

# Participatory Modeling of Wellbeing Trade-offs In Coastal Kenya

## Scenarios booklet

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One of the aims of P-mowtick is to explore possible futures for the Mombasa region. In a context of change and uncertainty scenario development is a way to explore possibilities for the future that cannot be predicted by extrapolation of past and current trends.

Based on input from stakeholders during the workshop in Mombasa in October 2011, we have structured four scenarios of plausible futures for the next 15 years of Mombasa region. The probability of any of these scenarios being the real future is very small. There exist many other possible futures that we have not explored. Our purpose in developing these stories is to encourage stakeholders to consider some of the positive and negative implications that the different development trajectories have in the wellbeing of different stakeholders groups. Notice how each story is a mixture of strengths and weaknesses. In that sense no scenarios is meant to prevail above the others.

We will explore together these scenarios during the workshop in May. In this booklet you will find the description of each scenario and storylines. While you browse through the stories you could start thinking about the strengths and weaknesses in each scenario and how they relate to the wellbeing of stakeholder groups.



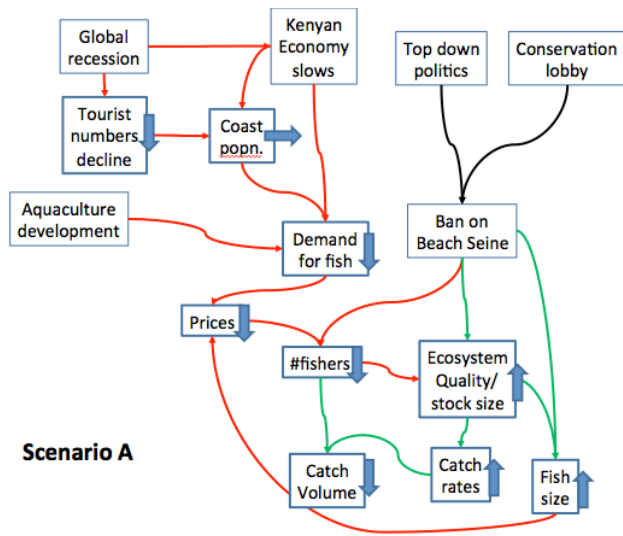
# Scenario A



*Global slow down means limited investments in tourism in Mombasa. A top down government implements strict regulations on beach seining. Fishers usually catch high quality fish but have limited market because of competition with aquaculture industry that has been developed elsewhere in the country.*

## **The story:**

A global recession has impacted the number of international tourists in Mombasa region and the economic growth of Kenya overall. This reduces immigration rates from other parts of Kenya. Local tourist businesses focus on low-volume, eco-tourism rather than mass tourism and there is limited additional investment of tourism infrastructure. The new government has less emphasis on individual rights and policies are pushed top-down with little engagement with local communities. Environmental policies are strictly enforced with the influence of remaining ecotourism operators. The ban on beach seines is strictly enforced displacing fisher folk from this livelihood. Inland and coastal aquaculture begins to develop providing low-income livelihoods and cheap fish (in competition with coastal fisheries) which persuades more fishers to diversify their livelihood. As a result of the removal of beach seining and reduction in fishing effort, the condition of corals, seagrass and nearshore fish stocks improve. Those fishers who do remain enjoy high catch rates of high quality (large) fish, but make limited money due to limited demand and competition from aquaculture that has been implemented around Malindi.



## Scenario B

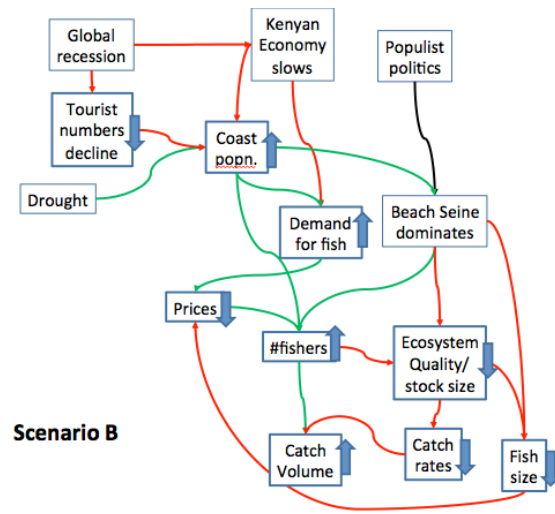


*A populist government enhances community participation. People are moving to Mombasa but job availability is low. The number of fishers increase. Young people move into beach seine as their source of income. Fish selling and trading grows due to the availability of small and cheap fish.*

### **The story:**

A government with strong ideas of inclusion and popular policies has enforced individual rights and community participation. Fisheries are managed by county governments and power is devolved to communities and supported by better healthcare and educational programs. There is a reluctance to enforce environmental regulations which displace livelihoods and a skeptical approach to large development proposals with limited benefits to local people. Meanwhile several years of drought combined with ethical and political tensions in other regions of Kenya have driven people to the coast. Mombasa is a safe haven against problems in other parts of Kenya and because of its newly implemented social policies. However few occupation options are available given the low economic growth. Mombasa's tourist industry struggles and low occupancy rates lead to redundancies in the tourism sector. Lacking of other job options many young men enter fisheries, especially as labourers in the beach seine fishery, which is legalized in response to popular demands for jobs and sources of

cheap fish. Immigrants also seek work in fish trading and frying. The demand for cheap fish products from the growing local population is high and marine resources are strongly exploited. Fish traders gather around the arriving boats at the beach to find only small and cheap fish in fisherman’s nets.



# Scenario C

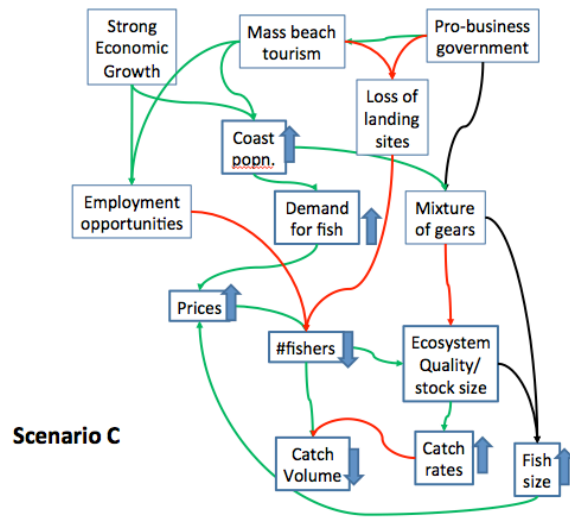


*International and local driven development helps Mombasa expand its touristic aspects. Many fisher folk leave fisheries to take up other job opportunities. Conflicts and political tension rises due to inequalities and unconstrained beach development erodes the beach line.*

## **The story:**

Kenya is enjoying a prosperous phase. A pro-business government and low taxation attracts foreign investments. Mombasa is a reflection of the booming economy with its newly expanded port and influxes of local and international investments which fund infrastructure, hotel investments that promote a growing mass beach tourism market. Port development raises land prices and standard of living. Some fisher folk are attracted out of fisheries into opportunities in construction, tourism and services or as a result of displacement from their landing sites by other economic interests. Those fishers who persist benefit from lowered competition at sea, high demand and high fish prices. Their catch rates are good and include larger species. Some immigrants find work on beach seine crews which still operate illegally in certain areas. In time, the unconstrained beach development results in beach erosion, which has an impact on tourism and fish landing sites. Conflict between beach seiners

and other types of fishers rise. Political tensions are also stoked by increasing levels of inequality as some entrepreneurs get rich and establish exclusive residences along the coast.





## Scenario D

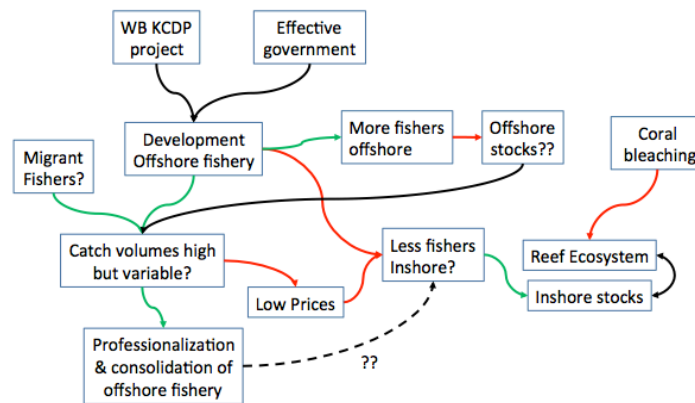


*A donor funding project leads to off-shore fisheries development while coral bleaching affects in-shore stocks. What started as a promising alternative turned out to be more complex than expected since fish catches are not reliable which ends up driving many out of fisheries. In 10 years offshore fishery is mostly owned by a few larger business people recruiting crew from the outside.*

### **The story**

Implementation of a project on external donor funding - e.g. Kenya Coastal Development Project - leads to provision of vessels, training, and fisheries marketing infrastructure along the coast by Mombasa. This supports development of an offshore fishery targeting semi-pelagic deep water fish with modern ring nets and aided by fish finding technology. Initial trials are variable but generally successful and within 5 years 10 large vessels operate from the coast immediately north of Mombasa. These are collaboratively owned by members of fisher organizations and BMUs and crewed by locals as well as migrant Tanzanians as hired labourers and captains. The catches from these vessels are significantly larger than those from small-scale nearshore gears and beach seines, leading to a reduction in the price per kilo of fish landed from the reef and seagrass fishery. The number of fishers using spear, small nets, handline and beach seine reduces due to some fishers receiving training and joining the new larger

vessels, and some opting to leave fisheries in the light of market competition with the new fishery. This leads to a slow recovery of fish in the nearshore habitats, but coral bleaching over repeated years reduces diversity and cover of corals. High catches from the offshore fishery attract investment from local business interests, but fluctuations in catches make it difficult to repay loans on investment, and several local and community owners have to sell their vessels and operations after poor seasons, or due to lack of financial capital and management. Thus within 10 years the offshore fishery becomes consolidated to be owned by a few larger business people who hire crew from outside the area. Some fishers lose access to this fishery as a result and reluctantly return to inshore fishing.



**Scenario D**