

Ecotourism in coastal and marine areas is relatively new. However, if done well, it will not only help raise the awareness about these areas and subsequently help combat threats, but also provide local communities an incentive to conserve them. Despite India's vast coastline that stretches across 7860 km and has a diversity of habitats ranging from sandy beaches coves, bays, headlands and lagoons harboring specialized ecosystems such as corals, mangroves, sea grasses, marine algae, etc. there are few examples of ecotourism. Potential areas for coastal ecotourism are: Gulf of Mannar, (Tamil Nadu); Chilka Lake (Orissa); Bhitarkanika, (Orissa); Sundarbans (West Bengal); Andaman & Nicobar Group of Islands; Malvan, (Maharashtra); Gujarat Coast and Lakshadweep Group of Islands.

Community-based Dolphin Tourism at Chilika Lake, Odisha

Chilika Development Authority

Located along the east coast of India in the state of Odisha, Chilika lake is one of the largest coastal wetlands in Asia. It shelters a number of rare, vulnerable and endangered species listed in the IUCN Red List, including the Irrawaddy dolphin (*Orcaella brevirostris*) and the limbless skink (*Barkudia insularis*) and is also a very important wintering ground for migratory avifauna found on the Indian sub-continent. The Nalabana wildlife sanctuary in Chilika is home to more than 100 species of long distance migratory birds. The flagship species of Chilika Lake is the Irrawaddy dolphin. This animal is also of great cultural and spiritual significance for the local community that strongly believes that if a dolphin is killed in a net, it brings bad luck. No intentional killing of the dolphin has been reported from here to date. The lake is a highly productive ecosystem, with rich fish resources and sustains the livelihoods of over 2, 00,000 fisher folk who live in areas contiguous to the lake. Satapada, that has become the hub for dolphin watching and thus a big tourist attraction. Dolphin-based tourism was initiated in Satapada by a group of self-motivated fishermen from Balabhadrapur, Gada, Bankijala, Gopinathpur and Allupatna villages in 1989. In 1991 they formed the 'Dolphin Motor Boat Association, Satapada' and legally registered it. This has provided the foundation for community-based ecotourism in the area. In 2000, the Chilika Development Authority (CDA)⁶ carried out a major hydrological intervention by way of opening of a new mouth to help restore the lake ecosystem. This resulted in significant improvement of the ecosystem and the biodiversity. There was an increase in the fish catch, directly benefiting the local community. The population of the Irrawaddy dolphin also

⁶ Chilika Development Authority (a Government of Odisha Agency) has been created under Forest & Environment Department of Government of Odisha in the year 1991 with an objective for conservation of ecology of Chilika lagoon and to bring an all round development in and around the lagoon which calls for multi-dimensional and multi-disciplinary development activities.

increased significantly as a result of food abundance and habitat improvement. More than 60 per cent of the dolphin population is now found in the outer channel of the lake making this an ideal destination for dolphin watching as a potential ecotourism activity. In 2005, the National Highway (NH 203A) connecting Puri with Satapada was established thus improving connectivity for tourists visiting the lake and giving an impetus to more community-based initiatives. Five community-based ecotourism centres have now been established in the outer channel of the lake. At present 1000 families from 17 fishing villages are affiliated to these centres managed by associations and dolphin watching has become an alternate source of livelihood. The five associations have a total of 900 motorised boats. The community-based ecotourism centres operate within the framework of the relevant Government Rules and Regulations provisioned either by the Government, the Chilika Development Authority, the State Wildlife Wing and the Forest Department, Government of Odisha in consensus with the stakeholders of these community-based tourism centres. The CDA has played a proactive role in promoting community-based ecotourism at Chilika lake. This has been through development of infrastructure like, boat landing centres, approach roads, a visitor centre, interpretation material such as signage, dust bins etc. In addition to this CDA supports the capacity building of the local fisher folk who guide the tourists. CDA has also developed a dolphin watching protocol.

Adapted from: Bhatt, S., K. Bavikatte., S. Subramanian. 2012. Community based Experiences on Access and Benefit Sharing: Case Studies. National Biodiversity Authority, Government of India.

4 The Ecotourism Market

4.1 National Level

India with its rich natural and cultural heritage has the potential to become a preferred destination globally. The total tourist visits in the country have been growing at a steady rate of about 16 per cent over the past five years. The travel and tourism sector in India generates significant socio economic benefits. While the direct contribution to GDP is estimated at INR 2222 billion in 2013, the total contribution is estimated at INR 7416 billion in the same year. These have further been forecasted to rise at a growth rate of 12 per cent over the next decade. While the sector supported 25 million direct and 40 million total jobs in 2012, these have been forecasted to increase at a growth rate of 2.1 per cent by 2023. The increase is attributed to several factors such as government initiatives, diverse product offerings, growing economy, increasing disposable income levels and marketing initiatives along with key trends such as increasing number of women and senior citizen travellers, multiple short trips and weekend holidays, introduction of innovative tourism concepts and customized tour packages are playing a pivotal role in shaping the Indian tourism sector. Table 2 is a representation of the same⁷. There are no segregated figures specifically for ecotourism travel in India.

⁷ Source: KPMG., Incredible India., CII.2013. Travel and Tourism Sector: Potential, Opportunities and Enabling Framework. Theme Paper. CII, Tourism Fest. KPMG, New Delhi

Table 2: Growth of tourism in India – key drivers and trends

Domestic tourism	Inbound tourism	Outbound tourism
<ul style="list-style-type: none"> • Healthy economic growth and rising income levels • Changing consumer lifestyles • Availability of low cost airlines • Diverse product offerings • Easy finance availability 	<ul style="list-style-type: none"> • New product offerings • Rich natural/cultural resources and geographical diversity • Government initiatives and policy support • Multiple marketing and promotion activities • Healthy economic growth levels • Host nation for major international events 	<ul style="list-style-type: none"> • Rising disposable income with the Indian consumer • Attractive tour packages • International events and increased business travel • Healthy economic growth • Easy finance availability

Some statistics⁸

Table 3: Foreign tourist arrivals in India

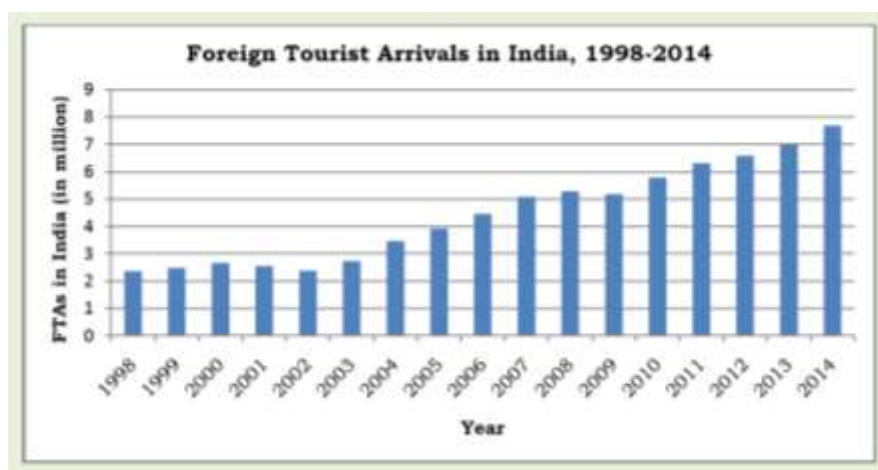
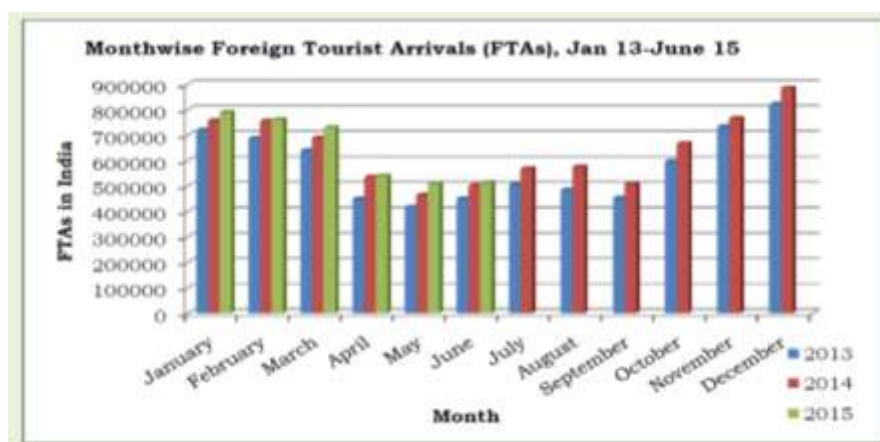


Table 4: Monthwise foreign tourist arrivals in India



⁸ Source: Ministry of Tourism, Government of India. 2015. India Tourism Statistics at a Glance 2014. Ministry of Tourism, Government of India, New Delhi.

Figure 1: Percentage share of Top 10 countries for FTAs in India

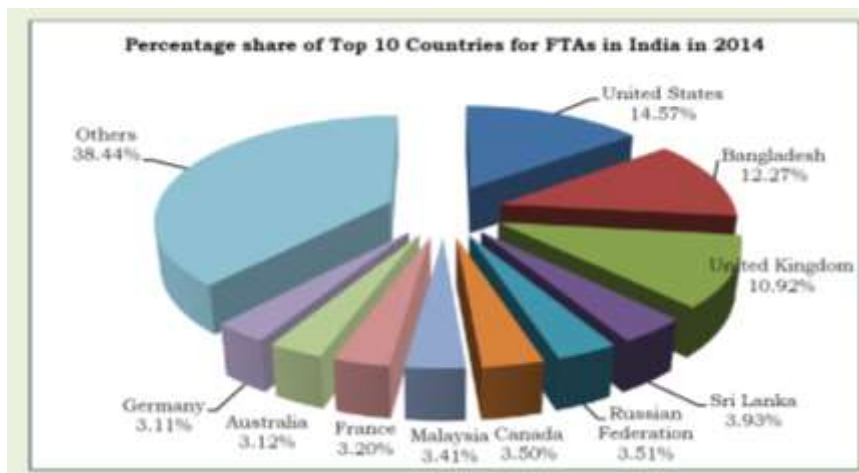


Figure 2: Percentage share of Top 10 States/UTs in domestic tourist visits

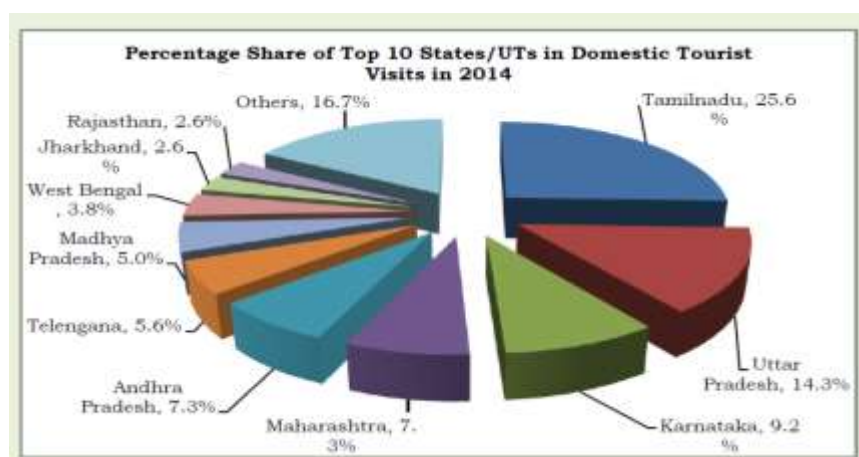
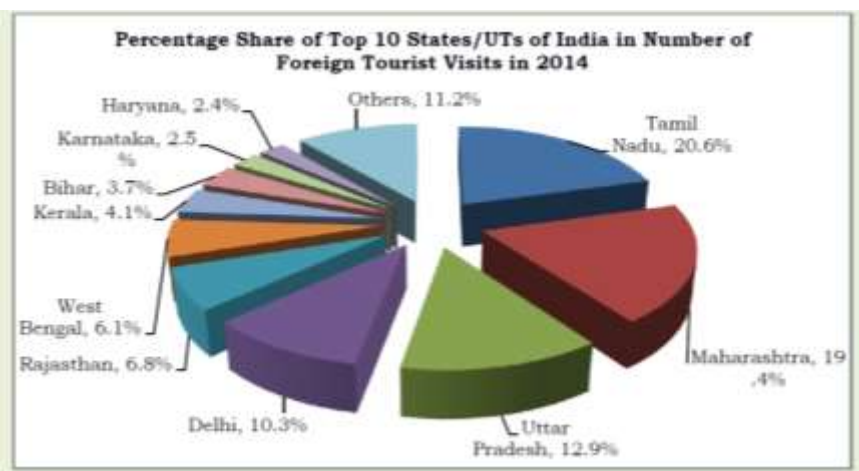


Figure 3: Percentage share of Top 10 States/UTs of India in number of foreign tourist visits



4.2 International Level

As already pointed out in chapter 3 ecotourism is not a homogenous term and therefore not always understood as a niche product for "responsible travel to natural areas that conserves the environment and improves the welfare of local people" (The International Ecotourism Society). Moreover, ecotourism is often used as synonym for other conventional/ mainstream nature and/or cultural based tourism forms that don't comply automatically sustainability standards. Because of this a serious estimation of the global demand of ecotourism in the narrow sense is not possible. However, based on existing data it can be assumed that the nature based tourism market share (incl. ecotourism) is between 7 and 9% of the total tourism market and further growth can be expected in this segment. This underlines the importance of promoting and implementing sustainability approaches in India and elsewhere to avoid negative impacts through unfavorable tourism development measures in natural and protected areas.⁹

Due to the lack of meaningful data at global level the international analysis has been focused on the **most important (eco) tourism markets for India, namely: USA, United Kingdom, Russia, Australia and Germany:**

- USA was selected, as it is the most important tourism source market for India and ecotourism has a market share of 20%.
- The UK ecotourism market isn't as big as in the USA but it is the fastest growing travel market. Additionally, UK is the third largest source market for India with a market share of 11%.
- Russia is the fifth largest source market with a market share of 4%. The growing awareness of ecotourism in Russia and its increased importance as outbound travel market makes it to an important source market for ecotourism also in India.
- Australia is also ranked in the top 10 of India's international source markets and represents a key destination of ecotourism. The awareness of ecotourism is much higher than in other countries as Australia was one of the first countries introducing sustainable tourism measures.
- The selected markets are completed with Germany as the most important global tourism source market (except for China). Germany is not only the 10th largest source market (market share: 3%) for India but has also high significance with regard to ecotourism/ nature tourism demand.¹⁰

The international analysis gives an overview of the ecotourism market in the respective countries, taking into account the following issues: **Statistics, tourist profile, tourist characteristics and preferences as well as tourist activities.**

USA

The USA is the most important source market for India in general. Ecotourism has a market share of 20% with a large number of younger travelers (18-34). The typical traveler prefers uncrowded destinations, hotels and a wide variety of activities.¹¹

⁹ The international ecotourism society (2000), The international ecotourism society, (2006), Weaver (2001)

¹⁰ The international ecotourism society (2000), Woodward (2012), The international ecotourism society (2006), Weaver (2001)

¹¹ Tourism Queensland (2011), The international ecotourism society (1999), Center for Responsible Travel (2010)

Table 5: Ecotourism market profile – USA

Ecotourism market profile – USA	
Market Share	<ul style="list-style-type: none"> 20%
Profile of ecotourists	<ul style="list-style-type: none"> Between 35 and 54 years old, with a disproportionately large number between 18 and 34 57% female, 43 % male Above average income and above average education Tend to travel for longer periods
Segment characteristics and preferences	<ul style="list-style-type: none"> Prefer local guides, small groups, uncrowded destinations, and meaningful educational content Participate more heavily in a wider variety of activities Wilderness experience and wildlife represent most important motivation Mainly hotels as accommodation Long planning horizon (over 9 months)
Activities	<ul style="list-style-type: none"> Wildlife observation Nature experience in protected areas Hiking Biking Bird watching

United Kingdom

The ecotourism market in the UK is not as developed as the US market. The total market share is 1,2% but is growing in double digits. The typical traveler is over 35, with high income and a preference for wildlife observation. Additionally local culture and food is important for the UK ecotourist.¹²

Table 6: Ecotourism market profile – United Kingdom

Ecotourism market profile – United Kingdom	
Market Share	<ul style="list-style-type: none"> 1,2 %
Profile of ecotourists	<ul style="list-style-type: none"> Well-to-do individuals from a middle to-upper-middleclass background with relatively high levels of education, aged over 35 and with women slightly outnumbering men. Average length of stay is 3-14 days in Europe with a flat seasonality.
Segment characteristics and preferences	<ul style="list-style-type: none"> Wilderness areas and viewing wildlife represent most important motivation Correlation between appreciation of natural environment and concern about environmental damage Preference of seasonal and local food, meeting local communities, discovery of different facets of the destination (arts and handicraft) Word of mouth and special interest magazines are important means to reach this segment
Activities	<ul style="list-style-type: none"> Wildlife observation Nature experience in protected areas Bird watching

¹² Natural England (2013), UNWTO (2002), Katz (2007), Office for national statistics UK (2014)

Russia

As one of the largest tourism growth markets in the world, Russia is an important source market for India. However, the size of the ecotourism market is still very small and does not show a significant sign of growth. Therefore the market analysis and overview have been combined with nature tourism and active tourism. Both have a market share of 7%. The typical traveler is between 20 and 29 with above average income. Russian ecotourists prefer outdoor activities, especially fishing.¹³

Table 7: Ecotourism market profile – Russia

Ecotourism market profile – Russia	
Market Share	<ul style="list-style-type: none"> 7 % (combined with nature and active tourism)
Profile of ecotourists	<ul style="list-style-type: none"> Between 20 and 55 (main group between 20 and 29) Above average income 55 % female, 45% male All levels of education but a significant number of higher education Couples and alone travelers
Segment characteristics and preferences	<ul style="list-style-type: none"> Scenic landscapes and nature trails are of importance Correlation between appreciation of natural environment and more sustainable lifestyle Increasingly, the internet and social media are important tools to address this target group
Activities	<ul style="list-style-type: none"> Wildlife observation Hiking, climbing Fishing

Australia

Australia is under the top 10 source markets for India and its importance for the global ecotourism market is high. Pioneering in inbound and outbound ecotourism Australia is a significant source market for ecotourism in India. Ecotourism has a market share of 20% with the typical traveler aged 35 and over and being overly fit. They prefer outdoor activities and untouched nature.¹⁴

Table 8: Ecotourism market profile – Australia

Ecotourism market profile – Australia	
Market Share	<ul style="list-style-type: none"> 20%
Profile of ecotourists	<ul style="list-style-type: none"> Well-to-do individuals from a middle to-upper-middleclass background with relatively high levels of education, aged over 35 and with women slightly outnumbering men Average length of stay is 3-14 days with a flat seasonality Average to high fitness degree
Segment characteristics and preferences	<ul style="list-style-type: none"> Natural beauty and novelties as main motivation Activities in the nature (hiking, diving) are important Booking via specialized tour operators Internet and special interest magazines as source of information

¹³ Explorussia (2014), Russia beyond the headlines (2011)

¹⁴ Weaver (2001)

Activities	<ul style="list-style-type: none"> ▪ Wildlife observation ▪ Nature experience in protected areas ▪ Hiking ▪ Diving ▪ Fishing
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Germany

Germany has a thriving and well-developed ecotourism market with a market share of 7%. The demand for nature tourism is even higher and amounts to 40 - 60%. The typical traveler is over 35, well educated, has an above average income and prone to outdoor activities. They prefer multi destination trips with combined (natural and cultural) offers and are interested in national parks and other protected areas.¹⁵

Table 9: Ecotourism market profile – Germany

Ecotourism market profile – Germany	
Market Share	<ul style="list-style-type: none"> ▪ 7 % only ecotourism, with nature tourism 40 - 60 %
Profile of ecotourists	<ul style="list-style-type: none"> ▪ In this segment men and women are present to the same degree; often couples travelling together (double income). ▪ Mid to elderly age range (35-65 years), increase of "best-agers" (50+) and seniors in the market is expected for the next years ▪ Often childless couples or "empty-nesters" ▪ Nature tourism is of increasing importance for the eco-conscious and well-educated LOHAS (Lifestyle of Health and Sustainability) ▪ Higher than average income ▪ High level of education often with academic qualifications ▪ Nature tourists are individuals with long year travel experience ▪ Average to high fitness degree
Segment characteristics and preferences	<ul style="list-style-type: none"> ▪ Often multi destination round trips ▪ Duration of two weeks ▪ Search for novelties ▪ Often high reliance on specialized tour operators ▪ Interest in multi-functional, combined offers ▪ Untouched nature and a sound environment are crucial for 80% of nature tourists ▪ Activities such as cycling, hiking or water sports are much appreciated ▪ 32% of nature tourists want to do something good for their health ▪ 42% wish to visit sights of natural beauty
Activities	<ul style="list-style-type: none"> ▪ Wildlife observation ▪ Nature experience in protected areas ▪ Hiking ▪ Biking

Summary

The analysis shows that ecotourism has different significance in the considered markets. In USA, Germany, Australia and United Kingdom ecotourism is an important market segment or a market segment in rapid growth whereas in Russia it is still a niche segment. The activities of ecotourists vary slightly from country to country. Generally, ecotourists are searching for novelties and untouched nature. They prefer to take part in guided wildlife

¹⁵ Strasdas (n.a.), Ministerium für Wirtschaft des Landes Brandenburg (2008), Opodo (2014),

tours, visit protected areas and/ or go hiking (see Table 10). They are mainly in the age group 35 – 65, well educated and have an above average income as well as travel spending behavior. The trips taken vary from short trips to 2-week trips. Moreover there is a general tendency to round trips. Special attention should be paid to special interest groups like bird watchers from USA or United Kingdom. Well-informed guides, professional interpretation and adequate infrastructure are key assets to attract these tourists.

Table 10: Summary of the ecotourism market profiles (focus: activities)

	Wildlife observation	Nature experience in protected areas	Hiking	Biking	Diving	Bird Watching	Fishing
USA	*	*	*	*		*	
United Kingdom	*	*				*	
Russia	*		*				*
Australia	*	*	*		*		*
Germany	*	*	*	*			

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5 State-wise Analysis

5.1 State of Tamil Nadu



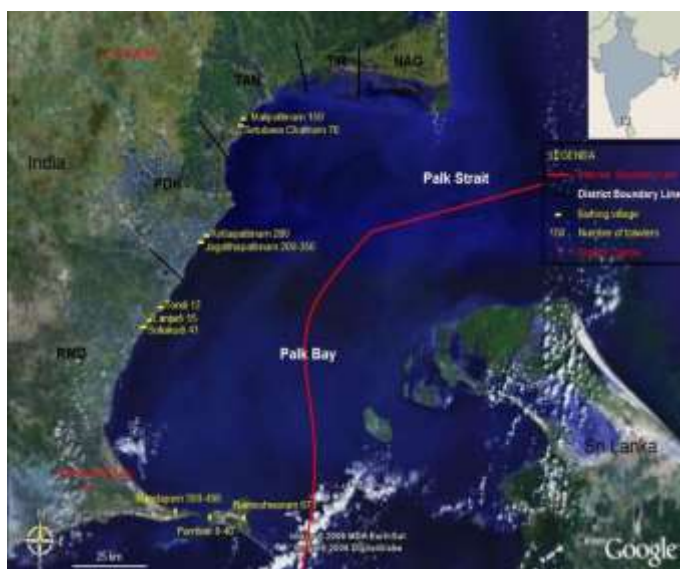
Tamil Nadu is a state in the south-eastern part of the Indian Peninsula has over 4000 years of cultural heritage and historic significance. Tamil Nadu has some of the most remarkable temple architecture in the country, and a living tradition of music, dance, folk arts and fine arts. Tamil Nadu is well renowned for its temple towns and heritage sites, hill stations, waterfalls, national parks, local cuisine, wildlife and scenic beauty.

5.1.1 Tourism at a glance (State level)

Tamil Nadu with a GDP of \$98 million is the fourth largest economy of the country and Tourism is one of the main sources of its revenue. The foreign exchange earnings from tourism during 2009 were Rs. 6,796 crore. Tamil Nadu's tourism sector is the second largest in India, after Andhra Pradesh. Tourism has been declared as an "Industry" in Tamil Nadu and the state provides investment subsidy for tourism projects. The key contributor to Tamil Nadu's tourism success is the development of niche tourism segments. Tamil Nadu is associated with three major segments: pilgrimage, heritage and hill station holidays. The other important segments are eco-tourism, adventure and wildlife tourism. The perspective plan of tourism in Tamilnadu (2003) says, Of the total tourists visiting Tamilnadu, 30% of them are pilgrimage tourism, 40% of them are Scenic beauty, forests and sanctuaries which attracts maximum number of tourists, 15% of them are adventures tourism, 10% of them Heritage and Historic Monuments and 5% of them are Leisure tourism (Source: Results of Market Research by the CES).

5.1.2 Tourism at a glance (Site level)

The proposed tourism study site - Palk Bay is situated the sea between Point Calimere (Kodikkarai) near Vedaranyam in the north and the Dhanushkodi of Rameswaram island in the south. The proposed Rapid destination analysis covers Ramanthapuram district with the coastal line of 130 KM.

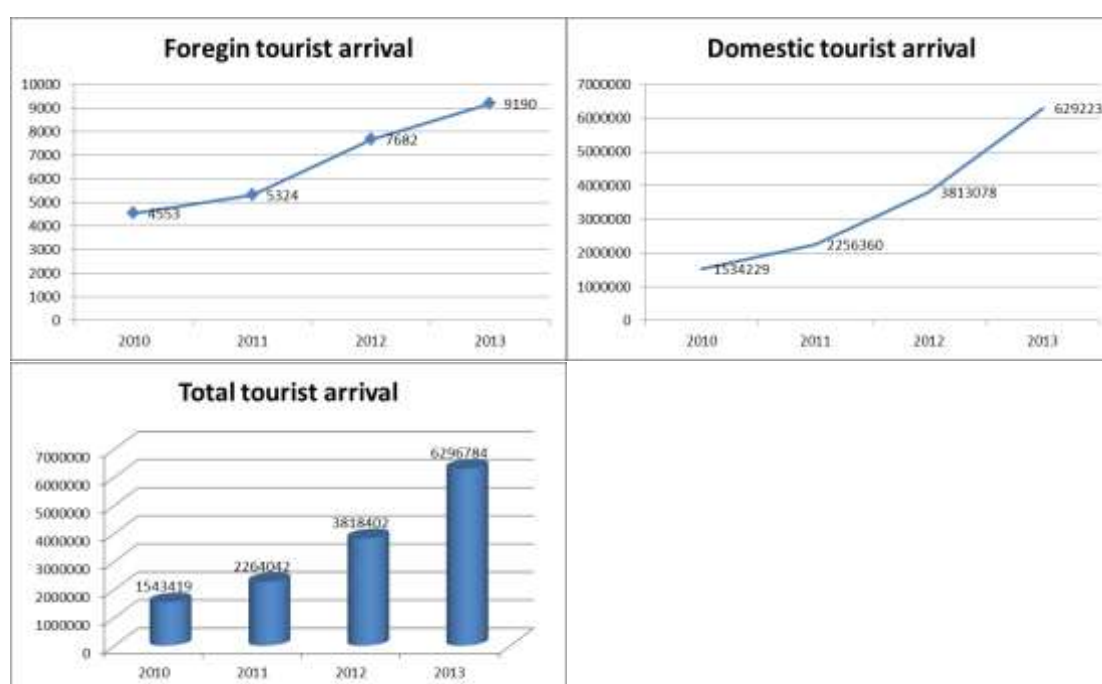


Palk Bay is a shallow and flat basin and the average depth hardly exceeds 9 meters. The average mean annual rainfall varies from 762 mm to 1,270 mm and the monthly average atmospheric temperature varies from 25°C to 31°C. The fishing season starts in October and lasts till February. Ambalakarars, Kadayars, Paravars and Muslims are the majors casts involved in fishing in Palk Bay region of

Ramnathapuram district. Rameswaram and Devipattanam are the two major temple tourism sites that received a huge number of tourists to this area and the majority of the population is involved in tourism-related industry consisting of trade and services. Service sector increased from 70% in 1971 to 98.78% in 2001, while the agricultural sector reduced from 23% in 1971 to 0.13% in 2001.

According to Ramanathapuram district Tourism department data source, the total tourists' arrival in Rameshwaram coastal spot was 15.43 lakh tourists in 2010 and in 2013 it increased to 62.96 lakh tourists, an increase of nearly four times. Hence, there has been a steady increase in the total tourists' arrival in Rameshwaram.

Figure 4: Tourism statistics of Palk Bay (Source: Ramanathapuram District Tourism Department)



5.1.3 Rapid destination appraisal: Palk Bay

Findings

Access

All in all Palk Bay provides reasonable accessibility conditions. The international airport of Madurai is around 165 km from Palk Bay. The local road network is acceptable and the destination can be reached from six different cardinal points all over the year. Yet the inappropriate signage makes the travel for visitors harder. Public buses and car rental service are available in Madurai and other places to travel to the destination. Nevertheless, due to the extension of Palk Bay it needs at least three hours from the next accommodation facilities to the area.

Attractiveness

Palk Bay is an untouched and beautiful destination, which is sparsely inhabited. Furthermore, it has comparably clean beaches with diverse coastal habitats (e.g. mangroves, seagrasses, backwaters) and birds diversity (e.g. flamingos). Moreover, there are also unique cultural sites such as the Temple of Rameswaram and Masi thiruvizha. Local fishing communities, the local cuisine, seasonal festivals (e.g. "Paska" festival at Senkol matha church) and further religious heritage sites provide cultural attractions.

Infrastructure

The basic infrastructure of Palk Bay is satisfactory including energy supply, telecommunication, medical aid and daily life services, although the given water supply scares. The tourism related infrastructure is not well developed, yet. Even though the road network is acceptable, neither an adequate infrastructure for nature- and/or cultural related activities, nor a bilingual information infrastructure exists.

Security

The security of Palk Bay is reasonable. Locally, no dangers such as crime, robberies, terrorist attacks or armed conflicts need to be feared. Yet, some health risks need to be considered due to inadequate water supply, inadequate sanitary standards and the existence of Malaria-transmitting mosquitos. Nonetheless, no epidemics or dangerous animals are prevalent at the destination.

Services and Products

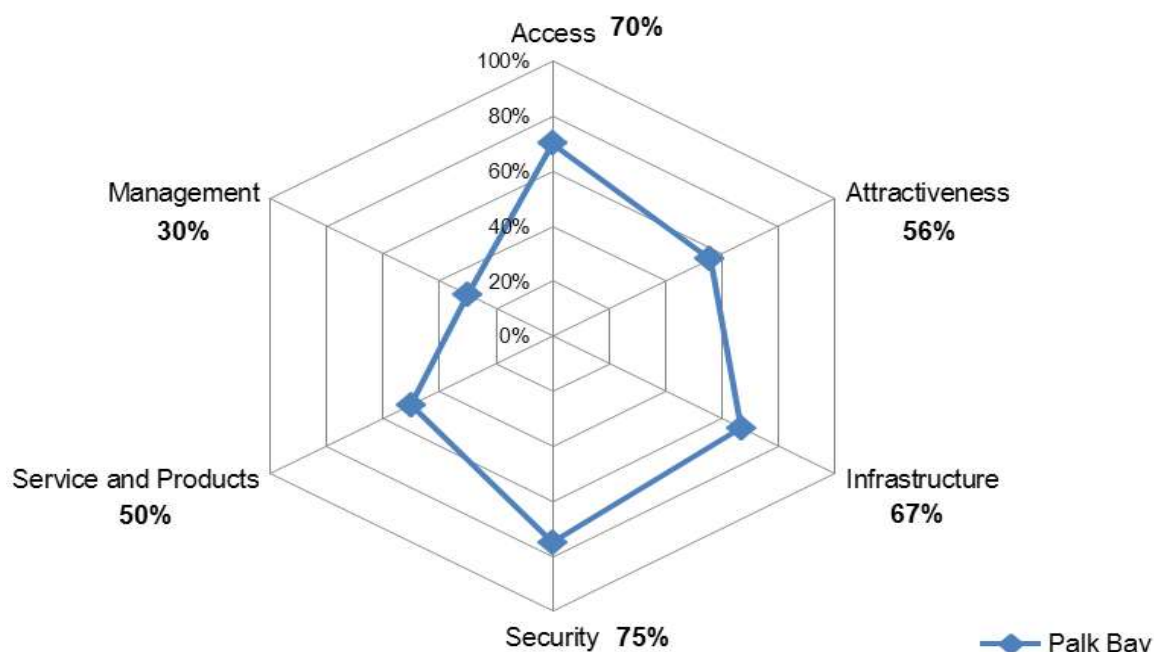
With the exception of Rameswaram, outside of the town the accommodation facilities are very sparse in terms of quantity, quality and variety. Yet, catering facilities are satisfactory and also the local transportation service is diverse offering buses, taxis and also a train service. Opportunities for nature-related activities are limited to water-based activities such as kayaking, snorkeling and swimming. Culture-related activities and all offered tours and excursions are limited to the local temples and thus show a lack of variety.

Management

The management performance of Palk Bay is the biggest weakness of the destination, since it does not have any tourism, protected area or sustainability management plans established. The Tourism Department at district level lacks in skills and capacity to develop and implement required (sustainable) tourism management strategies. There is a general acceptance of religious tourism within the local communities but they are not actively involved in tourism development or decision-making. However, several established associations such as a Hotel Association, Taxi/Auto Association, Guide Association and Photographer Association show that private tourism suppliers are willing to collaborate and organize themselves.

Evaluation

Figure 5: Rapid destination appraisal – evaluation of Palk Bay



Access performance:	REASONABLE
Attractiveness performance:	LOW
Infrastructure performance:	REASONABLE
Security performance:	REASONABLE
Services and Products performance:	LOW
Management performance:	INSUFFICIENT

Conclusions

- ➡ There is no awareness and /or vision among key stakeholders regarding ecotourism. However, there is considerable scope for ecotourism at selected sites despite the fact that significant biodiversity lies on the Gulf of Mannar side.
- ➡ Focus of tourism at this site at present is exclusively on temples and is religious in nature. Ecotourism, if promoted will need to address a completely different target group. This could include domestic and international tourists wanting an authentic natural and cultural experience.
- ➡ Palk Bay offers a range of coastal and marine habitats



that could be showcased and included in potential ecotourism packages and several sites could be selected across the Palk Bay.

- For example, at the Krishnapuram Beach at Panaikulam *Panchayat* visited, the team saw that there was scope to develop an ecotourism package around the sea grasses that could be viewed from a boat. The site includes a relatively pristine beach, clean and shallow water. The local inhabitants are the fishing community. A community-based ecotourism package at this site could include:
 - a tour of the sea grass ecosystem by boat or snorkeling.
 - basic facilities such as huts on the beach could be established and run by the local community with an idea of them interacting with the tourists.
 - sharing local cultural experiences such as traditional fishing techniques and local cuisine.
- Another product could be the establishment of a relatively high-end community-based eco-lodge/resort.
- A wildlife circuit that includes the Point Callimere Wildlife Sanctuary could be thought of. The sanctuary gets many enthusiastic birdwatchers making them an ideal target group for the proposed ecotourism here.
- Majority of area within Palk Bay does not fall under the jurisdiction of the Forest Department, proving more flexibility for establishing community-based ecotourism. However, there is a move to declare this area as a Community Reserve under the Wildlife Protection Act (1972).
- There is at present no sewage treatment plant or a plan for solid waste management. At present all waste is being dumped into the sea.
- There is a scarcity of potable water.

Recommendations

- Development of a common framework for community-based ecotourism across Palk Bay. This would include: a detailed analysis of attractive pilot sites in Palk Bay with diverse coastal/marine habitats and where local people are willing to participate.
- Development of a strategy for community based ecotourism development in identified coastal areas pilot sites.
- Establishment of a solid waste and sewage disposal plan for the select sites.

5.2 State of Goa

The coastal state of Goa lies on the west coast of India. This tiny state of Goa spread across an area of 3702 sq. kms and is located on the west coast of India. To its north lies the state of Maharashtra and to the east and south it is surrounded by the state of Karnataka and to its west lies the sparkling Arabian Sea. Geographically, the state can be divided into 3 distinct zones that run parallel from North to South; i.e. the coastal plains, the plateaus and the western *ghats*. The coastal plains lie between the Arabian sea and the plateau region. This area is made up of sandy shores interspersed with a few rocky shores. Another distinct feature of this region is that it has fertile delta on account of several rivers draining into the Arabian Sea and has low lying flood plains where tidal ingress can be felt. Tourism in Goa, largely thrives in this region. The area adjoining the coastal plains, are the plateau region of Goa with its distinct vegetation cover and has been supporting industrial activity in the state. The next region is the western *ghats*, a bio-diversity hot spot with several wild life sanctuaries and national parks such as

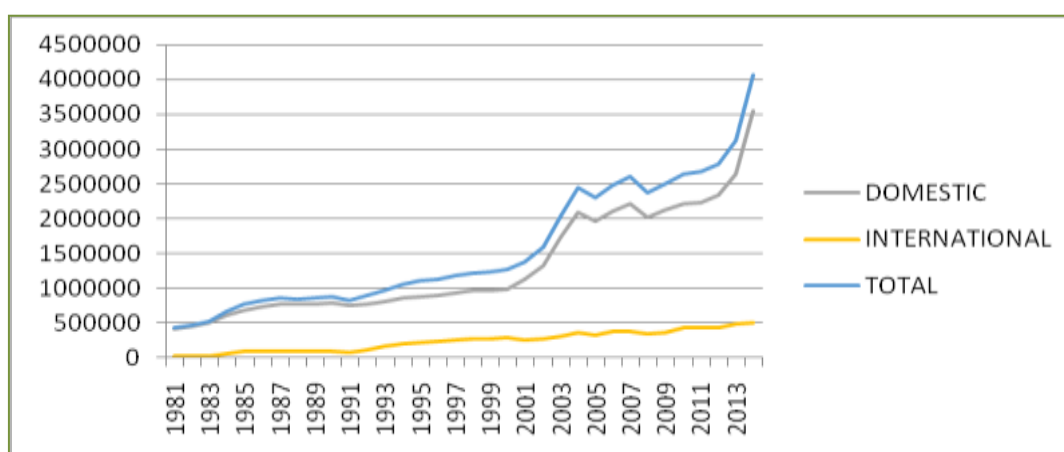
Dr. Salim Ali Bird Sanctuary, Bhagvan Mahavir Sanctuary, Bondla Wild life sanctuary, Madhei Wild life Sanctuary and Cotigao Wildlife Sanctuary. The above three regions are interposed with the following seven rivers of Terekhol, Mandovi, Zuari, Chapora, Sal, Galgibag and Talpona which originate in the Sahyadri and empty themselves in the Arabian Sea. Unlike the rest of India, the state of Goa was ruled by the Portuguese for almost 450 years and was annexed to the Indian union in 1961 and was a union territory. In 1980, statehood was conferred to this tiny state. For administrative purpose the state is divided into two districts-North and South Goa. These are further sub divided into 12 *talukas* of Tiswadi, Bardez, Pednem, Sattari, Ponda, Bicholim, Sanguem, Darbandora, Quepem, Canacona, Salcette and Murmagao.

5.2.1 Tourism at a glance (State level)

Goa stumbled on tourism in the sixties, when the hippie movement put Goa on the international tourism map. In response to tourist arrivals, the locals began catering to the needs of the tourists and with the increasing tourists, the tourism sector has got organised into a full-fledged industry. Currently, tourism in Goa is a major economic sector in the State of Goa, and its importance and reliance has increased on account of the ban on mining in 2012¹⁶.

It is estimated that around 50 lakh international tourists visit India every year, of which 8-10 percent visit Goa (GoG,2010)¹⁷. The tourist arrivals i.e. both domestic and international tourists visiting the state of Goa has been increasing. This ascending trend is represented in the graph (Figure 6) below, which depicts that the total tourists arrivals in Goa has increased from 4.39 lakh in 1981 to 40 lakh in 2014. Thus the growth in this time period has been almost 9 times with an average annual growth of 7 per cent from 1981-2014. Both streams of tourists, i.e. domestic and international tourists too have correspondingly increased over the years wherein the average annual growth for domestic tourists is 6.9 per cent and international tourist is 10.4 per cent.

Figure 6: Tourist arrivals to the State of Goa¹⁸



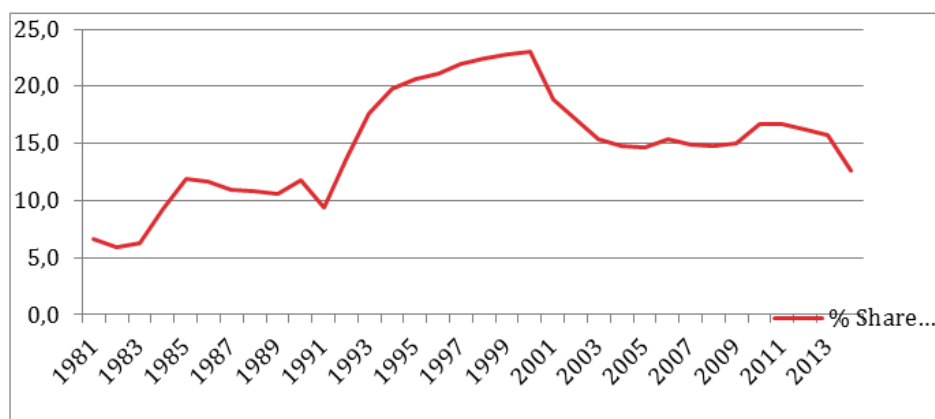
¹⁶ Mining was the leading economic sector of Goa followed by tourism.

¹⁷ GoG, 2010, *Economic Survey of Goa, 2009-2010*, http://www.goachamber.org/cms/index.php?option=com_content&task=view&id=933&Itemid=16
Last accessed on 12th October 2010

¹⁸ Source: GoG, 2013, Tourism statistics

The share of international tourist to total tourists is currently around 14.7 per cent and an examination of this over the years, displays that the percentage share was 6.7 in 1981 and has increased to around 23 percent in 2000 and has reached 12.7 in 2014 (See figure 1.2). The decline in the percentage share of international tourists despite increase in tourist numbers highlights that the growth of international tourists does not correspond to the pace of growth of domestic tourists in Goa.

Figure 7: Percentage share of international tourists to total tourists in Goa¹⁹



5.2.2 Tourism at a glance (Site level)

The island of Chorao along with its ecology can serve as a unique attraction for tourism that needs to be tapped and effectively marketed so as to sustain tourism in Chorao across the pillars of sustainability. However for it to be sustainable it is essential to understand the status of the ecology so as to devise mechanisms and strategies for its conservation through tourism. Thus addressing the health of the ecology will have a positive impact on the sustenance of the Dr. Salim Ali Bird Sanctuary. The Dr. Salim Ali Bird Sanctuary is located on the island of Chorao, which is an inland island located in the Mandovi estuary at the confluence of the Mapusa and Mandovi rivers. As tidal impacts in Goan rivers are felt up to 40 kms upstream the low lying area²⁰ of the island of Chorao is affected by the same. Given that this sanctuary was earlier a *khazan* land that was operated by some well-known families as well as comunidade), it is imperative to understand this system. The *khazan* lands of Goa are managed ecosystems which have evolved over centuries by reclaiming low lying lands by an intricate system of dykes, sluice gates and canals and have thereafter been put to multiple productive uses such as agriculture, aquaculture and salt panning.

Tourism in Chorao is primarily promoted on account of the Dr. Salim Ali Bird Sanctuary. This sanctuary is part of the six wild life sanctuaries present in Goa. This is the only sanctuary showcasing coastal biodiversity. In terms of revenue the Dr. Salim Ali Bird Sanctuary has generated a total of INR. 19,88,071/- in the past four years with an annual average revenue of INR. 4,97,071/-. The per-visitor revenue generated is around INR.97 per visitor. The data on total visitors to the sanctuary reveals that there has been an increase in the total visitor flow. Figure

¹⁹ Source: GoG, 2011, Tourism statistics

²⁰ The sanctuary is located in a low lying area at an altitude ranging from -0.5m to +0.5m and is affected by the tidal action (da Silva S., et al, 2014 cite Kumar 2013 pp. 6).

8, presents the data for the past 11 years from 2003-2004 till 2013-2014. The visitor flow to the island has picked up post 2010-2011 to register a growth of almost four times.

Figure 8: Growth of visitors to the Dr. Salim Ali Bird Sanctuary²¹



5.2.3 Rapid destination appraisal: Chorao

Findings

Access

Chorao is an island located 2 km from the capital Panaji and near the international airport of Goa. The destination is accessible over the whole year with the exception of the Dr. Sali Ali Bird Sanctuary, which is closed during the rainy season. It can be reached by public or private means of transportation in reasonable time from different cardinal points by a road in the north (Bichoni bridge) or two ferry points. The access to Chorao is insufficiently depicted through signage.

Attractiveness

The attractiveness of Chorao is outstanding because of its natural and cultural diversity and uniqueness. The island provides the only marine sanctuary in Goa and showcases Goan cultural heritage including the traditional rice cultivation practice on *Khazaan* lands. Birds (incl. six 6 species of kingfisher and two species under the IUCN Red ILst – Lessor Adjutant Stork and Woolly Necked Stork), crocodiles, otters and other mangrove associated fauna offer an attractive wildlife experience. But cultural richness adds to the attractiveness of the island. A Portuguese monastery, old heritage houses, Hindu temples, the landscape and architecture of the *Khazaan lands* are just some of the cultural attractions. Also part of the heritage is the local cuisine and two festivals exclusive to this region.

²¹ Source: Data collected from Department of Forests and da Silva S., et al., 2014

Infrastructure

The basic infrastructure on the island is rather average than outstanding, due to the long distance to emergency aid on the mainland and the predicted water shortage. Electricity, telecommunication and everyday life services are available. The destination still shows a lack of appropriate information infrastructure (signs, signboards etc.). Nevertheless, the road network is acceptable and some infrastructure for nature-related activities is in place, e.g. a trail and bird watching tower in the sanctuary.

Security

Chorao has issues with its water supply, which is not potable, yet. Furthermore, the sanitation standards are insufficient and need improvements as well. However, no other health risk such as dangerous or disease-transmitting animals or epidemics are prevalent in Chorao. Moreover, dangers to life such as road accidents, robberies, terrorist attacks or armed conflicts etc. are unlikely in this area.

Services and Products

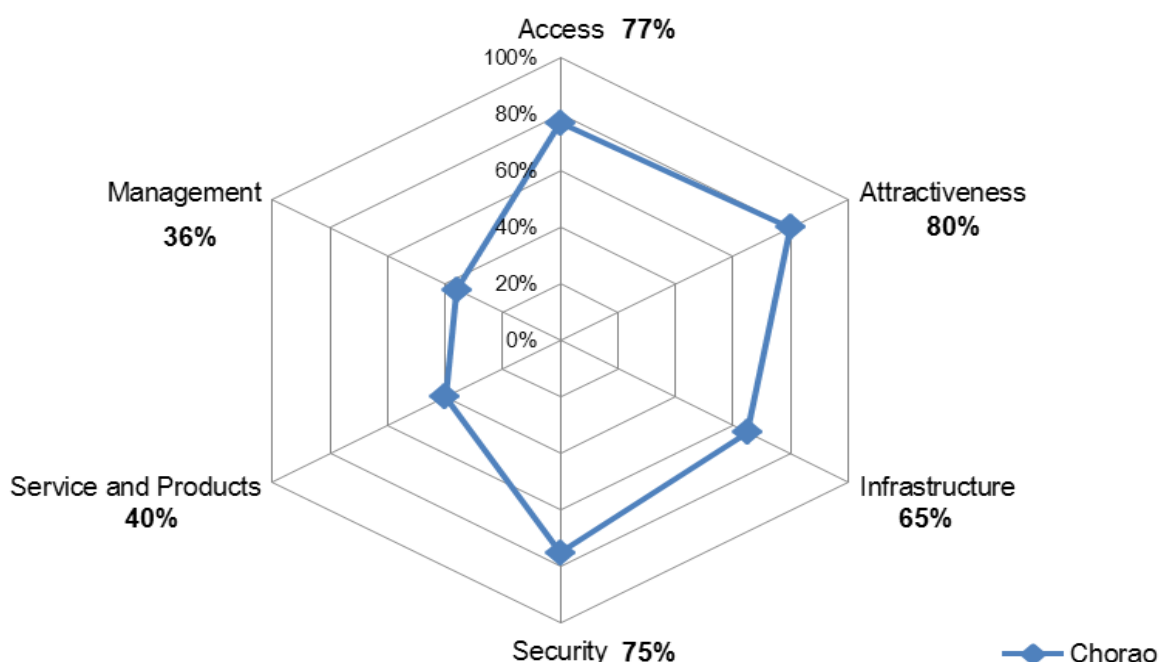
Chorao as a destination provides diverse opportunities for nature-related activities like hiking, biking, rafting and kayaking. Additionally diverse cultural activities could be undertaken, such as visiting local churches and temples. Also the local Society for Promoting Art, Culture and Education (SPACE) is engaged in a range of cultural activities. Nonetheless, at present there is limited accommodation (two guest houses) and three restaurants on the island and almost no local transportation service available. Moreover, at present, there is just one bird watching tour being offered. Other tourist attractions will need to be developed. There is little available information about the area.

Management

A professional tourism and sustainability management strategy at Chorao is yet to be developed. However, there are interested local people with a broader tourism vision related to sustainability issues. With regards to the Dr. Salim Ali Bird Sanctuary, a management plan exists and staff is also available. However, further inputs related to visitor education and management are required. There is significant stakeholder and community participation since public and private stakeholders started working together as part of the GIZ project. The project has also fostered local community involvement in the project. Although there are just a few tourism suppliers, a competition among them is evident. Nevertheless, a general acceptance for sustainable and low impact tourism development can be found in Chorao and offers therewith an important basis for future development.

Evaluation

Figure 9: Rapid destination appraisal – evaluation of Chorao



Access performance:	REASONABLE
Attractiveness performance:	HIGH
Infrastructure performance:	REASONABLE
Security performance:	REASONABLE
Services and Products performance:	LOW
Management performance:	INSUFFICIENT

Conclusions

- The entire island of Chorao should be promoted as one destination. This includes the Salim Ali Wildlife Sanctuary, the *khazaa*n lands and other natural and cultural heritage sites.
- The predominant attractions for both domestic and international tourists to Goa are the beaches and churches where tourism has reached unsustainable limits. The challenge is to attract at least some of these tourists to lesser-known sites such as Chorao island and hence the need to develop it as a destination with adequate safeguards.
- The island has sufficient potential to achieve this. It can offer a supplementary experience from the conventional, 'Beach and Church' tourism.



- ➡ Choraao showcases both natural and cultural heritage. The Salim Ali Wildlife Sanctuary represents the unique mangrove and estuarine habitats. It is also the only marine sanctuary in the state. The *khazaan* lands system is also unique to this region and is a living cultural heritage. The local residents and many heritage Portuguese houses provide an added flavor to the island.
- ➡ There is already an ongoing GIZ intervention in the Salim Ali Wildlife Sanctuary and the proposed tourism interventions could easily dovetail into these efforts. There is considerable potential for synergy and linkages between the GIZ conservation efforts and sustainable tourism development.
- ➡ There seems to be reasonable interest in developing a model of community-based tourism from local residents that does not follow the existing ‘mass tourism’ model for the beaches.
- ➡ Any tourism enterprise on the island will have to be in consultation with the local residents as well as the local *panchayat*.
- ➡ The sanctuary cannot be promoted as a birding destination only. The unique mangrove and estuarine habitat needs to be highlighted through good interpretation.
- ➡ No new built infrastructure is necessary for hotels etc on the island. Accommodation should be primarily homestays and potentially the conversion of existing heritage bungalows into hotels/guesthouses.
- ➡ The local residents must be fully included in the tourism initiatives (homestays, restaurants, local transport, tour guides, exhibitions to display local art etc), giving them economic benefits and enhancing pride in their heritage.

Recommendations

- ➡ Facilitate development of a detailed tourism strategy along with all the local stakeholders defining specific products (hospitality, transport, catering, cultural activities, nature-based activities).
- ➡ Develop a marketing strategy for tourism promotion of the island.
- ➡ Support a community institution to manage tourism development in the area through capacity building, handbooks etc.).

5.3 State of Gujarat

Gujarat – Gujarat is a state in the western part of India known locally as Jewel of the Western part of India. It has an area of 196,204 km² with a coastline of 1,600 km, most of which lies on the Kathiawar peninsula, and a population in excess of 60 million. The Land of the Legends, stands bordered by Pakistan and Rajasthan in the north east, Madhya Pradesh in the east, and Maharashtra and the Union territories of Diu, Daman, Dadra and Nagar Haveli in the south. The Arabian Sea borders the state both to the west and the south west.

5.3.1 Tourism at a glance (State level)

As per the Ministry of Tourism, Government of India 2014 Report, the foreign exchange earnings from tourism were approximately USD 20.24 billion.

Table 11: Economic importance of the tourism sector in the State of Gujarat²²

	Total Contribution to GDP (%)		Employment (No in Millions)		Total Investment (Figures in USD Billion)	
	2014	2025 (Projected)	2014	2025 (Projected)	2014	2025 (Projected)
World	9.8	10.5	276.85	356.91	814.4 (4.3% of total investments)	1336.4 (4.9% of total investments)
India	6.7	7.6	36.70	45.57	32.42 (6.2% of total investments)	66.73 (6.9% of total investments)
Gujarat	2.7	5	0.95	3.00	0.81	4.00

5.3.2 Tourism at a glance (Site level)

Mokarsagar Wetland is located in the Porbandar district of Gujarat. Gosabara-Mokarsagar Wetland Complex (which is popularly called as ‘Mokarsagar Wetland Complex’ in relatively recent time-frame) has been known as ‘Gosabara wetland’ for many years. This is a haven for birds and in the latest water bird count only 500 water birds were recorded in the inland channel like Gosabara wetland, whereas in the Mokarsagar wetland, total 94,204 water birds were recorded.

Table 12: Numbers and Percentage of tourist flow to Mokarsagar Wetland

Year	2014-15		2013-14		2012-13	
	No	%	No	%	No	%
National	250	100	200	100	200	100
International	0	0	0	0	0	0
Total	250	100	200	100	200	100

²² Source: Tourism Policy for the State of Gujarat (2015-2020)

Khijadiya Bird Sanctuary, Jamnagar: Khijadiya Bird Sanctuary is a bird sanctuary also known as safe haven for birds located in Jamnagar district of Gujarat, India. The sanctuary is unique having both fresh water lakes, salt and freshwater marshlands. It is spread over an area of 6.05 km².

Table 13: Numbers and Percentage of tourist flow to Khijadiya bird sanctuary

Year	2012-13		2011-12		2010-11	
	No	%	No	%	No	%
National	5953	94.50	10848	98.75	11486	99.60
International	346	5.50	137	1.25	43	0.40
Total	6299	100	10985	100	11529	100

Madhavpur is situated on a sandy coastline just 50 km from Porbandar city and is endowed with fertile agriculture land. It hosts the beautiful Madhavraji Haveli Temple in addition to the Rukmini no choro, which marks the place where celebrated with an annual fair held by the Mer community. Nearby are the ruins of a shiva temple, probably from the 12th c. The beach is not safe for swimming, but perfect for taking in the sea breeze. Madhavpur beach, is home to a two-decade long conservation project of Green Sea and Olive Ridley turtles: both endangered marine species included in Schedule-1 of the Wildlife (Protection) Act, 1972. In 2009, over 10,000 baby turtles have been safely released in the Arabian Sea. The beach has a hatchery established by the department where turtle eggs are nested. More than 100000 visitors come to Madhavpur beach as it is *en route* destination between Somnath and Dwarka, very famous religious tourism destination of Gujarat. Only seven nests were observed in 2015, compared to 110 nests in 2013. The site requires urgent protection measures and watersports and other tourism related activities are not advisable to conserve marine turtles.

5.3.3 Rapid destination appraisal: Mokasargar

Findings

Access

The biggest strength of the Mokarsagar Wetland complex is its accessibility. This includes, very good roads, bilingual signage and short drive from Porbandar City (30 minutes). In addition to that, Mokarsagar is connected to four airports that are in Porbandar, Jamnagar, Rajkot and Diu. Mokarsagar can be reached from several cardinal points and the easiest way to get there is by rented private transportation. Public buses are not very frequent in Porbandar. The destination is accessible for 11 months.

Attractiveness

Mokarsagar is an attractive destination for bird watchers with 260 different bird species that include 140 water bird species (18 red listed species). Over 100,000 water birds can be seen here in the wintertime. The huge and diverse number of birds, many quite rare can be spotted/ photographed easily without disturbance. The diverse landscape has a mosaic consisting of lagoons, freshwater wetlands, coastal wetland and mangroves. There are also few other (cultural) attractions e.g. the folk dance of Maher community for which Porbandar area is famous for, as well as the birthplace of Gandhi.

Infrastructure

The basic infrastructure of Porbandar City is absolutely satisfactory. With respect to tourism, Mokarsagar doesn't provide any (bilingual) information infrastructure. The road network however is acceptable and adequate trails are established, even though the concrete watchtowers are very unattractive and disrupt the landscape scenery.

Security

The Wetland complex seems to be a safe destination, which is neither affected by disease-transmitting or aggressive animals, nor by any epidemics in this area. There are however no sanitary facilities in place. Further dangers of life such as road accidents, robberies or terrorist attacks are very unlikely in Mokarsagar.

Services and Products

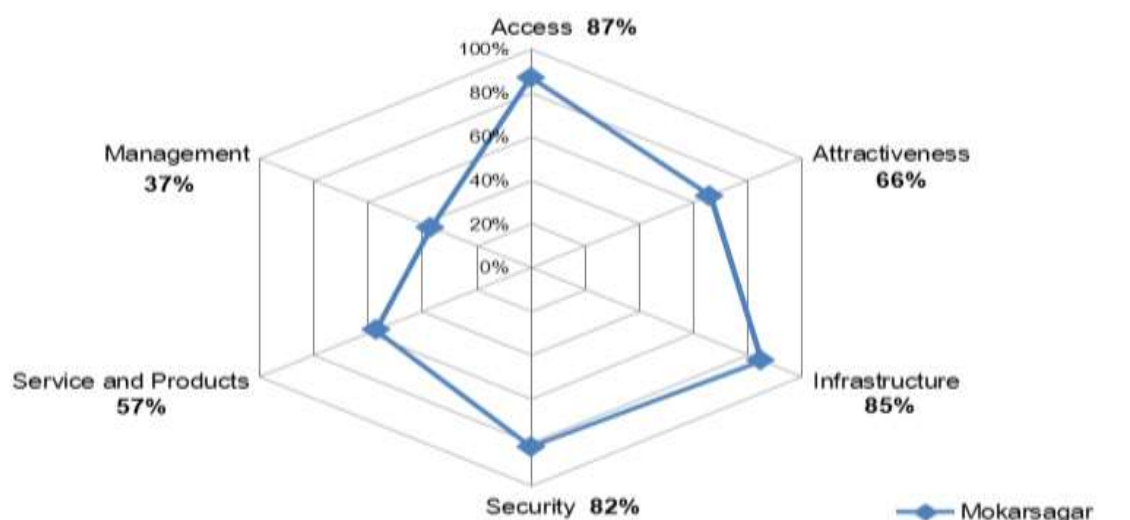
The accommodation facilities in Porbandar City provide adequate conditions and many restaurants as well as local transport services are available. The opportunities for diverse nature-related activities in Mokarsagar are limited to bird watching. Furthermore, even though there are skilled tour guides in Porbandar City, hardly any tours or excursions are offered. Information material about the area is only available on a website established by Mokarsagar Wetland Conservation Committee.

Management

A professional tourism and sustainability management plan for Mokarsagar doesn't exist. But there are proposals for declaring the area as a Wildlife Sanctuary, an Important Bird Area, a Biodiversity Heritage Site as well as a Ramsar site. There is potential for stakeholder and community participation due to the willingness for collaboration and the acceptance of tourism development. The Mokarsagar Wetland Conservation Committee and local eco guides are already very engaged to develop sustainable tourism and to support the conservation of the area. Nevertheless, so far only a few collaborations and interactions between public and private stakeholders as well as with the local community can be reported.

Evaluation

Figure 10: Rapid destination appraisal – evaluation of Mokarsagar



Access performance:	HIGH
Attractiveness performance:	REASONABLE
Infrastructure performance:	HIGH
Security performance:	HIGH
Services and Products performance:	LOW
Management performance:	INSUFFICIENT

Conclusions

- The area has tremendous potential as a domestic as well as international birding destination.
- Despite the potential, there is practically no tourist traffic here.
- It is important for the area to be declared a wildlife sanctuary for the development of tourism in a sustainable and responsible manner and also to mitigate the negative impacts from mass tourism.
- Marketing of this site internationally could also be facilitated if it is declared a Ramsar site and also an Important Bird Area (IBA).
- The protected area management plan for this area will need to address tourism in a comprehensive manner to ensure that tourism development is enhanced but tourist numbers are controlled.
- Interpretation and orientation for the site is crucial for the visiting tourists as well as school and college students.
- There is a general interest amongst the community members of the village Mokar, for the potential involvement in tourism-related activities.
- There are trained and highly motivated eco-guides available (four) with at present little opportunity to earn a full-time income from tourism.
- An NGO (Mokarsagar Wetland Conservation Committee) already exists with highly committed individuals who could help in the planning of this area.
- There appears to be a conflict between two of the key stakeholders, i.e. the farmers and the fishing community. The fishing community has allegedly been linked to certain poaching incidents. This issue may have far reaching impacts and will need to be resolved before the area is designated as protected.
- Mokarsagar is strategically located between significant wildlife destinations such as Sasan Gir Lion Sanctuary and National Park and the Velavadar Blackbuck Sanctuary. This opens opportunities for establishing an important wildlife circuit in the state. This would also facilitate putting Mokarsagar on the wildlife map of Gujarat and India.



Recommendations

- Facilitate the process of the area being declared a Wildlife Sanctuary and Ramsar site.
- Support to the development of the management plan (once declared a Wildlife Sanctuary), particularly for the chapter on Tourism.
- Development of a marketing strategy for the domestic and the international market.

- ➡ Development of a communication strategy to address the orientation and interpretation for a range of target groups.
- ➡ Establishment of ecotourism packages based on the wildlife circuits with national and international tour operators.

5.3.4 Rapid destination appraisal: Khijadiya

Findings

Access

The destination Khijadiya is easily accessible during 8 months of the year. There are four airports in the vicinity, i.e. Porbandar, Jamnagar, Rajkot and Diu, which are within 200 km range and facilitate tourist arrivals. Locally, the very good road infrastructure, the appropriate signage and the availability of private/rental transportation support visitors to travel around and get to the destination. From Jamnagar City it takes only 20 minutes to get to Khijadiya and from Rajkot City 90 minutes, which is still reasonable. However, the public transportation is very limited with only one bus per day.

Attractiveness

Overall Khijadiya is quite an attractive place. With about 250 bird species (e.g. nesting Black-necked Storks and the Indian Skimmer), the destination provides a variety of fauna of specific interest. Additionally, Khijadiya offers four mangroves species and also freshwater and coastal wetlands. With regards to cultural attractions, an Eco-Development Committee in Khijadiya village prepares unique handicrafts like bandhej on fabric. The nearby Jamnagar City offers diverse historical and religious heritage sites. The event of Silver Tajiya being gifted by the erstwhile King of Jamnagar for Moharram has been documented by BBC, and is also an attractive cultural event for local and international visitors.

Infrastructure

Basic infrastructure such as water, electricity, telecommunication, medical and daily services are available in Khijadiya. Also the tourism related infrastructure is well-established, including an acceptable road network and an adequate tourism-related infrastructure: six watch towers, three nature trails and three hides for photography are in reasonable condition. The signage is also given, but needs to be improved. Information material for tourists and nature education camps for students is also provided at Khijadiya. The prevailing drought in the region has resulted in Khijadiya being without water and subsequently fewer birds at present.

Security

The security standards of this destination are also more than satisfactory and show the highest performance of all analyzed destinations. No disease-transmitting or dangerous animals or any epidemics need to be feared in this area.

Services and Products

Jamnagar City offers various services and products for tourists, e.g. adequate accommodations, catering facilities and good opportunities for diverse culture-related activities (museum, zoo, exhibitions, temples). Moreover, the adequate local transportation and great opportunities for bird watching as well as other nature-related activities in Khijadiya create a great profile as a tourist destination. In addition excursion offers at Khijadiya, 11 eco guides

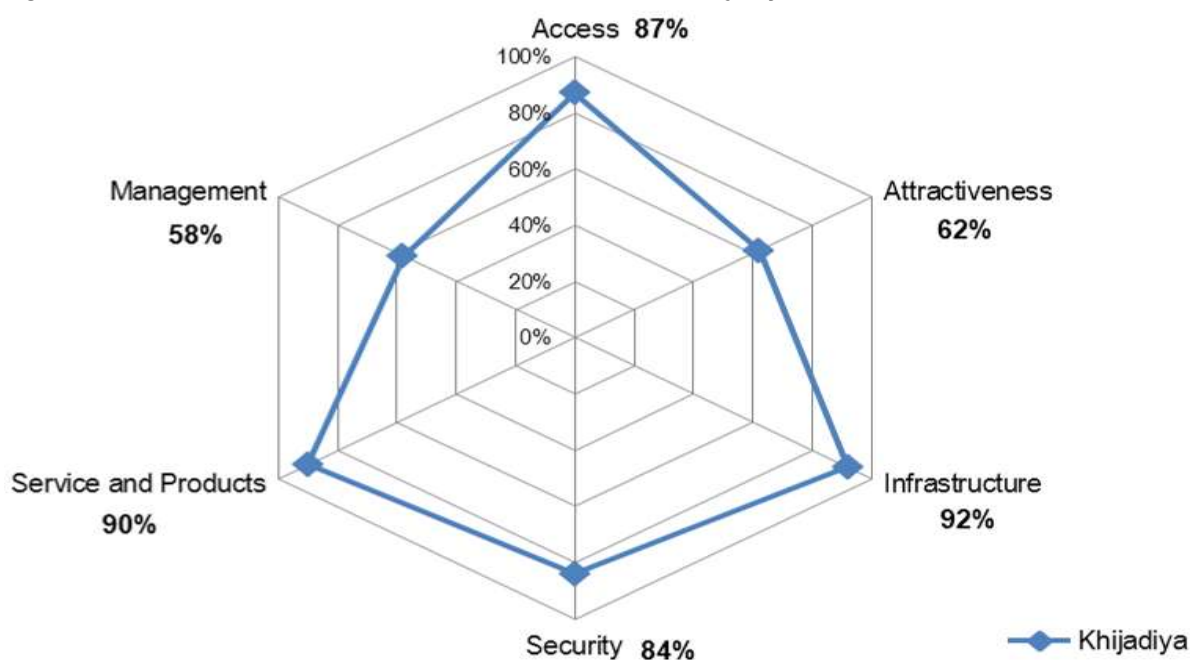
also provide their services. Overall the site is rated highly. Information material about the destination is available (website, nature education material) and an interpretation center is in place.

Management

The management strategy for Khijadiya is not adequate, but is still nevertheless one of the best compared to the other destinations. With regards to the tourism management there exists professional knowledge and therefore a tourism strategy and a marketing plan for the destination and its surrounding is in place. The Forest Department functions as a Destination Management Organization (DMO) and private tourism suppliers have also started to organize themselves (e.g. Jamnagar Area Nature Photographers Association and other NGOs). The management plan for the bird sanctuary includes a professional zoning concept, visitor management strategy and also a strategy for generating revenues through tourism. The local staff is adequate, but not skilled. So far there is no plan to sustainably manage the site for tourism, even though international guidelines and standards for sustainable tourism development in protected areas are recognized in Khijadiya Wildlife Sanctuary management plan. Furthermore, private tourism suppliers are willing to collaborate and there is also a general acceptance towards tourism activities in the community. Relevant public and private stakeholders already work together and thanks to the eco-development committee, the community is involved into decision making as well.

Evaluation

Figure 11: Rapid destination appraisal – evaluation of Khijadiya



Access performance:	HIGH
Attractiveness performance:	REASONABLE
Infrastructure performance:	HIGH
Security performance:	HIGH
Services and Products performance:	HIGH
Management performance:	LOW

Conclusions

- Khijadiya is an ideal destination that showcases the bird diversity of the region as well as migratory species. An added advantage is its proximity to Jamnagar and its small area.
- The prevailing conditions of drought in the region have impacted bird diversity resulting in fewer tourists. This will need to be taken into consideration while formulating a tourism strategy for Khijadiya.
- Khijadiya is a wildlife sanctuary and hence has a management plan.
- There is a very active and passionate birding community that could be potentially involved in tourism activities related to the wetland.
- Khijadiya Wildlife Sanctuary is already known as a birding destination in the state and is visited by a substantial number of domestic tourists.
- There are trained eco-guides available.
- An Interpretation Centre has been established at the entrance. There are also signboards with bird visuals and names scattered through the sanctuary. Watchtowers and bird hides to facilitate photography have also been established.
- It also a venue for eco-camps conducted for school and college students.
- Proximity of the sanctuary to the town of Jamnagar results in large number of visitors and cars that can potentially negatively impact the wildlife here.



Recommendations

- A carrying capacity study to determine optimum visitor numbers needs to be done on a priority basis. Marketing of the sanctuary for the international market could be considered only once this has been done.

5.3.5 Rapid destination appraisal: Madhavpur

Findings

Access

The accessibility of Madhavpur enables tourism throughout the whole year. Four airports are located within 200 km range, in Porbandar, Jamnagar, Rajkot and Diu. Furthermore, the destination can be reached from a northern or a southern cardinal point, it takes around 60 minutes from Porbandar City and the area is connected through a great road network with very good road conditions. With regards to the public transportation it should be said that only buses drive to the destination. However, visitors can also get a rental car or a taxi for reaching Madhavpur. Yet, the signage in the area is very poor and needs to be improved.

Attractiveness

Madhavpur represents one of India's few turtle nesting sites and is also the only turtle nesting site of Olive Ridley Turtles in Gujarat. Other animals of special interest are dolphins, whale sharks, dugongs, marine birds and

pelagic birds, which reflect the rich biodiversity of the area. However, the destination suffers from a lack of attractiveness for tourism purposes because swimming and water sports are not advisable due to serious risk factors and the presence of turtle nesting area. Although Madhavpur has a significant religious meaning due to Lord Krishna marriage there, no further cultural attractions can be found or visited.

Infrastructure

The overall infrastructure of the Madhavpur area is more than satisfactory, since all basic needs (water, electricity, telecommunication, medical and daily services and road network) are covered. But specific tourism related infrastructure is not in place. Even though the road network is acceptable, a proper and bilingual signage is not yet implemented.

Security

Madhavpur is a rather safe destination, which does not suffer any health risks except for some sanitary issues and an improvable water supply. But as mentioned before there is a high risk to drowning in the water. Further dangers to life don't need to be feared since crime, attacks and wars are very unlikely in the area.

Services and Products

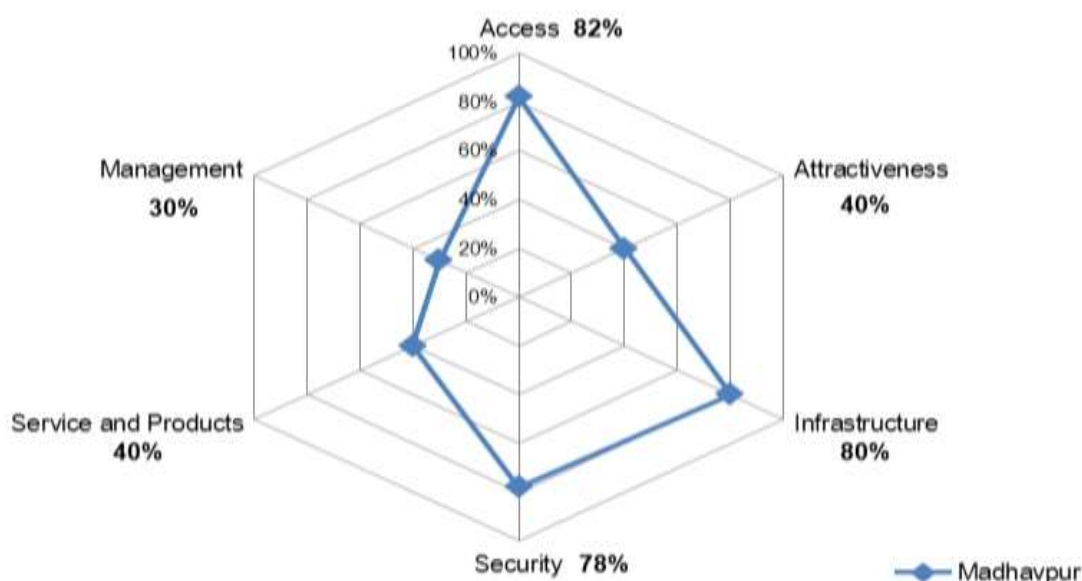
So far tourism services and products don't exist in Madhavpur and the existing catering and accommodation facilities in Porbandar City are not adequate for potential turtle watching tourism because of the long distance that needs to be covered in the night to reach the area and to return. Information material about the area is only available in a small interpretation center of the Forest Department.

Management

Madhavpur has very little in terms of a management strategy. Only the Marine National Park Dwarka Range of Marine National Park Jamnagar functions somewhat like a Destination Management Organization. Skilled staff of the Marine National Park is present but with the exception of applied environmental impact assessments there is little management at the site. However, the community accepts tourism related activities, but this has not lead to any further stakeholder or community collaborations as yet.

Evaluation

Figure 12: Rapid destination appraisal – evaluation of Madhavpur



Access performance:	HIGH
Attractiveness performance:	LOW
Infrastructure performance:	HIGH
Security performance:	REASONABLE
Services and Products performance:	LOW
Management performance:	INSUFFICIENT

Conclusions

- ➡ The area is strategically located between two very popular religious destinations (Dwarka and Somnath) and 1000s of tourists pass through it *en route* every day.
- ➡ Despite attractive beaches, it is not recommended for swimming or water sports.
- ➡ It is also the only nesting site for the Olive Ridley Turtles in the state.
- ➡ Turtle watching may well be the only potential activity that could be promoted. Observation of turtles laying eggs is a nocturnal activity and would need to be very strictly controlled and monitored. Given overwhelming tourist numbers, this may not be possible. Moreover, there is little accommodation to support this kind of tourism.
- ➡ The probability of spotting marine fauna at this site is low.



Recommendations

- ➡ Taking into consideration the conclusions, this site may not be promoted for any kind of tourism, except visit to the Interpretation Centre with appropriate bilingual signage.

5.4 State of Maharashtra

The state of Maharashtra is known for its sheer size and diversity. It has a varied landscape bound by the Western Ghats with its innumerable forts, that still stand proud and strong, depicting Maharashtra's historic past. Additionally scores of temples sculpted into and out of basalt rock, have been centres of Religious tourism since time immemorial. Its diverse and colorful cultures weave its people into one State. The colorful festivals of the State galvanize the sleepy thousands into fervent motion. And her miles of silver, white beaches inviting over the entire coast. And what to say of the forests of Vidarbha forests – the most spectacular habitats for the Tiger and other wildlife. And hence the theme Maharashtra Unlimited.

5.4.1 Tourism at a glance (State level)

Amongst the Domestic Tourists, Maharashtra is quite popular – being the fourth most favored destination after Andhra/ Uttar Pradesh and Tamil Nadu (Interestingly all these states are very strong in Pilgrimage/ Religious destinations).

Table 14: Maharashtra - Visitor Arrival between April 2013 – March 2014

April 2013 – March 2014	
Type of Tourists	Total
Domestic Visitors	18,32,88,064
Total Visitors	18,64,11,528

5.4.2 Tourism at a glance (Site level)

The bio-diverse mangrove creek of Thane's Kopri Koliwada and Airoli has been identified as a bird-heaven – with over 200 species of resident and migratory birds being recorded here. They include the glamorous greater and lesser flamingos. However, this area is under tremendous pressure. As a part of the protection plan for this mangrove habitat, it has been proposed by Maharashtra Forest department to provide this area a Sanctuary Status. This would help in reviving the habitat that is faced with large scale dumping, land reclamation and also will be under tremendous pressure from the prestigious Nhava Sheva – Sewree trans harbour link.



The Elephanta Caves are located in Western India on Elephanta Island (otherwise known as the Island of Gharapuri), which features two hillocks separated by a narrow valley. The small island is dotted with numerous ancient archaeological remains that are the sole testimonies to its rich cultural past. These archaeological remains reveal evidence of occupation from as early as the 2nd century BC. The rock-cut Elephanta Caves were constructed about the mid-5th to 6th centuries AD. This is a

UNESCO World Heritage Site. There are a total of three villages: Shentbandar, Morabandar, and Rajbandar, of which Rajbandar is the capital.

5.4.3 Rapid destination appraisal: Airoli Thane Creek

Findings

Access

The Airoli Thane Creek site is located in Mumbai and provides therefore good accessibility. The international airport of Mumbai is accessible, the road network is perfect and the area can be reached from different cardinal points. Additionally, busses, trains and also private (rental) transportation are available and make local travel easy. This in turn also lends itself to reasonable travel time to Airoli Thane Creek. It takes less than 2 hours to reach the destination from the next accommodation facilities. Furthermore, Airoli Thane Creek can be visited throughout the whole year. However, appropriate signage to the area is still missing.

Attractiveness

The attractiveness of Airoli Thane Creek is due to (endangered, red listed) bird species that are found in large numbers in the surrounding creeks, the river and the urban mangrove landscape. Considering that and the Lesser Flamingos, which winter in this area, the destination shows an unique site to see avifauna in an urban setting. But with the exception of a local fishing community there are few cultural assets. Also the Airoli Thane Creek itself is simply fallow land which doesn't serve as an attractive tourism hotspot.

Infrastructure

The basic infrastructure of Airoli Thane Creek is very well developed. Water and electricity supplies are available without restrictions as well as an access to telecommunication and daily life services such as ATMs, stores and gas stations in the vicinity. A nearby hospital guarantees medical and emergency help. Tourism-related infrastructure is still being developed (e.g. cafeteria, interpretation center, nature trail, signboards) and will certainly enrich the poor infrastructure conditions for facilitating educational activities and nature experience in an urban environment.

Security

Airoli Thane Creek has a low risk of robberies, terrorist attacks, (armed) conflicts and similar crimes or dangers to life. Same counts for dangerous diseases or epidemics that have not occurred in this area for the last few years. Except for poisonous snakes and the risk of malaria, there are no other dangerous animals. However, a risk of potential boat accidents has to be considered. Another aspect that needs strong performance improvement is the sanitation situation in the area.

Services and Products

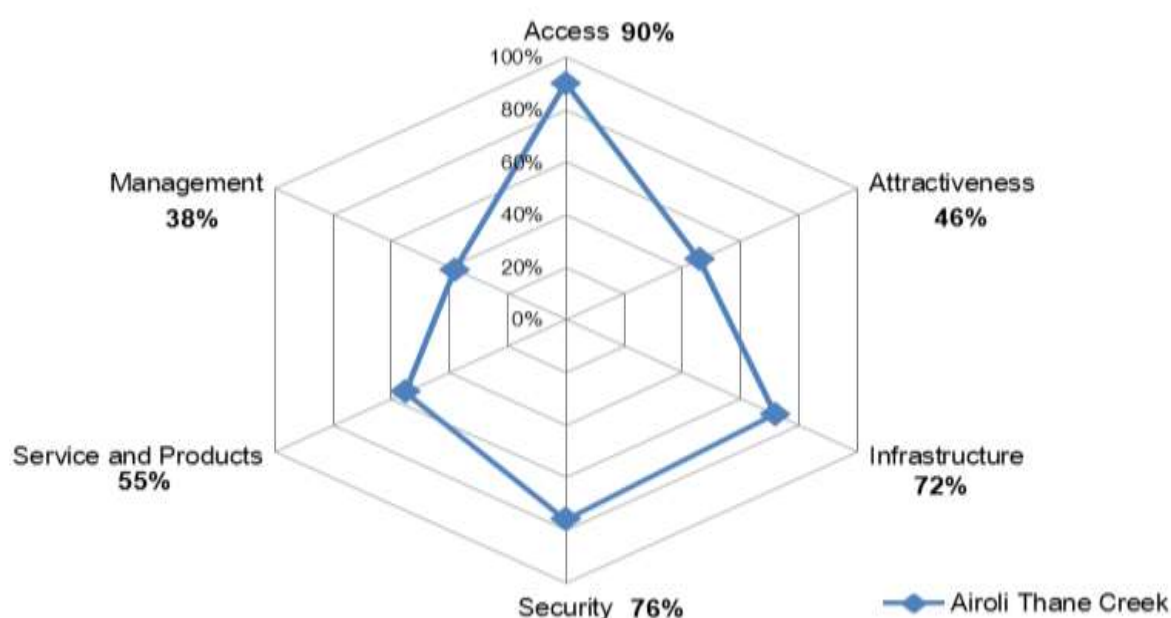
Due to its location of Airoli Thane Creek, accommodation and catering offers are very diverse and provide everything from low budget to high end products. The availability of local transportation is also adequate. Nevertheless, guided tours, excursion offers or any other kind of services or products are not in place yet because the destination is still being developed. So far only bird watching boat trips are provided by local fishermen.

Management

Currently a professional management strategy for Airoli Thane Creek doesn't exist. But several measures are proposed to improve the management performance with regard to tourism and sustainability requirements, such as a tourism strategy, a zoning concept, a visitor management strategy and a strategy for generating revenues through tourism. Furthermore, the local staff is supposed to become more skilled to manage the tourism development and collaboration with local fishermen as well as training of local guides is planned to strengthen the community participation and to involve local people.

Evaluation

Figure 13: Rapid destination appraisal – evaluation of Airoli Thane Creek



Access performance:	HIGH
Attractiveness performance:	LOW
Infrastructure performance:	REASONABLE
Security performance:	REASONABLE
Services and Products performance:	LOW
Management performance:	INSUFFICIENT

Conclusions

- ➡ This area is unique because of the rich mangrove habitat and associated species (over 200 bird species) located in the heart of suburban Mumbai, making it an urban biodiversity destination.
- ➡ The site can be promoted as an urban ecotourism experience particularly for the local residents and domestic/ international tourists that happen to already be in Mumbai.

- ➡ However there are constraints that will need to restrict the number of visitors. The primary one being the flow of the tide that determines the boat ride and the number of hours for the same.
- ➡ An Interpretation Centre, a watchtower, a boardwalk loop trail above the mangroves, a souvenir shop, a cafeteria and other activities are already being planned under the GIZ supported Forest Department initiative.
- ➡ Based on the discussions and activities planned it appears that this is primarily an environment education initiative along with an opportunity to see up close the mangrove ecosystem and related species.



Recommendations

- ➡ Determination of number of visitors for various activities planned at the site. This includes boat rides, boardwalk tours etc. This should determine if there is scope for more boats and consequently extension of the existing jetty.
- ➡ Mumbai offers a unique opportunity that showcases urban biodiversity through the Mahim Nature Park, the Sanjay Gandhi National Park and many other birding ‘hotspots’. A map that highlights these spots will indeed be an asset to attract the eco tourist, both domestic and international.
- ➡ Boats to be invested in, need to be environmentally friendly. Boats such as these are plying in some select protected areas.
- ➡ Facilitate local community participation in project activities (as guides, boats, handicrafts as souvenirs, local cuisine etc.).

5.4.4 Rapid destination appraisal: Elephanta Island

Findings

Access

Elephanta Island can be reached exclusively by public ferry or private boats within 45 minutes from the city center of Mumbai. However, during monsoon season the ferry service is limited or even suspended. Furthermore, the signage to find the ferry jetty is inadequate and not bilingual, yet.

Attractiveness

Elephanta Island is widely known for its unique Buddhist and Hindu caves which were designated by UNESCO as a World Heritage Site and represent the main tourism attraction of the island. Beside this Elephanta Island is characterized by coast mangroves and a mixed forest landscape but doesn’t provide any other extraordinary natural or cultural attraction yet. Moreover, the island is strongly affected by insufficient waste management that is visible all over the island.

Infrastructure

In contrast to the other destinations, the infrastructure of Elephanta Island is far less developed. Unfortunately the water supply is limited, the electricity supply is through generators and there is no medical aid in the vicinity. With regards to daily life services, only shops are present on the island, but no further services. However, telecommunication is available without restrictions. The tourism-related infrastructure still lacks of adequate road conditions as well as appropriate information and activity infrastructure.

Security

Elephanta Island suffers potential health risks caused by insufficient potable water supply, sanitary standards and waste management. Further health risks such as aggressive, disease-transmitting animals or epidemics are not relevant for this destination. Additionally, also other dangers like crime, terrorism and regional war, are highly uncommon in this area. Nevertheless, there is a high risk for boat accidents that needs to be considered.

Services and Products

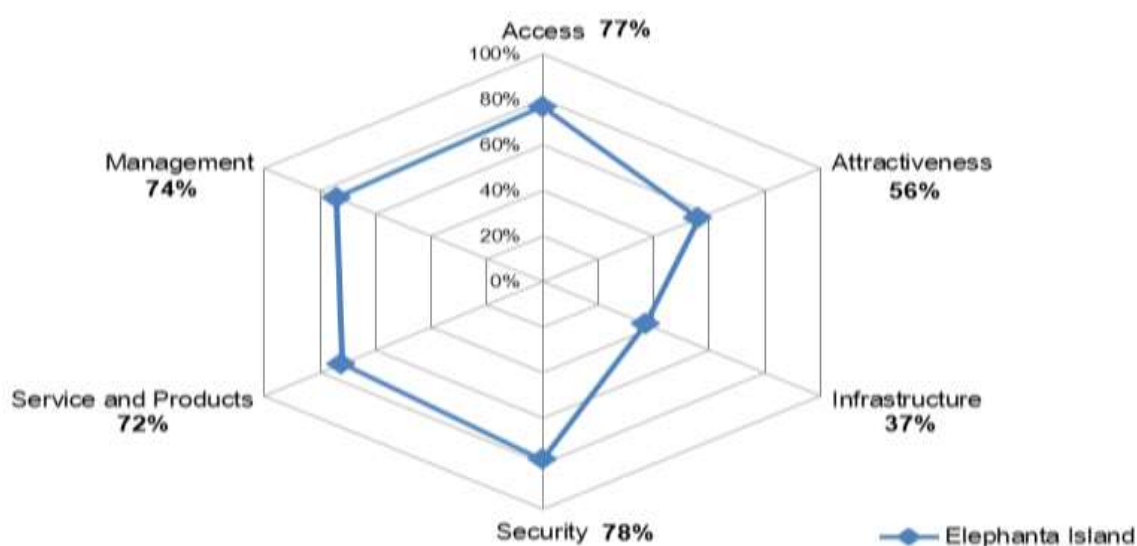
The destination already provides a number of services and products on the island, such as transport, catering facilities, various excursions and guides tours (hiking and bird and bat watching) as well as adequate information material. It is also planned to enrich the service conditions of the island through a natural history museum and an interpretation center focused on biodiversity. Moreover, for accommodation Mumbai offers diverse facilities from low budget to high end products.

Management

The island sticks out with a reasonable management performance especially in tourism consisting of a professional tourism strategy, a marketing plan, a Destination Management Organization (DMO), recognition of international guidelines and standards, experienced local stakeholders, skilled guides as well as a certain level of organization and willingness to collaborate including active community involvement. There is also a professional strategy for generating revenues through tourism and a zoning concept in place. However, the Limits of Acceptable Change (LAC) have not been analyzed yet and the island is still lacking of a professional visitor management as well as waste management strategy.

Evaluation

Figure 14: Rapid destination appraisal – evaluation of Elephanta Island



Access performance:	REASONABLE
Attractiveness performance:	LOW
Infrastructure performance:	INSUFFICIENT
Security performance:	REASONABLE
Services and Products performance:	REASONABLE
Management performance:	REASONABLE

Conclusions

- Elephanta is a World Heritage Site and a popular destination for both domestic and international tourists visiting Mumbai.
- An Interpretation Centre and a Natural History Museum are being planned under the GIZ supported project.
- Elephanta has some mangrove habitat and it is possible to have a trail traversed by golf carts that goes around the periphery of the island. The trail could showcase the natural ecosystem, local culture and cuisine etc. This combined with birdwatching to the nearby mudflats could be designed as half or even one day package for the visiting tourists. Overnight stay at Elephanta is not possible and should also not be considered.

Recommendations

- There is a proposal to link nature tourism at Elephanta with that of Thane Creek at Airoli. It is proposed to use speedboats to take tourists from Elephanta to Airoli. However, this might not be feasible for various reasons. The boat ride from Elephanta to Airoli would take over two hours one-way and would also be considerably expensive. The ride is also governed by tides at Airoli, making the management of these rides quite complicated. Moreover, visitors who have left their transportation at the Gateway of India, will find it difficult to get back from Thane Creek. Both sites attract different target groups. Airoli appears to be targeted more towards school and college groups. For the avid naturalist/birder at Elephanta boat rides to the nearby mudflats that harbor considerable bird diversity during the winter months also could be organized.
- The proposed location for the Natural History Museum may be reconsidered to be able to attract more visitors. At present, it appears that only people who opt to take the trail would be able to visit it.



6 Recommendations and Priorities for GIZ at Program Level

Proposed Action Points for the Program

➤ State-level Workshops

Workshops at the state level to share the findings of this study would be the first step towards the planning for the proposed initiatives.

➤ Development of Standards

There is a need to develop a set of standards particularly for community-based tourism for coastal and marine destinations. These standards could then be applied to all the sites under this program and be made part of the overall monitoring and evaluation plans for each site-based initiative.

➤ Capacity Building

Any community-based program will need address the capacity building requirements for a range of stakeholders in a variety of topics across the sites. Trainings will need to be designed and imparted for topics such as hospitality, hygiene, waste management etc. Basic training will also be needed for tasks such as accounts and book keeping. Capacity building could be done at one location where participants from all the sites can meet.

➤ Carrying Capacity Studies

Each of the pilot sites visited represent ecologically fragile areas for which the number of visitors will need to be determined. Carrying capacity studies will therefore need to be carried out for each site before opening up the sites for ecotourism. A common methodology for determining carrying capacity could be used.

➤ A Manual/Handbook Coastal and Marine Ecotourism

A handbook that describes in detail the steps for establishing a coastal and /marine ecotourism initiatives would indeed be an asset for any such endeavor.

Table 15: Overview of the rapid destination appraisal results

Destination	Access	Attractiveness	Infrastructure	Security	Services and Products	Management	Average Percentage
Khijadiya	87%	62%	92%	84%	90%	58%	79%
Mokarsagar	87%	66%	85%	82%	57%	37%	69%
Elephanta Island	77%	56%	37%	78%	72%	74%	66%
Airoli Thane Creek	90%	46%	72%	76%	55%	38%	63%
Chorao	77%	80%	65%	75%	40%	36%	62%
Madhavpur	82%	40%	80%	78%	40%	30%	58%
Palk Bay	70%	56%	67%	75%	50%	30%	58%

Annexure

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Annexure 1: Itinerary for Field Visit Plan – Tamil Nadu (Oct 13-16, 2015)

Time	Purpose	Venue	Key stakeholders to be involved
Day 1 (October 13th, 2015) – Field visit covering from Ramanathapuram to SP Pattinam			
6:00-7:25	Travel from Chennai to Madurai by flight	Madurai Airport	Marirajan and Rajendraprasad
7.25 to 10.30	Travel to Ramameswaram by car		Marirajan and Rajendraprasad
10.30 to 11.30	Travel to Devipattinam		Marirajan and Rajendraprasad
11.45 to 12.00	Briefing about geographical area between Ramanathapuram to SP Pattinam	SPEED Office, Devipattinam	Marirajan and Devaraj
12.00 to 01.30	Meeting with Tourism stakeholders of Devipattinam, Palk bay (Destination analysis matrix)	SPEED Office, Devipattinam	Local community, Town Panchyat representatives, Associations - Temple priest, Yathirai Paniyalar, Traders, Taxi owners, Auto drivers, NGOs – Dhan Foundation, SPEED.
01.30 – 2.30	Lunch break	SPEED Office	
2.30 – 3.00	Visit to Navapasanam and Kannamunai		Local guide
3.00 – 3.15	Travel to potential eco-tourism site -Karankadu		Mr.Devaraj and Dr.Muniyandi
03.15 – 04.00	Discussion with local community representative	At Church building, Karankadu	Village heads, Fisherman cooperatives, Women SHG leaders
04.00 – 05..30	Boat ride – Mangrove rich Karankadu village	Karankadu Mangrove	Mr.Devaraj and Dr.Muniyandi and local contact
5.30 – 06.00	Back to Ramaeswaram		
Day 2 (October 14th, 2015) Field visit covering from Ramanathapuram to Rameswaram			
11.00 to 1.00	Meeting with Trust director and Wildlife warden, Tourism Officer	Ramanathapuram	Marirajan and Dr.Muniyandi
01.00 – 2.00	Lunch break	Ramanathapuram / Rameswaram	
2.00 – 3.00	Travel to Devipatinam	Devipatinam	
3.00 – 04.00	Visit sea grass area in Krishnapuram in Pariakulam Panchayat	Krishnapuram	
4.00 – 05.00	Visit to Sankumal Beach developed under PP model tourism project		Marirajan and Dr.Muniyandi
8.00 to 09.00	Meeting with Rafi, journalist, Blue Coral manager		Marirajan
Day 3 (October 15th, 2015) Field visit covering from Rameswaram to Dhanuskodi			
7.25 to 09.00	Travel to Mukuntharayar sattiram to see water sports and Bird sanctuary	Mukuntharayar sattiram	Marirajan and Dr.Muniyandi
9.00 – 11.00	Travel to Dhanuskodi to see earlier monuments of		Marirajan and Dr.Muniyandi

	devastated town		
11.00 to 12.00	Travel to Arichal point to see the joining of both GoM and Palk Bay sea and Adam Bridge. Meeting with Tour Operator and Tourism Officer, Rameswaram		Marirajan and Dr.Muniyandi
12.00 to 1.30	Back to Rameswaram	PAD Office	
01.30 – 2.30	Lunch break		
02.30 – 05.30	Internal discussion		
Day 4 (October 16th, 2015)			
9.30 – 12.30	Travel to Madurai and drop at Airport		Marirajan
15.15 - 16:40	Travel to Chennai by Flight towards Goa		

Annexure 2: Itinerary for Field Visit Plan – Goa (Oct 17-19, 2015)

Date	Timing	Person	Purpose/Objective
17th October	9.30 am-10.30 am	Saltanat Kazi and Aaron Lobo	To take stock of the work carried on and revisit the itinerary
	10.30 am-11.30 am	Bianca Dias-Director, Off Trail Adventures	Explore potential for adventure tourism at Chorao
	11.30 am-12.00 pm		Travel to the island
	12.00 pm-2.00 pm	Aaron Lobo	Understand the facilities at the Dr. Salim Ali Bird Sanctuary
	2.00 pm-4.00 pm		Lunch and travel to Panjim
	4.00 pm-4.30 pm	Prajat Sakhardande-Historian and Professor at Dhempe College of Arts and Science	Explore the potential for heritage and culture tourism at Chorao
18th October 2015	06.00 am-10.00 am	Uday-Boat operator and guide	Boat trip to assess the birding and wildlife potential by local operators. Also saw the components of the <i>khazan</i> ecosystem
	10.00 am-10.30 am		Breakfast at Dadi's -a local restaurant that has been in business for decades.
	10.30 am-11.00 am	Premanand Mambhrey- Ex-Sarpanch and member of the Chorao Farmers Association	Understand the importance of agriculture and agricultural association in Chorao, as well as <i>panchayats</i>
	11.00 am-11.15 am		Travel to Lisa Dias Noronha
	11.30 am-12.45 pm	Lisa Dias Noronha, Founder of SPACE	To get community perspective on community based tourism in Chorao
	12.45 pm-1.30 pm		Travel to Pomburpua
	1.30 pm-2.30 pm	Savio and Pirrko Fernandes, owners of Oulaulim Backyard	To explore opportunities for locals in home stay at Chorao and look at eco-friendly options of constructions
	2.30 pm -4.30 pm		Lunch and travel to Panjim
	8.00 pm -9.00 pm	Aaron Lobo and Saltanat Kazi	Worked on filling up the matrix for Goa
19th October 2015	3.00 pm -4.00 pm	Anil Kumar,Dy. Director, Department of Forest	Vision and plan of DoF for the Dr. Salim Ali Bird Sanctuary
	4.30 pm -4.40 pm	Amey Abhayankar-Director, Department of Tourism, Goa	Understand if DoT has any role for Chorao

Annexure 3: Itinerary for Field Visit Plan – Gujarat (Oct. 20-24, 2015)

20 Oct to 24 Oct 2015

21 Oct: Porbandar

Mokarsagar Wetland, Porbandar
Mokar Village: Meeting with villagers
Madhavpur Turtle Nesting Site
Kirti Mandir (Gandhi Birthplace)
Shree Sahajanand Swami District Community Science Centre (Proposed Interpretation Centre)
Chhaya rann Wetland (Flamingo)
Meeting with 4 Ecoguides of Porbandar
Dhaval Varagiya, Vivek Bhatt, Kishor Odedra and Karan Karavadra

22 Oct: Junagadh

Porbandar to Sasan Gir Wildlife Sanctuary
Gir Wildlife Safari (9 to 12) via route 6 and 2
Meeting with Dr Sandeep Kumar, I/c DCF, Porbandar Forest Division
Jamnagar
Meeting at Hotel President (08:30 PM)

Participants

Yashodhan Bhatiya
Jay Bhayani
Suraj Joshi
Pratik Dabhi
Mehul Dodia
Jignesh Nakan
Chirag Solanki
Manish Trivedi
Mustak Mepani (info@hotelpresident.in)
Mehul Bhadania
Hiten Radhanpura
Kamlesh Ravat
Niraj Mehta
Kishan Vinchhi
Tejas Nakum
Shabbir Vijilivadha
Jayesh Vaghela

23 Oct: Jamnagar

Visit to Khijadiya Bird Sanctuary, Jamnagar
Meeting with
Forester: Mr Jitendra D. Ker
Ecoguides: Nitin Makvana, Nilesh Makvana and Sanjay Makvana
GEER Foundation, Gandhinagar
Meeting with Shree Bharat Pathak, IFS, Director, GEER Foundation

24 Oct: Ahemdabad

Group discussion for Rapid Destination Appraisal Matrix Preparation with Shree Kishore Joshi, Scientific Adviser,
Mokarsagar Wetland Conservation Committee- Porbandar at Fortune Landmark

Annexure 4: Itinerary for Field Visit Plan – Maharashtra (Oct 25-28, 2015)

Oct 25: Arrive Hotel

- 16:00 hrs: Meet (field experts)
Ms. Parveen Sheikh (+91-8108127199) (parveenevs@gmail.com)
Ms. Anjana Devesthale (+91-9324565060) (anjanahorticulture@rediffmail.com)
- 17:30 hrs: Visit to the Thane Airoli Creek Site with Anjana & Parveen

Oct. 26:

- 11:00 hrs: Meet with CCF- Mangrove Cell.
Mr. Vasudevan (022 26591586) (ccfmmumbai@gmail.com)
- 14:30 hrs: Meeting with Principal Secretary to the Chief Minister –
Mr. Pravin Pardeshi (+91-8888689555) (prvnpardeshi@gmail.com)
- 16:00 hrs : Meeting with Mr. Sujoy Chohan, Director Ocean Blue Boats
(+91 98200 24500) (sujay.chohan@oceanblue.in)

Oct 27:

- Visit to Thane Creek by boat in the morning with RFO.
RFO Mangrove Cell Ms. Seema Adgaonkar (+91-8692077070) (adgaonkar.seema@gmail.com),
Parveen and
Ms. Meghana Davar of GIZ (pccmpamaha@gmail.com) (+91-8451818452)

Oct 28:

- 09:00 hrs : Visit to Elephanta Caves by boat ferry with Parveen and
Mr. Bhaskar Jyoti Paul of GIZ (pocmpamaha@gmail.com) (+91-9004992942)
- Departure for Delhi by flight.

Annexure 5: Rapid Destination Appraisal Matrixes

1. Palk Bay.....	56
2. Chorao.....	64
3. Mokarsagar.....	72
4. Khijadiya.....	80
5. Madhavpur.....	88
6. Airoli Thane creek.....	92
7. Elephanta Island.....	104

1. Rapid Destination Appraisal Matrix

Name of the area: Palk Bay

A. General Facts		
A.1 Location of the area	Palk Bay is situated in the southeast coast of India encompassing the sea between Point Calimere (Kodikkarai) near Vedaranyam in the north and the northern shores of Mandapam to Dhanushkodi in the south.	A. 13 Main stakeholders <ul style="list-style-type: none">• Tourism Department• Forest Department• GOMBRT• Town Panchyat• Hotel Association• Temple Priest Association• Yathirai Paniyalar Sangam (Temples Tourist Service Workers Association)• Traders Association• Taxi Owners Association• Auto Driver Association• Guide Association• Photographer Association• NGOs – Dhan Foundation - Madurai, SPEED – Devipattinam, TRRM Ramanathapuram
A.2 Size of the area	110 KM (coast-line)	
A.3 Total visitor numbers per year (district)	2014: 139.86 (estimated) 2013: 12858254 2012: 11465067 As against the usual daily arrival of 3,000 to 5,000 persons, it has got 7,000 to 10,000 tourists during the current summer.	
A.4 Origen of visitors	International: 0.74% National: 99.36 %	
A.5 Origen of international visitors	Asia: % Europe: % Australia: % U.S.: % Other Regions: % A recent study of Manickaraj (2015) shows that 23.08% of respondents come from foreign countries such as Gulf Countries, Germany, France and Thailand.	
A.6 Type of guests	Individuals: 90% Package guests: 10%	
A.7 Total number of accommodation facilities (district)	148	
A.8 Composition of accommodation facilities	Hotels: 100 % Guest houses: 0 % Eco lodges: 0 % Campsites: 0 %	
A.9 Classification of accommodation facilities	1-Star: 0 2-Star: 0 3-Star: 5 4-Star: 0 5 Star:0	
A.10 Number of certified accommodation facilities	Service Quality: 0 Sustainability: 0	
A.11 Total number of other tourism suppliers	3 registered tour operators, over 40 unregistered tour operators	
A.12 General observations/comments Status of the area: Revenue land with small pockets of mangrove forest under the Forest Department Responsible Bodies: Local Pnchavat and Forest Department		

B. Access (analysis)

Standard: The area can be reached under acceptable conditions and in a reasonable time

Criteria	Indicators	Comments	Evaluation (= insufficient) – 5 (accomplished)
B.1 Traffic hub	In the surrounding (max. 200 km) exists a local or international airport	International Airport of Madurai (165 km from Palk Bay)	5
B.2 Road Infrastructure/ driving conditions	The road network provides acceptable driving conditions	Yes	4
	The area can be reached from different cardinal points	The area can be reached from at least six different cardinal points	5
B.3 Signage	The access to the area is appropriately and bilingually depicted through signage	No	1
B.4 Means of transportation	The area can be reached by public means of transportation (e.g. bus, train)	Yes, by public buses from Madurai and other places	3
	The area can be reached by (rented) car, private busses and/or taxi	Yes, by rented car from Madurai, Airport of Madurai and other places	3
B.5 Travel time	The area can be reached in reasonable time (up to 2 hours from the next accommodation opportunity)	No, it needs at least 3 hours	3
	The area is accessible over the whole year (incl. rainy season)	Yes	4

Access (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

28 points out of 40 = 70% out of 100%

Result: 28

C. Attractiveness (analysis)

Standard: The area provides interesting attractions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
C.1 Unique Selling Proposition (USP)	The area provides an unique attraction	Virgin, beautiful, empty (sparsely inhabited) and comparably clean beaches with diverse coastal habitats (e.g. mangroves, seagrasses, backwaters), Temple of Raniswaram, Dhanushkodi Town	4
	The area provides animals of specific interest	Birds (e.g. flamingos), dolphins (rarely spotted)	2
	The area provides plants of specific interest	Seagrass	1
	The area provides cultural assets of specific interest	Temples (e.g. Ramiswaram, Masi thiruvizha), seasonal festivals (e.g. "Paska" festival at Senkol matha church)	4
C.2 Natural attractions	The area provides rich biodiversity (animals, birds and other fauna and/or plants)	Diverse coastal habitats (e.g. mangroves, seagrasses, backwaters) and birds diversity	2
	The area provides a diverse and attractive landscape scenery (e.g. mountains, hills, highlands, plains, canyons, volcanoes)	Attractive beaches	3
	The area provides water-based attractions (e.g. sea, rivers, lakes, creeks, beaches, waterfalls, lagoons, cliffs, coral reefs)	Mangroves, seagrasses, backwaters	2
C.3 Cultural attractions	The area provides a diverse and attractive living culture experience (e.g. architecture, villages, indigenous communities, community based tourism projects)	Temple architecture, fishing communities	2
	The area provides a diverse and attractive historical and religious heritage (e.g. historic sites, monuments, religious sites)	Yes	4
	The area provides a diverse and attractive intangible cultural heritage (e.g. music , dance , drama , skills , cuisine, crafts, festivals, ceremonies)	drama , skills (traditional fishing), cuisine, religious festivals and ceremonies	4

Attractiveness (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

28 points out of 50 = 56% out of 100%

Result: 28

D. Infrastructure (analysis)

Standard: The area disposes of adequate (tourism) infrastructure conditions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
D.1 Basic infrastructure	The area disposes of water supply	Water supply is general available but scares	2
	The area disposes of energy supply	Yes	5
	The area provides access to telecommunication (e.g. landline, mobile phone, internet, Wifi)	Yes	4
	The area disposes of other daily life services (e.g. ATMs, shops, gas stations)	Yes	5
	The area disposes of basic medical/emergency aid (e.g. medical stations, hospitals)	Yes	5
D.2 Tourism-related infrastructure	The area provides an acceptable road network	Acceptable road network	4
	The area provides adequate infrastructure conditions for nature- and/or cultural related activities (e.g. hiking trails, observation points/ platforms, bothies/shelters, museums)	No	1
	The area provides appropriate, bilingual information infrastructure (e.g. signs, signboards, visitor/information centre, educational trails)	No	1

Infrastructure (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

27 points out of 40 = 67% out of 100%

Result: 27

E. Security (analysis)

Standard: There are no safety concerns for visitors with the use of and stay in the area

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
E.1 Health risks	Water supply in the area is potable	Inadequate	1
	Adequate sanitation standards in the area are in place	Inadequate	1
	There are no or very limited disease-transmitting animals in the area (e.g. mosquitos)	Malaria is prevalent	3
	There are no or very limited dangerous or aggressive animals in the area (e.g. tigers, poisonous snakes)	Yes	5
	There are no dangerous diseases or epidemics occurred in the area within the last years	Yes	5
E.2 Danger to life	The risk of road accidents to or in the area is reasonable	Is reasonable	4
	The risk of robberies or other crimes (e.g. rapes, kidnapping) in the area is low	Yes	5
	There are no terrorist attacks occurred in the area within the last years	Yes	5
	There is no ongoing (armed) conflict in the area (e.g. regional war)	Yes	5

Security (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

34 points out of 45 = 75% out of 100%

Result: 34

F. Services and Products (analysis)

Standard: The area offers diverse tourism services and products for visitors in an acceptable quality

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
F.5 Accommodation and catering	The area provides adequate accommodation facilities (e.g. hotels, guesthouses, ecolodges, campsites)	Inadequate outside of Rameswaram in terms of quantity and variety (no ecolodges and campsites), international quality is available in Rameswaram	3
	The area provides adequate catering facilities (e.g. restaurants, cafés, bars)	Yes	4
F.6 Activities	The area disposes of adequate local transport services (e.g. bus, trains, taxis, rental cars, bikes)	Yes, busses and taxis as well as a train	4
	The area provides good opportunities for diverse nature-related activities (e.g. hiking, biking, swimming, rafting, kayaking, horseback riding)	Only water-based activities: kayaking, snorkelling and swimming	2
	The area provides good opportunities for diverse cultural-related activities (e.g. museums, exhibitions)	Focus on visiting temples	2
F.7 Tours and excursions	The area disposes of attractive guided tours (e.g. by local tour guides)	Limited to temples	2
	The area disposes of attractive excursion offers (e.g. by local tour operators)	Limited to temples	2
F.8 Information	Adequate information materials about the area is available (e.g. guidebooks, brochures, maps)	No	1

Services and Products (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

20 points out of 40 = 50% out of 100%

Result: 20

G. Management (analysis)

Standard: The area disposes of adequate management structures and tools for sustainable tourism development

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
G.1 Tourism management	A professional tourism strategy for the area is in place and applied	No	1
	A professional tourism marketing plan for the area is in place and applied	No	1
	A functioning Destination Management Organization (DMO) is in place	Tourism Department at district level is in place	3
	Private tourism suppliers have organized themselves (e.g. in a local hotel or tour operator association)	Hotel Association, Taxi/Auto Association, Guide Association, Photographer Association etc. are established	4
	Relevant public and private stakeholders of the area dispose of technical knowledge and operational experience in tourism management	No	1
G.2 Protected area management (Bird Sanctuary)	The Limits of Acceptable Change (LAC) through tourism have been analysed in the area	No	1
	A professional zoning concept for the area is in place and applied	No	1
	A professional visitor management strategy for the area is in place and applied	No	1
	A professional strategy for generating revenues through tourism is in place and applied to foster conservation efforts	No	1
	The area disposes of sufficient and skilled staff (park rangers) to manage tourism	No (only daily wagers)	2

G.3 Sustainability management	The area disposes of a waste disposal system	No	1
	The area disposes of a sewage treatment system	No	1
	International guidelines and standards for sustainable tourism development in protected areas are recognized and applied in the area (e.g. GSTC, ESOI Guidelines, CBD Guidelines, IUCN Guidelines, certification schemes)	No	1
	Environmental impact assessments are mandatory and applied in the area (e.g. before permitting new infrastructure)	No	1
	Tourism/ visitor impact assessments are conducted frequently in the area	No	1
G.4 Stakeholder und community participation	Relevant public and private stakeholders working together on tourism development	No	1
	Private tourism suppliers of the area respect each other and are willing to collaborate	There is a general willingness to collaborate	2
	There is a general acceptance at the community level of tourism related activities	There is a general acceptance of religious tourism	4
	Local communities are involved in tourism development and decision making	No	1

Management (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

29 points out of 95 =

30% out of 100%

Result: 29

2. Rapid Destination Appraisal Matrix

Name of the area: Chorao

A. General Facts			
A.13 Location of the area	Chorao island (incl. Dr. Sali Ali Bird Sanctuary), Tiswadi Taluka; north goa district, 2 km from the capital Panaji		
A.14 Size of the area	Island: 21 sq km; Sanctuary: 1.8 sq km		
A.15 Total visitor numbers per year (Dr. Sali Ali Bird Sanctuary)	2014: 6,456	2013: 4,372	2012: 3,117
A.16 Origen of visitors (Dr. Sali Ali Bird Sanctuary)	International: 60%	National: 40%	
A.17 Origen of international visitors (Dr. Sali Ali Bird Sanctuary)	No data		
A.18 Type of guests (Dr. Sali Ali Bird Sanctuary)	Individuals: 100 %	Package guests: 0%	
A.19 Total number of accommodation facilities	2		
A.20 Composition of accommodation facilities	Hotels: 50% Homestay: 50 %		
A.21 Classification of accommodation facilities	Irrelevant		
A.22 Number of certified accommodation facilities	Irrelevant		
A.23 Total number of other tourism suppliers	0		
A.24 General observations/comments			
Status of the area: Revenue and private land with a Wildlife Sanctuary under the Forest Department			
Responsible body: Private land holders, Forest Department, local district authorities			
Within the above two categories, of international and domestic visitors, depending on the interest of the visitors, there are two distinct groups of visitors. One group of visitors are the hard-core bird watchers. These tourists come to see the different species of birds and visit the sanctuary in the early morning hours suitable for bird sighting. The other group of tourists is those who come to experience a boat ride along the island and these visitors are seen during the day and these visitors make up a higher per cent share of the total visitors. A rough estimation made by da Silva S., et al (2014) pegged the per cent of hard core bird watchers to 7 per cent. Package visit to the island is almost negligible ²³ . Seasonality: An examination of the visitor data month-wise, shows a distinct seasonality trend. The peak season is between December and February and the off peak season is during the monsoon months (June to October) (da Silva S., et.al 2014).			

A. 13 Main stakeholders			
<ul style="list-style-type: none">At the state level, the various state departments that have a stake in Dr. Salim Ali bird Sanctuary and the adjoining areas are the forest department, the fisheries department, the agriculture department, river navigation departmentIn terms of tourism industry, it is not developed. There are a couple of boat operators who also serve as guides.The community stakeholders are by and large the residents inhabiting the island and comprises fishermen, farmers, the Chorao farmers association, tenant’s association, educational and religious institutions.			

²³ Interview with Deputy Forest Conservator, North District on 30th September, 2015.

B. Access (analysis)

Standard: The area can be reached under acceptable conditions and in a reasonable time

Criteria	Indicators	Comments	Evaluation (= insufficient) – 5 (accomplished)
B.6 Traffic hub	In the surrounding (max. 200 km) exists a local or international airport	Yes, the international airport of Goa	5
B.7 Road Infrastructure/ driving conditions	The road network provides acceptable driving conditions	Yes, there is road access in the north (Bichoni bridge) and 2 ferry points	4
	The area can be reached from different cardinal points	Yes	5
B.8 Signage	The access to the area is appropriately and bilingually depicted through signage	Almost no signage	2
B.9 Means of transportation	The area can be reached by public means of transportation (e.g. bus, train)	By bus and ferry (bringing people and their vehicles to the island)	3
	The area can be reached by (rented) car, private busses and/or taxi	Yes	4
B.10 Travel time	The area can be reached in reasonable time (up to 2 hours from the next accommodation opportunity)	Yes	5
	The area is accessible over the whole year (incl. rainy season)	Island yes, sanctuary no	3

Access (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

31 points out of 40 = 77% out of 100%

Result: 31

C. Attractiveness (analysis)

Standard: The area provides interesting attractions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
C.4 Unique Selling Proposition (USP)	The area provides an unique attraction	It is an island that presents the only marine sanctuary in Goa and showcases the Goan cultural heritage incl. the traditional rice cultivation practice on Khazaan lands	5
	The area provides animals of specific interest	2 bird species under IUCN red list (Lesser Adjutant Stork, Woolly Necked Stork), crocodiles, otters and other mangrove associated fauna, all 6 species of kingfisher	4
	The area provides plants of specific interest	Mangrove habitat	3
	The area provides cultural assets of specific interest	Khazaan landscape, Portuguese monestry and old heritage houses, Hindu temples, two festivals	4
C.5 Natural attractions	The area provides rich biodiversity (animals, birds and other fauna and/or plants)	Mangrove and estuarine habitat and associated flora and fauna	4
	The area provides a diverse and attractive landscape scenery (e.g. mountains, hills, highlands, plains, canyons, volcanoes)	Mangrove, estuarine, river and Khazaan land	4
	The area provides water-based attractions (e.g. sea, rivers, lakes, creeks, beaches, waterfalls, lagoons, cliffs, coral reefs)	Sea, river, mangrove	4
C.6 Cultural attractions	The area provides a diverse and attractive living culture experience (e.g. architecture, villages, indigenous communities, community based tourism projects)	Architecture, local residents	4
	The area provides a diverse and attractive historical and religious heritage (e.g. historic sites, monuments, religious sites)	Temples, churches, Khazaan land	4
	The area provides a diverse and attractive intangible cultural heritage (e.g. music , dance , drama , skills , cuisine, crafts, festivals, ceremonies)	Local cuisine and art, two festivals	4

Attractiveness (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

40 points out of 50 = 80% out of 100%

Result: 40

D. Infrastructure (analysis)

Standard: The area disposes of adequate (tourism) infrastructure conditions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
D.3 Basic infrastructure	The area disposes of water supply	Water shortage is predicted	3
	The area disposes of energy supply	Available	4
	The area provides access to telecommunication (e.g. landline, mobile phone, internet, WLAN)	Available	4
	The area disposes of other daily life services (e.g. ATMs, shops, gas stations)	Available	4
	The area disposes of basic medical/emergency aid (e.g. medical stations, hospitals)	Not available on the island, you need to move the mainland	2
D.4 Tourism-related infrastructure	The area provides an acceptable road network		5
	The area provides adequate infrastructure conditions for nature- and/or cultural related activities (e.g. hiking trails, observation points/ platforms, bothies/shelters, museums)	There is a trail and a bird watching tower in the sanctuary	3
	The area provides appropriate, bilingual information infrastructure (e.g. signs, signboards, visitor/information centre, educational trails)	No information available	1

Infrastructure (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

26 points out of 40 = 65% out of 100%

Result: 26

E. Security (analysis)

Standard: There are no safety concerns for visitors with the use of and stay in the area

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
E.3 Health risks	Water supply in the area is potable	Not available	1
	Adequate sanitation standards in the area are in place	No	1
	There are no or very limited disease-transmitting animals in the area (e.g. mosquitos)	Yes	4
	There are no or very limited dangerous or aggressive animals in the area (e.g. tigers, poisonous snakes)	Yes	4
	There are no dangerous diseases or epidemics occurred in the area within the last years	Yes	5
E.4 Danger to life	The risk of road accidents to or in the area is reasonable	Yes	4
	The risk of robberies or other crimes (e.g. rapes, kidnapping) in the area is low	Yes	5
	There are no terrorist attacks occurred in the area within the last years	Yes	5
	There is no ongoing (armed) conflict in the area (e.g. regional war)	Yes	5

Security (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

34 points out of 45 = 75% out of 100%

Result: 34

F. Services and Products (analysis)

Standard: The area offers diverse tourism services and products for visitors in an acceptable quality

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
F.9 Accommodation and catering	The area provides adequate accommodation facilities (e.g. hotels, guesthouses, ecolodges, campsites)	Not available (only 2 accommodation facilities)	1
	The area provides adequate catering facilities (e.g. restaurants, cafés, bars)	3 restaurants	2
F.10 Activities	The area disposes of adequate local transport services (e.g. bus, trains, taxis, rental cars, bikes)	Not available	1
	The area provides good opportunities for diverse nature-related activities (e.g. hiking, biking, swimming, rafting, kayaking, horseback riding)	Hiking, biking, rafting, kayaking	4
	The area provides good opportunities for diverse cultural-related activities (e.g. museums, exhibitions)	Presence of a local Society for promoting Art, Culture and Education (SPACE), visiting churches and temples	4
F.11 Tours and excursions	The area disposes of attractive guided tours (e.g. by local tour guides)	Bird watching tour is provided	2
	The area disposes of attractive excursion offers (e.g. by local tour operators)	Not available	1
F.12 Information	Adequate information materials about the area is available (e.g. guidebooks, brochures, maps)	Not available	1

Services and Products (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

16 points out of 40 = 40% out of 100%

Result: 16

G. Management (analysis)

Standard: The area disposes of adequate management structures and tools for sustainable tourism development

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
G.5 Tourism management	A professional tourism strategy for the area is in place and applied	Not exists	1
	A professional tourism marketing plan for the area is in place and applied	Not exists	1
	A functioning Destination Management Organization (DMO) is in place	Not exists	1
	Private tourism suppliers have organized themselves (e.g. in a local hotel or tour operator association)	No	1
	Relevant public and private stakeholders of the area dispose of technical knowledge and operational experience in tourism management	No, but there are some people with a broader tourism vision related to sustainability	2
G.6 Protected area management(Dr . Sali Ali Bird Sanctuary)	The Limits of Acceptable Change (LAC) through tourism have been analysed in the area	No	1
	A professional zoning concept for the area is in place and applied	There is a management plan for the sanctuary	4
	A professional visitor management strategy for the area is in place and applied	No	1
	A professional strategy for generating revenues through tourism is in place and applied to foster conservation efforts	No	1
	The area disposes of sufficient and skilled staff (park rangers) to manage tourism	Yes, but skills need to be improved	3

G.7 Sustainability management	The area disposes of a waste disposal system	No	1
	The area disposes of a sewage treatment system	Yes	3
	International guidelines and standards for sustainable tourism development in protected areas are recognized and applied in the area (e.g. GSTC, ESOI Guidelines, CBD Guidelines, IUCN Guidelines, certification schemes)	No	1
	Environmental impact assessments are mandatory and applied in the area (e.g. before permitting new infrastructure)	No	1
	Tourism/ visitor impact assessments are conducted frequently in the area	No	1
G.8 Stakeholder und community participation	Relevant public and private stakeholders working together on tourism development	As part of the GIZ project they started working together	3
	Private tourism suppliers of the area respect each other and are willing to collaborate	At present tourism suppliers are few and there is competition amongst them	2
	There is a general acceptance at the community level of tourism related activities	There is a general acceptance for sustainable tourism development	3
	Local communities are involved in tourism development and decision making	As part of the GIZ project they started involving local communities	3

Management (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

34 points out of 95 =

36% out of 100%

Result: 34

3. Rapid Destination Appraisal Matrix

Name of the area: Mokarsagar

A. General Facts		
A.25 Location of the area	On the national highway 8B, 10 km from Mokal cross road	A. 13 Main stakeholders Forest Department Mokarsagar Wetland Conservation Committee
A.26 Size of the area	Approx. 100 sq km	
A.27 Total visitor numbers per year	2015: 250 2014: 200 2013: 200	
A.28 Origen of visitors	International: 0 % National: 100%	
A.29 Origen of international visitors	Not applicable	
A.30 Type of guests	Individuals: 40% Package guests: 60 %	
A.31 Total number of accommodation facilities	28 (in Porbandar City, 20 km from the site)	
A.32 Composition of accommodation facilities	Hotels: 70% Guesthouses: 30%	
A.33 Classification of accommodation facilities	1-Star: 7 2-Star: 0 3-Star: 3 4-Star: 0 5 Star: 0	
A.34 Number of certified accommodation facilities	No data	
A.35 Total number of other tourism suppliers	3 tour operators (in Porbandar City, Jamnagar City and Ahmedabad City)	
A.36 General observations/comments Status of the area: Revenue and private land Responsible body: District authorities		

B. Access (analysis)

Standard: The area can be reached under acceptable conditions and in a reasonable time

Criteria	Indicators	Comments	Evaluation (= insufficient) – 5 (accomplished)
B.11 Traffic hub	In the surrounding (max. 200 km) exists a local or international airport	Yes, in Porbandar City, Jamnagar City, Rajkot City and Diu City	5
B.12 Road Infrastructure/ driving conditions	The road network provides acceptable driving conditions	Very good roads	5
	The area can be reached from different cardinal points	Yes	5
B.13 Signage	The access to the area is appropriately and bilingually depicted through signage	Bilingual signage available up to Porbandar City	3
B.14 Means of transportation	The area can be reached by public means of transportation (e.g. bus, train)	Yes, up to Porbandar City. After that transport needs to be hired.	3
	The area can be reached by (rented) car, private busses and/or taxi	Area can be reached by rented cars or taxi	5
B.15 Travel time	The area can be reached in reasonable time (up to 2 hours from the next accommodation opportunity)	Yes, 30 minutes from Porbandar City	5
	The area is accessible over the whole year (incl. rainy season)	Accessible for 11 months	4

Access (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

35 points out of 40 = 87% out of 100%

Result: 35

C. Attractiveness (analysis)

Standard: The area provides interesting attractions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
C.7 Unique Selling Proposition (USP)	The area provides an unique attraction	One of the few areas in India where a huge and diverse number of water birds can be spotted/photographed easily without disturbance. The area covers 260 of different bird species incl. 140 water bird species. About 100,000 water birds are remaining in the wintertime.	5
	The area provides animals of specific interest	Water birds (18 species of them are on the red list of endangered birds), and terrestrial birds	5
	The area provides plants of specific interest	Hydrophytes and wetland associated flora, not enough trees for nesting birds	3
	The area provides cultural assets of specific interest	Birth place of Gandhi	2
C.8 Natural attractions	The area provides rich biodiversity (animals, birds and other fauna and/or plants)	Rich biodiversity associated to wetlands	4
	The area provides a diverse and attractive landscape scenery (e.g. mountains, hills, highlands, plains, canyons, volcanoes)	Not very diverse	3
	The area provides water-based attractions (e.g. sea, rivers, lakes, creeks, beaches, waterfalls, lagoons, cliffs, coral reefs)	Lagoons, freshwater wetland, coastal wetland, mangroves etc.	5
C.9 Cultural attractions	The area provides a diverse and attractive living culture experience (e.g. architecture, villages, indigenous communities, community based tourism projects)	No	1
	The area provides a diverse and attractive historical and religious heritage (e.g. historic sites, monuments, religious sites)	Yes, in Porbandar City	3
	The area provides a diverse and attractive intangible cultural heritage (e.g. music , dance , drama , skills , cuisine, crafts, festivals, ceremonies)	Porbandar area is famous for folk dance of Maher community	2

Attractiveness (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

33 points out of 50 =

66% out of 100%

Result: 33

D. Infrastructure (analysis)

Standard: The area disposes of adequate (tourism) infrastructure conditions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
D.5 Basic infrastructure (Porbandar City)	The area disposes of water supply	Yes	5
	The area disposes of energy supply	Yes	5
	The area provides access to telecommunication (e.g. landline, mobile phone, internet, WLAN)	Yes	5
	The area disposes of other daily life services (e.g. ATMs, shops, gas stations)	Yes	5
	The area disposes of basic medical/emergency aid (e.g. medical stations, hospitals)	Yes	5
D.6 Tourism-related infrastructure (Mokarsagar)	The area provides an acceptable road network	Yes	5
	The area provides adequate infrastructure conditions for nature- and/or cultural related activities (e.g. hiking trails, observation points/ platforms, bothies/shelters, museums)	Adequate trails but watch towers are very unattractive concrete structures	3
	The area provides appropriate, bilingual information infrastructure (e.g. signs, signboards, visitor/information centre, educational trails)	No	1

Infrastructure (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

34 points out of 40 = 85% out of 100%

Result: 34

E. Security (analysis)

Standard: There are no safety concerns for visitors with the use of and stay in the area

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
E.5 Health risks	Water supply in the area is potable	No	1
	Adequate sanitation standards in the area are in place	No	1
	There are no or very limited disease-transmitting animals in the area (e.g. mosquitos)	Yes	5
	There are no or very limited dangerous or aggressive animals in the area (e.g. tigers, poisonous snakes)	Yes	5
	There are no dangerous diseases or epidemics occurred in the area within the last years	Yes	5
E.6 Danger to life	The risk of road accidents to or in the area is reasonable	Yes	5
	The risk of robberies or other crimes (e.g. rapes, kidnapping) in the area is low	Yes	5
	There are no terrorist attacks occurred in the area within the last years	Yes	5
	There is no ongoing (armed) conflict in the area (e.g. regional war)	Yes	5

Security (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

37 points out of 45 = 82% out of 100%

Result: 37

F. Services and Products (analysis)

Standard: The area offers diverse tourism services and products for visitors in an acceptable quality

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
F.13 Accommodation and catering (Porbandar City)	The area provides adequate accommodation facilities (e.g. hotels, guesthouses, ecolodges, campsites)	Adequate conditions	4
	The area provides adequate catering facilities (e.g. restaurants, cafés, bars)	Yes, a lot	5
F.14 Activities	The area disposes of adequate local transport services (e.g. bus, trains, taxis, rental cars, bikes)	Yes, are available (Porbandar City)	4
	The area provides good opportunities for diverse nature-related activities (e.g. hiking, biking, swimming, rafting, kayaking, horseback riding)	Only bird watching	2
	The area provides good opportunities for diverse cultural-related activities (e.g. museums, exhibitions)	No	1
F.15 Tours and excursions	The area disposes of attractive guided tours (e.g. by local tour guides)	There are skilled tour guides in Porbandar City	4
	The area disposes of attractive excursion offers (e.g. by local tour operators)	No	1
F.16 Information	Adequate information materials about the area is available (e.g. guidebooks, brochures, maps)	No (only a website established by Mokarsagar Wetland Conservation Committee: www.mokarsagar.org)	2

Services and Products (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

23 points out of 40 = 57% out of 100%

Result: 23

G. Management (analysis)

Standard: The area disposes of adequate management structures and tools for sustainable tourism development

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
G.9 Tourism management	A professional tourism strategy for the area is in place and applied	No	1
	A professional tourism marketing plan for the area is in place and applied	No	1
	A functioning Destination Management Organization (DMO) is in place	No	1
	Private tourism suppliers have organized themselves (e.g. in a local hotel or tour operator association)	Yes, Mokarsagar Wetland Conservation Committee and eco guides	3
	Relevant public and private stakeholders of the area dispose of technical knowledge and operational experience in tourism management	No, only Mokarsagar Wetland Conservation Committee	2
G.10 Protected area management	The Limits of Acceptable Change (LAC) through tourism have been analysed in the area	No	1
	A professional zoning concept for the area is in place and applied	No	1
	A professional visitor management strategy for the area is in place and applied	No	1
	A professional strategy for generating revenues through tourism is in place and applied to foster conservation efforts	No	1
	The area disposes of sufficient and skilled staff (park rangers) to manage tourism	No	1

G.11 Sustainability management	The area disposes of a waste disposal system	No	1
	The area disposes of a sewage treatment system	Not applicable	
	International guidelines and standards for sustainable tourism development in protected areas are recognized and applied in the area (e.g. GSTC, ESOI Guidelines, CBD Guidelines, IUCN Guidelines, certification schemes)	There are proposals for classifying the area as a wildlife sanctuary, Important Bird Area (IBA), a Biodiversity Heritage Site as well as a Ramsar site	3
	Environmental impact assessments are mandatory and applied in the area (e.g. before permitting new infrastructure)	No	1
	Tourism/ visitor impact assessments are conducted frequently in the area	No	1
G.12 Stakeholder und community participation	Relevant public and private stakeholders working together on tourism development	There is an effort but no intensive collaboration yet	2
	Private tourism suppliers of the area respect each other and are willing to collaborate	Yes, there is a strong willingness to collaborate	5
	There is a general acceptance at the community level of tourism related activities	Yes, there is a general acceptance	5
	Local communities are involved in tourism development and decision making	Only few interactions	2

Management (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

33 points out of 90 =

37% out of 100%

Result: 33

4. Rapid Destination Appraisal Matrix

Name of the area: Khijadiya

A. General Facts				
A.37 Location of the area	10 km from Jamnagar City			
A.38 Size of the area	6 sq km			
A.39 Total visitor numbers per year	2013: 6,299	2012:10, 985	2011: 11,529	
A.40 Origen of visitors	International: 5%		National: 95 %	
A.41 Origen of international visitors	No data			
A.42 Type of guests	Individuals: 70 %		Package guests: 30%	
A.43 Total number of accommodation facilities (Jamnagar City)	45			
A.44 Composition of accommodation facilities	Hotels: 90% Guesthouse: 8% Campsites: 2%			
A.45 Classification of accommodation facilities	1-Star: 0	2-Star: 0	3-Star: 0	4-Star: 2 5 Star: 0
A.46 Number of certified accommodation facilities	No			
A.47 Total number of other tourism suppliers	3 tour operators			
A.48 General observations/comments				
Status of the area: Wildlife Sanctuary				
Responsible body: Forest Department				

A. 13 Main stakeholders				
<ul style="list-style-type: none">Forest DepartmentEcoclub guidesBirding enthusiasts from Jamnagar				

B. Access (analysis)

Standard: The area can be reached under acceptable conditions and in a reasonable time

Criteria	Indicators	Comments	Evaluation (= insufficient) – 5 (accomplished)
B.16 Traffic hub	In the surrounding (max. 200 km) exists a local or international airport	Yes, in Porbandar City, Jamnagar City, Rajkot City and Diu City	5
B.17 Road Infrastructure/ driving conditions	The road network provides acceptable driving conditions	Very good roads	5
	The area can be reached from different cardinal points	Yes, west and east	4
B.18 Signage	The access to the area is appropriately and bilingually depicted through signage	Yes	5
B.19 Means of transportation	The area can be reached by public means of transportation (e.g. bus, train)	No, only one bus per day	2
	The area can be reached by (rented) car, private busses and/or taxi	Yes	5
B.20 Travel time	The area can be reached in reasonable time (up to 2 hours from the next accommodation opportunity)	Yes, 20 minutes from Jamnagar City and 90 minutes from Rajkot City	5
	The area is accessible over the whole year (incl. rainy season)	Accessible for 8 months	4

Access (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

35 points out of 40 = 87% out of 100%

Result: 35

C. Attractiveness (analysis)

Standard: The area provides interesting attractions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
C.10 Unique Selling Proposition (USP)	The area provides an unique attraction	About 250 species of birds are recorded and easily spotted. Nesting of black necked storks	4
	The area provides animals of specific interest	Birds, especially Indian skimmer and mammals such as jungle cat	4
	The area provides plants of specific interest	4 mangrove species	3
	The area provides cultural assets of specific interest	Local handicrafts at Khijadiya village	2
C.11 Natural attractions	The area provides rich biodiversity (animals, birds and other fauna and/or plants)	Birds	3
	The area provides a diverse and attractive landscape scenery (e.g. mountains, hills, highlands, plains, canyons, volcanoes)	No	2
	The area provides water-based attractions (e.g. sea, rivers, lakes, creeks, beaches, waterfalls, lagoons, cliffs, coral reefs)	Freshwater wetland, coastal wetland, mangroves	3
C.12 Cultural attractions	The area provides a diverse and attractive living culture experience (e.g. architecture, villages, indigenous communities, community based tourism projects)	There is an eco-development committee in Khijadiya village which prepares handicrafts like bandani.	3
	The area provides a diverse and attractive historical and religious heritage (e.g. historic sites, monuments, religious sites)	Yes, Jamnagar City (Darbar gadh, Lakhota lake, Old heritage houses etc.)	4
	The area provides a diverse and attractive intangible cultural heritage (e.g. music , dance , drama , skills , cuisine, crafts, festivals, ceremonies)	Yes, Silver Tajiya gifted by erstwhile King of Jamnagar for Moharram. This has documented by BBC	3

Attractiveness (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

31 points out of 50 = 62% out of 100%

Result: 31

D. Infrastructure (analysis)

Standard: The area disposes of adequate (tourism) infrastructure conditions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
D.7 Basic infrastructure (Jamnagar City)	The area disposes of water supply	Yes	5
	The area disposes of energy supply	Yes	5
	The area provides access to telecommunication (e.g. landline, mobile phone, internet, WLAN)	Yes	5
	The area disposes of other daily life services (e.g. ATMs, shops, gas stations)	Yes	5
	The area disposes of basic medical/emergency aid (e.g. medical stations, hospitals)	Yes	5
D.8 Tourism-related infrastructure	The area provides an acceptable road network	Yes	5
	The area provides adequate infrastructure conditions for nature- and/or cultural related activities (e.g. hiking trails, observation points/ platforms, bothies/shelters, museums)	Reasonable conditions (6 watch towers, 3 nature trails, 3 hides for photographing birds)	4
	The area provides appropriate, bilingual information infrastructure (e.g. signs, signboards, visitor/information centre, educational trails)	Signboards but inadequate, Interpretation Center, materials are provided to students (nature education camps)	3

Infrastructure (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

37 points out of 40 = 92% out of 100%

Result: 37

E. Security (analysis)

Standard: There are no safety concerns for visitors with the use of and stay in the area

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
E.7 Health risks	Water supply in the area is potable	Yes	2
	Adequate sanitation standards in the area are in place	Dumping site for garbage close to the bird sanctuary	1
	There are no or very limited disease-transmitting animals in the area (e.g. mosquitos)	Yes	5
	There are no or very limited dangerous or aggressive animals in the area (e.g. tigers, poisonous snakes)	Yes	5
	There are no dangerous diseases or epidemics occurred in the area within the last years	Yes	5
E.8 Danger to life	The risk of road accidents to or in the area is reasonable	Yes	5
	The risk of robberies or other crimes (e.g. rapes, kidnapping) in the area is low	Yes	5
	There are no terrorist attacks occurred in the area within the last years	Yes	5
	There is no ongoing (armed) conflict in the area (e.g. regional war)	Yes	5

Security (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

38 points out of 45 = 84% out of 100%

Result: 38

F. Services and Products (analysis)

Standard: The area offers diverse tourism services and products for visitors in an acceptable quality

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
F.17 Accommodation and catering (Jamnagar City)	The area provides adequate accommodation facilities (e.g. hotels, guesthouses, ecolodges, campsites)	Yes	5
	The area provides adequate catering facilities (e.g. restaurants, cafés, bars)	Yes	5
F.18 Activities	The area disposes of adequate local transport services (e.g. bus, trains, taxis, rental cars, bikes)	Yes	5
	The area provides good opportunities for diverse nature-related activities (e.g. hiking, biking, swimming, rafting, kayaking, horseback riding)	Bird watching and nature education camps	3
	The area provides good opportunities for diverse cultural-related activities (e.g. museums, exhibitions)	Yes, in Jamnagar City (museum, zoo, exhibitions, temples)	4
F.19 Tours and excursions	The area disposes of attractive guided tours (e.g. by local tour guides)	Yes, 11 eco guides	5
	The area disposes of attractive excursion offers (e.g. by local tour operators)	Yes, there are excursion offers	4
F.20 Information	Adequate information materials about the area is available (e.g. guidebooks, brochures, maps)	Website, nature education material, interpretation Center etc.	5

Services and Products (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

36 points out of 40 = 90% out of 100%

Result: 36

G. Management (analysis)

Standard: The area disposes of adequate management structures and tools for sustainable tourism development

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
G.13 Tourism management	A professional tourism strategy for the area is in place and applied	Yes	3
	A professional tourism marketing plan for the area is in place and applied	Marketing plan is in place by Gujarat tourism	4
	A functioning Destination Management Organization (DMO) is in place	Forest Department	4
	Private tourism suppliers have organized themselves (e.g. in a local hotel or tour operator association)	Jamnagar Area Nature Photographers Association and other NGOs	3
	Relevant public and private stakeholders of the area dispose of technical knowledge and operational experience in tourism management	There is certain professional knowledge in place	3
G.14 Protected area management	The Limits of Acceptable Change (LAC) through tourism have been analysed in the area	No	1
	A professional zoning concept for the area is in place and applied	Yes	3
	A professional visitor management strategy for the area is in place and applied	Yes	3
	A professional strategy for generating revenues through tourism is in place and applied to foster conservation efforts	Yes	3
	The area disposes of sufficient and skilled staff (park rangers) to manage tourism	Yes, there is sufficient staff but not skilled	3

G.15 Sustainability management	The area disposes of a waste disposal system	No	2
	The area disposes of a sewage treatment system	No	1
	International guidelines and standards for sustainable tourism development in protected areas are recognized and applied in the area (e.g. GSTC, ESOI Guidelines, CBD Guidelines, IUCN Guidelines, certification schemes)	Yes under Khijadiya WLS management plan	3
	Environmental impact assessments are mandatory and applied in the area (e.g. before permitting new infrastructure)	No	1
	Tourism/ visitor impact assessments are conducted frequently in the area	No	1
G.16 Stakeholder und community participation	Relevant public and private stakeholders working together on tourism development	Yes	4
	Private tourism suppliers of the area respect each other and are willing to collaborate	Yes	5
	There is a general acceptance at the community level of tourism related activities	Yes	5
	Local communities are involved in tourism development and decision making	Eco-development committee exists in Khijadiya village	3

Management (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

55 points out of 95 =

58% out of 100%

Result: 55

5. Rapid Destination Appraisal Matrix

Name of the area: Madhavpur

A. General Facts		
A.49 Location of the area	50 km from Porbandar City on the coastal highway 8E	A. 13 Main stakeholders <ul style="list-style-type: none">• Forest Department• Tourists
A.50 Size of the area	Approx. 70 km of turtle nesting coastline	
A.51 Total visitor numbers per year	2014: 120,000 2013: 2012:	
A.52 Origen of visitors	International: 10% National: 90 %	
A.53 Origen of international visitors	No data	
A.54 Type of guests	Individuals: 70% Package guests: 30 %	
A.55 Total number of accommodation facilities	28 (in Porbandar City, 50 km from the site)	
A.56 Composition of accommodation facilities	Hotels: 70% Guesthouses: 30%	
A.57 Classification of accommodation facilities	No data	
A.58 Number of certified accommodation facilities	No data	
A.59 Total number of other tourism suppliers	Huge local, state and international tour operators (no data about concrete number)	
A.60 General observations/comments Status of the area: Part of the Marine National Park Responsible body: Forest Department		

B. Access (analysis)

Standard: The area can be reached under acceptable conditions and in a reasonable time

Criteria	Indicators	Comments	Evaluation (= insufficient) – 5 (accomplished)
B.21 Traffic hub	In the surrounding (max. 200 km) exists a local or international airport	Yes, in Porbandar City, Jamnagar City, Rajkot City and Diu City	5
B.22 Road Infrastructure/ driving conditions	The road network provides acceptable driving conditions	Very good roads	5
	The area can be reached from different cardinal points	2 cardinal points, north and south	4
B.23 Signage	The access to the area is appropriately and bilingually depicted through signage	No	1
B.24 Means of transportation	The area can be reached by public means of transportation (e.g. bus, train)	Yes, by bus	3
	The area can be reached by (rented) car, private busses and/or taxi	Area can be reached by rented cars or taxi	5
B.25 Travel time	The area can be reached in reasonable time (up to 2 hours from the next accommodation opportunity)	Yes, 60 minutes from Porbandar City	5
	The area is accessible over the whole year (incl. rainy season)	Yes	5

Access (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

33 points out of 40 = 82% out of 100%

Result: 33

C. Attractiveness (analysis)

Standard: The area provides interesting attractions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
C.13 Unique Selling Proposition (USP)	The area provides an unique attraction	One of the few turtle nesting sites in India. The only turtle nesting site of Olive Ridley Turtles in Gujarat.	4
	The area provides animals of specific interest	Turtles, dolphins, whale sharks, dugongs	3
	The area provides plants of specific interest	No	1
	The area provides cultural assets of specific interest	No	1
C.14 Natural attractions	The area provides rich biodiversity (animals, birds and other fauna and/or plants)	Yes (turtles, dolphins, whale sharks, dugongs, marine birds and pelagic birds)	4
	The area provides a diverse and attractive landscape scenery (e.g. mountains, hills, highlands, plains, canyons, volcanoes)	No	1
	The area provides water-based attractions (e.g. sea, rivers, lakes, creeks, beaches, waterfalls, lagoons, cliffs, coral reefs)	Beach and sea	2
C.15 Cultural attractions	The area provides a diverse and attractive living culture experience (e.g. architecture, villages, indigenous communities, community based tourism projects)	No	1
	The area provides a diverse and attractive historical and religious heritage (e.g. historic sites, monuments, religious sites)	Yes, religious significance because Lord Krishna got married there.	2
	The area provides a diverse and attractive intangible	No	1

	cultural heritage (e.g. music , dance , drama , skills , cuisine, crafts, festivals, ceremonies)		
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Attractiveness (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

		20 points out of 50 = 40% out of 100%	Result: 20
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D. Infrastructure (analysis)

Standard: The area disposes of adequate (tourism) infrastructure conditions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
D.9 Basic infrastructure (Porbandar City)	The area disposes of water supply	Yes	5
	The area disposes of energy supply	Yes	5
	The area provides access to telecommunication (e.g. landline, mobile phone, internet, WLAN)	Yes	5
	The area disposes of other daily life services (e.g. ATMs, shops, gas stations)	Yes	5
	The area disposes of basic medical/emergency aid (e.g. medical stations, hospitals)	Yes	5
D.10 Tourism-related infrastructure	The area provides an acceptable road network	Yes	5
	The area provides adequate infrastructure conditions for nature- and/or cultural related activities (e.g. hiking trails, observation points/ platforms, bothies/shelters, museums)	Swimming and water sports are not advisable because of risk factors and the presence of turtle nesting area	1
	The area provides appropriate, bilingual information infrastructure (e.g. signs, signboards, visitor/information centre, educational trails)	No	1

Infrastructure (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

		32 points out of 40 = 80% out of 100%	Result: 32
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E. Security (analysis)

Standard: There are no safety concerns for visitors with the use of and stay in the area

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
E.9 Health risks (Porbandar City)	Water supply in the area is potable	Yes	3
	Adequate sanitation standards in the area are in place	No	1
	There are no or very limited disease-transmitting animals in the area (e.g. mosquitos)	Yes	5
	There are no or very limited dangerous or aggressive animals in the area (e.g. tigers, poisonous snakes)	Yes	5
	There are no dangerous diseases or epidemics occurred in the area within the last years	Yes	5
E.10 Danger to life	The risk of road accidents to or in the area is reasonable	Yes, but there is a high risk of drowning	1
	The risk of robberies or other crimes (e.g. rapes, kidnapping) in the area is low	Yes	5
	There are no terrorist attacks occurred in the area within the last years	Yes	5
	There is no ongoing (armed) conflict in the area (e.g. regional war)	Yes	5

Security (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

35 points out of 45 = 78% out of 100%

Result: 35

F. Services and Products (analysis)

Standard: The area offers diverse tourism services and products for visitors in an acceptable quality

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
F.21 Accommodation and catering (Porbandar City/ Madhavpur)	The area provides adequate accommodation facilities (e.g. hotels, guesthouses, ecolodges, campsites)	Not adequate conditions for turtle tourism	3
	The area provides adequate catering facilities (e.g. restaurants, cafés, bars)	Not adequate conditions	3
F.22 Activities	The area disposes of adequate local transport services (e.g. bus, trains, taxis, rental cars, bikes)	Local transport services are available	4
	The area provides good opportunities for diverse nature-related activities (e.g. hiking, biking, swimming, rafting, kayaking, horseback riding)	No	1
	The area provides good opportunities for diverse cultural-related activities (e.g. museums, exhibitions)	No	1
F.23 Tours and excursions	The area disposes of attractive guided tours (e.g. by local tour guides)	No	1
	The area disposes of attractive excursion offers (e.g. by local tour operators)	No	1
F.24 Information	Adequate information materials about the area is available (e.g. guidebooks, brochures, maps)	No, only a small interpretation center of the Forest Department	2

Services and Products (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

16 points out of 40 = 40% out of 100%

Result: 16

G. Management (analysis)

Standard: The area disposes of adequate management structures and tools for sustainable tourism development

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
G.17 Tourism management	A professional tourism strategy for the area is in place and applied	No	1
	A professional tourism marketing plan for the area is in place and applied	No	1
	A functioning Destination Management Organization (DMO) is in place	No, but there is a presence of the Marine National Park Dwarka Range of Marine National Park Jamnagar	2
	Private tourism suppliers have organized themselves (e.g. in a local hotel or tour operator association)	No	1
	Relevant public and private stakeholders of the area dispose of technical knowledge and operational experience in tourism management	No	1
G.18 Protected area management	The Limits of Acceptable Change (LAC) through tourism have been analysed in the area	No	1
	A professional zoning concept for the area is in place and applied	No	1
	A professional visitor management strategy for the area is in place and applied	No	1
	A professional strategy for generating revenues through tourism is in place and applied to foster conservation efforts	No	1
	The area disposes of sufficient and skilled staff (park rangers) to manage tourism	There area disposes of skilled staff of the Marine National Park Dwarka Range of Marine National Park Jamnagar	3

G.19 Sustainability management	The area disposes of a waste disposal system	No	1
	The area disposes of a sewage treatment system	Not applicable	
	International guidelines and standards for sustainable tourism development in protected areas are recognized and applied in the area (e.g. GSTC, ESOI Guidelines, CBD Guidelines, IUCN Guidelines, certification schemes)	No	1
	Environmental impact assessments are mandatory and applied in the area (e.g. before permitting new infrastructure)	Yes	4
	Tourism/ visitor impact assessments are conducted frequently in the area	No	1
G.20 Stakeholder und community participation	Relevant public and private stakeholders working together on tourism development	No	1
	Private tourism suppliers of the area respect each other and are willing to collaborate	Not applicable	
	There is a general acceptance at the community level of tourism related activities	Yes	4
	Local communities are involved in tourism development and decision making	No	1

Management (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

26 points out of 85 =

30% out of 100%

Result: 26

6. Rapid Destination Appraisal Matrix

Name of the area: Airoli Thane creek

A. General Facts

A.61 Location of the area	Thane District, off Airoli Bridge	A. 13 Main stakeholders <ul style="list-style-type: none"> Forest Department Fishing Community
A.62 Size of the area	0.080938 sq km (incl. 0.032375 sq km open area)	
A.63 Total visitor numbers per year	Not applicable	
A.64 Origen of visitors	Not applicable	
A.65 Origen of international visitors	Not applicable	
A.66 Type of guests	Local bird watchers	
A.67 Total number of accommodation facilities	Great number low budget to high end accommodation facilities in Airoli Thane and Mumbai	
A.68 Composition of accommodation facilities	No evidence	
A.69 Classification of accommodation facilities	No evidence	
A.70 Number of certified accommodation facilities	No evidence	
A.71 Total number of other tourism suppliers	No evidence	
A.72 General observations/comments Status of the area: Reserve Forest		

Responsible body: Forest Department

B. Access (analysis)

Standard: The area can be reached under acceptable conditions and in a reasonable time

Criteria	Indicators	Comments	Evaluation (= insufficient) – 5 (accomplished)
B.26 Traffic hub	In the surrounding (max. 200 km) exists a local or international airport	Yes, International Airport of Mumbai	5
B.27 Road Infrastructure/ driving conditions	The road network provides acceptable driving conditions	Yes, perfect	5
	The area can be reached from different cardinal points	Yes, from all	5
B.28 Signage	The access to the area is appropriately and bilingually depicted through signage	No	1
B.29 Means of transportation	The area can be reached by public means of transportation (e.g. bus, train)	Yes, by bus and train	5
	The area can be reached by (rented) car, private busses and/or taxi	Yes	5
B.30 Travel time	The area can be reached in reasonable time (up to 2 hours from the next accommodation opportunity)	Yes	5
	The area is accessible over the whole year (incl. rainy season)	Yes	5

Access (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

36 points out of 40 = 90% out of 100%

Result: 36

C. Attractiveness (analysis)

Standard: The area provides interesting attractions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
C.16 Unique Selling Proposition (USP)	The area provides an unique attraction	Large number of threatened, red list bird species in an accessible urban landscape	5
	The area provides animals of specific interest	Wintering ground of Lesser Flamingos and other migratory species	4
	The area provides plants of specific interest	Mangrove and associated species	2
	The area provides cultural assets of specific interest	Fishing community	1
C.17 Natural attractions	The area provides rich biodiversity (animals, birds and other fauna and/or plants)	Mangrove and associated species, 200 bird species	4
	The area provides a diverse and attractive landscape scenery (e.g. mountains, hills, highlands, plains, canyons, volcanoes)	Mangrove habitats	2
	The area provides water-based attractions (e.g. sea, rivers, lakes, creeks, beaches, waterfalls, lagoons, cliffs, coral reefs)	River, creeks	2
C.18 Cultural attractions	The area provides a diverse and attractive living culture experience (e.g. architecture, villages, indigenous communities, community based tourism projects)	No	1
	The area provides a diverse and attractive historical and religious heritage (e.g. historic sites, monuments, religious sites)	No	1
	The area provides a diverse and attractive intangible cultural heritage (e.g. music , dance , drama , skills ,	No	1

	cuisine, crafts, festivals, ceremonies)		
Attractiveness (scoring) High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%			
		23 points out of 50 = 46% out of 100%	Result: 23

D. Infrastructure (analysis)

Standard: The area disposes of adequate (tourism) infrastructure conditions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
D.11 Basic infrastructure	The area disposes of water supply	Yes	5
	The area disposes of energy supply	Yes	5
	The area provides access to telecommunication (e.g. landline, mobile phone, internet, WLAN)	Yes	5
	The area disposes of other daily life services (e.g. ATMs, shops, gas stations)	Yes	5
	The area disposes of basic medical/emergency aid (e.g. medical stations, hospitals)	Yes, there is a hospital close to the site	5
D.12 Tourism-related infrastructure	The area provides an acceptable road network	Area is accessible	2
	The area provides adequate infrastructure conditions for nature- and/or cultural related activities (e.g. hiking trails, observation points/ platforms, bothies/shelters, museums)	Being developed	1
	The area provides appropriate, bilingual information infrastructure (e.g. signs, signboards, visitor/information centre, educational trails)	Being developed	1

Infrastructure (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

	29 points out of 40 = 72% out of 100%	Result: 29
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E. Security (analysis)

Standard: There are no safety concerns for visitors with the use of and stay in the area

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
E.11 Health risks	Water supply in the area is potable	Potable water that requires treatment	4
	Adequate sanitation standards in the area are in place	No	1
	There are no or very limited disease-transmitting animals in the area (e.g. mosquitos)	Risk of malaria	3
	There are no or very limited dangerous or aggressive animals in the area (e.g. tigers, poisonous snakes)	Presence of few poisonous snakes	4
	There are no dangerous diseases or epidemics occurred in the area within the last years	Yes	5
E.12 Danger to life	The risk of road accidents to or in the area is reasonable	Yes, but risk of potential boat accidents and getting stranded as a result of tight movement	2
	The risk of robberies or other crimes (e.g. rapes, kidnapping) in the area is low	Yes	5
	There are no terrorist attacks occurred in the area within the last years	Yes	5
	There is no ongoing (armed) conflict in the area (e.g. regional war)	Yes	5

Security (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

34 points out of 45 = 76% out of 100%

Result: 34

F. Services and Products (analysis)

Standard: The area offers diverse tourism services and products for visitors in an acceptable quality

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
F.25 Accommodation and catering	The area provides adequate accommodation facilities (e.g. hotels, guesthouses, ecolodges, campsites)	Yes, from low budget to high end hotels	5
	The area provides adequate catering facilities (e.g. restaurants, cafés, bars)	Variety of restaurants	5
F.26 Activities	The area disposes of adequate local transport services (e.g. bus, trains, taxis, rental cars, bikes)	Yes	5
	The area provides good opportunities for diverse nature-related activities (e.g. hiking, biking, swimming, rafting, kayaking, horseback riding)	Is being developed, bird watching boat trips are offered	2
	The area provides good opportunities for diverse cultural-related activities (e.g. museums, exhibitions)	No	1
F.27 Tours and excursions	The area disposes of attractive guided tours (e.g. by local tour guides)	No	1
	The area disposes of attractive excursion offers (e.g. by local tour operators)	No	1
F.28 Information	Adequate information materials about the area is available (e.g. guidebooks, brochures, maps)	Being developed, guidebook about birds of Thane Creek	2

Services and Products (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

22 points out of 40 = 55% out of 100%

Result: 22

G. Management (analysis)

Standard: The area disposes of adequate management structures and tools for sustainable tourism development

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
G.21 Tourism management	A professional tourism strategy for the area is in place and applied	No, proposed	2
	A professional tourism marketing plan for the area is in place and applied	No	1
	A functioning Destination Management Organization (DMO) is in place	Forest Department	3
	Private tourism suppliers have organized themselves (e.g. in a local hotel or tour operator association)	No	1
	Relevant public and private stakeholders of the area dispose of technical knowledge and operational experience in tourism management	No	1
G.22 Protected area management	The Limits of Acceptable Change (LAC) through tourism have been analysed in the area	No	1
	A professional zoning concept for the area is in place and applied	Proposed	2
	A professional visitor management strategy for the area is in place and applied	Proposed	2
	A professional strategy for generating revenues through tourism is in place and applied to foster conservation efforts	Proposed	3
	The area disposes of sufficient and skilled staff (park	Proposed	3

	rangers) to manage tourism		
G.23 Sustainability management	The area disposes of a waste disposal system	No	1
	The area disposes of a sewage treatment system	No	1
	International guidelines and standards for sustainable tourism development in protected areas are recognized and applied in the area (e.g. GSTC, ESOI Guidelines, CBD Guidelines, IUCN Guidelines, certification schemes)	No	1
	Environmental impact assessments are mandatory and applied in the area (e.g. before permitting new infrastructure)	Yes	5
	Tourism/ visitor impact assessments are conducted frequently in the area	No	1
G.24 Stakeholder und community participation	Relevant public and private stakeholders working together on tourism development	Collaboration with local fishermen, training of local guides	3
	Private tourism suppliers of the area respect each other and are willing to collaborate	Not applicable	
	There is a general acceptance at the community level of tourism related activities	No evidence	
	Local communities are involved in tourism development and decision making	No	1

Management (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

32 points out of 85 =

38% out of 100%

Result: 32

7. Rapid Destination Appraisal Matrix

Name of the area: Elephanta Island

A. General Facts

A.73 Location of the area	Gharpūri Island, 10 km from Mumbai				A. 13 Main stakeholders <ul style="list-style-type: none">• MTDC• Revenue department• Forest department• Boat owners• Local community (incl. fishing community)• Shop owners• Local guides• Restaurant owners
A.74 Size of the area	10 sq km during high tide, 16 sq km during low tide				
A.75 Total visitor numbers per year	2014:	2013:	2012:		
A.76 Origen of visitors	International:	%	National:	%	
A.77 Origen of international visitors	Asia:	%	Europe:	%	
	U.S.:	%	Other Regions:	%	
A.78 Type of guests	Individuals:	%	Package guests:	%	
A.79 Total number of accommodation facilities	0 (day trips only, accommodation in Mumbai)				
A.80 Composition of accommodation facilities	Not applicable				
A.81 Classification of accommodation facilities	Not applicable				
A.82 Number of certified accommodation facilities	Not applicable				
A.83 Total number of other tourism suppliers	Presence of souvenir shops, restaurants, guides and boat owners				
A.84 General observations/comments					

World heritage site
Protected island with a buffer zone, includes prohibited area 1km from the shoreline
Part revenue land, part forest land

B. Access (analysis)

Standard: The area can be reached under acceptable conditions and in a reasonable time

Criteria	Indicators	Comments	Evaluation (= insufficient) – 5 (accomplished)
B.31 Traffic hub	In the surrounding (max. 200 km) exists a local or international airport	International airport of Mumbai	5
B.32 Road Infrastructure/ driving conditions	The road network provides acceptable driving conditions	Good road network with ferry connectivity	5
	The area can be reached from different cardinal points	Only one cardinal point	1
B.33 Signage	The access to the area is appropriately and bilingually depicted through signage	Yes but not bilingual	2
B.34 Means of transportation	The area can be reached by public means of transportation (e.g. bus, train)	Yes	5
	The area can be reached by (rented) car, private busses and/or taxi	Yes, by private boat	5
B.35 Travel time	The area can be reached in reasonable time (up to 2 hours from the next accommodation opportunity)	Yes, 45 minutes by ferry	5
	The area is accessible over the whole year (incl. rainy season)	During monsoon season ferry service is limited or suspended	3

Access (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

31 points out of 40 = 77% out of 100%

Result: 31

C. Attractiveness (analysis)

Standard: The area provides interesting attractions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
C.19 Unique Selling Proposition (USP)	The area provides an unique attraction	World Heritage Site	5
	The area provides animals of specific interest	No	1
	The area provides plants of specific interest	Mangroves, mixed forest	3
	The area provides cultural assets of specific interest	Buddhist and Hindu caves	5
C.20 Natural attractions	The area provides rich biodiversity (animals, birds and other fauna and/or plants)	No	1
	The area provides a diverse and attractive landscape scenery (e.g. mountains, hills, highlands, plains, canyons, volcanoes)	Coast mangroves, mixed forest	3
	The area provides water-based attractions (e.g. sea, rivers, lakes, creeks, beaches, waterfalls, lagoons, cliffs, coral reefs)	Sea	1
C.21 Cultural attractions	The area provides a diverse and attractive living culture experience (e.g. architecture, villages, indigenous communities, community based tourism projects)	Buddhist and Hindu caves	3
	The area provides a diverse and attractive historical and religious heritage (e.g. historic sites, monuments, religious sites)	Buddhist and Hindu caves	5
	The area provides a diverse and attractive intangible cultural heritage (e.g. music , dance , drama , skills , cuisine, crafts, festivals, ceremonies)	No	1

Attractiveness (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

28 points out of 50 = 56% out of 100%

Result: 28

D. Infrastructure (analysis)

Standard: The area disposes of adequate (tourism) infrastructure conditions for visitors

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
D.13 Basic infrastructure	The area disposes of water supply	Limited	2
	The area disposes of energy supply	Very limited (generator based)	1
	The area provides access to telecommunication (e.g. landline, mobile phone, internet, WLAN)	Yes	5
	The area disposes of other daily life services (e.g. ATMs, shops, gas stations)	Only shops	2
	The area disposes of basic medical/emergency aid (e.g. medical stations, hospitals)	No	1
D.14 Tourism-related infrastructure	The area provides an acceptable road network	Not at present (future maybe)	1
	The area provides adequate infrastructure conditions for nature- and/or cultural related activities (e.g. hiking trails, observation points/ platforms, bothies/shelters, museums)	Hiking trail exists, other infrastructure (museum) is planned	2
	The area provides appropriate, bilingual information infrastructure (e.g. signs, signboards, visitor/information centre, educational trails)	Little exists, being planned (e.g. Information Centre)	1

Infrastructure (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

15 points out of 40 = 37% out of 100%

Result: 15

E. Security (analysis)

Standard: There are no safety concerns for visitors with the use of and stay in the area

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
E.13 Health risks	Water supply in the area is potable	No	1
	Adequate sanitation standards in the area are in place	Limited	2
	There are no or very limited disease-transmitting animals in the area (e.g. mosquitos)	Yes	5
	There are no or very limited dangerous or aggressive animals in the area (e.g. tigers, poisonous snakes)	Yes	5
	There are no dangerous diseases or epidemics occurred in the area within the last years	Yes	5
E.14 Danger to life	The risk of road accidents to or in the area is reasonable	No but high risk of boat accidents	2
	The risk of robberies or other crimes (e.g. rapes, kidnapping) in the area is low	Yes	5
	There are no terrorist attacks occurred in the area within the last years	Yes	5
	There is no ongoing (armed) conflict in the area (e.g. regional war)	Yes	5

Security (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

35 points out of 45 = 78% out of 100%

Result: 35

F. Services and Products (analysis)			
Standard: The area offers diverse tourism services and products for visitors in an acceptable quality			
Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
F.29 Accommodation and catering	The area provides adequate accommodation facilities (e.g. hotels, guesthouses, ecolodges, campsites)	Only day travellers from Mumbai	5
	The area provides adequate catering facilities (e.g. restaurants, cafés, bars)	Yes	5
F.30 Activities	The area disposes of adequate local transport services (e.g. bus, trains, taxis, rental cars, bikes)	Toy train exists, other facilities being planned	2
	The area provides good opportunities for diverse nature-related activities (e.g. hiking, biking, swimming, rafting, kayaking, horseback riding)	No, only hiking and bird and bat watching	2
	The area provides good opportunities for diverse cultural-related activities (e.g. museums, exhibitions)	No (Natural History Museum and Interpretation Center is planned)	1
F.31 Tours and excursions	The area disposes of attractive guided tours (e.g. by local tour guides)	Yes, to the caves	4
	The area disposes of attractive excursion offers (e.g. by local tour operators)	Yes	5
F.32 Information	Adequate information materials about the area is available (e.g. guidebooks, brochures, maps)	Yes	5
Services and Products (scoring)			
High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%			
		29 points out of 40 = 72% out of 100%	Result: 29

G. Management (analysis)

Standard: The area disposes of adequate management structures and tools for sustainable tourism development

Criteria	Indicators	Comments	Evaluation 1 (= insufficient) – 5 (accomplished)
G.25 Tourism management	A professional tourism strategy for the area is in place and applied	Yes	5
	A professional tourism marketing plan for the area is in place and applied	Yes	5
	A functioning Destination Management Organization (DMO) is in place	Yes, MTDC	5
	Private tourism suppliers have organized themselves (e.g. in a local hotel or tour operator association)	Yes	5
	Relevant public and private stakeholders of the area dispose of technical knowledge and operational experience in tourism management	Yes	5
G.26 Protected area management	The Limits of Acceptable Change (LAC) through tourism have been analysed in the area	No	1
	A professional zoning concept for the area is in place and applied	Yes	5
	A professional visitor management strategy for the area is in place and applied	No	1
	A professional strategy for generating revenues through tourism is in place and applied to foster conservation efforts	Yes	4
	The area disposes of sufficient and skilled staff (park rangers) to manage tourism	Skilled guides are in place	4

G.27 Sustainability management	The area disposes of a waste disposal system	No	1
	The area disposes of a sewage treatment system	Septic tanks	2
	International guidelines and standards for sustainable tourism development in protected areas are recognized and applied in the area (e.g. GSTC, ESOI Guidelines, CBD Guidelines, IUCN Guidelines, certification schemes)	Yes (World Heritage Site)	5
	Environmental impact assessments are mandatory and applied in the area (e.g. before permitting new infrastructure)	No evidence	
	Tourism/ visitor impact assessments are conducted frequently in the area	No	1
G.28 Stakeholder und community participation	Relevant public and private stakeholders working together on tourism development	Yes	5
	Private tourism suppliers of the area respect each other and are willing to collaborate	Yes	5
	There is a general acceptance at the community level of tourism related activities	Yes	5
	Local communities are involved in tourism development and decision making	Yes, in development	3

Management (scoring)

High performance: 80-100% / Reasonable performance: 60-79% / Low performance: 40-59% / Insufficient performance: Less than 40%

67 points out of 90 = 74% out of 100%

Result: 67

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