

Coastal tourism, environment, and sustainable local development explores the interface between social and environmental issues relating to coastal tourism. That coastal tourism is highly dependent on nature is not sufficiently understood. This results in an emphasis on promoting tourism without attention to the supporting systems and a classic 'golden goose' problem can ensue. The societal implications of this phenomenon can be serious as tourism can push out other prevalent activities, result in changed skills of the local populace, and effect a change in priorities. This suggests the need for cross-disciplinary perspectives to measure and monitor impacts and manage a coastal tourism that 'lasts'.

This publication is among the products of a research project entitled 'Measuring, monitoring, and managing sustainability: the coastal dimension', supported by the European Union's INCO-DC programme over the period 1998–2002. It has involved three Indian and four European institutes. The contributions reflect a range of disciplines, including sociology, economics, biology, chemistry, hydrology, geography, and botany. The objective is to highlight (1) the interface between social and environmental issues in a coastal tourism context, (2) the issues that need to be considered in planning and managing for coastal development within a sustainability framework, and (3) the need for coastal policy-making to be more stakeholder-sensitive.

This publication provides a comprehensive, accessible account of the analyses, results, and decision tools developed to measure, monitor, and manage coastal tourism developments along sustainable paths and opens up fresh perspectives for the development of sustainable strategies. This book should be of interest to coastal planners, professionals in the tourism industry, researchers, and those interested in developing a 'sustainability science'.

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Editors

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Foreword

Most coastal regions in the world are characterized by fragile ecosystems, essentially because they represent the interface between the land and the sea. Additionally, the attraction for tourists that coastal areas present can become a source of stress that needs to be carefully regulated and managed. Tourism by its very nature differs in the intensity of harmful impacts produced on ecosystems in comparison with those from much larger populations who actually live in ecologically stressed areas. The inhabitants of most ecologically stressed locations in the world hold a lasting stake in their surroundings and, therefore, not only display concern for the sustainability of natural resources on which their livelihoods depend, but are able to come up with innovative solutions that help to manage any stresses that develop. Tourism, which is based on floating populations, often representing an unsustainable and exploitative relationship between tourists and the ecology of such locations, needs to be analysed as a sector in its entirety, understood with all its complex linkages and then effectively regulated.

This book is an attempt by three Indian and four European institutions working in partnership to assess the complex inter-relationship between tourism, local economic activities, and the resultant footprint of human actions on a fragile coastal ecosystem. While there is a general awareness of the importance of these issues, an analysis and full understanding of the complex inter-relationships between different variables characterizing the health of coastal ecosystems is absent in many such areas of the world. To that extent, therefore, this readable and deeply insightful publication would go a long way in bringing about a better understanding of the issues involved in tourism and coastal zone management. It is only on the basis of such research that a proper tourism policy applicable to such areas and regulatory measures for creating sustainable development choices could actually be achieved.



R K Pachauri
Director-General, TERI

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Tourism proves as a resilient and stable economic sector

[News releases, June 2002]

Madrid: WTO. 6 pp.

The Baga-Nerul watersheds: tourism, local stakes, and transformations

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Tourism is advocated and promoted by many development specialists and governments for its ability to generate local employment and opportunities. In this chapter, we discuss the extent and nature of involvement of local households in the tourism industry in one location representative of tourism, the study area in Goa, with a view to understanding local stakes in this activity and their implications for tourism policy.

This chapter is inspired by studies that suggest that tourism should not be seen merely as an external variable creating change, but as an activity that plays out through other social processes (Hussey 1989; Wood 1991; Noronha, Siqueira, Sreekesh *et al.* 2002). Studies elsewhere in the world show linkages between resident perception and attitude towards tourism relative to the level of development of tourism and related economic activities (Johnson, Snepenger, and Akis 1994). Geoffrey Wall's (1996) study on perspectives on tourism in Balinese villages suggests that resident perception of tourism undergoes a sequence of stages from euphoria to apathy to irritation and finally to antagonism known as Doxey's stage of resident perception. These resident perceptions, according to Wall (1996), are influenced by temporal as well as spatial components. Thus, the emphasis is on both the depth and extent of tourism development, which have strong implications for resident populations. In earlier studies on tourism in the villages of the Baga-Nerul watershed, it has been argued that local people are definitely implicated in this activity (Wilson 1997; Siqueira 1999; TERI 2000).

We would like to thank Dr Ligia Noronha for her guidance, and encouragement in writing this paper. We would also like to express gratitude to Mr A Siqueira and Dr S Venkataraman for valuable feedback.

This recasts tourism from being seen merely as an exogenous driver, involving inflows of people whose needs cause changes to the ecosystems, to having an endogenous dynamic that provides opportunities for change and a local reorganization of resource use, which leads to ecosystem transformation (Noronha, Siqueira, Sreekesh, *et al.* 2002). This chapter contributes to this analysis by focusing on one aspect of the interaction—the stake of the local population with respect to how their interests get reconstituted and expressed in the context of tourism. This will enable us to gauge the degree of ‘localization’¹ of tourism and its social basis, which prompts the need to support this activity.

Understanding the local basis of tourism is especially important in a globalized situation as it is under such conditions that understanding local processes and stakes becomes intensely and acutely challenging. However, to enable any kind of interventions that make tourism socially relevant, it is necessary to understand the factors that influence people’s stake in tourism, and the implications of these factors on a socially relevant tourism policy. If, as it is argued, tourism is a vehicle that provides opportunity, then the incentives that it provides will interact with the factors to shape the choices that people make. Based on earlier studies, we assume that the following factors may be of importance in influencing the decision of local people to have a stake in tourism (TERI 2000): settlement patterns or location of houses relative to the sea, age, gender, income of the household, educational level, migrant status, and engagement in agriculture and/or fishing. Thus, our expectations about who will be typically engaging in tourism are as follows.

- Those with houses closer to the sea, given the type of tourism that exists in this location, which is based essentially on the ‘sun, sea, and sand’ triad of attributes of coastal tourism
- Those who are young, rather than the old, given that tourism is a ‘glamour’ activity
- Those with low levels of education and drop-outs
- Those who own agricultural land in the watershed, but are not cultivating it
- Those from the fishing community, especially women, as it provides them a means of ‘moving up’ the social ladder
- Those who belong to the low-income bracket, as tourism is associated with easy money

¹ Local stakes in tourism activities

- Those who are involved in the tertiary sector and can invest part of their time and money in tourism during the season.

Approach

This chapter draws on secondary data (GoI 1961, 1971, 1981, 1991), earlier studies done in the region, and a detailed primary household survey that was done in the villages in 2000. About six per cent of the households in the study area were covered under the sample; these were selected using systematic random sampling. Data collected from the household survey was analysed using descriptive and inferential statistical methods to arrive at the patterns of socio-economic activities in the watershed and possible relations.

Chi-square tests were used to determine whether any significant associations exist between different socio-economic factors and stake in tourism. Those factors that have significant associations, as determined through the Chi-square test, were used as predictor variables in logistic regressions² run for each of the categories (mature tourist villages and developing/supporting tourist villages) and all study villages to identify the direction of association of predictor variables with stake in tourism of individuals. The fundamental assumption in logistic regression analysis is that \ln^3 (odds⁴) is linearly related to the independent variables. No assumptions are made regarding the distributions of the predictor variables.

The study area

The study area comprises 12 villages: Anjuna, Assagao, Arpora, Nagoa, Parra, Verla, Saligao, Nerul, Marra, Calangute, Candolim, and Reis Magos (Figure 1). Of these villages, Calangute, Candolim, and Anjuna are the most preferred tourist villages. Calangute was the first Goan village to be visited by tourism (in the shape of hippies) in the 1960s and soon gained international recognition. The steady increase of tourist inflows – both domestic and international –

² ‘Logistic regression is a mathematical modelling approach that can be used to describe the relationship of several independent variables to a dichotomous dependent variable.’ (Kleinbaum 1994) [See end-note to chapter.]

³ Natural logarithm is abbreviated as \ln .

⁴ An odd is the ratio of the probability that some event will occur over the probability that the same event will not occur.



Figure 1
Map of the
study area

resulted in the development of Calangute and its surrounding areas. In the 1970s, a five-star hotel was built in the neighbouring village of Candolim. This boosted tourism development in this region and brought in a different profile of tourists, compelling the original tourist inhabitants to search for new pastures—pristine and less ‘touristy’. This has led to the development of Anjuna as a haven for backpacking⁵ tourists.

⁵ Backpacking tourists are independent travellers, who travel with minimum requirements or demands.

In this section, this chapter examines the socio-economic changes over the last 30 years,⁶ and then focuses on the contemporary period.

Demographic characteristics

The study area covers an area of approximately 90 km² and a total population of 57 563 (1991 census), which is 36.5% of the total population of the Bardez *taluka*. The population, over the last four decades, has grown faster than that of the *taluka*. While the average annual growth rate of population for the *taluka* was 1.61%, that of the 12 villages together has been 2.17% over 1961–91. Reis Magos has registered the highest growth of 3.6%, while the lowest growth has been 2.9% in Arpora.

The population density in the study area is higher than that of the *taluka* and the district. While the district and the *taluka* both have a density of 624 persons per km², all the study villages together have 690 persons living per km². Candolim has the highest density with 1021 persons per km², followed by Calangute and Reis Magos. Large-scale commercial development probably contributes towards the high density. There has been an increase in population density in all the villages except Nerul, where it has declined over the years.

From the early 19th century to the time of liberation, out-migration was prevalent in coastal Goa (Mascarenhas-Keyes 1990; Siqueira 1998). It has been noted that from 1755 to the early part of the first decade of the 20th century, the population increased due to natural factors. However from 1910 to 1961, there was a steep fall in population, mainly due to out-migration. British India and other British colonies were the most sought after destinations for out-migrants; some even travelled to British colonies in Africa. The reasons varied: escaping from poverty, trying to get employed, and looking for better prospects. With the establishment of the British colonial government in India and the development of Bombay and other towns and cities, many new employment opportunities were created. So also the partition of Africa among the various European powers led to a considerable demand for manual and white-collar

⁶ The analysis covers the period 1961–91 and later, wherever information is available. The year 1961 is significant for Goa because it was liberated from Portuguese rule and integrated into India in that year. A number of changes followed on from this change of rule. In India, a population census is carried out every 10 years. Currently, the publication of the 2001 census data is awaited.

workers. The Portuguese colonies recruited many literate Goans to work as clerks and administrators. A large number of migrants also went to work in similar capacities in British East Africa. Of the emigrants, around 51% were literate. Although migration was common throughout the state, it was more acute in Bardez. In order to replace the loss of labour due to out-migration and to cater to the new demand for labour, there was in-migration from other *talukas*. Most migrants became agricultural labourers but a few took up other occupations too.

The post-Portuguese era saw a new migratory cycle. In-migration far outstripped out-migration, giving rise to an increase in population. Trained manpower came from all other Indian states (Siqueira 1998; TERI 2000; OASES 1998). Out-migration of people from the study area in the 1970s to the Gulf countries was an important development in terms of local implications, as it involved considerable inward remittances (there were no possibilities of investments or permanent settlements in the Gulf). After 1981, with the onset of tourism, the trend of in-migration into Goa was boosted. There has been a continuous inflow of migrant population, especially in tourism-dominated areas (TERI 2000).

The effect as well as the character of migration, in terms of its gender selectivity, can be seen through the sex ratios observed in the study area. A higher proportion of females in the period prior to 1961 and through the 1960s can be explained by the out-migration of the male population in search of jobs, leaving their families behind. Also through the 1960s, as in-migration began to change the demography, and the sex ratio declined slightly in 1971. However, from 1981 onwards, the sex ratio has favoured males. This can be attributed to the immigration of male labourers and other workers from neighbouring states. A number of these migrants come alone, leaving their families behind.

Migration studies put three factors as crucial to the choice of destination.

- 1 Availability of work opportunity
- 2 Accessibility of the destination
- 3 Familial support.

In the case of Goa, all these factors have encouraged migration. In a survey conducted in the tourist destinations, 60% of the

respondents said that they had migrated in search of better job prospects and other reasons such as a preference for Goa, contacts in Goa, and collecting money for further studies (TERI 2000). Most migrants are young and come from the states of Karnataka, Kashmir, Rajasthan, and Maharashtra. The key aspects of migration into the study villages are summarized in Box 1.

Box 1 Main migration trends in the study villages

- Migration levels for all villages have been the highest during the decade 1961–71.
- Migration levels have been higher in the study area as compared to the *taluka* for the period 1961–71.
- The rate of migration was positive for all the villages except Arpora during 1961–71.
- During 1971–81, there was out-migration from all villages except the more touristy ones. This migration was mostly to Gulf countries.
- Among the 12 villages, migration during 1981–91 has been the highest in Reis Magos.
- Arpora has witnessed out-migration in all the decades

Of the 12 study villages, Calangute obtained the status of a census town in 1981, while Candolim and Reis Magos did so in 1991. Calangute is classified as a Class III town (with population between 20 000–49 999). The other two are classified as Class IV towns (with population between 10 000–19 999). A major factor contributing to the growth of urbanization in this area is the inflow of migrant population. This in-migration in coastal villages is related to tourism (TERI 2000).

For purposes of brevity, we have classified the study villages into two groups: more mature tourist villages and developing/supporting tourist villages, depending on the extent of tourist activity. Anjuna, Calangute, and Candolim are the mature destinations while Arpora, Assagao, Nagoa, Marra, Parra, Saligao, Reis Magos, Verla, and Nerul are developing/supporting tourism villages. These support tourism in terms of supply of labour and services required for the tourism industry. However, these villages also have the potential to develop into tourist villages. Our analysis suggests that a higher proportion of the households in the villages with mature tourism live closer to the

sea. In the mature tourist villages, 21.6% of the households are within 500 m of the sea.

Only 5.3% of the population surveyed is reported to be migrant.⁷ Of this, about 54% is made up of migrants from other states. Among the migrants, a higher percentage (7.3%) stays in supporting tourism villages, whereas only 3% stay in mature tourist villages.⁸ The analysis suggests a lower number of migrants as compared to what the tourism industry worker surveys suggest (TERI 2000; Noronha, Siqueira, Sreekesh, *et al.* 2002 [Table 4, p.300]). This could be due to the two types of migrants that we have in the study area—(1) permanent migrants, who settle in the tourist destination for availing the employment opportunities there and thereby provide support to the tourism industry and (2) seasonal migrants, who stay only for the tourist season, generally from October to March. Permanent and seasonal migrants can be inter-state (people who migrate from other states into Goa) or intra-state (Goans moving within the state) migrants. This provides us with an explanation for the low capture of migrants in the household survey.

- 1 Seasonal migration of workers does not get captured by household surveys. About 75% of the tourism accommodation sector operates only during the season. Thus, the number of permanent migrants living in the region is low.
- 2 It is possible that many of the permanent migrants are not registered in the electoral rolls, which were used as population frames,⁹ and hence there are chances that a smaller proportion has been captured by the household survey carried out in the region as compared to the actual numbers.
- 3 Perhaps these migrants do not stay in the study area.

The study area has a young population (about 25% are in the age group 21–30 years) and households in the region have larger families (above five members), with the villages with developing/supporting

tourism having a higher share of households with more than five members (58%) as compared to the villages with mature tourism (51%). Interestingly, the study found that there is illiteracy and lack of formal education in the study area and it is marginally higher in mature tourism villages relative to the others; education achievements too are lower in these villages compared to developing/supporting tourism villages. Among the educated, a larger proportion of people (38%) is educated only up to standards 8–10.

Economic structure

The study area has seen significant economic changes over the last 40 years, the changes in the mature villages being more striking than those in the other villages. One of the striking changes has been the increase in the non-working population after 1961 and until 1981. This could be a result of the withdrawal of women and children from the labour force. While the proportion of female workers had increased from 26% to 39% during 1950–60, female participation reduced thereafter (NCAER 1964). Moving out of labour force, along with a few other markers such as improved housing, education, and dietary practices, meant climbing up the social hierarchy (Siqueira 1998). The 1990s saw a mild reduction in the non-worker category as there was increase in employment opportunities due to overall development during the past decades.

The occupational structure of the study villages during the past four decades suggests a clear tertiarization of the economy ever since 1961. The 1961 census reveals that a substantial proportion of the workforce was engaged in agriculture and fishing and a very small proportion was engaged in industry and services. Agriculture was the backbone of the economy prior to and during the Portuguese rule. Over time, the percentage of population in the agricultural sector has decreased from 62.8% to 10.3%, while the participation of the workforce in other sectors has increased. This increase is higher in the tertiary sector while that in the secondary sector has been minimal.¹⁰

The decade 1961–71 witnessed the maximum shift from traditional occupations of agriculture and fishing to the services sector.

⁷ Defined as 'not of the village'.

⁸ We believe that this is because the household lists (*panchayat* lists), which are used as population frames, do not have a number of these migrants enrolled, making it difficult to capture this floating population. A number of them live in extensions of the main house, or even in rooms.

⁹ In an earlier study (TERI 2000), we had used household lists from the village *panchayats* as our population frames. We found that those lists did not have the migrants enlisted as many of these lived in extensions of homes or other non-listed places. Hence, we decided to use electoral lists, which are presumably updated to ensure that migrants have a vote.

¹⁰ The 1981 census classifies the occupational structure into four—(1) cultivators, (2) agricultural labourers, (3) household industry and manufacturing, and (4) other workers. In this analysis, these other workers were taken as the service sector. Hence, the reliability of the 1981 data is doubted.

One crucial aspect that needs to be noted here is that individuals who have primary employment in the public or private sector, also rent out rooms to guests or migrant workers, run shops or shacks, and own taxis and other vehicles.¹¹ Tourism has enabled people to reduce their dependency on activities such as fishing and agriculture.

The growth in tourism has had major implications for the villages. Hitherto dependent on fishing and/or primarily agriculture, they have become increasingly tourism-oriented.¹² This accounts for the high tertiarization of the economy of the watershed. Table 1 shows the involvement of local households in tourism in the study area.

Table 1 Households' involvement in tourism

Village	Households involved in tourism (%)	Individual involvement in tourism as main workers at the household level (%)	Total number of households surveyed
Anjuna	48	30	110
Calangute	53	33	123
Candolim	44	34	85
<i>Mature tourism</i>	49	32	318
Arpora	40	20	35
Assagao	28	22	50
Marra	17	17	12
Nagoa	25	25	12
Nerul	53	27	45
Parra	31	26	42
Reis Magos	36	15	73
Saligao	31	28	65
Verla	30	20	20
<i>Developing/ supporting tourism</i>	35	22	354
Grand total	41	27	672

Note Weighted averages are used.

Source Authors' survey

While 41% of the households (at least one member from the house) in the study villages are involved in tourism, only 27% of the individuals (main workers) are involved. The involvement is higher in

the villages with mature tourism as compared to those villages with developing/supporting tourism. Amongst all the study villages, Calangute and Nerul have the maximum households involved in tourism, while Candolim and Calangute have the highest participation of individuals in tourism.

Seasonality and diversification of tourist occupation in coastal areas

Tourism in Goa is a seasonal activity as the main thrust of tourism is coastal tourism, which is heavily dependent on climatic conditions (ability to use the sea and the beach). Hence, tourism in Goa is concentrated in the months of October–March, which are the non-monsoon months when the sun, sea, and sand are available. One of the fallouts of seasonality is that the tourist destination has to scale up its infrastructure in order to be able to meet the demands that arise in the peak season. This seasonality has two results. One, these facilities are underutilized in the off-season. Two, during the season, the population of tourists outnumbers the local host population and thus there is an additional stress on coastal resources due to the concentration of tourists on limited space and time.

Another more positive outcome of the seasonality of tourism, however, is that it allows for diversification of occupation. Since tourism activity is concentrated over six months in Goa, it is necessary to have alternative sources of income and it is this necessity that allows for diversification of occupation. However, the diversification of occupation should be compatible with tourism-related occupation with regard to time commitments involved in each. Tourism is increasingly seen in these coastal villages as an opportunity to move across class lines and occupations (Noronha, Siqueira, Sreekesh, *et al.* 2002). Thus, any opportunity to move out of primary occupations into tourism is seized. These villages have been historically agricultural and/or fishing-oriented. However, as discussed earlier, there has been a movement out of these activities and into tourism or non-primary activities. But of those engaged in tourism and other primary activities, a differentiation exists. Agriculture is observed to be a more favoured secondary occupation as compared to fishing in these villages (Table 2).

It is observed in our study area that households having a stake in tourism are also involved in agriculture, and those engaged in the tertiary sector often invest in tourism in terms of owning taxis or

¹¹ Thus, although they are not in the service sector, as far as census enumeration is concerned, they are involved in tourism.

¹² See chapter 5 by Alito Siqueira in TERI 2000, describing the processes of transformation of a 'ganv' (village) into a tourist village.

Table 2 Percentage stake in tourism and other activities as main workers at the household level

Village	Agri-culture + tourism	Fisheries + tourism	Other primary + tourism	Seco-dary + tourism	Tertiary + tourism	Only tourism	Households having stake in tourism (%)
Anjuna	15	3	0	36	58	12	30
Calangute	15	2	2	12	44	39	33
Candolim	0	7	7	17	48	38	34
Mature tourism	11	4	8	21	50	30	32
Arpora	14	0	0	14	71	14	20
Assagao	27	0	0	0	27	55	22
Marra	0	0	0	50	100	0	17
Nagoa	33	0	0	0	67	33	25
Nerul	42	25	0	8	67	8	27
Parra	18	0	0	18	64	27	26
Magos	9	0	9	55	73	27	15
Saligao	33	0	0	17	56	17	28
Verla	25	0	0	0	0	75	20
Developing/supporting tourism	25	4	1	18	57	27	22
Total	17	4	5	20	53	29	27

Note Percentages do not total 100, as there are multiple stakes in different activities; weighted averages are used

Source Authors' survey

motorbikes, renting out rooms for tourists, etc. Table 2 also shows the occupational diversity among households in the study region.

In mature tourist destinations, 32% of the households are involved in tourism. Of these, 30% of the households report sole dependency on tourism. Stakes in both tourism and agriculture are observed in 11% of the total households; 4% of the households have a stake in tourism and fisheries; 8% in tourism and other primary sectors; 21% in tourism and other secondary sectors; and 50% in tourism and other tertiary sectors. Villages with developing/supporting tourism and villages with mature tourism show similar trends except for the stake in agriculture along with tourism that is higher in the villages with developing/supporting tourism.

Similar trends across both mature and developing/supporting tourism villages with regard to stake in tourism can be due to the proximity of mature tourist villages and the developing tourist villages as tourism is not confined by administrative boundaries and

can spill over into neighbouring areas. For instance, Assagao is located adjacent to the mature coastal village of Anjuna and the dominant tourist activity in this village is renting out of rooms / parts of houses / whole houses to tourists. Unlike Anjuna, the visibility of tourism (presence of facilities such as travel and tour agencies, shopping, communication, etc.) is absent in Assagao. It comes across as a lazy village, moving at its own pace, unaffected by the bustle and activities of tourism prevalent in Anjuna. This observation is supported by an earlier study in this study area, which showed that workers commute from neighbouring villages to mature tourist villages. For instance, in Calangute, 49% of the workers in the accommodation sector came from other villages. In the restaurants/shacks sector it was 25%, and 15% in the other establishments, which comprised public call booths, handicraft and garment shops, etc. (TERI 2000).

The developing/supporting tourist villages are not located on the coast; hence, there is very little participation in fishery. The only village with a high stake in fishing is the creek-based Nerul. Interestingly, the stakes in fishery here are even higher than those of the coastal villages. Possible reasons could be the existence of functioning *khazans* in this village and two fishing jetties on either side of the village (i.e. Betim and Sequerim that have encouraged fishing activities in this village). Further, unlike other villages, Nerul indicates a greater diversification amongst those with interest in tourism, as 67% of the households are engaged in tourism along with the tertiary sector; 42% are engaged in agriculture and tourism, 25% in tourism and fishing; and only 8% solely in tourism.

These changing patterns of primary activities in coastal villages reflect the nature of tourism and the inherent incentives, which influence choices. People in these villages are engaged mostly in low-budget tourism, which runs for a short period of the year. This enables them to engage in more than one activity. Thus, agriculture is dominant in the monsoon and tourism after the monsoon; however, this is not true for fishing. Mechanical fishing (legally banned in the monsoon because it is the breeding season) is carried out on a low scale in the monsoon. Our research indicates that agriculture has a better chance to co-exist with tourism as compared to fishing. Three main factors suggest this.

- 1 The fishing and tourism seasons overlap and so compete for the householder's time.
- 2 Belonging to the fishing community is seen increasingly as a less preferred option relative to belonging to the rentier class, leasing out rooms to tourists or even providing other services such as laundering or cooking, because of the social markers attached to the former activity.
- 3 The 'creeping expropriation' of the fisher from the coast, as tourism appropriates the space formerly used by the fishers, means that there is lesser space to pull in the nets, dry them out, and even lay out the fish for distribution or drying.¹³

Another factor is that, in some areas, water sports disturb the near-shore fish breeding sites, compelling the fishers to move further out to sea, which requires them to invest in motorized boats.

These factors, taken together or by themselves, we believe, point to the potential of a greater shift, relative to other primary activities, from fishing to tourism in coastal villages.¹⁴ Coastal tourism competes with fishing spatially, temporally, and socially, and hence may easily displace fishing in coastal villages where it locates or is located.

In our study area, the incentives to move out of agriculture are more complex and less related to tourism. Higher input prices, lower product prices, changed product preferences, non-availability of labour, non-agricultural incomes such as remittances or public service incomes, tenurial laws, and other social processes combine to make agriculture increasingly unattractive.

This is particularly the case of the *khazan*, a multifunctional coastal ecosystem, whose uses emerged over time from the management practices adopted. This land, previously under coconuts, salt panning, paddy production, and recreation, is being converted to built area to support tourist accommodation and recreation (Noronha, Siqueira, Sreekesh, *et al.* 2002). The displacement of agriculture by tourism is thus through the supply of agricultural land for tourism purposes by people who have already distanced

¹³ Sourced from interviews with local fishers

¹⁴ Traditional fishing has also been badly affected due to trawlers; this too has made people move from fishing to tourism. *Rampons* (fishing nets) of the traditional fishermen are put closer to the shore, but these get caught in the trawlers. Though trawlers are supposed to fish in waters that are five fathoms away from coast, this rule is not implemented. (Sourced from interviews with local *panchayat* officials)

themselves from agriculture. For those still engaged in agriculture, there are possibilities of co-existence with tourism.

Table 3 Households having stakes in tourism and not cultivating their agricultural lands

Village	Stake in tourism, not cultivating agricultural land (%)
Anjuna	43
Calangute	42
Candolim	33
<i>Mature tourism</i>	40
Arpora	50
Assagao	57
Marra	50
Nagoa	0
Nerul	0
Parra	25
Reis Magos	0
Saligao	25
Verla	0
<i>Developing/supporting tourism</i>	27

Note Weighted averages are used

Source Authors' survey

Table 3 shows details of households in the study region, which are not cultivating agricultural land but are involved in tourism. About 20% of the households owning agricultural land in our study area do not cultivate it. About one-third of these are engaged in tourism activities.

This is higher in the villages with mature tourism (40%) and lower for those with developing/supporting tourism (27%).

Involvement of women in tourism

The household survey showed that in the entire study area, 25% of the main workers were women. From the survey data, it is observed that a large majority (73%) of working women are in the tertiary sector, followed by the agriculture sector taking up 12%. The percentage of working women in the tourism sector is very low at 6%. It is a little higher in villages with mature tourism (8%) as compared to villages with developing/supporting tourism (3%). The study villages

together have the same percentage of women workers in the tourism sector and the secondary sector. But in the villages with mature tourism, 9% of the workforce is in the tourism sector while only 3% is in the secondary sector. The reverse is seen for the villages with developing/supporting tourism.

We believe from our fieldwork that these figures are on the lower side due to non-reporting of such 'secondary occupations' by a lot of households engaged in renting rooms. This is also strategic as a number of these rooms are rented without proper licences from the *panchayats* / tourism departments to avoid taxation. Further, the easy convertibility from house to guest-rooms for tourists enables non-registration.

However, the survey of the accommodation sector revealed a high percentage share of women's involvement in renting out rooms, as will be seen in the following chapter. The data also reveals that the majority of the working women are young (below 30 years). This holds true for the tourism sector too. Most of the women in tourism are below the age of 30 years; this is still higher for villages with mature tourism as compared to those with developing/supporting tourism.

Nature of local involvement in tourism

The study area has seen a large increase in commercial activities related to tourism, such as restaurants, bars, travel agencies, communication facilities, beauty parlours, and cyber cafes. Figure 2 and Table 4 provide a description of the participation in tourism and the nature of this participation. The following types of activities related to tourism are observed in the study area.

- 1 Owning or operating a hotel/restaurant, shack, or shop
- 2 Renting out rooms to tourists and others
- 3 Hiring or owning a taxi (car/motorcycle)
- 4 Selling goods and services to the industry (laundry, garbage collection, entertainment, etc.)
- 5 Others: working in hotels/restaurants, carrying out tourism-related activities such as driving.

Ownership by local households of hotels/shacks, restaurants, and shops is the highest in Candolim, followed by Anjuna and Calangute. The study area altogether has 10% households with ownership of the

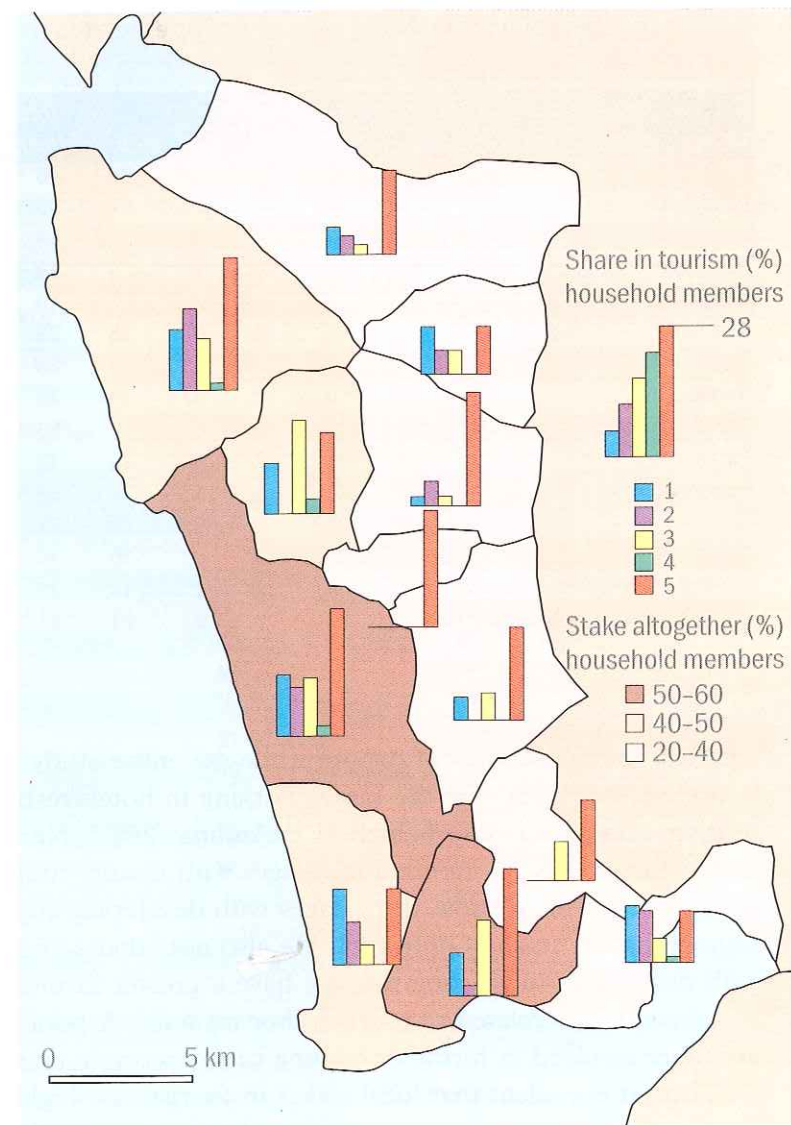


Figure 2
Percentage share of households in tourism

above while these three villages have 16%, 13%, and 13%, respectively. Ownership of rooms rented out as guesthouses in all study villages is 8% and is highest in Anjuna (17%) followed by Reis Magos (11%).¹⁵ Ownership of car/motorcycle taxis is the highest

¹⁵ The renting out of rooms in Reis Magos is not only for tourists. This village is situated close to the capital city of Goa (Panaji) and accommodates migrants who cannot afford to live in Panaji. It also accommodates those who are indirectly involved in tourism and cannot afford the high cost of living in the tourist villages.

Table 4 Percentage stake of households in types of activities related to tourism in study villages

Village	1	2	3	4	5	Total % stake of households
Anjuna	13	17	11	1	28	48
Calangute	13	10	12	2	27	53
Candolim	16	9	4	0	16	44
<i>Mature tourism</i>	14	12	10	1	24	49
Arpora	11	0	20	3	17	40
Assagao	6	4	2	0	18	28
Marra	0	0	8	0	17	25
Nagoa	0	0	0	0	25	25
Nerul	9	2	16	0	27	53
Parra	2	5	2	0	24	31
Reis Magos	12	11	5	1	11	36
Saligao	5	0	6	0	20	31
Verla	10	5	5	0	10	30
<i>Developing/supporting tourism</i>	7	4	7	1	18	35
Total	10	8	8	1	21	41

Source Authors' survey

amongst the households of Arpora while the entire study area has 8% households with stake in the same. Working in hotels/restaurants and tourism-related activities is highest in Anjuna (28%), Nerul (27%), and Calangute (27%). While the villages with mature tourism have a 24% stake in this section, the villages with developing/supporting tourism have a stake of only 18%. We also note that some villages with developing/supporting tourism have a greater involvement in certain activities related to tourism. For instance, Arpora and Nerul are more involved in hiring or owning car/motorcycle taxis.

Thus, it is evident that local stakes in tourism are higher in the mature tourist villages. Amongst these, Anjuna has a high stake in terms of ownership of hotels/shacks, restaurants, and shops; in renting out rooms and guesthouses; and in providing workers for hotels/restaurants and tourism-related activities. The profile of tourists catered to in Anjuna is different from the other two mature tourist villages. This village is a home to 'backpacking tourists', locally popular as 'hippies'. These tourists want to experience the real Goan culture and tradition, which is possible by living with locals and interacting with them (Wilson 1997). Drug use is also a consideration (Sengupta 2002). Given these motivations to travel, the quality

and type of tourist infrastructure is not a major consideration. Locals can meet their demands, which require small and average investments.

Besides the above forms of involvement in tourism, there is a large sector of the population – both local and migrant – that benefits from tourism indirectly. The survey was not able to capture this indirect or multiplier effect of tourism, which benefited the locals. This is because it was difficult to segregate these activities as tourism-related. Some of the activities are construction, tailoring, carpentry, electrical work, and car and motorcycle repair/maintenance. Table 5 presents a typical profile, developed by us, of those involved in tourism.

Table 5 Profile of those with stakes in tourism (percentage respondents)

Variable	Classes	Mature tourism	Developing/supporting tourism	Whole study area
Place of residence (with reference to the sea)	<500 m	30.0	1.5	21.0
	>500 m	70.0	98.5	79.0
Migration	Locals	98.6	96.0	97.5
	Migrants	1.4	4.0	2.5
Age group	Up to 30 years	44.0	55.0	49.0
	31–45 years	45.0	31.0	39.0
	45 years and above	11.0	14.0	12.0
Sex	Male	92.0	94.0	92.5
	Female	8.0	6.0	7.5
Education	No education	4.0	4.0	4.0
	Up to Standard 10	69.0	68.0	69.0
	Standard 10 and above	27.0	28.0	27.0
Income	<= Rs 2000	28.0	35.5	31.0
	Rs 2001–5000	46.0	37.6	42.5
	>Rs 5000	26.0	26.9	26.5

Note Weighted averages are used

Source Authors' survey

The analysis suggests that amongst those with a stake in tourism, 21% live within 500 m from the coast. The major share of the population with a stake in tourism in this study area is formed by the locals; the share of migrants is less than 5%. It is interesting to note that it is the younger population (<30 years) that has a stake in tourism. While 49% of those with a stake are in the age group of 30 years and below, 39% are within the age group of 30–45 years and a very small proportion of 12% are above 45 years. Women have a very small share; only 7.5% of the stakeholders in the entire study region

are women. A majority of those with a stake in tourism are educated till Standard 10. In the entire study area, 69% of the population with a stake are educated till Standard 10. About 60% of this group is educated till Standards 8–10 and there is minimal difference in the villages with developing/supporting tourism and villages with mature tourism. A majority of those with stakes in tourism are in the middle-income group (42.5%). While it is lowest in the high-income group (26.5%), 31% are in the low-income group. A similar pattern is observed in the villages with mature tourism and developing/supporting tourism.

Beach shacks and local stakes¹⁶

A peculiar 'localization' of tourism is observed in the beach shacks, which, for political and economic reasons, have been reserved for local people. Beach shacks are similar to restaurants and are a part of the food and beverage sector of the tourism industry. Operating on or near the beach, only during the tourist season from mid-September to end-May, these cater mainly to tourists. Located just above the high tide line on public space or private properties, these structures have a rustic appearance as they are built of organic materials such as wood, bamboo, and matted leaves. These materials are used due to the temporary nature of these structures as well as their location within the Coastal Regulation Zone area.¹⁷

The services provided at beach shacks are more post-modernist for the following reasons.

- 1 Blurred distinction between front and back,¹⁸ and inside and outside of the beach shack¹⁹
- 2 Informal relation between tourists and shack owners and staff²⁰
- 3 Personalized or customized service.²¹

¹⁶ See Kazi and Siqueira (2001) for further details

¹⁷ Coastal Regulation Zone legislation regulates construction within a specified distance from the beach, depending on the zone that area comes under.

¹⁸ The front refers to the most gazed area, and the back to the area hidden from the gaze. In a shack, the tourist is free to enter the kitchen and at times also assists in making his/her meal.

¹⁹ Service areas of the shacks are not demarked by physical boundaries; chairs and tables may be set up outside the shack, closer to the water.

²⁰ The shack owner and staff relate with the tourist on a first name basis, there is no 'Sir-ing' of the tourist, as commonly observed in restaurants and hotels.

²¹ Shacks go out of the way to satisfy clients, for instance prepare a dish, which is not on the menu, adjust timings to suit clients, etc.

The nature of services offered at shacks, the lower price range, and the ambience make them serious competition for the hotels²² and restaurants in the region.

The licensing of shacks has become an issue of contestation for limited space along the beach. This contest has resulted in conflict between the shacks and hotels, between the shacks and the government, amongst shacks themselves, and increasingly with local fishermen. The contest between shacks and hotels is over tourists and coastal resources in order to augment their earnings. The contest between the government and shacks is over the nature of shack licensing. This is because the application form contains certain clauses safeguarding the interests of the hotel lobby; it is based on a lottery system that jeopardizes the interest of the traditional shack owners and the allocation of the location of shacks.²³ The conflict amongst shack owners is on account of mushrooming of illegal shacks, which eats into their business. The conflict with fishermen is over space, as shacks are typically on the beach, and as discussed earlier, are used by fishermen in their fishing supports.

Initially the local village *panchayat*²⁴ regulated the licensing of shacks and, in most cases, favoured applications from the village itself. Since 1995, the state government took over the licensing of beach shacks and the preference for locals still continues. Thus, shack owners by and large are local villagers, unless they are sublet to non-locals. However, the workers are a mix of locals and migrants. Cooks and dishwashers are often migrants, whereas waiters are locals or relatives of the owner.

It is interesting that when the power shifted from a lower to a higher level of government authority, it did not spread the scope for applicants across a wider region. Historically, this has been an area of tourism activity in which the locals have actively participated and their participation has been safeguarded by a strong interplay of local and regional level politics, reflecting the dependence of the locals on this activity. Increasingly, this issue is gaining importance in the context of electoral politics.

²² Hotels sell rooms at a cheaper rate to attract tourists and expect to profit from the food and beverage sections, which have been showing poor sales. In response to this, some hotels have started selling packaged rooms with inclusive meals.

²³ See Kazi and Sequeira 2001 for more details

²⁴ Local self-governing body, at the village level, the third tier of government in India.

Guesthouses

One characteristic of the tourism found in Goa is the availability of cheap accommodation. In the tourist areas, houses are rented out to tourists for long periods of time, varying between a week and four months. The type of guests catered to are independent travellers, who want to explore the tourist destination by themselves and adapt easily to situations. They live in houses of the host population and live a life similar to theirs. The maximum comfort they require is that of a fan; they are not particular about the type of toilet (Western style with flush, bathrooms with shower, 24-hour hot water, and so on) and are content drawing water from wells and heating it on fuelwood for their baths.

These guesthouses, which are rented out to tourists, are often rooms within the house or parts of the house where both tourist and host live together. At times, a whole house may be rented out. Often, these guesthouses do not require any marketing, as they rely on the same clients, who patronize their guesthouses in subsequent years or recommend them to their friends and relatives. There is a greater bonding between tourists and guesthouse owners.

Another characteristic of these guesthouses is that locals own them. The high local involvement is attributed to the following reasons.

- 1 Ownership of houses and land makes it easier for locals to rent them out to tourists.
- 2 Locals own land and houses close to the sea, as these have traditionally been owned by the fishing community, toddy tappers, and coconut orchard owners and tenants. Most guesthouses are located within this area as the Coastal Regulation Act prohibits new construction within 200–500 m from the sea, depending on the zone that the coastal area falls in.
- 3 The attitude of the locals towards the foreign tourists helps matters. Goa is popular for its friendly, hospitable, and helpful locals. This cosmopolitan nature of the Goans has made them receptive to foreign tourists.

Taxi operators

The low level of required investment (within 2–5 lakh rupees) allows locals to participate in this activity. Further, the job timings are flexible and so it allows for people with dual occupations to enter this field. A peculiar form of localization is seen in this activity, where taxi

stands in public places are reserved for taxi operators belonging to that village itself. This does not mean that all taxi operators in a village belong to that village itself, as taxi operators from other villages can operate from taxi stands that are outside hotels, shopping arcades, etc. This peculiar set-up safeguards the interest of locals and ensures monetary returns to go back to the villagers supporting tourism.

Rent-backs

Rent-backs are small flats or studio apartments, which constitute a complex and are sold as second homes to non-resident buyers by a builder. The builders then 'rent back' the flats and convert the entire complex into a hotel, using them as flats to accommodate tourists during the tourist season. The main buyers were Goan migrants to the Gulf with an interest in investment in real estate. Rough estimates from brokers suggest that about 65% of the rent-backs are owned by non-resident Goans, 20%–25% by Goans from India's metropolises, and 10%–15% by natives residing in Goa (Siqueira 1999). Builders opting for promotion of rent-backs are usually from Goa. They prefer rent-backs as they require much less capital and the construction is undertaken through advances paid by purchasers of the studio apartments.

There is no data on the total number of rent-backs. However in the coastal stretch along Calangute–Baga–Candolim alone (where rent-backs are mostly located), a total number of 43 rent-back complexes with room capacity of about 2000 is estimated. These rent-backs have contributed to a considerable change in land cover (TERI 2000).

Factors associated with local stakes

The study sought to establish the factors associated with the stake in tourism as a primary activity. Hypothesized factors, such as proximity to the coast, migrational status, gender, age, education, family stake in agriculture, and family size were tested for their association with local stakes using the Chi-square test. Table 6 shows the results of this test for the study area as whole.

The results reveal that tourism, as a primary occupation, is associated with the level of family income, proximity to the beach, age of the individual, and gender and education levels at 5% level of

Table 6 Chi-square results for entire study area

Variable	Chi-square	df	P
Income	6.561	2	0.038*
Distance from the sea	8.081	1	0.004*
Migrants	2.468	1	0.116
Village	14.425	1	0.000*
Age group	43.911	2	0.000*
Sex	47.192	1	0.000*
Education group	18.837	2	0.000*
Stake in agriculture	.439	1	0.507
Family size group	.172	1	0.678

Note df – degrees of freedom; P – probability value;

* – significant at 5% level of significance; ** – significant at 10% level of significance

significance. Also, the degree of participation differs across mature and developing tourist villages. However, no significant association is observed with stake in agriculture and family size. Having established the variables that can be used as predictor variables, the direction of the association of these variables on the stake in tourism was computed using logistic regression. The independent variables considered here are only the variables, which have significant associations with the stake in tourism. With these independent variables, the logistic regression was run using stake in tourism as the dependent variable. This analysis (Table 7) revealed the following.

- Respondents in older age groups, females, and those who are far from the coast (more than 500 m) have a lower stake in tourism.
- Those living in villages where the tourism industry is less developed have a smaller participation as compared to those in mature tourist villages.
- Education and income do not emerge as significant predictors in the logistic model.

The pattern of association between stake in tourism and other factors in the mature tourist region, tested using the Chi-square test (Table 8) reveal that location (proximity to the sea), age group of working members, gender, and education are significantly associated with stake in tourism at the 5% level. Family income is also associated with stake in tourism at the 10% level of significance.

Table 7 Logistic regression coefficients, standard errors, and significance

Variable	B	SE	Wald	df	Sig.	Exp (B)
Proximity to the beach	-0.445	0.227	3.852	1	0.050	0.641
Village	-0.682	0.175	15.106	1	0.000	1.978
Age group	-0.707	0.121	33.909	1	0.000	0.493
Sex	-1.876	0.304	38.181	1	0.000	0.153
Education group	-0.028	0.161	0.030	1	0.862	1.029
Income	-0.167	0.114	2.175	1	0.140	0.846
Constant	2.693	0.727	13.728	1	0.000	14.780

Note For each variable in the equation, B – coefficient; SE – standard error of B; Wald – Wald statistic; df – degrees of freedom; Sig. – significance; Exp (B) – estimated odds ratio

Table 8 Chi-square results for mature tourism villages

Variable	Chi-square	df	P
Income	4.896	2	0.086**
Distance from sea	7.462	1	0.006*
Migrants	0.830	1	0.362
Age group	26.839	2	0.000*
Sex	23.870	1	0.000*
Education group	10.744	2	0.005*
Stake in agriculture	0.342	1	0.559
Family size group	0.181	1	0.670

Note df – degrees of freedom; P – probability value;

* – significant at 5% level of significance; ** – significant at 10% level of significance

The logistic regression analysis (Table 9) revealed the following.

- Household members in older age groups, females, and those who are far from the coast (more than 500 m) have a smaller stake in tourism.
- Again education and income groups show no significant differences in the logistic model.

Similarly, in developing/supporting tourism villages, the association pattern between stake in tourism and other predictor variables was tried using Chi-square; the results are represented in Table 10. The chi-square results show associations between only three variables in this region. i.e. age, gender, and education are associated with stake in tourism. Income is associated with stake in tourism in these villages at the 10% level of significance.

Table 9 Logistic regression coefficients, standard errors, and significance

Variable	B	SE	Wald	df	Sig.	Exp (B)
Distance from sea	-0.589	0.264	4.980	1	0.026	0.555
Age group	-0.674	0.167	16.341	1	0.000	0.510
Sex	-1.648	0.359	21.050	1	0.000	0.192
Education group	0.186	0.218	0.721	1	0.396	1.204
Income	-0.178	0.152	1.370	1	0.242	0.837
Constant	2.994	0.849	12.442	1	0.000	19.969

Note For each variable in the equation, B – coefficient; SE – standard error of B; Wald – Wald statistic; df – degrees of freedom; Sig. – significance; Exp (B) – estimated odds ratio

Table 10 Chi-square results for developing/supporting tourism villages

Variable	Chi-square	df	P
Income	5.491	2	0.064**
Distance from sea	0.211	1	0.646
Migrants	1.004	1	0.316
Age group	18.711	2	0.000*
Sex	24.730	1	0.000*
Education group	8.594	2	0.014*
Stake in agriculture	0.162	1	0.688
Family size group	0.301	1	0.583

Note df – degrees of freedom; P – probability value; * – significant at 5% level of significance; ** – significant at 10% level of significance

The logistic regression (Table 11) reveals that females and aged persons have lower stakes in tourism. Similarly, the higher the income, the lower the stake in tourism, as observed in developing/supporting tourism villages. However, educational groups are not significant, both in the entire study area and in the mature tourist villages.

Table 11 Logistic regression coefficients, standard errors, and significance

Variable	B	SE	Wald	df	Sig.	Exp (B)
Age group	-0.698	0.151	21.453	1	0.000	0.498
Sex	-2.061	0.435	22.395	1	0.000	0.127
Education group	0.045	0.208	0.046	1	0.830	1.046
Income	-0.307	0.143	4.606	1	0.032	0.736
Constant	2.470	0.779	10.060	1	0.002	11.823

Note For each variable in the equation, B – coefficient; SE – standard error of B; Wald – Wald statistic; df – degrees of freedom; Sig. – significance; Exp (B) – estimated odds ratio

Conclusions

While the previous chapter discussed tourism as a driving force responsible for change, this chapter discusses the degree of 'localization' of tourism and its social basis. The objective of this exercise was to assess the extent and nature of this localization and the need to support tourism activity in order to ensure that this lasts. In this chapter, a number of factors associated with people's stake in tourism were examined. We found that education, gender, and age were important determinants of this stake. In the tourist villages, locals have also been in the forefront of demand for land conversions and instrumental in selling land to the tourist industry (TERI 2000). Our work suggests that tourism has drawn in the youth and the less skilled. This is supported by the age structure of those with stakes in tourism.

To recapitulate, we found that young people were involved; that the education level of the locals involved was low and people did not have any special trained skills for the hospitality trade or any alternative skills that they could use if this trade disappeared; that although women reported lower involvement in the household survey, in our hotel/establishments survey, there was a high involvement of women as owners and managers in the low-budget hotels, especially guest-houses,²⁵ which suggest that this trade can support the evolution of women as entrepreneurs.

Despite these involvements, the qualitative research indicates a feeling amongst local people that the gains from tourism are not substantial. There is a growing feeling that large hotels and external groups are cornering the economic benefits while the local population has to bear the social and environmental burden. There have been instances of locals fighting to prevent major hotel projects, such as the proposed Japanese village at Morjim, and also extension programmes of hotels. Locals view migrant groups with a feeling of distrust, as they feel that the lack of stake in land within the tourist village allows these groups to have short-term interests in tourism; there is very little interest in what happens to the region as a tourist destination over a longer period of time. The migrant groups are seen as 'floaters', who will move on if the region loses its tourist attraction (Herald 2002).

²⁵ See the next chapter.

This conflict over resources and over-appropriation of tourists has its manifestations in the issue of shacks and taxis,²⁶ where locals feel that their interests have to be safeguarded at all costs. Locals feel that the state government policy towards tourism has supported the development of large hotels and government-run accommodation but not that of the local people as hosts (Dantas 1986).

The implications of our findings in this chapter to a socially relevant tourism policy are as follows.

- *Attention to the shifts in occupational distribution to prevent complete loss of activities with longer and more secure time spans*
Tourism has resulted in people shifting away from traditional occupations; more and more people are getting engaged in tourism-related activities, thereby resulting in loss of skills in other occupations such as agriculture and fisheries. Tourism can be transient and overexposure can cause the tourist to move away, as has happened in many other destinations of the world. Hence, a precautionary slant has to be adopted in policy to ensure that local communities are not affected adversely in the event of such an occurrence.
- *Attention to employment seasonality, which is largely witnessed in small sectors of the tourism industry*
Due to the simultaneous demand from all the sectors of the tourism industry, it is not cost-effective for the hotels to hire skilled labourers during the peak season(s) and to lay them off during the off season. So, it is the unskilled workers that find employment in season and are laid off during the off-season.
- *Attention to the education, training, and skills attained by the youth in local communities*
Tourism can be a seductive activity, luring the youth with easy work and money. In the absence of attention to education and skill formation trends, there may be a loss of interest in more rigorous training as easy money can be made by providing such services to tourism as singing and dancing. In the event of tourism fading as an activity, we have a lost generation in terms of skills and readiness to avail of opportunities available in other job markets.

²⁶ Taxi owners residing in the tourist village are permitted to park their taxis at the main taxi stands of that village. This is done to safeguard the interest of local taxi drivers. Taxi drivers from neighbouring villages operate by parking near hotels.

- *Focus on the training required for tourism so that servicing this trade is done in a skilled manner*
These skills will not only infuse a greater professionalism in the services provided, but also empower local communities and increase their manoeuvrability in terms of locations and occupations.
- *Focus on supports to the households to improve the domestic economy, especially by improving its investment capacity, income, and professional qualification*
Parallel to financial support to develop tourism infrastructure, it is important to organize training programmes on management and entrepreneurial innovation, which can give the local population a higher capability to participate in income generation through tourism.
- *Examination of the implications of local involvement on the function of the local panchayats*
What constraints or opportunities does this provide for good governance? For instance, it is seen that the involvement of locals in tourism activities is determined by their financial strength. Local investment is seen in the category of 1–5 lakh rupees and thus the activities they are involved in are renting out rooms, running restaurants or shacks, operating taxis, hiring out bikes, etc. Besides having stakes in tourism, this group of people is a force to reckon with in local politics; they comprise a sizeable vote bank in the village. This has resulted in appeasement policies for these groups by local governing authorities and, to some extent, it may be causing a deliberate ignorance of the existence of social ills and illegalities.
- *Examine health security and well-being*
This is a major issue that emerged in our study and requires further investigation. It is being increasingly recognized that population movements influence the spread of infections. One such infection noted in the tourist areas is HIV/AIDS. Studies in other parts of world bring to our attention sexual exploitation of economically weaker populations by tourists from wealthier countries (Hall 1997). Another emerging security issue related to global tourism is that of sex tourism, especially risking the children of migrant workers who come in search of employment. There have already been documented cases of paedophilia in

some tourist locations in our study area (Tombat 2000). The problem of tourism-related paedophilia is essentially one of providing protection to all children. Currently, locals believe that the children of migrants are not 'our children' but the children of 'outsiders' (Tombat 2000). Consequently, no questions are asked if they are not sent to school. They are expected to fend for themselves and also augment the family income. They are easy prey for paedophiles. There is a need for village *panchayats*, the police, and other government bodies to identify the vulnerability of these children as a problem and develop tri-sector partnerships with the civil society and industry to respond to this problem.

■ *Pricing of essential commodities*

The pricing of essential commodities should be safeguarded, as costs of vegetables, fish, and other seafood go up during the tourist season. Specifically, fish is a part of the staple diet of the coastal areas. High prices or non-availability of fish deprives locals of nutritious and regular food practices.

End-note

Logistic regression technique

Logistic regression is a mathematical modelling approach that can be used to describe the relationship of several independent variables to a dichotomous dependent variable (Kleinbaum 1992). This can be used whenever an individual is to be classified into one of two populations (say groups of 'aware' and 'not aware' or 'know' and 'do not know'). The fundamental assumption in logistic regression analysis is that $\ln(\text{odds})$ is linearly related to the independent variables. No assumptions are made regarding the distribution of the predictor variables.

The model assumed is

$$\ln(\text{odds}) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p$$

In terms of the probability of belonging to particular population, say I, the equation can be written as

$$I = \frac{1}{1 + \exp[-(\alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p)]}$$

This equation is called logistic regression equation.

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