Title/Name of the area: Tanga Coelocanth Marine Park (TACMP)

Presented by: Dr. Charles Lugomela, Ag. Head, Department of Aquatic Sciences and Fisheries, University of Dar es Salaam, P.O. Box 35064 Dar es Salaam, Tanzania

Abstract
Tanga Coelacanth Marine Park (TACMP) is located on the northern coastline of Tanzania. It includes the bays of Tanga City and Mwambani, Tongoni estuary, and three small islands of Toten, Yambe and Karange. The uniqueness of the park includes: the occurrence and high rates of incidental catches of the CITES - listed and iconic Coelacanth, *Latimeria chalumnae*. The unprecedented catch incidents of coelacanths in Tanga area called for urgent management measures to protect the species in Tanzania, through protecting the reef and deepwater ecosystems where these fishes live; hence the establishment of TACMP. The benefits of including this area in CBD will be more emphasis on the conservation of biodiversity especially protecting the critically endangered 'once believed extinct' fish, the coelacanth, *Latimeria chalumnae*.

Introduction
Tanga Coelacanth Marine Park (TACMP) is located on the northern coastline of Tanzania. It extends for 100 km along the coastline from north of Pangani River estuary to Mafuriko village just north of Tanga City. The Park covers an area of about 552 km² of which 85 km² are terrestrial and 467 km² are aquatic. It includes the bays of Tanga City and Mwambani, Tongoni estuary, and three small islands of Toten, Yambe and Karange. The uniqueness of the park includes: the occurrence and high rates of incidental catches of the CITES - listed and iconic Coelacanth, *Latimeria chalumnae*. TACMP is also a home to other endangered species like dugong, sea turtles and migratory water birds. The dugong was last sighted in 2006 off Kigombe. Moreover, the area has a highly productive and diverse fisheries resources and coral reef communities.

The continental shelf off Tanga Region is about 2,090 km² in area and comparatively narrow. It varies in width from 5-10 km between Tanga and Pangani to over 40 km near the Kenya border (Bensted-Smith, 1988).

Currents
The major currents prevailing in the coastal waters of Tanzania are the South Equatorial Current (SEC) flowing westwards around 12°S (approximate border area of Tanzania and Mozambique), and the East African Coastal Current (EACC) flowing northwards from there along the coast. The TACMP is influenced by the EACC. The EACC is a steady current, strongest during the Southern Monsoon (April - October) when surface currents can exceed 3 m/s, and weaker during the Northern Monsoon (November-March) with an average speed of 0.5 m/s (UNESCO-IOC, 2009). The speeds of over 1 m/sec were recorded in TACMP waters in October 2007.

Tides
Tides are semi-diurnal with high and low waters occurring twice within a day. Mean spring tide for Tanzania is about 3.5 m and mean neap tide about 2.5 m (UNESCO-IOC, 2009). For Tanga, a maximum diurnal range of about 4.5 m has been recorded. During the low water - spring tides,

biggest changes are seen over the area of Mwambani Bay where an extensive area of sand and seagrass gets exposed.

Surface Water Temperature

In TACMP near-shore areas, warm water of >25°C sometimes penetrated depths of more than 200m, whereas at other times temperatures of <20°C were found at only 120m depth. As coelacanths seem to be intolerant of water above 23°C (Ribbink & Roberts, 2006), movements of cool or warm water into the area may presumably affect coelacanth distribution and this has direct implications for TACMP management.

Location

The Park is located between 5° 03' 37"S 39° 14' 41"E and 5° 24' 13"S 39° 08' 12"E and 5° 21' 39"S 39° 01' 55"E and 5° 03' 21"S 39° 03' 21"E (Figure 1, see attachment). The area is within the national jurisdiction.

Feature description of the proposed area

The shallow waters of the continental shelf are characterized by a series of 96 submerged fringing and patch reefs, mangrove habitats, seagrass beds and sand banks, and the deeper shelf areas are characterized by many small ridge-like extrusions that form caves in which Coelacanths have been found (Kaehler et al. 2007/8). Main elevations within TACMP are the outer coral rag islands of Toten Island, Yambe, and Karange, where most of the Coelacanths have been found. A small sea-floor feature of approximately 80m height has been discovered to the east of Fungu Tongoni reef (Kaehler et al. 2007/8). At approximately 80m depth, the shelf scarp increases rapidly to about 150m depth, and from there the seafloor tends to be flat and smooth. Seawater visibility in TACMP area is clear most of the times.

Biological communities

One of the most notable fish in the region is the Coelacanth, *Latimeria chalumnae*. Often referred to as a 'living fossil fish', its conservation status is that of endangered, CITES - Annex 1 species. Within the park area, Coelacanths seem to mainly occur along the outer island drop-offs. In 2004, fishers from Kigombe caught 4 specimens when using deep-set shark nets set on the inshore seabed between 50-200m depth. As of January 2011, at least 37 specimens were captured as by-catch in the Park, mainly in the fishing villages of Kigombe, Mwarongo and Mwambani.
The unprecedented catch incidents of coelacanths in Tanga area called for urgent management measures to protect the species in Tanzania, to sustain representative reef and deepwater ecosystems and ensure maintenance of the ecosystem processes on which coastal communities as well as coelacanths depend, hence the establishment of TACMP.

Other fauna include three species of marine turtles, namely, olive ridley (*Lepidochelys olivacea*), green turtle (*Chelonia mydas*) and hawksbill (*Eretmochelys imbricata*), marine mammals such as dugongs and dolphins, shorebirds and invertebrates such as octopus, lobsters, molluscs and echinoderms.

In TACMP, mangroves are predominant in river estuaries as well as on Yambe and Karange. A large area of mangrove forest is spanning the villages of Mtambwe, Ndumi, Mwambani Mchukuuni, Jambe Island and Geza; Mwarongo, Tongoni and a small strip south of Kigombe.

Nine species of mangroves exist inside the park area: *Avicennia marina*, *Bruguiera gymnorhiza*, *Ceriops tagal*, *Heritiera littoralis*, *Lumnitzera racemosa*, *Rhizophora mucronata*, *Sonneratia alba*, *Xylocarpus granatum* and *Xylocarpus molluccensis*.

There are numerous and extensive seagrass beds within the park area, but their extent and ecological patterns inside the marine park are not well documented to-date (et al. 2007/2008).
The habitat is particularly critical as a nursery ground for juvenile fish of the majority of fish species exploited in TACMP, as major contributor to coastal productivity, and as feeding habitat for endangered species like dugong and green turtle.

The reefs in the Tanga region are generally rich in marine biodiversity, and support a large local fishing community (McClanahan et al. 1999). A total of 47 coral genera have been documented (Horrill et al. 2000).

Feature condition and future outlook of the proposed area
The main potential threats to mangroves in the park area include mangrove cutting for firewood, charcoal production, domestic building poles, boat-building and fuel wood (including producing lime from coral though to a smaller extent). These pressures have been generally increasing, and may continue to do so with growing population numbers and imminent needs for livelihood development inside the park area. A potentially significant threat to mangroves within the Park is furthermore posed by planned construction of a deep-water port in Mwambani Bay, which if implemented would considerably impact on the surrounding creeks of Ras Nyamakuu and Mchukuuni.

Sand, gravel and coral limestone mining from the shore also contribute to accelerated erosion and are practiced in the Park. Within the Park there is a high level of beach erosion in some areas. Regarding pollution there are inadequate solid and liquid waste management systems and a number of beaches are polluted by human excreta. A potential threat of water pollution stems from high levels of waste water and proximity of the sisal and cement making industries.

Assessment of the area against CBD EBSA Criteria (Tanga Coelacanth Marine Park (TACMP**)**

(Discuss the area in relation to each of the CBD criteria and relate the best available science. Note that a candidate EBSA may qualify on the basis of one or more of the criteria, and that the boundaries of the EBSA need not be defined with exact precision. And modeling may be used to estimate the presence of EBSA attributes. Please note where there are significant information gaps)

CBD EBSA Criteria (Annex I to decision IX/20)	**Description** (Annex I to decision IX/20)	**Ranking of criterion relevance** (please mark one column with an X)			
		Don't Know	**Low**	**Some**	**High**
Uniqueness or rarity	Area contains either (i) unique ("the only one of its kind"), rare (occurs only in few locations) or endemic species, populations or communities, and/or (ii) unique, rare or distinct, habitats or ecosystems; and/or (iii) unique or unusual geomorphological or oceanographic features.				**X**
Explanation for ranking: Area contains a diversity of habitat types (mangroves, mudflats, channels, segrass beds, algal beds, coral reefs) all within the Park. The presence of Coelacanth, which is considered fossil fish, in the area makes the park very unique in the country					
Special importance for life-history stages of species	Areas that are required for a population to survive and thrive.				**X**
Explanation for ranking: Ecologically important habitats such as mangroves, seagrass beds and coral reef ecosystems are critical for the survival of economically and ecologically important marine species at various stages of their life cycles. In addition, the area provides good nesting and breeding grounds for the marine turtles hence requires protection					
Importance for threatened, endangered or declining species and/or habitats	Area containing habitat for the survival and recovery of endangered, threatened, declining species or area with significant assemblages of such species.				**X**
Explanation for ranking: The Park contains, together with other marine habitats, mangroves and coral reefs, habitats which are threatened globally. There are also a number of threatened and endangered species, like the dugong, coelacanth and the marine turtles in the area					

Vulnerability, fragility, sensitivity, or slow recovery	Areas that contain a relatively high proportion of sensitive habitats, biotopes or species that are functionally fragile (highly susceptible to degradation or depletion by human activity or by natural events) or with slow recovery.				**X**
Explanation for ranking: The area contains a high proportion of sensitive biotopes that are functionally fragile (i.e. coral reefs and mangroves) which are highly susceptible to degradation by human activity with slow recovery. Improper fishing activities threaten habitats within the area. Also the reported planned construction of a deep-water port in Mwambani Bay is likely to affect the ecosystem of the area. Finally the harvesting of corals to provide raw material for limestone manufacture if not attended to may destroy a large part of the coral habitat.					
Biological productivity	Area containing species, populations or communities with comparatively higher natural biological productivity.			**X**	
Explanation for ranking: Not enough information is available in the area but studies made in Zanzibar, which is not far away, and the presence of high fish production, judged by the high number of fishers fishing in the area, confirm high biological productivity					
Biological diversity	Area contains comparatively higher diversity of ecosystems, habitats, communities, or species, or has higher genetic diversity.				**X**
Explanation for ranking: The area contains all the three critical habitats namely Mangroves, seagrass beds and coral reefs, habitats which are typically characterized by high biological diversity. Also the presence of the endangered species in the area and the many fish and crustacean species adds to high biological diversity					
Naturalness	Area with a comparatively higher degree of naturalness as a result of the lack of or low level of human-induced disturbance or degradation.				X
Explanation for ranking: The area is under considerable pressure especially the many activities happening on the terrestrial part, such as sand, gravel and coral limestone mining pose a threat to the naturalness of the area otherwise the fishing activities if well managed will unlikely alter the naturalness of the area.					

References

(e.g. relevant documents and publications, including URL where available; relevant data sets, including where these are located; information pertaining to relevant audio/visual material, video, models, etc.)

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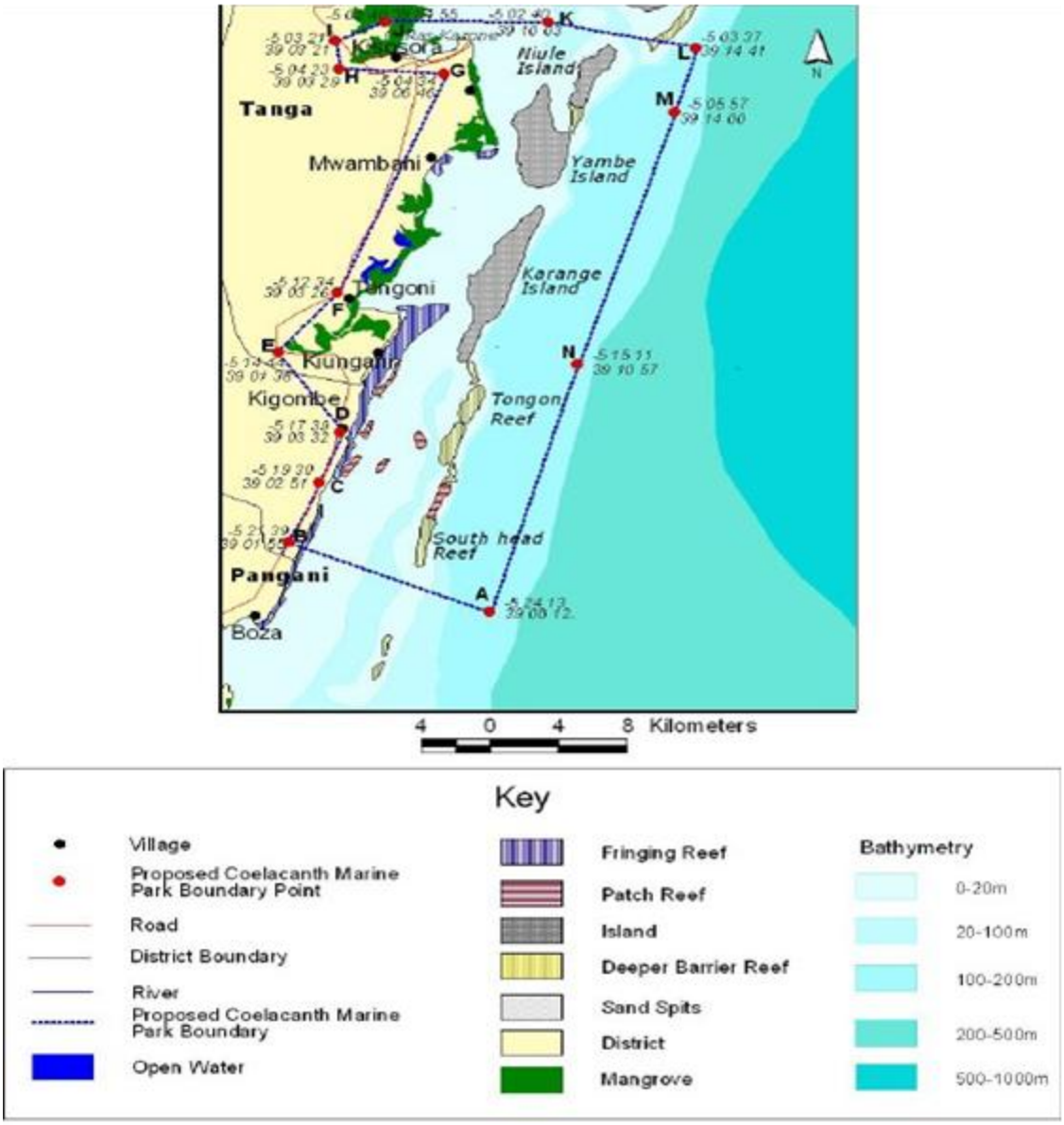

Figure. 1. The coastal map of Tanga showing the location and important features of TACMP.

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