



PROTECTING DUGONGS
CONSERVING SEAGRASS
CHANGE FOR COMMUNITIES

صندوق محمد بن زايد
للمحافظة على الكائنات الحية
The Mohamed bin Zayed SPECIES CONSERVATION FUND

COUNTRY PRESENTATION: Mozambique

INCEPTION WORKSHOP
THE GEF DUGONG AND SEAGRASS CONSERVATION PROJECT
20-21 October 2015
Colombo, Sri Lanka



blue ventures
beyond conservation



Dugongos.org





MOZAMBIQUE

Geographic Position: Western Indian Ocean Coast

Latitudes: 10° 27' S & 26° 52' S

Longitudes: 30° 12' E & 40° 51' E

Surface: 799 380 km² (13 000 inland water)

Coastline Length: 2 700 km

Climate: Tropical & Subtropical; Coastal Zone

Annual Average: Temperature: 23°C (S) & 26°C (N);

Rain 1,200mm

Total Population (2015): 25 727 911

Population Growth Rate: 2.80%

Urban Population (31%): 8 181 475

Rural Population (69%): 17 546 436

Coastal Population (66%): 16 980 421

GDP Per Capita (2013): 640 U\$D

GDP Annual Growth: 7.3%

Agricultural land: 47%

Life expectancy: 53.4 Years

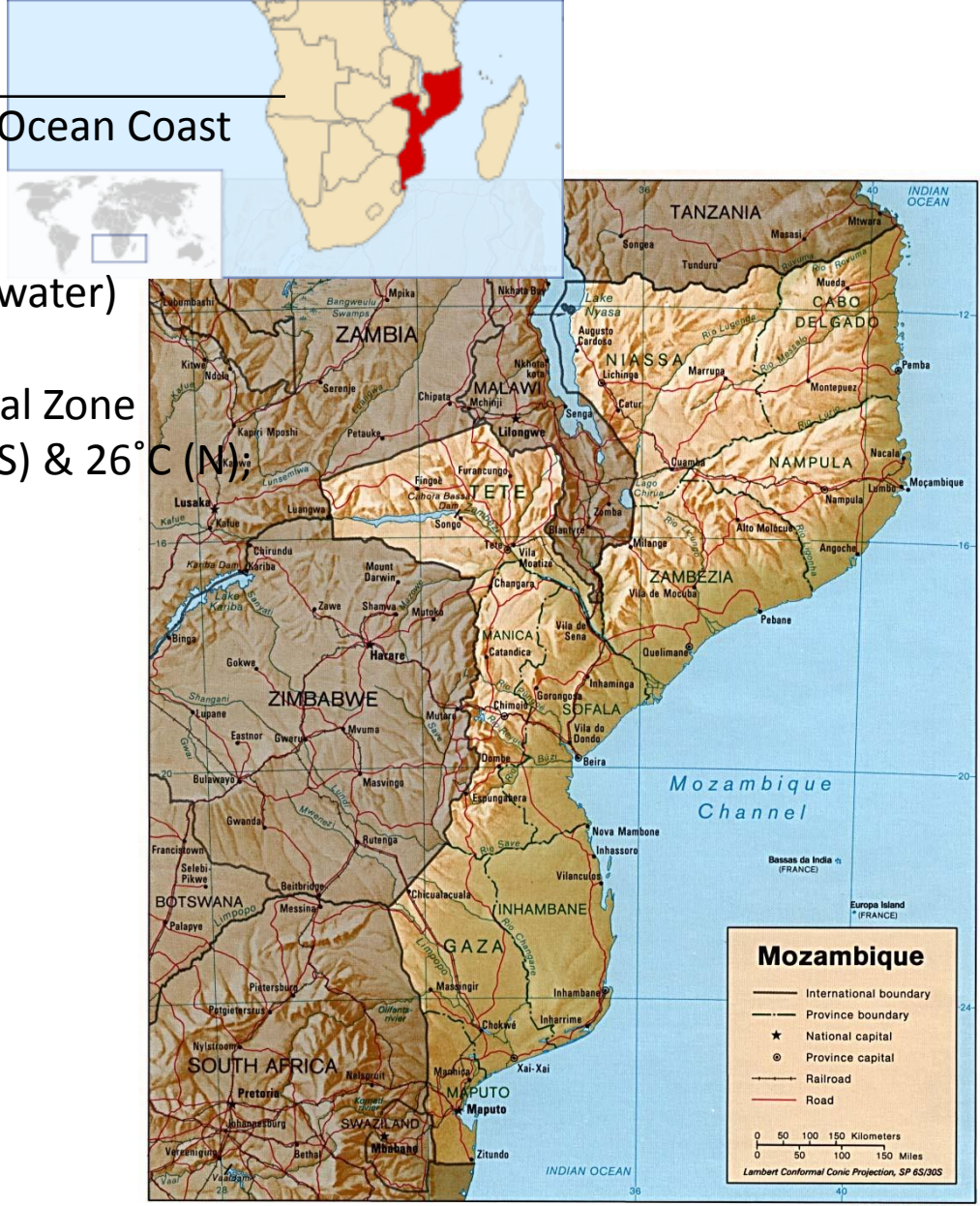
Poverty rate land: 54.70%

Currency: Metical

Literacy: 48%

Languages: Portuguese, Swahili, Makhuwa, Shangaan and Sena

Religion: Indigenous beliefs, Christian, Muslim



Base 802419 (A05253) 12-95



MAIN IMPORTS AND EXPORTS AND STAPLE FOOD PRODUCTION

Main imports	Amount (US\$)
Rice	108 687 970
Wheat	3 548 695
Palm Oil	59 057 202

Main Exports	Amount (US\$)
Unprocessed tobacco	155 542 127
Unrefined sugar	87 517 430
Cotton	29 057 262

Staple food production	Quantities (Tons)
Cassava	4 054 590
Maize	1 207 200
Sweet potatoes	566 039
Sorghum	115 000
Fish catches (2010)	161 840
Aquaculture prod. (2010)	864



TOP 5 CONSERVATION FACTS 26% of surface under conservation

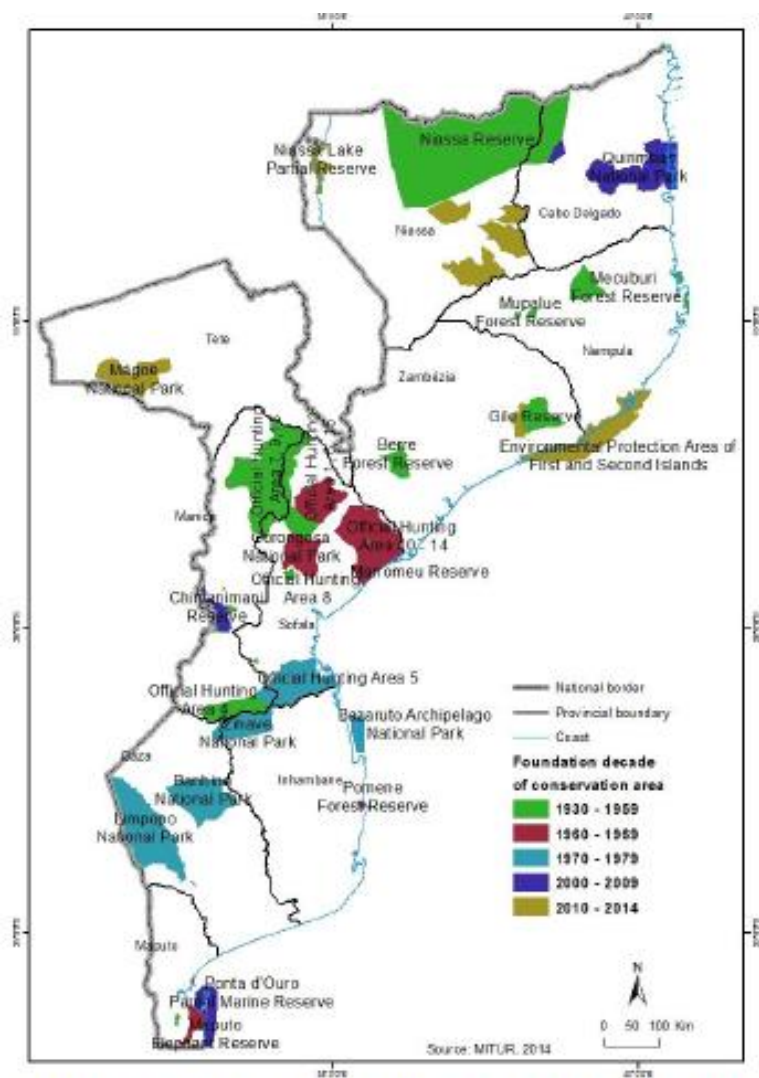


Figure 5. Distribution of protected areas in Mozambique and the validity period of their declaration areas.

Conservation facts	Locations	Year	Surface (Km ²)
Ramsar sites	Zambezi Delta	2003	11 324
	Lake Niassa	2011	486
Largest land Protected Areas	Niassa National Reserve	1960	42 200
	Bazaruto Arquipelago National Park	1971	1 463
Marine Protected Areas	Quirimba National Park (11 limestone islands)	2002	9 130
	Ponta do Ouro Partial Reserve	2011	673
	Ilhas Primeiras & Segundas Environmental Protected Area	2012	10 490

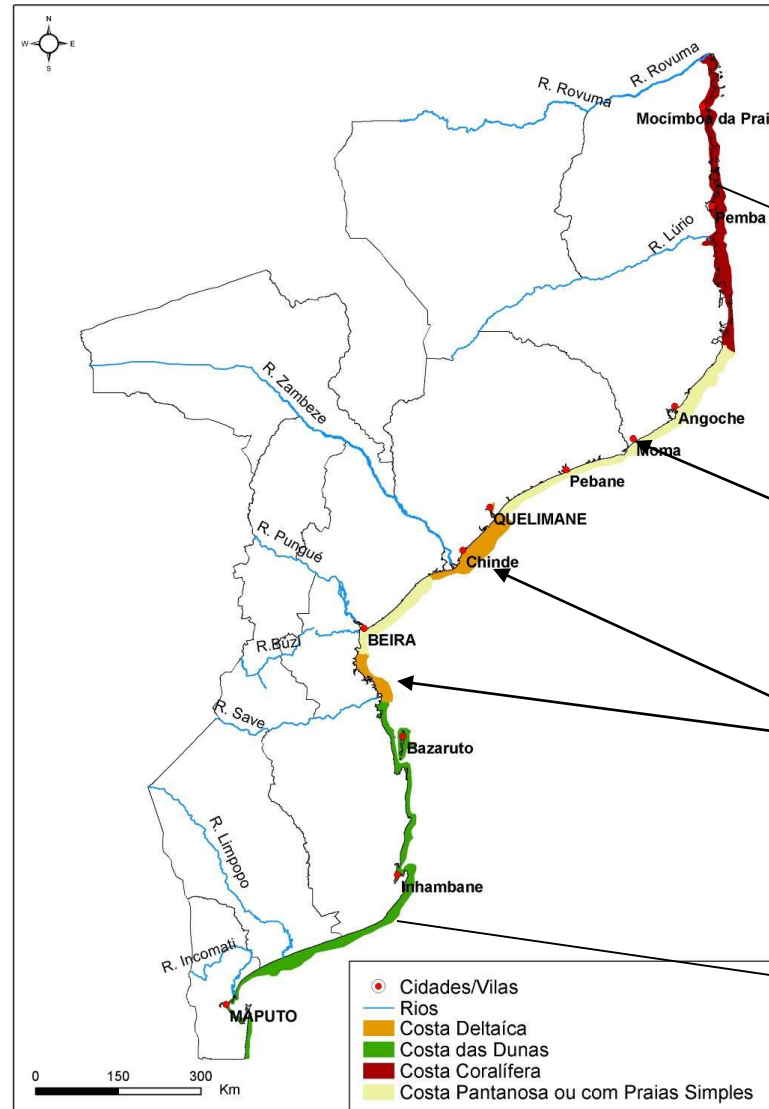
Largest East Africa Dugong Population – 300 dugongs
 Nesting and foraging habitat of 5 endangered marine turtles (entire coastline)



MOZAMBIQUE DUGONG STATUS REPORT

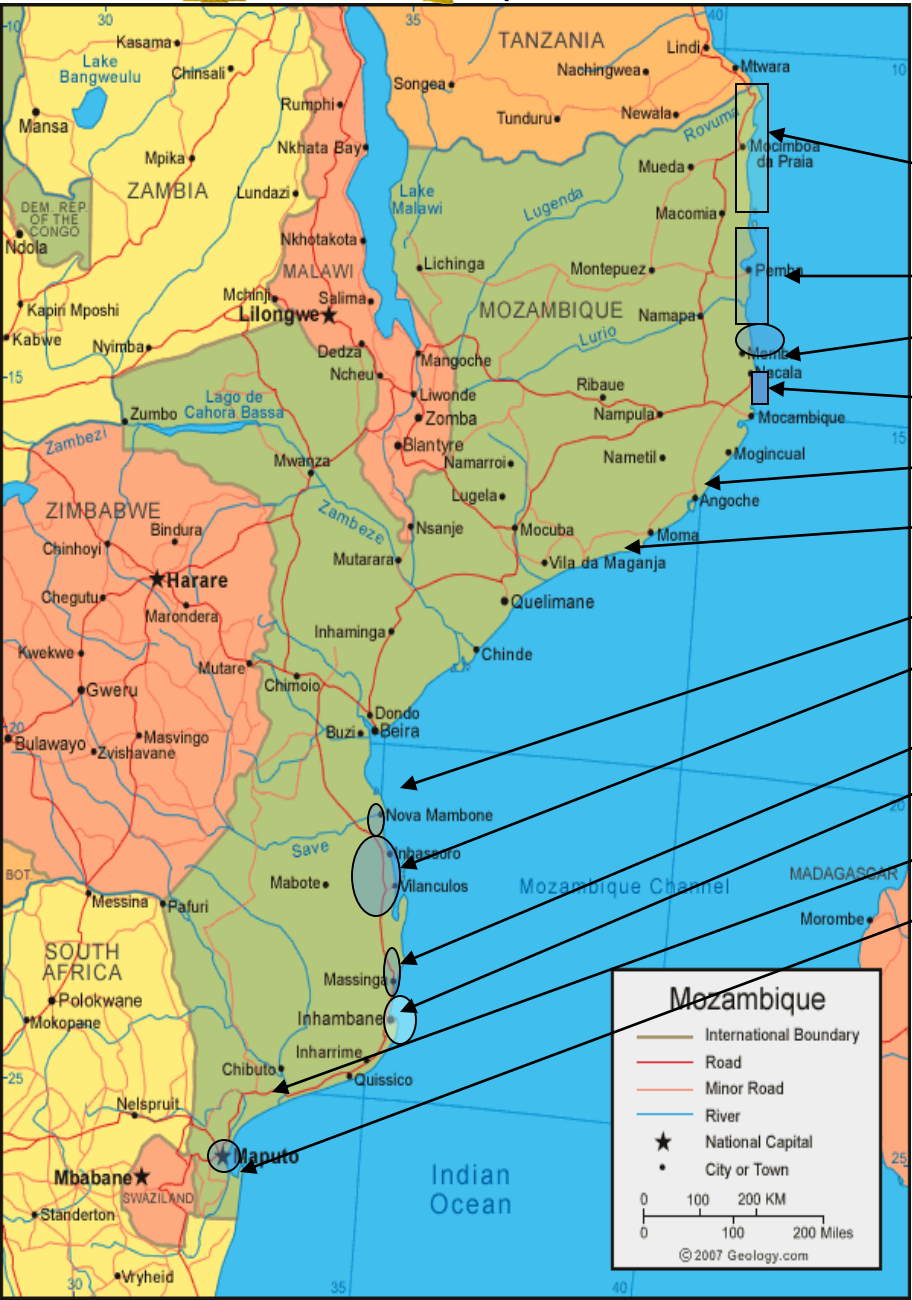


Geographical Settings & Marine Habitats





Known distribution of key seagrass and other dugong habitats (location, area, extent)



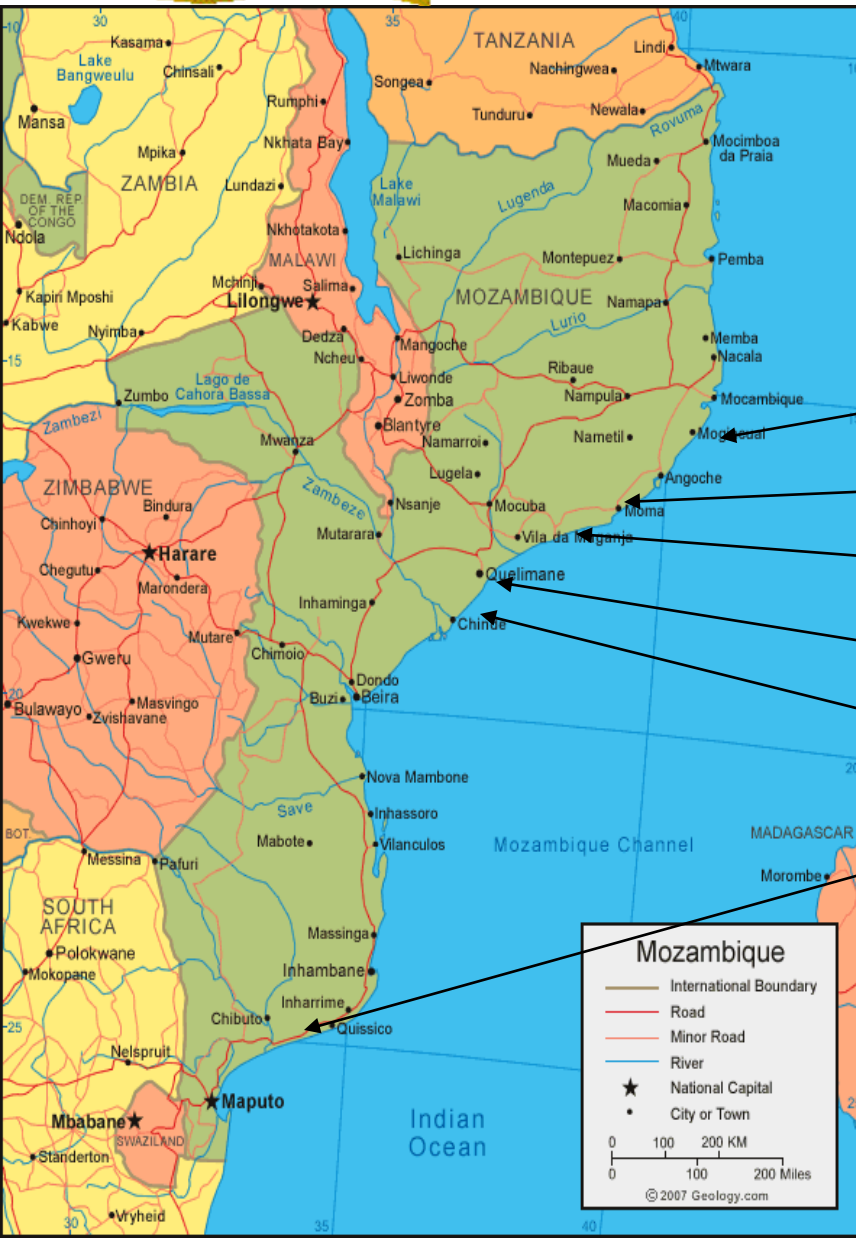
- **Quirimba Archipelago (Palma-Quissanga)**
- Pemba-Memba
- Nacala Matibane
- **Mozambique Island/Mossuril**
- Angoche
- Pebane
- **Nova Mambone- Inhassoro**
- **Inhassoro- Vilanculos-Bazaruto**
- Pomene - Morrungulo
- **Inhambane Bay to Zavora**
- Bllene
- **Maputo Bay**

Total extent of seagrass : Unknown, . 1/3 coastline (800 km)

PS: Few estimates available for areas marked with bold



Possible additional seagrass habitats (areas yet to be surveyed)



Mongicual

Moma

Maganja da Costa

Quelimane

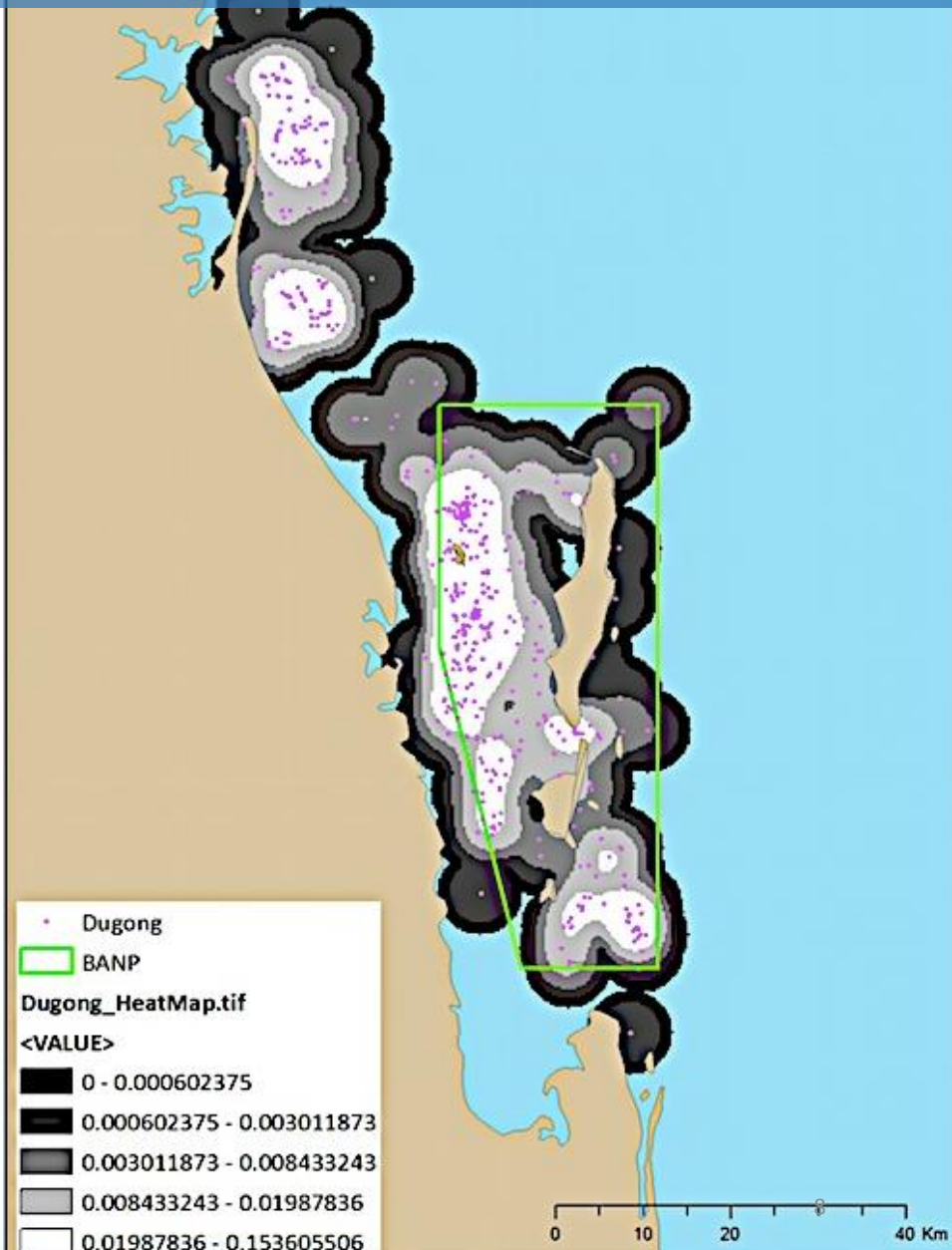
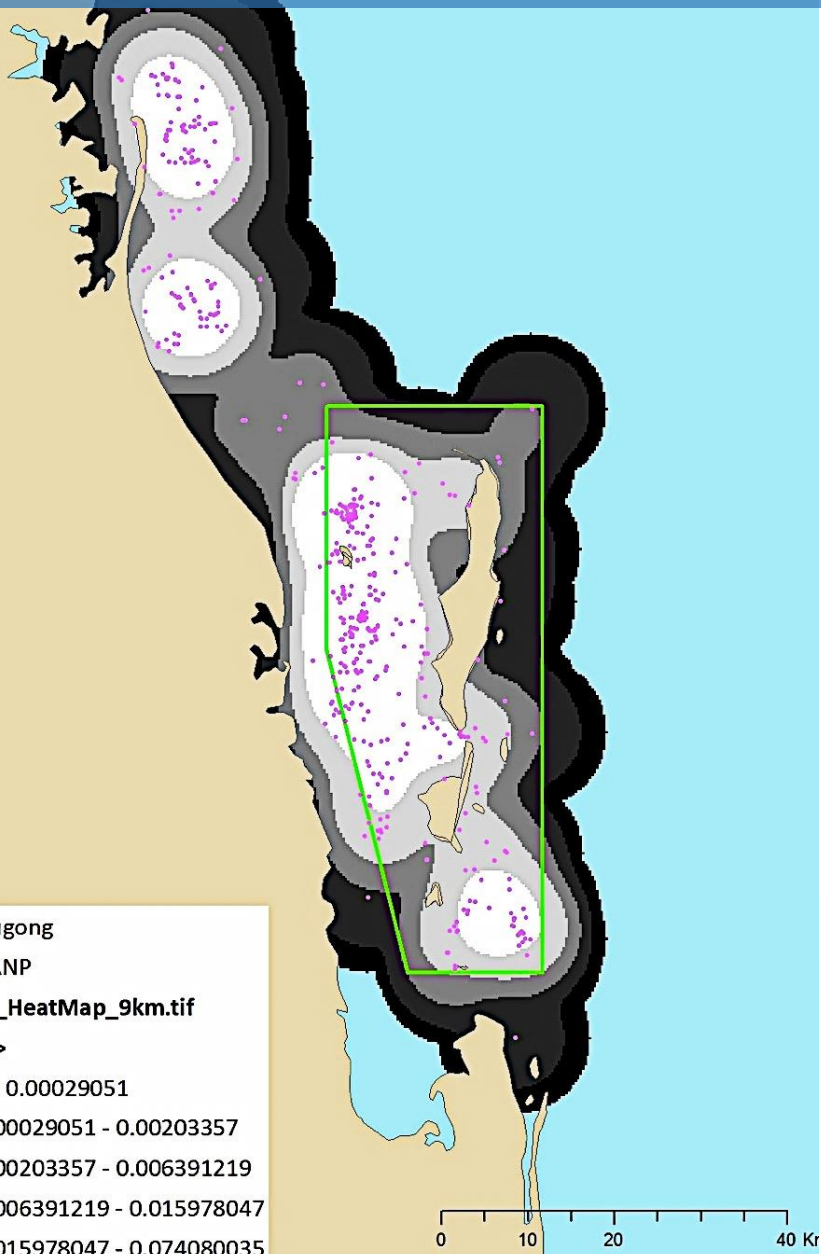
Chinde

Chidenguele

Dugong Heat Map - 9 km radius

Dugong Heat Map - 5 km radius

Dugong sightings





RELEVANT LEGISLATION ADDRESSING DUGONGS AND THEIR HABITATS (NATIONAL LAWS, REGULATIONS, DECREES)

- Land Law (Lei de Terras, Lei nº 19/97 De 1 de Outubro).
- Framework Environmental Law (Lei do Ambiente 20/97 1 de Outubro).
- Forestry and Wildlife Law (Lei de Florestas e Fauna Bravia, Lei No. 10/99).
- Regulation of the Forestry and Wildlife Law (Decreto nº 12/2002, de 6 de Junho).
- Fisheries Law (Lei 30/90, de 30 de Setembro)
- General Regulation of Maritime Fisheries (Decreto no. 431 2003, de 10 de Dezembro).
- Regulation for Prevention of Pollution and Protection of Coastal and Marine Environment (Decreto No.45/2006 de 10 de Novembro).
- National Strategy and Action Plan for Costal Zone Integrated Management (**on going**).



Mozambique signs the UNEP/CMS Dugong MOU in Maputo on 18 April 2011



RELEVANT LEGISLATION (WHICH ADDRESSES DUGONGS AND THEIR HABITATS)

RESOLUTIONS ADOPTING INTERNATIONAL CONVENTIONS

- CITES (Resolução n.º 20/81, de 30 de Dezembro).
- CMS or Bonn Convention de 23 June 1979 and its Amendments 1985, 1988, 1991, 1994, 1997, 1999, 2002 and 2005 (Resolução n.º 9/2008, de 19 de Setembro).
- Convention of Biological Diversity (Resolução n.º 2/94, de 24 de Agosto).
- RAMSAR Convention (Resolução n.º 45/2003, de 5 de Novembro de 2003).
- African Convention on Conservation and Nature and Natural Resources (Resolução n.º 18/81, de 30 de Dezembro).
- Convention for Protection , Management and Marine and Coastal Development of the Eastern African Region of 2 June of 1985 and their protocols (Resolução n.º 17/96, de 26 de Novembro).
- Convention for Protection of World Cultural and Natural Heritage of UNESCO (11/10/76).
- UN Convention on Climate Changes of June 1992. (Resolução n.º 1/94, de 24 de Agosto).



NATURE AND MAGNITUDE OF THREATS TO DUGONGS

- Deliberate hunting (gill nets)
- By catch in gill net and beach seine fisheries
- Siltation/Sedimentation of habitats caused by river or erosion
- Disturbance with coastal developments (acoustic & boat traffic)
- Oil explorations (recent)
- Cyclones (Mortality observed in 2003)





NATIONAL CONSERVATION PRIORITIES FOR DUGONGS

- Law enforcement/Institutional Capacity
- Preparation of National Dugong Strategy (including seagrass habitat)
- National Management Plan
- Reduction of Dugong Mortality from by-catch in fisheries and other sources
- Improve of Management at Conservation Areas
- Awareness and conservation in fishing communities, local governments and central governments



MOZAMBIQUE PROJECTS

PROJECT REF.	PROJECT TITLE	PROJECT PARTNER
MZ1	Building a model for innovative long-term community-based conservation of seagrass - dependent biodiversity in Mozambique.	Blue Ventures
MZ2	The distribution of dugongs in the coastal waters of Mozambique.	Dugongos.Org
MZ3	Developing an Education and Awareness Campaign to Conserve Dugongs in the Bazaruto Archipelago and Mozambique.	Dugongos.Org
MZ4	The Dugong Emergency Protection Project.	Endangered Wildlife Trust (EWT)
MZ5	Participatory Research of Additional Methods to reduce the Impact of the beach seine fisheries on seagrass beds at Vilanculos and Inhassoro.	Ministry of Land, Environment and Rural Development (MITADER) – National Directorate of Environment (DINAB)
MZ6	National Facilitating Committee for the GEF Dugong and Seagrass Conservation Project.	MITADER – DINAB



OUTPUTS

- Formation of Bartolomeu Dias management council representing all stakeholders and actors in the region; Formation of a Joint Law Enforcement Unit (LEU) for the Bartolomeu Dias region (initial stages).
- Create a dugong protection forum: Strengthen local structures by formalizing a Dugong Protection Unit (DPU) comprised of local authorities, fishing associations, and the tourism sector.



OUTPUTS

- Develop collaborations with Fishing Associations (CCP's) and other relevant stakeholders to promote best practice.
- Provide an alternative source of income for local island residents through the provision of FADS and a link to secure markets for sustainably-caught line fish.
- Alleviate poverty by identifying further alternative income-generating activities for the Park's communities.
- Increased production of fisheries to assist the achievement of local economic and social development within the island communities.
- Develop proficiency in teachers and augment their awareness of marine ecosystems, Dugongs, and seagrass.
- Enhance children's knowledge of marine ecosystems, Dugongs, and seagrass and instil an understanding of sustainable marine resource use.
- Reduce netting activity in certain zones seasonally - which will allow near-shore aggregations of fish a degree of recovery - leading to additional food security. This will also minimize destruction of bivalve habitat, and increase the recovery of Mapalo (sand oysters) which constitute a staple food source for islanders.



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