

# MORJIM **AT RISK?**

Community at a crossroads

Goa, India



Centre for Development and Emergency Practice (CENDEP), Oxford Brookes University

International Centre Goa (ICG)

SEEDS India

January 2011

# CONTENTS

Executive Summary and recommendations	2
Introduction	3
Study approach	4
Who are the most vulnerable and why?	6
Key Stakeholders	10
Three key threats and three key opportunities	12
Climate Change: threats and adaptation measures planned or underway	14
Recommendations	16
References	18
Appendices	

## ACKNOWLEDGEMENTS

We would like to thank the people of Morjim for their time and patience and their warm hospitality. Special thanks go to Mr Sawant, Headmaster of Vidyaprasarak; Rekha Shenoy, Puja Batra, Dean D’Cruz; Prachi Pinglay of the BBC; David Sanderson and Anshu Sharma for their support and advice; Maria D’ Souza; the Goan Café and Village Susegat.

## AUTHORS

The authors of this report are students from CENDEP’s Masters degree in Development and Emergency Practice, who undertook this work as part of a DEP field trip. They are: Jackie Cartwright, David Curtis, Natalie Daniels, Caroline Dewast, Hilde Dunker, Lucy Faulkner, Camilla Higgins, Sophie Morley, Daniela Mota, Kim Swallow, David Smith, Martine Tomassini, Stephanie Wolfgang and Michele Young.

For further information contact: [cendep@brookes.ac.uk](mailto:cendep@brookes.ac.uk)

**January 2011**

## **EXECUTIVE SUMMARY**

Unless better managed, Morjim's growing tourism trade risks swamping this quiet Goan village, and plunging those already vulnerable into further uncertainty. This is one of the findings of a new report produced by an international team of students and researchers from India and the UK. 'Morjim is at a crossroads: it can preserve its natural riches with a vibrant and caring tourism industry, or it can suffer the same fate of beach resorts in the Mediterranean whose culture is destroyed.' This is the conclusion of one member of the team, an expert in sustainable tourism.

This draft report, a collaboration between Masters degree students from the Centre for Development and Emergency Practice (CENDEP) at Oxford Brookes University, UK, the NGO SEEDS India and the International Centre Goa (ICG) has identified key threats and opportunities for this small beach community. The team undertook a livelihoods assessment using a participatory rapid approach. This elicited threats and opportunities as identified by the inhabitants of Morjim themselves. The report concludes with the eight recommendations, organised under the headings of 'Environment and Planning' and 'Awareness, Advocacy and Empowerment.' They relate to the protection of cultural and environmental resources, the promotion of sustainable and community-centred tourism, and community empowerment to influence developments in their village and environs.

The study's findings and recommendations were presented to the community of Morjim at the local fish market on Thursday 20 January 2011 and comments welcomed and assimilated. Findings were also presented and discussed at a special meeting convened at the ICG on the same day.

## **RECOMMENDATIONS**

1. Enforce ethical and sustainable development
2. Promote sustainable and community-centred tourism
3. Raise awareness of sustainable tourism development
4. Empower workers within the local tourist industry
5. Encourage the local community to influence future development in Morjim
6. Enhance awareness on Climate Change and viable adaptation measures
7. Build a 'culture of safety' at community level in disaster risk reduction (DRR)
8. Protect local cultural and environmental resources.



Section through Morjim with life stories



Community consultations

## INTRODUCTION

Morjim is a small coastal community located in Pernem, North Goa. Its population of around 10,000 is further inflated by migrant workers from other Indian states and tourists, who are currently predominantly from Russia. The fluctuation in population is seasonal.

Fishing and agriculture were traditionally mainstay livelihoods for inhabitants but there has been an increasing reliance on the tourism sector both in terms of employment opportunities and rentals to tourists, especially over the last few years. The influx from tourism may boost income but also makes heavy demands on the environmental, social and cultural resources of the village. Both positive and negative impacts are noted by inhabitants.

Over the last few years an increasing number of tourists have visited Goa. Correspondingly development has not always been in accordance with the Coastal Zone regulations, being driven instead by economic considerations and individual interest. The local population appears to have little input to the development of their village and environs.

### **Morjim and the Coastal Regulation Zone (CRZ)**

Draft CRZ 1991 notification provides applicable regulations. Morjim beach designated CRZ1 due to turtles, mangroves and sand dunes. CRZ1 – ecologically fragile area. No development within 500m of the high tide. Recognition of rights of coastal communities for fishing and agriculture, etc.

CRZ is outlined in the appendices

The village is managed by the local council, the Panchayat, which is responsible for enforcing relevant state and national regulations. On occasions different levels of legislation can conflict, which do not facilitate this task. As a result the potential vulnerabilities of the population are impacted by many factors. Although not responsible for any disaster locally, climate change is an insidious stress that is already affecting Morjim as it does other coastal areas.

The issues are complex and not all of the residents of Morjim are fully aware of all the implications for their future. Studies of the micro level impact of tourism and long-term infrastructure planning at village level are few and far between. Morjim might benefit from a raised awareness on all levels and the opportunity for those already aware to share their knowledge.

The process of participatory community assessment is an ideal tool to establish a baseline, identify challenges and make suggestions for the future based on the concerns and initiatives of the people themselves. The study team carried out a Participatory Rapid Assessment, as detailed in the section below, during a 10 day preliminary workshop in Morjim the results of which are given in this report. The study also provides eight recommendations drawn from these studies to improve understandings among communities and decision makers for the benefit of Morjim’s future and the protection of the most vulnerable.

## STUDY APPROACH

The approach to the study consisted primarily of Participatory Rapid Appraisal (PRA, Chambers 1997). This was supplemented with briefings by key informants with relevant expertise, informal conversations with local people, a review of secondary sources such as maps, articles, files and books as well as complementary web-based research. The approach was qualitative rather than quantitative.

Key principles of PRA were followed during the information-gathering process: facilitation and observation on the part of researchers to encourage reversal of learning; a “hand-over-the-stick” approach to create a space where the interviewees could play an active role as the source of knowledge-generation and sharing; triangulation (cross-checking the accuracy and validity of information through different sources and tools); seeking diversity by targeting groups of informants belonging to different social categories, economic sectors, etc.; and building rapport with interviewees. The PRA exercise targeted different stakeholders from the local community, including, but not limited to, fishermen, business-owners, formal and informal workers in the tourism industry, tourists, government officials and villagers. Key Informants included the former Minister of Tourism in Goa, a landscape architect, an ecologist and a social worker who had carried out extensive livelihood-related research in Morjim and throughout India. PRA tools comprised:



During the 10-day study, approximately 100 people were interviewed out of a total population of 9,522<sup>1</sup>. This figure reinforces the notion that the present study intends to be a preliminary scoping exercise concerning the threats and opportunities in Morjim among vulnerable communities and should not be regarded in any way as exhaustive.

After receiving an introductory briefing, the group of researchers – an international team of Masters degree students from Oxford Brookes University representing a total of nine countries from diverse professional backgrounds, including tourism to architecture and communication – in partnership with the NGO SEEDS India and the International Centre Goa - split into four main groups. These covered: tourism-related livelihoods (fishermen, hotel workers, beach sellers, etc.); the old village (the innermost core of Morjim); those marginalized in relation to general society; and governance. Each group carried out their livelihoods assessment as instructed in the Terms of Reference:

1. Identify who are the most vulnerable and why
2. Map key stakeholders
3. Identify three key threats and three opportunities
4. Assess the threat of climate change and any adaptation measures planned or underway.

## **WHO ARE THE MOST VULNERABLE AND WHY?**

Four areas of Morjim were assessed – the beach strip, the old village (Vitaldas Waddo, the original settlement of Morjim), the Panchayat, and the marginalised. Our research findings have led us to believe that in order to define who are the most vulnerable in Morjim a distinction should be made between those living below the poverty line and Morjim community as a whole.

Families living below the poverty line have been found in several locations, including a small number of households earning less than the minimum daily wage<sup>2</sup> and living unofficially on government owned land. Although these families have access to public toilets, water and receive food subsidies from the government, they have no assets to protect them in case of an unpredicted event such as disease or disaster and may be evicted from their homes at any time.

---

<sup>1</sup> Figures provided by the local Panchayat

<sup>2</sup> The minimum wage in India is categorized according to the nature of employment and the skill level of the employee. The lowest official minimum wage is 150 Rs a day ([www.labour.nic.in](http://www.labour.nic.in)) yet in several cases we spoke with persons receiving the equivalent of 100Rs a day, often representing the sole source of income of their household.

Nevertheless, our findings have led us to conclude that Morjim as a whole is also vulnerable and is at a critical juncture in terms of future development. Ten years ago there were no well-finished roads and few tourists frequented the beach. Since then tourism infrastructure has grown substantially but unevenly, the most recent addition being a new road that runs from the town directly to the beach. No plans are in place however, to tackle environmental concerns or implement systems of waste management which will be magnified by an increase in visitors.

If infrastructure continues developing at this pace and with insufficient planning, in ten year's time - in 2021 - Morjim may mirror the hustle and bustle of over-developed resorts elsewhere. A young student expressed his fear that "Within the next two years, Morjim will be the next Calangute". A research visit to Calangute revealed that although residents there are content with the increased revenue that a developed tourist industry has provided, the nature of this development has had serious undesirable consequences in terms of waste disposal and crime in particular.

The recreational activities that come with increased tourism have damaging impacts on the environment:

- Water needed to fill swimming pools and wells to support an inflated population can lead to groundwater decrease and salination;
- Jetskis and other motor boats along with irresponsible waste dumping might threaten the habitat of some species polluting the water with oil and creating noise;
- Beach accommodation often lacks ecological toilet facilities and adequate waste treatment;
- Although planning regulations exist, evidence suggests that these may be misinterpreted or weakly imposed, often resulting in building occurring in undesirable locations.

### **Who is vulnerable?**

Groups identified as potentially vulnerable include:

- **Migrant workers and Beach sellers** who come to Morjim (particularly from Karnataka) in search of better work conditions in Goa's comparatively affluent economy. The latter are selling on the beaches illegally and report regularly paying bribes to officials to be allowed to continue. Conversations with migrant families repeatedly emphasised that conditions and job availability were better than in their home town; however as in many countries, migrant workers are accepting lower wages thereby providing a cheaper substitute for the local workforce who prefer higher-paid employment;



- **Taxi Drivers** many of whom have taken out loans to purchase their vehicles and who currently appear to out-strip demand resulting in a highly competitive market which is further threatened by foreign reps;
- **Those below the poverty line (BPLs):** families, identified as dependent upon government basic needs provision and lacking assets to fall back on in times of stress, including the security of possessing the land which they occupy. These families were rarely included in mapping exercises with other residents of Morjim and one housewife even asserted: “There are no poor in Morjim”;
- **Small and medium rental landlords** many of whom have given up their former livelihood base, building second houses to lease to tourists during the high season;
- **Fishermen** whose activities require space along the coastline and who experience increased demand during the tourist season from hotels and restaurants;
- **Hotel and Restaurant owners** and their employees who depend almost entirely on catering for visitors, many of those permanently resident in Morjim have no source of income outside the tourist season;
- **Villagers:** general inhabitants of Morjim whose lives are inevitably affected by the presence and activities of foreign visitors to their area.

Although tourism has generally increased over the last ten years, this season saw a drop in those holidaying in Morjim by, according to some informants, some 50 per cent. In the opinion of some local people this was mostly due to an extended monsoon season and visa restrictions imposed on Russian tourists by the government, which reduces the time a Russian citizen can spend in Goa.

This has caused concern among business owners dependent on tourism, whose incomes vary accordingly. In the words of a local restaurant owner: “There is now a chance to change the development of Morjim”.

Will tourism increase in the coming years and, if so, will it be planned and sustainable? Or does this drop in tourists herald an imminent decline? In both cases, who will benefit and who will become more vulnerable?

In an attempt to answer these questions, three possible scenarios have been created for this report:

1. a snapshot of the current situation in 2011;
2. a projection of the situation in Morjim in ten years time with no tourism; and
3. a projection of the situation in Morjim in ten years time if unplanned over-development occurs.

The results of these three scenarios can be seen in the table below.

Scenario	Vulnerable	Beneficiaries
Current – 2011	<p><b>Migrant workers</b> Low and unstable wages, lack of bargaining power with employer</p> <p><b>Beach sellers</b> Highly dependent on tourism fluctuation and subject to discrimination</p> <p><b>Taxi drivers</b> Highly dependent on tourism fluctuations, competition from other drivers</p> <p><b>BPLs</b> Lack of assets and therefore reduced buffer to shocks and stresses</p>	<p><b>S/M rental landlords</b> Revenue from tourists</p> <p><b>Police/Government officials</b> Increased revenues from expanding market and tourist license fees</p> <p><b>Hotel/Restaurant owners</b> Revenue from tourists</p>
Future without Tourism – 2021	<p><b>Taxi drivers</b> Decrease in income, possibly exposing drivers to loan defaults</p> <p><b>Beach sellers</b> No tourists to purchase their goods</p> <p><b>S/M rental landlords</b> Unfilled properties leading to possible loss of income</p> <p><b>Hotel/Restaurant owners</b> Lack of tourists possibly leading to decreased income</p> <p><b>Local people directly or indirectly working in the tourism sector</b> (as above)</p> <p><b>Migrant workers</b> Decreased livelihood opportunities and income, possibly forced to seek elsewhere</p>	<p><b>Biodiversity</b> Preservation of ecosystems and reduced pollution, less stress on environment</p> <p><b>Villagers</b> Increased likelihood of preservation of culture and traditions, return to traditional occupations</p>
Future with Unplanned Tourism and development - 2021	<p><b>Fishermen</b> Space on the beach may be encroached upon and environmental resources may deplete faster in an increased market</p> <p><b>Villagers</b> Possible decrease in quality of life in terms of space, noise, waste and security</p> <p><b>BPLs</b> May be displaced by development construction</p>	<p><b>Tourists</b></p> <p><b>National and International business investors</b> Unregulated access to tourist market</p> <p><b>S/M Rental Landlords</b> Full income potential due to regular house occupation</p> <p><b>Government</b> Possible increased revenue from licenses</p> <p><b>Taxi Drivers</b> More clients</p> <p><b>Beach Sellers</b> More clients and unenforced regulation</p>

## KEY STAKEHOLDERS

All stakeholders in Morjim were identified at the beginning of the initial assessment in order to explore who were the most vulnerable. Based on the vulnerability profile presented above, stakeholders were subsequently divided into those who are related to tourism, those who are not related or not dependent on it, and those who occupy both categories.

For the purpose of this report and in accordance with the Terms of Reference of the PRA project, the key stakeholders in Morjim have been classed as those who have the ability within the community to play an active role in instigating changes in the direction of the village's future.

We have therefore identified the following stakeholders as being key to our assessment: Government; Civil Society; Local businesses; and Morjim community.

### Government

The government is the key decision-making body regarding plans for development with a fundamental role in representing the people's best interest and protecting vulnerable segments of the community. At village level Morjim's local council is the Grand Panchayat with a Panch representing each of the nine wards. The legislation relating to powers and responsibilities between the Panchayat, the State government of Goa, and the Government of India (GOI) can however lead to confusion, for example where prior laws have not been repealed, which inevitably hinders effectiveness.

### LEGAL CONTEXT FOR MORJIM

Conflicting local, regional and national laws:

**Panchayati Raj Act (1994) amendments 73,74**

*Responsibilities devolved to Panchayat*

**Town and Country Planning Act 1974 (TCP 74)**

*Spatial planning within sphere of National Government*

**GOA Municipalities Act 1968**

*Inconsistent with Amendments – dependent on Planning and Development Authorities (PDAs)*

**Regional Plan 2011 incl Special Economic Zones (SEZs)**

*Diluted by amendments, rejected by civil society*

**GOA Right to Information Act 1997**

*Ensures transparency*

## Civil Society

According to the research conducted virtually no formally organised civil society has been identified in Morjim and the Panchayat has so far opted not to seek assistance from regional civil society institutions or NGOs. This was a key factor in the rejection of the special plan that they submitted for the Regional Plan for Goa 2021 (RPG2021 see textbox), which was subsequently created without Morjim's input. Nonetheless the potential still exists to ignite interest on a regional level, for example through organisations such as Save Goa or the Goa Foundation who assist in educating Goan communities about their rights.<sup>3</sup>

### MORJIM and RPG2021

The Regional Plan for Goa includes potential for Morjim in several ways:

- Opportunity for Planned Development FAR (Floor Area Ratio)
- Eco Zone II Policies for beach area outside CRZ1
- Satellite townships, planned settlements
- Disaster Management Sites
- Micro Industrial Zones (MIZs) – *diversification from tourism*
- Hubs for managing infrastructure

## Local Businesses

These small businesses can make a significant contribution to preserving the local environment by implementing sustainable energy supply mechanisms and recycling waste, as well as providing adequate sanitation systems in beach restaurants. Given their major role in the economy of Morjim, collectively they have a strong influence on the direction of its development.

## Morjim Community

As a body of people, the villagers of Morjim elect the Panch for their ward who will represent their interests in the Panchayat. Community dissatisfaction and mobilization on a significant level can be a powerful vehicle for change. There is however a danger that the most influential and articulate voices dominate the marginalized.

---

<sup>3</sup> An of the successful planning process along the lines of the G21 is the initiative of the NGO Goa Bachao Abhiyan with its workshop in planning at the village of Nachinola, It was also based on the Panchayati Raj Act as guaranteed by the Indian constitution. Such workshops and initiatives help de-mystify many text heavy documents of the Government as well as explain processes such as planning, emphasizing the need for decentralization and grass roots activism of this important task.

## THREE KEY THREATS AND THREE KEY OPPORTUNITIES

This section of the report identifies three threats and three opportunities that Morjim might face today in relation to its vulnerability profile. These are as follows:

### Threats

#### 1. Unplanned and uncontrolled development

Unless existing regulations are enforced and put into practice, it is likely that new construction may occupy the area surrounding the beach side. High buildings created for mass tourism may displace established palm trees, green landscape and vernacular architecture still visible today. A tourism-related property owner from Morjim protested: “You are spoiling our beauty with your concrete jungles”. Additionally, weak enforcement of regulations might see such local businesses increasingly lose out to foreign investors who can channel profits elsewhere. The dependency on tourism that results from unplanned development can encourage mono-sectoral livelihoods, which are highly vulnerable to factors beyond their control such as international relations and visa policies, a concern raised by several tourism-dependent participants.

#### 2. Environmental degradation and climate change concerns

There is already some evidence of environmental degradation such as a diminishing number of turtle nests, road-side rubbish and water shortages in the hottest months of April and May. There appears to be no viable government plans in relation to the pressing problem of solid waste management. If construction increases, deforestation may increase the risk of flooding in the plains, as well as global warming. Ultimately, climate change may extend the monsoon period, which would shorten the duration of the tourist season. Therefore development needs to take into account climate change factors or subsequent maintenance may be too costly to sustain. Equally, climate change could further accelerate environmental degradation such as coastal erosion, water salination and flooding (see below).

#### 3. Loss of culture, change in livelihoods and in aspirations

According to some villagers, habits and values are already starting to change. In the words of David, a school football coach living in Vithaldas Waddo, “people used to work for food, now they work for money and they want more and more money”. A social researcher living in Morjim similarly lamented: “Before with agriculture people were honest, if somebody needs they can borrow. With tourism there

is greed and nobody wants to give even one rupee”. Additionally changing priorities may decrease the time put aside for important cultural practices such as traditional ceremonies during Makara Sankramana, which some of the team were privileged to witness. Besides a change in aspirations, some livelihoods might be threatened with over development: the fishermen for example might lose the space they occupy on the beach and rice fields might be sold for construction.

## Opportunities

### 1. Increased employment and livelihood opportunities resulting from a rise in visitors

Employment opportunities would arise to provide tourists with infrastructure, accommodation, entertainment and food. Besides the number of jobs, the type of employment would also vary across the tourism sector as new business opportunities such as shops and restaurants are created.

### 2. Improved mobility and access to surrounding areas for local inhabitants

Infrastructure in the form of roads and transport in Morjim have already developed alongside tourism; therefore if tourism continues to expand improved access is likely to follow suit. This allows inhabitants to commute to nearby towns, thereby offering possibilities to access a wider variety of jobs as well as the opportunity to improve skills with better access to training and education.

### 3. Maximise the energy-saving potential of Goa’s tropical climate to reduce energy consumption and provide sustainable water sources

Goa is famous for its sand, sea and sun, with sunny days from November until May. The growing green economic industry could provide a wealth of new job opportunities, both for skilled and unskilled labour, in areas such as solar panel installations, with innovative solutions for Morjim that respect the community’s desire to maintain its traditions whilst securing stable livelihoods<sup>4</sup>. In addition the Goan population has an opportunity during the tropical climate and monsoon period to reduce energy consumption and provide water resources for washing and irrigation, thereby bypassing unsustainable methods applied in other regions of the world. Given the volume of rubbish that so far has not been dealt with, waste recycling schemes also present an excellent potential business opportunity.

---

<sup>4</sup> In India the highly respected creativity and entrepreneurial abilities of its people is known as *Jugaad*

## **CLIMATE CHANGE: THREATS AND ADAPTATION MEASURES PLANNED OR UNDERWAY**

Climate change itself should be considered a threat only where vulnerabilities and instabilities already exist and where a system is susceptible to adversity. Blaikie et al. (2004) define vulnerabilities as “*characteristics of a person or group and their situation that influence their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard*”. The potential negative influences of such characteristics in Morjim suggest it may be at great risk from the possible social, environmental and cultural impacts of future climate change.

Although detailed research on the possible impacts of Climate Change on the Northern Coastal region by organizations such as TERI and the IES have recently begun, the findings of these studies are not yet available for this report. In absence of this data, this section aims to delineate how the more general predicted trends of climate change at a state-wide, or even national, level might affect the locality of Morjim in light of the Participatory Rapid Assessment and research findings of this report.

### **Climate Change in Goa**

The following four predicted Climate Change trends across India are considered the most relevant in the context of Morjim:

#### **1. Variability and unpredictability of Monsoon Patterns**

As noted by ecologist Puja Batra, “while the total amount of rainfall may not change, the distribution and intensity of rainfall may be random and intermittent” (pers. Comm. 2011). Morjim’s agricultural and tourist economy is intrinsically linked to the annual monsoon cycle: this will affect the duration of the tourist season and the predictability of crop productions with a subsequent impact on livelihood security.

#### **2. Temperature Rise**

Morjim residents interviewed generally agree that the temperature is rising as corroborated by a recent study by the Indian Network for Climate Change Assessment that “the beaches and coastal settlements in Goa will be warmer” (INCCA, 2010). This will intensify water demand of the already water-intensive tourism industry in Morjim as indicated previously with serious implications for local fresh water supplies, including, but not limited to, agriculture and household consumption.

#### **3. Acidification of the Ocean**

Emissions from burning fossil fuels, waste and deforestation practices increase carbon concentrations which contributes to the acidification of oceans. This impacts marine life and may reduce the supply of local fishing stocks or alter the variety of species inhabiting certain coastal areas. Loss of traditional fishing practices would erode Morjim's cultural identity and could provoke major socio-economic changes.

#### 4. Sea Level Rise

As stated by Berker in his report, *Modelling Vulnerability and Resistance to Climate Change*, "observed trends in the mean sea level along the Indian coast indicate a rising trend of about 1 cm per decade, which is close to that recorded in other parts of the globe." Given that a 1m sea level rise along the Indian coast has been predicted to cause the displacement of up to 7 million people and the loss of an estimated 5764 sq km of land and 4200 miles of road (TERI, 2002) even the current rate of sea level rise could soon have extensive impacts for low-lying coastal villages such as Morjim<sup>5</sup>.

#### **Adaptation measures in place**

The participatory research undertaken for this study did not uncover any major adaptation initiatives in Morjim to mitigate the potential trends identified above. Small pockets of awareness and activity do exist in the form of solar panels, rainwater collection tanks and the construction of properly designed soakaways for sewage and waste water by a handful of more eco-conscious individuals.

The most notable effort is the environmental education at the local secondary school delivered through its Environmental Specialisation lessons. Pupils learn about the general science of climate change and are given the opportunity to get involved with local environmental activities such as litter picks and campaigning. This is a good start among the young, however much more remains to be done in Morjim to raise awareness of the connection between global climate change phenomena and changes visible locally in order to incite a more serious response to the issue. Adaptation measures are necessary to avoid the abandonment of traditional practices.

---

<sup>5</sup> This would include further exacerbation of salination problems in the Khazan flood plains, already harmed by the recent drift of many Goans from resource-based agriculture to the non-resource-based tourism industry



# RECOMMENDATIONS

The study's preliminary assessment of the opportunities and stresses upon Morjim has led to the following eight recommendations, which have been organised under two headings: Environment and Planning; and Awareness, Advocacy and Empowerment.

## Environment and Planning

1. Enforce Ethical and Sustainable Development
  - Promote sustainable, low impact and culturally sensitive building methods;
  - Ensure local government has the authority and resources to enforce sustainable building standards;
  - Invest in suitable infrastructure and environmental services such as water harvesting (during monsoon rains) and solar energy (for water heating and electricity generation) to minimise shortage or loss and reduce dependence on other fuels ;
  - Develop and implement a comprehensive waste recycling and processing policy.
  
2. Promote Sustainable and Community-centred Tourism
  - Develop opportunities to promote protected local heritage in a sustainable manner;
  - Promote the purchase of local goods and agricultural products to supply resorts and restaurants and develop other local jobs and industries;
  - Promote the diversification of tourism activities including accommodation to suit a range of budgets, tours, fishing experiences etc. to attract a variety of tourists from different countries and reduce reliance on a limited customer base.

## Awareness, Advocacy and Empowerment

3. Raise awareness of sustainable tourism development
  - Raise community awareness of potential future outcomes - perhaps via alternative scenarios or comparisons - and encourage active participation in advocacy for sustainable future development ;
  - Promote examples of successful sustainable tourism and demonstrate to the community the potential benefits;

- Endorse partnerships between local builders and architects who follow sustainable and environmentally sound building techniques;
- Support and further promote environmental education at both School and Community level.

4. Empower workers within the local tourist industry

- Investigate the introduction of educational programmes by tertiary and/ or local institutions to provide training and certification in the areas of catering, hotel management, accommodation and food & beverage service thus increasing the quality of the local workforce and their access to higher wages;
- Empower political organisation of tourism sector.

5. Encourage the local community to influence future development in Morjim

- Build local capacity in development planning initiatives;
- Promote community groups and their active involvement in the management of their cultural and environmental assets;
- Ensure proper community consultation in planning;
- Uphold local traditions and skills and knowledge;
- Limit foreign investment and make property ownership more transparent;
- Tax tourist based profits that can be invested directly back into the community.

6. Enhance awareness of Climate Change and viable adaptation measures

- Disseminate environmental education as promoted in school to wider community;
- Sponsor further, more localised scientific research on potential climate change impacts and future scenarios;
- Create a platform in order to relay the findings of local studies, to provide access to the global wealth of climate change knowledge and to train locals in sustainable practice and provide them with credible 'green' skills that will provide new job opportunities;

7. Build a 'culture of safety' at community level in disaster risk reduction (DRR)

- Carry out more detailed research into social, economic and environmental vulnerabilities in Morjim.
- Carry out scientific research to identify most effective and sustainable local adaptation/mitigation measures to reduce these vulnerabilities.
- Use influential local stakeholders to communicate, train local people and ensure the implementation of these measures.

#### 8. Protect Local Cultural and Environmental Resources

- Conduct an audit of all cultural and environmental assets to obtain a comprehensive snapshot of present day Morjim;
- Develop a register of all cultural and environmental assets and allocate to a member of local government to manage and enforce.
- Advocate for grants for those living in and on culturally sensitive buildings and land who have limited funds to maintain these assets.

This document should include a detailed audit and assessment mapping of environmental and cultural features of Morjim, to become a significant reference point in time for both the community to refer back to and for future studies and initiatives to assess and quantify their results.

## REFERENCES

Archer, D (2010) *The Global Carbon Cycle*, Princeton University Press, US

Blaikie, P. et al (2003) *At Risk: Natural Hazards, People's Vulnerability and Disasters*, Routledge, UK.

Brenkert, A. and Malone, E. (2005) *Modeling Vulnerability and Resilience to Climate Change: A Case Study of India and Indian States*, Joint Global Change Research Institute

Chambers, R. (1997) *Whose Reality Counts? Putting the first last*. Intermediate Technology Publications

INCCA (2010) *Climate Change and India: A 4x4 Assessment, A Sectoral and Regional Analysis for 2030s*, INCCA, India

Infochange News article by K Kasheri, April 2010, accessed online 17 January 2011 at [www.infochangeindia.org/Agenda/Coast-communities/Coastal-regulations-flip-flop.html](http://www.infochangeindia.org/Agenda/Coast-communities/Coastal-regulations-flip-flop.html)

Sawkar, K. et al (1998) *Tourism and the Environment: 'Case studies on Goa, India and the Maldives'*, The Economic Development Institute of the World Bank

Tata Energy Research Institute (2002) <http://www.ccasia.teri.res.in/country/india/impacts/impacts.htm>.

# APPENDICES

## Coastal Regulation Zone (CRZ)

### Objective

The Environment Protection Act (EPA) was enacted in 1986 to implement decisions taken at the Conference on Human Environment in Stockholm in 1972 to which India was a signatory. Subsequently the Coastal Regulation Zone notification of 1991 was issued. It is primarily concerned with ecologically fragile areas and has as its objective to preserve the coastal environment by regulating land use along the whole coast of mainland India and its islands.

### Categories

Coastal areas have been designated one of the four categories below, which determines which regulations apply and therefore how much development is permitted. These areas include estuaries, bays and river mouths where there is a tidal effect.

**CRZ1:** ecologically fragile area with maximum protection. No development is permitted within 500m of the high tide line. The regulations recognise the rights of coastal communities (concerned with fishing and agriculture). Morjim beach has been designated CRZ1 due to the Ridley turtle breeding area, mangroves and sand dunes.

**CRZ2:** areas which are substantially built up and/or already urbanised, such as municipalities. No expansion is permitted on the seaward side of existing developments and increased density of habitation is prohibited.

**CRZ3:** All other coastal areas on the mainland. Areas within 200m of high tide to be “no development zones” and new development between 200m and 500m should be restricted to industry requiring waterfront or foreshore with clearance from the Ministry of the Environment and Forests. Morjim village is in this category.

**CRZ4:** Coastal areas of Indian islands.

### History

Since the 1991 notification various interest groups have succeeded in putting through amendments which threaten the intent of the CRZ. Pressure has been exerted on the Ministry of the Environment and Forests to address the management of coastal areas with regulations set out in terms of promoting development without harming the environment, which would afford much weaker, possibly no, protection to the ecologically fragile areas.

A review of the CRZ in 2004 by a committee headed by Professor Swamanatha reiterated that the principles of coastal management should be an integrated approach to promote the productivity of the coastal areas while promoting sustainable development. Consideration was also given to moving from a fixed 500m line to a variable line based on topography. Subsequently a draft Coastal Management Zone notification was issued in 2008. In relation to the 1991 notification this offers pared down environmental protection, for example there was no blanket ban on industry on the coast and it would be possible to designate economically significant areas where industry and infrastructure could be permitted. This draft is attractive to parties interested in the freeing up of land for development. There was strong opposition to this proposal from fishermen through their federation, environmental groups, governments of some coastal states and others.

A 2009 committee advocated the retention of the terms in the 1991 notification and criticized the vagaries of the demarcation line.

Currently the draft 1991 notification provides the applicable regulations.

### **Vulnerability**

For many years if not for centuries communities have treated fishing waters and land (where fish is processed, nets mended and so on) as common property resources. These rights are based on custom and tradition. The absence of any legal rights make such communities vulnerable as they do not have recourse to law in the event of a problem such as displacement or lack of adequate compensation.