

Consequences and Challenges of Tourism and Seaweed Farming: A Narrative on a Coastal Community in Zanzibar

Eva Tobisson

The Nordic Africa Institute, PO Box 1703, SE - 751 47 Uppsala, Sweden.

Keywords: Zanzibar, coastal livelihoods, seaweed farming, tourism

Abstract — Although international influences have affected Zanzibar for centuries, some rural areas have remained largely unaffected by globalization until a few decades ago when Zanzibar emerged as a tourist destination and commercial seaweed farming was introduced. This paper focuses on local responses to these two external drivers of change, from the perspectives of women and men on the south-eastern coast of Unguja Island where they strive to improve their livelihoods. Longitudinal social anthropological surveys using interactive methods were used to reveal the perspectives and coping strategies of individuals under multidimensional poverty. The study thus focused on micro-level diversity and diversification in the modes of livelihood over time and within broader national and global frameworks. The tourist boom in the 1990s was followed by fluctuations and a decline in backpackers who had until then benefited the local economy. Seaweed production, undertaken almost exclusively by women, has steadily increased since the late 1980s. Although it entails hard work for limited returns, seaweed has become highly significant in boosting women's empowerment and securing their livelihood; economic diversification is central to the livelihood of poor women.

INTRODUCTION

The coastal areas of East Africa host some of the world's richest biological resources and represent substantial economic, social and cultural values for its inhabitants, and for people who live beyond the coast but depend on marine and coastal resources for their food needs and income. The interface between the land and the sea and the recurrent processes of tidal flux, monsoons and precipitation serve as the major determinants of life and

its perpetuation in rural settlements along the coast. A combination of marine and terrestrial resources, such as coral reefs, intertidal flats, mangroves, sea grasses, algae and arable land and forests, constitute the foundation for the highly diversified coastal smallholder production regimes. Typical natural resource-based activities are fishing and gleaning in shallow waters, crop and tree production, livestock rearing and aquaculture. Coastal dwellers are also often involved in petty trade, handicraft production and tourism.

The wealth of natural resources offers opportunities for production and livelihoods, but coastal communities are often very susceptible to local and external events and processes of change, and exhibit a high incidence of poverty in multiple dimensions (Mwaipopo *et al.*, 2011). The causes of poverty are complex and interrelated. One reason is the high exposure to the effects of environmental and climate change. There are signs of serious ecosystem degradation in many East African coastal areas, evidenced by declining fish yields, the deterioration of coral reefs and a reduction in mangroves (e.g. Francis & Bryceson, 2001). Moreover, the global financial crisis, economic recession and fear of terror attacks have, in many areas, reduced tourism and hence employment and market opportunities for coastal populations. An increasingly globalized market has led to increased prices of food, essential consumer goods and fuel, often with devastating effects on consumers who have limited resources. Another reason behind poverty is an increased competition for resources and employment opportunities, following the immigration of people trying to escape poverty and vulnerability in inland areas.

Livelihood diversity is essential for rural coastal dwellers, especially individuals and families who have limited resources and who therefore need to spread their risks (Porter *et al.*, 2008). The aim of this paper was to reveal how women and men (in particular the former) who experience multidimensional poverty in a coastal setting are not passive victims of circumstance, but actively strive to use their limited resources in ways they believe will curtail risks and optimize the outcome of livelihood choices. The study was undertaken in Jambiani village on the south-eastern coast of Unguja Island, the largest and most densely-populated island in the Zanzibar Archipelago, some 35 km off the coast of mainland Tanzania. An understanding was sought of the micro-level diversity and diversification of modes of livelihood over time, as well as of the effects of government policies and global processes (e.g. climate change and increasing globalization of the economy) on local livelihood options.

Although international influences have affected Zanzibar for centuries, their consequences on the population and resources have been uneven. Mercantile history has only marginally affected the more remote areas, such as the one investigated in this study. These areas were of peripheral economic interest to the ruling powers and their infrastructure remained very poor. The inhabitants were, therefore, until fairly recently left to pursue a lifestyle orientated towards satisfying needs, based on local resource extraction. However, the situation changed dramatically with the introduction of seaweed farming for the international market in the late 1980s and a tourist boom in the 1990s. Through these, the area and its inhabitants were drawn into broader global and national economic frameworks, with implications for local livelihoods. Indeed, research in different parts of Unguja Island has shown that both seaweed farming and tourism have brought some negative effects and increased the economic vulnerability of the individuals and communities involved (Gössling, 2003; Fröcklin *et al.*, 2012). This investigation thus examined some of the local responses to and consequences of these external economic drivers of change, from the perspectives of women, men and families in Jambiani.

METHODS

The paper is based on short periods of social anthropological field research (3-4 weeks), conducted in Jambiani more or less every year between 1998 and 2011. The principal research methodology used was what anthropologists call participant observation, i.e. a range of qualitative and interactive methods in which the researcher's participation in the daily lives of local people is central. Data collection methods included e.g. semi-structured interviews, informal discussions, life histories and observations. While participant observation is commonly undertaken over an extended, continuous period of time (often a year or more), recurrent short visits over more than a decade enabled a longitudinal assessment of the ways in which individuals and families dealt with new situations associated with volatile and changing macroeconomic, social and political environments.

THE NARRATIVE

Zanzibar

Zanzibar exhibits all of the typical features of the East African coastal zone. The interface between land and sea in Tanzania is a significant variable for cultural formation along the entire coast, including the islands. The vast majority of coastal inhabitants, from southern Somalia to northern Mozambique, belong to the waSwahili who proudly regard themselves as maritime people (Prins, 1965; Middleton, 1992; Sheriff, 1987). The cultural characteristics of the greater group serve as initial, common values for the formation of multiple identities (Middleton, 1992; Larsen, 2009; Caplan, 2007).

Zanzibar's marine and coastal ecosystems exhibit a high diversity of biotopes and species that coastal dwellers depend on for dietary needs as well as cash income. They are rich in coral reefs, seagrasses and algae, sandy beaches and intertidal flats, and, in certain areas, mangroves. However, they are also increasingly subject to degradation due to natural and human causes (Mohammed *et al.*, 2009; Mustelin, 2009). Climate change affects ocean temperatures and hence the health of corals and the reproduction and migratory routes of fish. Coral reefs and mangrove forests are not only important habitats for fish and crustaceans, but they also serve as barriers protecting the shore. The human factors behind environmental degradation include overfishing and the use of destructive fishing practices, pollution and excessive harvesting of mangroves (Lange & Jiddawi, 2009). Most of the fisheries in Zanzibar are small-scale, artisanal and nearshore for the local market, using lines, spears, nets and, in some areas, baskets (*madema*) and fish traps (*uzio*). Where traps and baskets are used, or where rock formations provide habitat for fish, the seabed is subject to customary regulations guiding access to particular sites. These rights commonly follow the same rules and regulations as the customary rights applying to arable land, i.e. the fishing sites are common property of a kin group and needs, as well as effective use, are requirements for continued access (Tobisson *et al.*, 1998). The information on trends in fish catches in Zanzibar

is discontinuous, but most sources suggest they have decreased over a ten- to twenty-year period (Francis & Bryceson, 2001; Tobey & Torell, 2006; Feidi, 2005). Jiddawi *et al.* (2009) report that, while official sources record a rise of 24% in the annual fish catch between 2000 and 2007, their interviews with local fisherfolk suggested that total catches as well as catch composition, size and diversity have deteriorated. My surveys supported these observations.

Most of coastal agricultural land in the region is located in the so-called coral rag zone of dry, evergreen bushland. The shallow and rocky soils are difficult to work, but they are nutrient rich and able to sustain the natural forest cover (Krain *et al.*, 1993). Mangroves on Unguja Island are concentrated in only a few areas. In addition to serving as barriers protecting the shore, they provide timber for construction and boatbuilding as well as firewood and charcoal. But dependence on terrestrial resources on Unguja Island is clearly limited.

A semi-autonomous Revolutionary Government governs Zanzibar as part of the United Republic of Tanzania. While some issues of development and governance are union-wide (e.g. constitutional matters, foreign policy and defence), the majority are non-union (e.g. the judicial system, tourism and natural resource and environment management) and are thus dealt with separately by the regional governments. The Zanzibar Government has established its Development Vision 2020.

Although the Zanzibar national economy has been progressing, a Household Budget Survey 2004/2005 showed that almost half of the population had an income below the basic needs poverty line, and 13% below the food poverty line. Preliminary analysis of the results of the 2009/2010 Household Budget Survey suggests that improvements since then have been marginal, and that a significant proportion of Zanzibar's inhabitants are still income-poor (Zanzibar Human Development Report, 2009), mainly in the rural areas where ~70% of the population live. The non-income dimensions of poverty remain obstacles to development for many people and include poor access to public and social services. Diminishing and degraded natural resources

further exacerbate poverty (Tobey & Torell, 2006; Francis & Bryceson, 2001; Feidi, 2005). Nevertheless, Zanzibar has fared relatively well in terms of nutrition, health and education indicators in recent years. The enrolment rate for basic education (95.7% in 2008) is high compared to other parts of East Africa, with girls registering a higher enrolment (Zanzibar Human Development Report, 2009).

The ‘Jambiani way of life’

‘We are family. We care about each other. There are no strangers here. We work the land of the ancestors and get our fish from the ocean. If you go away, you can always return. Why do you think the water returns to the shore after disappearing far out in the ocean? The water wants to return home – just like us.’

There are some fundamental values that Jambiani women and men, elderly people in particular, bring out when explaining who they are and what they mean by a ‘Jambiani way of life’ (*maisha ya Jambiani*), an expression they keep referring to. The values include a strong kinship and family organisation, firmly tied to territory, social cohesion and the significance of building and maintaining social capital. These are values grounded in tradition. They remain stable and serve as the foundation for ways in which individuals and families deal with new situations, including the integration of their community into the broader context of Zanzibar, the nation and the world beyond.

They consider themselves descendants from a common ancestor, i.e. the founder of the community who, according to legends, was the first to settle in the area and thereby secured user-rights for his descendants. This provides them access to arable land in the coral rag area beyond the coastline. Although this is not scarce, regulation of rights to specific plots is subject to customary tenure rules (Krain *et al.*, 1993). Stone walls (*bigili*) built around the individual plots, rather than the land itself, constitute the value worth keeping and passing on through inheritance (Tobisson, 2011). Highly complex rules regulate individual ownership, transfer and inheritance of coconut palms on the coastal strip where

the villagers have their houses. These rules are nowadays subject to reinterpretation and revision, following increased competition for land near the shore when guesthouses and private villas are constructed.

Although the vast majority of inhabitants along the south-eastern coast of Unguja Island identify themselves as *waHadimu* of the *waShirazi* section of the *waSwahili*, people who have other origins seem to have been well-assimilated into the community; this includes access to land for cultivation. Such people include the descendants of slaves who remained in Zanzibar upon release.

‘Look at us! All colours. Some as black as charcoal. Others very ‘white’ (mweupe). Many came from the mainland (bara), from different areas. We no longer remember where we came from. It doesn’t matter. We all belong to Jambiani. This is our home.’

As is typical of coastal dwellers, the people in Jambiani and in neighbouring settlements have pursued livelihood systems in which they have used both marine and land-based resources throughout their generations. Their sources of food and income are thus very diverse and they combine their resources in flexible ways to curtail risks and to make best use of their assets. Jambiani dwellers use every opportunity to stress the importance of diversification in their sources of subsistence – of doing ‘many things’. In accordance with their customary, gender-based division of labour, men are primarily involved in fisheries and women in agriculture. However, men also engage in agricultural work and women traditionally fish (using cloth or mosquito nets), harvest molluscs in shallow water and occasionally octopus on the reef (Porter *et al.*, 2008).

As coastal dwellers, they are highly dependent on, and guided by, the recurrent and powerful forces of tidal flux and monsoons (Tobisson *et al.*, 1998; Tobisson, 2009). The combination of seasonal winds, precipitation and tidal variation determine both marine and land-based activities on an hourly, daily, monthly and seasonal basis. These natural processes give life a rhythm and form the

basis for the reckoning of time and activities. Land-based activities, such as agriculture, firewood collection and lime burning take place mostly during periods of neap tide. When the sandbanks are dry twice per month during high spring tide (*bamvua*), the women collect molluscs and bury coconut husks, and nowadays manage their seaweed farms. Fishing also occurs mainly during spring tides when fishermen can get close to or pass through ‘doors’ (*milango*) in the reef using their shallow outrigger canoes (*ghalawa*). Only the bravest fishermen venture to fish in the deep ocean water outside the reef. Returning through a ‘door’ on an incoming tide poses a serious danger. Fishermen have to know exactly where and when to make this passage to avoid crashing on the corals or getting trapped outside the reef. Fishing opportunities and catches are also dependent on winds and precipitation, with greater catches being harvested during the north-eastern monsoon (October to March) when the sea is relatively calm with weaker currents.

Agriculture is important for subsistence needs but, as stated, the conditions for agriculture are poor. The soils in the coral rag area are relatively high in nutrients but the average annual rainfall in Jambiani is a mere 1,100 millimetres, compared with ca. 2,000 millimetres on the west coast (Mustelin *et al.*, 2010). The rainfall pattern is bimodal, with the greatest rainfall from March to June (*masika*) and a smaller, less reliable rainy season from October to December (*vuli*). The basic crops are cassava, sweet potatoes, some maize, a few pulses, and other vegetables that can grow in the thin topsoil in pockets between the coral rocks and with limited and erratic rainfall. The principal cultivation tool is an iron rod used to loosen the soil between the stones and to dig out tubers. The farms are swidden and left to rest for some ten years after three to four years of cultivation.

The overriding significance of natural determinants in these activities is that both men and women possess extensive and detailed knowledge on the natural resources and processes. Their ability to ‘read nature’ is decisive for their personal safety and success. Their knowledge

includes a detailed assessment of and vocabulary for the hourly and daily tidal variations over a monthly cycle, and the changes in the ‘voice of the reef’ (*sauti ya mwamba*) which indicates how far the water has moved back and with what strength it is returning. People also observe the shifting colour of the water, signalling strong winds, and the warning sign of crabs leaving their hiding places in the seaweed farms when a tide turns (Tobisson *et al.*, 1998; Tobisson, 2009), as well as seagrass movement showing the direction and intensity of currents (de la Torre-Castro & Rönnbäck, 2004).

External drivers of change affecting Jambiani

As stated above, large parts of Unguja Island, including the relatively remote south-eastern coast, have remained largely unaffected by mercantile activity and the assertion of power by rulers from urban centres. Coral rag agriculture was unsuitable for the kind of production that would meet the food needs of more densely populated areas. Moreover, the vast intertidal flats and the narrow and shallow passages through the reefs have prevented the use of larger canoes and dhows. Hence, the natural and human resources have been of no interest to the ruling powers in the past, and villagers largely went on with their lives as subsistence farmers and fisherfolk, at their own pace and following their own traditions. They have had sufficient resources to be self-sustaining in most years and have occasionally bartered or sold surpluses to neighbouring communities or in Zanzibar Town.

It is only in the past two decades that Zanzibar’s integration into a broader, regional and global framework has brought potential and real benefits to the people living in Jambiani and other relatively isolated parts of Unguja Island. However, this has also increased their vulnerability and the need for greater differentiation. Added to this are the effects of global climate change, which cause variable and strong winds that prevent fishing and affect fish catches. This leads to increased competition for fish inside the reef where most of the fishing takes place, resulting in overfishing. A fisherman exclaimed:

'We don't understand what is going on! Why does the water returning to the shore from the ocean no longer bring fish? We used to get plenty and we kept only the bigger ones – now we keep everything, even the tiniest fish. And everybody talked about the fat octopus from Jambiani. We were so proud! Now we catch them when they are youngsters because we are hungry. We no longer respect the closure seasons (kufunga wakati).'

In 1986, Tanzania embarked on a dramatic economic and social reform programme set in motion by the World Bank and the IMF to support economic liberalization and privatization. An ensuing Zanzibar Economic Recovery Programme formed the basis for the establishment and rapid expansion of tourism and seaweed farming in 1987; both of these have had a profound impact on life in Jambiani and other coastal settlements. Commercial seaweed farming was introduced to Jambiani in 1989 and 'backpacker' tourists came in large numbers throughout the 1990s. Income opportunities from these external drivers of change coincided with an increased need for cash to purchase food and essential consumer goods, and to pay for transport and other public services.

While Jambiani villagers cannot mitigate the effects of climate change, e.g. the aforementioned reduced fish catches or increasingly unreliable and erratic rainfall, they accommodate this by turning to other opportunities or external drivers of change, such as commercial seaweed farming and tourism. The fundamental principles of social and economic life, grounded in traditions (the 'Jambiani way of life'), have remained fairly stable and have served as the foundation for the manner in which the women and men cope with new situations.

Tourism in Zanzibar

Tourism was for the first time identified and boosted as a major area for economic growth and employment creation in the 1987 Zanzibar Economic Recovery Programme. The development potential of tourism was further underlined in two successive Government Strategies for Growth and

Reduction of Poverty. However, while mass tourism was a major focus during the 1990s, the Tourist Development Policy 2004 voiced the concern that large numbers and the character of visitors could negatively affect the environment and local culture. 'Backpackers', in particular, were portrayed as a culturally and environmentally insensitive, low-spending and low-quality category of 'disruptive' visitor that ought to be reduced. The Government therefore shifted its focus to the promotion of investment in five star hotels, based on the conviction that Zanzibar had the potential of becoming as successful as Mauritius and the Seychelles in attracting high-budget tourists (Zanzibar Human Development Report, 2009). In addition, narrowing the focus in this way would reduce the number of visitors and, hence, there would be less negative impact on the environment and on local culture, as well as higher revenue that could be used to fund pro-poor programmes (Kombo *et al.*, 2009).

The policy documents also reflected the view that, while foreigners were in better position to establish top-class hotels and, hence, generate higher revenue, accommodation under Zanzibar ownership would stand a better chance of benefiting the local communities. Upper class hotels source their skilled labour from outside Zanzibar and even from outside Tanzania. Foreign 'club' hotels commonly bring most or all their staff from their own countries, using young people for low-skilled tasks. The latter are often not paid a salary, or paid very little, but are attracted by the opportunity to have an all expenses paid stay in Zanzibar. The upper-class establishments also tend to import the vegetables, fruit and other foods on their menus (apart from fish and other marine produce), rather than using local suppliers.

'Zanzibar ownership', on the other hand, usually means simple accommodation that is very often built and operated on informal terms using local supplies and employing local labour. Such lodgings became very popular among 'backpackers' and other budget tourists due to their reasonable prices and proximity to everyday village life. The

Zanzibar Human Development Report 2009 remarks that, although tourism has not created the envisaged mass employment of local people, it has provided direct and indirect income opportunities for many. In the mid-2000s, women were estimated to account for some 70% of the informal tourism-related workforce in Zanzibar, while men were in clear dominance in the migrant workforce (Gössling & Schulz, 2005).

Potential and real conflict is an issue between tourism and local community life, mostly in areas suitable for larger-scale, high-budget tourism on the north-eastern coast. One such source of conflict is a lack of concord between local (customary) rules and regulations on access to land and coconut palms and the formal entitlements granted to investors for the construction of hotels and guesthouses (Gössling, 2003, 2006). While local people look upon land rights as a 'bundle' (Bruce, 1988) in which several rights applying to several people constitute a tenure, formal legislation grants exclusive rights to a single owner. This disconnect implies that local people commonly find themselves on the losing side in negotiations with outsiders. They believe, for example, if they sell a coconut palms to investors, this covers the rights to the palms but not the land on which they grow (Tobisson, 2009; Caplan, 2009). Another source of conflict stems from the fact that hotel owners want the beach and the shallow waters to be 'untouched and clean', not to be disturbed by women farming seaweed or fishermen landing fish (Wallervik & Jiddawi, 2001; Sukhdev & Singer, 2009). There has also been conflict between dolphin tourism and mosquito net fishing by women outside Kizimkazi village in the southernmost part of Unguja Island (Amir & Jiddawi, 2001).

The figures available for tourist arrivals in Zanzibar vary considerably. Most sources report a doubling of arrivals between 1990 and 2000 (Sukhdev & Singer, 2009, p 7; Luvanga & Shitunda, 2003, p 18) and a decline from around 2005. However, data from the Zanzibar Commission for Tourism suggest a decline from 2000 to 2003, a recovered growth between 2004 and 2007 and reduced growth thereafter.

There are several interrelated reasons for these fluctuations and for the overall downward trend reported by researchers. These include the combined effects of the global economic recession and, more importantly, government policy in favour of high-budget tourism. These factors have increased the costs of transport, food and accommodation and hence discouraged travel to distant tropical destinations, particularly by low-budget tourists. Young people who travel for extensive periods in Africa (including overland caravans) often follow the advice of fellow travellers who suggest destinations based on experience. It is clear that Zanzibar is currently not favoured for such travel because of the increased costs. In addition, violence connected with the Zanzibar elections in 2000 and 2005 and the global consequences of the terror attacks in the United States and Africa cannot be ignored. Moreover, the increased occurrence of piracy in East African coastal waters has more or less brought cruise tourism to a standstill. The ships used to call at Zanzibar Town and provided welcome income for shop-owners, street vendors and local guides.

Jambiani perspectives on tourism

'We did not understand where they all came from. They were many. Young people. Boys and girls. Some looking as if they had been sleeping in the bush for weeks. We called them vishuka [i.e. 'bed-sheets', indicating that they could only afford the basics]. Carrying all their belongings on their backs. They were different from us but we liked them. They played football with our children on the beach and did not cause problems to anyone. The girls asked for henna paintings and plaited hair. It did not look nice on them but they were happy.'

When I first arrived in Jambiani in the late 1990s, most of the guesthouses and bungalows were fully occupied in the high season and there were significant numbers of visitors in the low season as well. Jambiani became an increasingly popular destination for young people. The major attractions were diving, snorkelling and using the long, sandy beach for football, biking and parties. The reasonably priced accommodation located on

the beach and right in the village was highly appreciated. The visitors felt that they were welcome, well-received and, for a little while, part of community life.

Although Jambiani was one of the first villages in Zanzibar opened to tourism (two guesthouses in 1981), it was not included in the Government's Tourist Zoning Plan of 1993, or in the National Land Use Plan of 2005. Both documents focused on areas deemed suitable primarily for large-scale, foreign investment, i.e. the north and north-eastern coast and, to some extent, the stretch between Chwaka and Paje immediately north of Jambiani. The fact that the coastline further south fell outside the area for prospective larger investment is one reason why the infrastructure (roads and transportation) remained very poor until a few years back. However, Jambiani did attract the interest of local investors, mainly in the village but also from Zanzibar Town, who saw potential in tourists looking for simpler accommodation. The number of small-scale and ungraded guesthouses and bungalows steadily increased throughout the 1990s (Heita-Mwampamba, 2003).

Jambiani has remained an exceptional case on Unguja Island in that the vast majority of guesthouses and bungalows have continued to be owned and managed by individuals and families in the village and employing most, in some cases all, staff from the community.

The informality and seasonality of tourist-related work makes it difficult to estimate the number of employees. In addition to the direct benefits from employment in guesthouses, indirect benefits and cash accrued to a much larger group of people. These included construction workers and small-holders supplying vegetables, fish, egg and other food to the guesthouses or to private bungalows. Other sources of cash for local people were derived from henna-painting, hair-plaiting, massage and the sale of handicraft, fruit or cakes on the beach, offering evening meals in a home environment or taking visitors on guided tours through the village and to the reef area for snorkelling or fishing.

This was the situation prevailing in the 1990s but things have changed. Over the past ten years

or so, there has been a dramatic decline in the number of visitors finding their way to Jambiani. Accommodation is reasonably well occupied during the Christmas and New Year vacation but many only have the odd visitor during the rest of the year and visits by larger groups of young people making a stopover in overland bus tours have more or less ceased. Most villagers have experienced the effects of the decline and they have been devastating for many. With few exceptions, the guesthouses are still in operation, but the staff are laid off on unpaid leave (*likizo*) for long periods. Low-paid staff (women in particular) such as cleaners, kitchen-help and night guards turn up and hang around even when they are on leave so that they do not lose their jobs if and when occasional visitors arrive. The same applies to beach vendors who cannot afford to miss a customer.

Some guesthouses have converted to part ownership involving nationals from Zanzibar Town or foreigners. Jambiani owners hope to maintain or renovate their premises to stand a chance of competing for the odd tourists through the injection of such new capital. There are also individuals who, in the 1990s, invested their savings in the building of small, private bungalows that they hoped would be let to tourists or even sold to returning visitors who had taken a liking in Jambiani. With the decline in income earning opportunities and the absence of visitors, such structures have often been left half-complete or are being demolished for better use of the building material. Many young men are desperately searching for income or educational opportunities outside Zanzibar and migration to Europe scores high in their dreams. The few success stories of temporary migration serve as models and encouragement but these are not easily repeated.

In Jambiani, the prices of accommodation and food have risen to compensate for the decrease in the numbers of visitors, making a visit less interesting for low-budget tourists. Diving schools and centres have closed down, and Jambiani has lost important groups of young tourists to villagers further north where diving operations still function. Another important factor contributing to the decline in tourism is the intricate system of minibuses

that bring tourists from Zanzibar Town to find accommodation on the north and east coast. The drivers are rewarded for bringing guests to certain villages and guesthouses, which means that they are selective when presenting the visitors with the options to choose from. The low revenue of most Jambiani guesthouses has caused the village to lose favour with minibus companies.

The official tourist policy that discourages low-budget tourism is not in agreement with the views and sentiments in Jambiani. It is difficult to find anybody applauding the dramatic decline in numbers of visitors. The villagers were happy about the economic opportunities brought by the 'backpackers'. They recall that, although young people were cautious when spending their money, they used the local shops, bought fruit and food from local vendors, accepted invitations for an evening meal in a 'typical Jambiani home environment' and used the local buses or rented bicycles.

With regard to the official view on the environmental and cultural 'insensitiveness' of young visitors, there have been episodes of this nature but the villagers feel that they have been successful in 'educating' the tourists and that the benefits far outweigh the negative consequences. I recall an elderly man who took great effort to explain to a visitor that the sea grass left on the beach when the tide turned was not 'dirt', but a treasure that the ocean would take back when the tide turned again. Tourists are often invited to have a closer look at the seaweed farms, and local entrepreneurs organise a variety of 'cultural' and 'eco-walks' through the village. I have met villagers (mainly women) who felt that their movements were constrained by the tourists occupying the beach when they were many, but most of them continued with their business and merely tried to keep some physical distance. I have also witnessed incidents when villagers approached tourists who walked around 'naked' (e.g. women wearing shorts and a top, or men stripped to the waist) outside the beach area, telling them to put on something more proper, making

it clear what the term 'proper' meant. The villagers nevertheless understand that tourists have travelled far and paid a lot of money to enjoy the sun and that sunbathing and walking with light clothing on the beach is part of this.

Visitors from distant destinations provide amusement to the local people. Their spontaneous evening games of beach football, with mixed teams of youngsters from the village and from all over the world always attract an audience. The tourists' way of dressing and their behaviour provoke curiosity and become topics of conversation. I spent many evenings with friends on their verandas overlooking the village 'main street', peeling cassava or preparing ropes for the next day's seaweed planting, being asked to interpret and explain the strange behaviour or appearance of foreign passers-by. 'Why is the woman so much younger than the man?' 'Why are white people so fat?' 'Why are they holding hands? Are they afraid to get lost?' 'What language are they speaking – do you understand what they are saying? Ask them how they like Jambiani!'

The reason behind the relatively conflict-free relations between Jambiani villagers and tourists, as compared with some other parts of Unguja Island, is the combination of local ownership and management of most of the accommodation, and the strong social fabric of the community. An owner has to try to balance the needs of his guests and his own family, kin, neighbours and friends. The former is the source of a cash income. The latter comprise the essence of social capital. Potential conflict therefore needs to be avoided or resolved at an early stage. The villagers always spoke and acted in ways that indicated that they were confident and in command of the tourism, i.e. it is they who were in charge of, and not subject to the authority and will of others. Most importantly, however, they appreciated that tourism had brought what they felt were tangible benefits and a more vibrant economy to the village. They resented the dramatic decline in numbers of visitors. And they kept on wondering and asking 'why' they no longer came.

Seaweed cultivation for economic growth

Seaweed farming began as a research initiative in Zanzibar in the late 1980s, drawing on experience and cultivars from the Philippines. The two major species grown (*Eucheuma spinosum* and *Eucheuma cottoni*) have a high content of carrageenan that serves as a gelling and thickening agent in foods, cosmetics and pharmaceutical products. Smallholder seaweed farming became part of the government's initiative to implement the Structural Adjustment Programme for economic growth by encouraging foreign investment and international trade that would boost the national and local economy.

Commercial production started in 1989 on a small scale, in communities on the south-eastern coast of Unguja Island where the extensive intertidal flats provided good conditions for farming. Two foreign companies introduced cultivation techniques and seeds to small groups of male villagers. However, women soon took over and they have remained more or less the sole producers until today. They welcomed seaweed cultivation as an opportunity to earn cash, even if it involved hard labour for little remuneration, this being the reason why the men abandoned seaweed farming.

A handful of carrageenan processors in Denmark, the United Kingdom, United States of America and China are at present monopolizing the world market and control the production in Zanzibar (Lange & Jiddawi, 2009). The output has now reached more than 7 000 tonnes p.a., compared with 261 tonnes in 1989, and seaweed production currently involves some 18 000 farmers in 56 villages (Jiddawi *et al.*, 2009). There is a high international demand for this valued product but the price paid to the farmers has remained exceedingly low. *Eucheuma spinosum* was initially bought for 40 Tanzanian shillings per dried kilogram. The price ranged between 90-120 shillings from the late 1990s up to 2007 when it reached 160 shillings. In February 2011, it was 250 shillings and rose to a top level of 400 shillings (ca. ¼ of a US dollar per kg dry weight) in November the same year. The recent rise is still a very low

return for the labour seaweed farming takes, but it has now attracted the interest of some men who have taken up farming to compensate for the reduction in fish catches and tourism income. *Eucheuma cottoni* attracts a higher price but has never been popular among the producers, mainly due to its disease proneness and vulnerability to strong currents.

Seaweed farming occurs in the two periods of spring tide (*bamvua*) every month when the farms can be reached and the growers can remain far out on the sandbanks for hours for their work. Production starts with the tying of seaweed fragments every 15-20 cm on two-metre strings stretched between poles. Since each plot has its own cycle of growth and maturity (five to six weeks between planting to harvesting), a woman can deal with three to four plots simultaneously (each with some fifty strings). At 400 shillings per kg, a good harvest during a springtide can yield up to 25 000 shillings (ca 16 USD). Farmers dry the harvested seaweed in the sun for three days before selling to a company agent in the village for export and further processing by importing countries.

The government has made statements in recent years in the media about the need to increase the price paid to farmers. Their concern, which probably prompted the price increase, marks a shift in attention on seaweed in the Zanzibar Strategy for Growth and Reduction of Poverty 2010-2015. The Strategy underlines the need to improve the quality and varieties, invest in processing and improve the skills in farming and post-harvest handling, but it did not raise the low producer price. A quotation from a US-based company illustrates the prevalent cynicism at the time of seaweed introduction:

'As a potential seaweed supplier trying to find the best village to work in, you should be delighted to find a village populated by consumers with no or little livelihood options. In this case, we call cottoni and spinosum farming the livelihood of last resort. ... Your ultimate goal is to make seaweed farming become a way of life for the villagers. This happens after five years or so. At this stage people don't think too much about the price, they just farm because they have always farmed...' (cited in Bryceson, 2002, p 4).

Zanzibar thus appears to be competitive on the world market due to its low labour costs, i.e. the low producer price is likely to be the primary reason why multinational companies are interested in maintaining seaweed production in Zanzibar and in other parts of East Africa (mainland Tanzania, Kenya and Mozambique). In the Philippines, most seaweed is grown on floating lines and rafts or in nets with a relatively small labour input and the quality is higher. The coastal areas of East Africa with their intertidal flats and strong currents necessitate a more labour-intensive approach and hence the productivity is low.

Despite the poor compensation, seaweed farming is a significant factor in improving livelihoods and is highly appreciated as an income by the farmers involved. The women are, in most cases, in control of the income from seaweed and they invest this primarily in improved family living conditions, e.g. better education, health and housing. Their contribution to the family income has become a significant supplement for the failing income from fishing and tourism.

While most research reports on the socio-economic implications of seaweed farming in coastal Zanzibar consider the benefits to the communities, there are reports of negative effects as well. These include conflict between tourism and seaweed farming in areas with more upmarket accommodation on the north and north-east coast of Unguja Island where farming has been prohibited outside some hotels on the pretext that it is 'visually unattractive' (Mustelin *et al.*, 2010, p 381). De la Torre-Castro and Lindström (2010) were concerned about the uprooting of sea grass in preparation for the seaweed farms as this contributes to changes in the fish population and coastal erosion. In addition, the women farming seaweed complain about fatigue, respiratory problems, injuries, allergies, headache, back pain and eye-related problems (Fröcklin *et al.*, 2012).

Jambiani perspectives on seaweed cultivation

Jambiani and the neighbouring Paje village were the first to be approached regarding commercial seaweed farming in Zanzibar in the late 1980s. The women like to tell the

story of how seaweed was introduced to a small group of men who received training by a seaweed company, and also seed and material for planting, but how the women soon took over. The men took an interest because fishing had become less profitable and so they were looking for alternative sources of income. A woman pioneer farmer in Jambiani explained:

'The number of men moving out to the seaweed area decreased every day. And they were tired when they came back! Complaining about the heavy work. Their sore backs and headache. And when the first small crop was harvested and brought to the company – everybody in the village knew about the little money they got. Very hard work for nothing, they said! So some of us women decided that we would give it a try. We could make good use of the money and we were not afraid of hard work.'

The women had previously had few options to earn money. Making *kofia* (Muslim headdresses), *makuti* (roofing material) and baskets from palm leaves and ropes from copra brought in some cash but this was irregular and not enough to see a family through difficult times. A group of women approached the seaweed company and asked for training and material. Other women followed and it was not long before the outermost intertidal flats outside Jambiani were covered with individual seaweed plots. The area is large enough to accommodate everybody who wants to farm. It is located at some distance from the area where the men can reach the sandbank with their outrigger canoes or by swimming to land fish or octopus, but close enough to be able to communicate and crack jokes. The conflict between seaweed farming and tourism reported elsewhere on the island has not been an issue in Jambiani. The farms are located where the tourists do not go swimming and the vast majority of guesthouses are owned and managed by local people who appreciate the importance of seaweed farming for the livelihood of the community.

The women appreciate that seaweed farming, with its continuous cycles of cultivation, brings in a regular income. The outcome is fairly predictable due to the regularity of the growing

cycle and the possibility of estimating the size of a harvest, hence, a woman can count on a regular cash flow (despite the small return for hard work) throughout the year. The chances of making purchases on credit in the village shops are higher for seaweed growers because of this predictability. Shop-owners know who the farmers are and roughly how much they plant, because the women use the same shops to buy their plastic string (*'tie tie'*) and ropes, and beg for or buy the second-hand rice bags that they use to transport the wet produce to the shore and the dried crop to the company store. A woman can decide to harvest early if she needs instant cash, or she can leave the crop to gain more weight until the next spring tide for greater profit. However, the decision to harvest or not is always a risky calculation since a heavier crop may be torn off the strings by strong winds and currents. Even seaweed that has drifted away brings in welcome cash to individuals in need as elderly or disabled women who are no longer able to manage their own farms glean this. They claim that this is 'enough to buy soap' (Tobisson, 2009, p 136).

Some women in Jambiani ventured to try the more recently introduced seaweed variety, *Eucheuma cottoni*. They were tempted by the opportunity to earn more money from its heavier weight and better price. But those who tried soon gave it up:

'Planting cottoni is risky. You watch it grow until you are sure that you will have a bumper harvest the next bamvua (springtide). The farm looks very good and you think of all the things you will buy in the shops. But when the bamvua comes you will find that most of the seaweed is gone and there is very little or nothing to harvest. All your efforts were in vain!'

The women show pride when speaking of their seaweed farming but they also constantly grumble about the little money they get, their aching backs and legs after long hours in the water and under the burning sun, and the heavy load of a harvest that has to be pulled ashore on foot. Harvesting means tying some seven to nine bags (each bag containing 25 kg wet weight of seaweed) to a thick rope wrapped around the woman's waist and dragging the load through the water to the shore at the pace

of the incoming tide. The women perform this operation in small groups. None of them can swim and there is always a risk of falling, stepping on sharp corals or becoming entangled in the ropes. They also feel powerless in their dealings with the companies that buy their seaweed. The local agents sometimes do not have sufficient cash to pay the growers, but ask the women to come back later to get their money. The women interpret the combination of poor remuneration and sporadic payment as signs that the companies are losing interest in their village and plan to move elsewhere. This is a reason why few women opt to sell their crop to intermediaries who occasionally appear in Jambiani and offer a slightly better price; they remain loyal to the same company even when they are let down. The recent rise in price to 400 shillings per kg dry weight is welcome, but the women still feel it is low and few have hopes that the price will remain at this level. They have experienced price drops to lower levels that have persisted for months.

The vast majority of Jambiani women who farm seaweed are also involved in a range of other activities that they continuously assess and flexibly adjust to change their livelihood strategies. Since seaweed can only be farmed during the low spring tides, the neap tide periods are free for land-based activities. In general, the women recognize the importance of economic diversification and hence they avoid conducting only one or a few activities to meet their needs. During the height of tourism in the 1990s, many women took occasional jobs in guesthouses (cleaning and doing laundry) or found other ways to earn some money from tourism. Most of the women have maintained their agricultural farms in the coral rag area. They appreciate the importance of getting some staple foods from the land, rather than having to buy everything in the shops. This makes them less vulnerable, but the farms require continuous attention to prevent wild animals from destroying the crop. These women farmers mock fellow women who leave their farms idle while focusing only on seaweed production (or any other non-farm-based economic activity for that matter) as 'stupid' or 'lazy' (Tobisson, 2009).

Women strive through these efforts to sustain a diversified economy, and build and maintain social capital to escape poverty, or at least not fall deeper into poverty. Women in Jambiani commonly use the expressions ‘eating late’ and ‘eating early’ that capture the interrelated dimensions of poverty and relative wealth (Tobisson, 2009). Poor people ‘eat late’ because they work long hours and, although tired, have to wait until the fishermen and vendors sell leftovers at a reduced price towards the end of the day. More fortunate families ‘eat early’. They have money to buy food and can prepare a meal at any time. Both husband and wife draw an income and hire labour to take care of the more strenuous (female) household tasks like firewood and water collection, and the laundry.

Although seaweed farming is not a guarantee that families will be able to ‘eat early’, it is clear that seaweed has been instrumental in empowering women in their livelihood options, since most of them are in control of the money they earn from seaweed (Tobisson, 2009; Wallevik & Jiddawi, 2001). The income is largely spent on food and essential consumer goods, children’s clothing, maintenance of the house and other basic family requirements. They also try to save money for larger investments (e.g. a sewing machine, a goat or their children’s education). Saving is commonly accomplished through community-based saving societies. Members agree to contribute a certain amount every week (usually up to 3,000 shillings) and each in turn is entitled to draw a larger sum from the “box” in which the money is kept:

‘I’ll tell you how it works. The money is always safe. When it is my turn to take care of the box, someone else in the group has the key. So we all take care of the box and the key, but we never have both at the same time. It is impossible to take money from the box when you are in charge. Not a shilling will get lost.’

While women struggle to diversify and to make the most of their income opportunities, men have experienced a devastating reduction in income opportunities but seem to lack the women’s ability to seize every opportunity to earn a few shillings. Their predicament is

tragic as, following the decline in fishing and in tourism-related employment, they may no longer be able to provide new clothes for their wives, which is a responsibility under Islamic law (Caplan, 2009). One man explained:

‘My wife is paying for everything nowadays. It is because of her that we don’t have to go to bed hungry. I used to bring fish and new clothes for Ramadan. Now I have nothing to contribute. Only a few shillings if somebody is willing to pay for my work. I feel so bad.’

Although statistics are lacking, my impression is that divorce is becoming more common in Jambiani, with women taking this initiative, the men’s problems to contribute to the family income being the major reason. I have heard more than one woman using the expression ‘eating – but not working’ (*‘anakula tu – hafanyi kazi!’*) as the reason for her decision to divorce a husband (Tobisson, 2009).

The men’s recent interest in seaweed farming in Jambiani must be viewed in this perspective. The increase in price to 400 shillings per kg has caused some 20 to 30 men to establish their own, small seaweed farms. Some are young men without employment who are considering marriage and who are trying to find ways of earning money to build a house. Most of them are middle-aged men who are struggling to contribute to the family income. The men’s seaweed farms are located in an area immediately inside the reef and apart from the women’s farms in the intertidal flat zone adjacent to a creek. The area is more exposed to currents and can only be accessed by boats. The crop grows well but payment for transport is a drain on the cash earned.

CONCLUDING COMMENTS

The consequences of globalization on coastal communities vary greatly with the nature of the external forces and that of the local people, as well as the level of integration of the community and their assets within the broader national and global frameworks. This paper clearly reveals that the coastal zone warrants specific attention due to the diversity of its natural resources and hence the multiplicity and complexity of its livelihood

options. The two principal characteristics of tropical coastal areas, i.e. the interface between land and sea and the recurrent natural processes, are major determinants of production. The example of Jambiani shows that external drivers of change, in this case tourism and seaweed farming, have brought prospects but also introduced vulnerabilities to the local communities. Seaweed farming continues to provide an opportunity for livelihood improvement (partly, but not only, because it is a ‘women’s crop’), in spite of the hard work and its limited remuneration, while the fluctuations and dramatic decline in ‘backpacker’ tourism has deprived many people of much needed direct and indirect income.

Interestingly, the natural resources and conditions that left Jambiani and neighbouring villages outside the sphere of interest of the ruling powers up to the present, now constitute the basis for the advent and speedy growth of commercial seaweed production and tourism to the benefit of the local population. The poor agricultural conditions, inability to use larger fishing vessels and a local population seemingly disinterested in change did nothing to boost the mercantile economy in the past. But seaweed cultivation requires extensive intertidal flats such as those at Jambiani, and ‘backpacker’ tourists were attracted to it by its ‘indigenesness’, the hospitality of the local communities, its pristine beaches and the outstanding diving opportunities adjacent to the reef. Moreover, the structures, levels of organisation and values grounded in culture and tradition (as part of the ‘Jambiani way of life’) have served as a foundation for the ways in which women and men use their assets, knowledge and experience to deal with new situations. This paper shows that both women and men who experience poverty (the former, in particular) are not passive victims of circumstances, but actively strive and strategize to put their limited resources to use in ways that they judge will curtail risks and optimise the outcome of their livelihood choices.

Acknowledgements – I am grateful to the Swedish International Development Cooperation Agency (Sida) for support for my research in Zanzibar, and to the Nordic Africa Institute in Uppsala for providing a welcoming and stimulating environment for my research. I am also indebted to the Institute of Marine Sciences (IMS) of the University of Dar es Salaam and the Western Indian Ocean Marine Science Association (WIOMSA), both located in Zanzibar, for being my local contacts and hosts. My very special thanks go to Dr. Narriman Jiddawi at IMS, Dr Julius Francis at WIOMSA and, needless to say, all my friends and ‘families’ in Jambiani village for their affectionate companionship and care.

References

- Amir OA, Jiddawi N (2001) Dolphin tourism and community participation in Kizimkazi village, Zanzibar. In: Richmond M D, Francis J (eds) Marine science development in Tanzania and Eastern Africa. Proceedings of the 20th Anniversary Conference on Advances in Marine Sciences in Tanzania. 28th June - 1 July 1999, IMS/WIOMSA, Zanzibar, pp 551-560
- Bruce JW (1988) A perspective on indigenous land tenure systems and land concentration. In: Downs R W, Reyna S P (eds) Land and society in contemporary Africa. University Press of New England for the University of New Hampshire, Hanover, USA, pp 23-52
- Bryceson I (2002) Coastal aquaculture developments in Tanzania. Sustainable and non-sustainable experiences. Western Indian Ocean Journal of Marine Sciences 1: 1-10
- Caplan P (2007) ‘But the coast is of course quite different’. Academic and local ideas about the East African littoral. Journal of Eastern African Studies 1 (2): 305-320

- Caplan P (2009) Understanding modernity/ies. The idea of a moral community on Mafia Island, Tanzania. In: Larsen K (ed) Knowledge, renewal and religion. Repositioning and changing ideological and material circumstances among the Swahili on the East African Coast. The Nordic Africa Institute, Uppsala, pp 213-235
- de la Torre-Castro M, Rönnbäck P (2004) Links between humans and seagrasses – an example from tropical East Africa. *Ocean and Coastal Management* 47: 361-387
- de la Torre-Castro M, Lindström L (2010) Fishing institutions. Addressing regulative, normative and cultural-cognitive elements to enhance fisheries management. *Marine Policy* 34: 77-84
- Feidi IH (2005) The fisheries of Zanzibar. Potentials for new investments. *NAGA WorldFish Center Quarterly* 28, pp 37-40
- Francis J, Bryceson I (2001) Tanzanian coastal and marine resources. Some examples illustrating questions of sustainable use. In: Ahmed J *et al.* Lessons learned. Case studies in sustainable use, IUCN, pp 76-102
- Fröcklin S, de la Torre-Castro M, Lindström L, Jiddawi N S, Msuya F E (2012) Seaweed mariculture as a development project in Zanzibar, East Africa: A price too high to pay? *Aquaculture* 356-357: 30-39
- Gössling S (2003) The political ecology of tourism in Zanzibar. In: Gössling S (ed) *Tourism and development in tropical islands: Political ecology perspectives*. Edward Elgar Publisher, Cheltham, pp 178-202
- Gössling S, Schulz U (2005) Tourism-related migration in Zanzibar, Tanzania. *Tourism Geographies* 7: 43-62
- Gössling S (2006) Towards sustainable tourism in the Western Indian Ocean. *Western Indian Ocean Journal of Marine Sciences* 5: 55-70
- Heita-Mwampamba N (2003) Tourism in Zanzibar (Available at: <http://hdl.handle.net/1834/344>) Date accessed: 14 January 2014
- Jiddawi N, Vuai HSN, Suleiman IA (2009) Status of fisheries resources and seaweed farming. In: The status of Zanzibar's coastal resources. Towards the development of integrated coastal zone management strategies and action plan. Prepared by the Department of Environment through support from the Marine and Coastal Environmental Project (MACEMP), Zanzibar, pp 18-39
- Kombo YH, Juma MH, Othman SA (2009) Integrated land, forestry and tourism. In: The status of Zanzibar's coastal resources. Towards the development of integrated coastal zone management strategies and action plan. Prepared by the Department of Environment through support from the Marine and Coastal Environmental Project (MACEMP), Zanzibar, pp 61-94
- Krain E, Wellard K, Haji SP, Ali SH, Kraetzer S, Mbaye K (1993) Farming systems of the coral rag area of Zanzibar. National Coconut Development Programme, Household Food Security Programme of UNICEF, Commission for Planning and Administration, Ministry of Agriculture, Livestock and Natural Resources, Zanzibar, Tanzania, 52 pp
- Lange GM, Jiddawi N (2009) Economic value of marine ecosystem services in Zanzibar: Implications for marine conservation and sustainable development. *Ocean and Coastal Management* 52: 521-532
- Larsen K (2009) Introduction. In Larsen K (ed) Knowledge, renewal and religion: Repositioning and changing ideological and material circumstances among the Swahili on the East African coast. The Nordic Africa Institute, Uppsala, pp 11-37

- Luvanga N, Shitundu J (2003) The role of tourism in poverty alleviation in Tanzania. Research on Poverty Alleviation (REPOA). Research report No 03.4. Mkuki na Nyota Publishers Ltd., Dar es Salaam, 55 pp
- Middleton J (1992) The world of the Swahili: An African mercantile civilization. Yale University Press, New Haven and London, 254 pp
- Mustelin J (2009) Adaptation of coastal communities in the cross-pressure of tourism and environmental change in Zanzibar, Tanzania. *Climate Change: Global risks, challenges and decisions*. IOP Conference Series: Earth and Environmental Science 6 572030. IOP Publishing [doi:10.1088/1755-1307/6/7/572030]
- Mustelin J, Klein R G, Assaid B, Sitari T, Khamis M, Mzee A, Haji T (2010) Understanding current and future vulnerability in coastal settings. Community perceptions and preferences for adaptation in Zanzibar, Tanzania. *Population and Environment* 31: 371-398
- Mwaipopo R, Fisher E, Wanyonyi I, Kimani P, Tunje J, Msuya, F, Bashemerewa V (2011) The relationship between community-based organizations and the effective management of coastal and marine resources in the WIO region. A report prepared for the Marine Science for Management Programme of the Western Indian Ocean Marine Science Association. WIOMSA and Sida, 85 pp
- Porter M, Mwaipopo R, Faustine R, Mzuma M (2008) Globalization and women in coastal communities in Tanzania. *Development* 51: 193-198
- Prins AHJ (1965) Sailing from Lamu: A Study of Marine Culture in Islamic East Africa. Van Gorcum, Assen, 309 pp
- Sheriff A (1987) Slaves, spices and ivory in Zanzibar. Integration of an East African commercial empire in the world economy, 1770-1873. James Currey, London, 297 pp
- Sukhdev M, Singer A (2009) Behind your beach vacation. A review and evaluation of EIAs as a legal framework to regulate the environmental impacts of tourism in Zanzibar. SIT, Zanzibar, 63 pp
- Tobey J, Torell E (2006) Coastal poverty and MPA management in mainland Tanzania and Zanzibar. *Ocean and Coastal Management*. [doi:10.1016/j.ocecoaman.2006.08.002]
- Tobisson E, Andersson J, Ngazi Z, Rydberg L, Cederlöf U (1998) Tides, Monsoons and Seabed: Local Knowledge and Practice in Chwaka Bay, Zanzibar. *Ambio* 27: 677-685
- Tobisson E (2009) Notions of poverty and wealth in coastal Zanzibar. The policy relevance of local perspectives. In: Hagberg S, Widmark C (eds) *Ethnographic Practice and Public Aid. Methods and Meanings in Development Cooperation*. Acta Universitatis Upsaliensis. Uppsala Studies in Cultural Anthropology, Uppsala, pp 125-159
- Tobisson E (2011) A delicate balance. Short-term gains or long-term food security? Annual Report 2010. The Nordic Africa Institute, Uppsala, pp 28-29
- Wallevik H, Jiddawi N S (2001) Impacts of tourism on the activities of the women on the southeast coast of Unguja. In: Richmond M D, Francis J (eds) *Marine science development in Tanzania and Eastern Africa. Proceedings of the 20th Anniversary Conference on advances in Marine Sciences in Tanzania, 28th June - 1 July 1999, IMS/WIOMSA, Zanzibar*, pp 535-550
- Zanzibar Human Development Report 2009. Towards Pro Poor Growth. Revolutionary Government of Zanzibar, Ministry of Finance and Economic Affairs, 150 pp