

Eritrea's Pristine Coastal Environment Is Significant to Science and Technology Cooperation

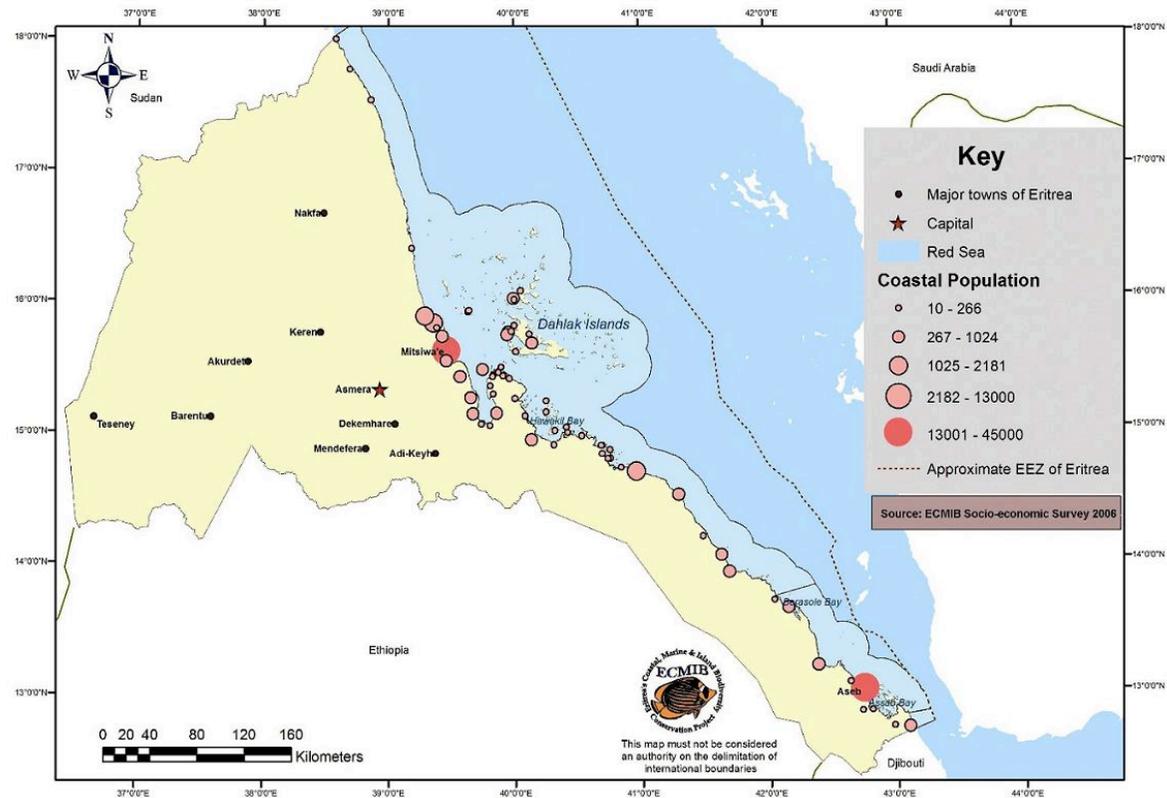
H.E. Mr. Semere Russom Minister of Education of the State of Eritrea's Presentation to the
Science and Technology Forum and Science and Technology Ministers' Roundtable Meeting
October 3 – 5th , 2010 Kyoto Japan

Contents

- **What is so special about marine and coastal biodiversity in Eritrea?**
- **What is the local wisdom about marine and coastal biodiversity in Eritrea?**
- **Can science and technology serve the local wisdom used in preserving this important biological zone?**

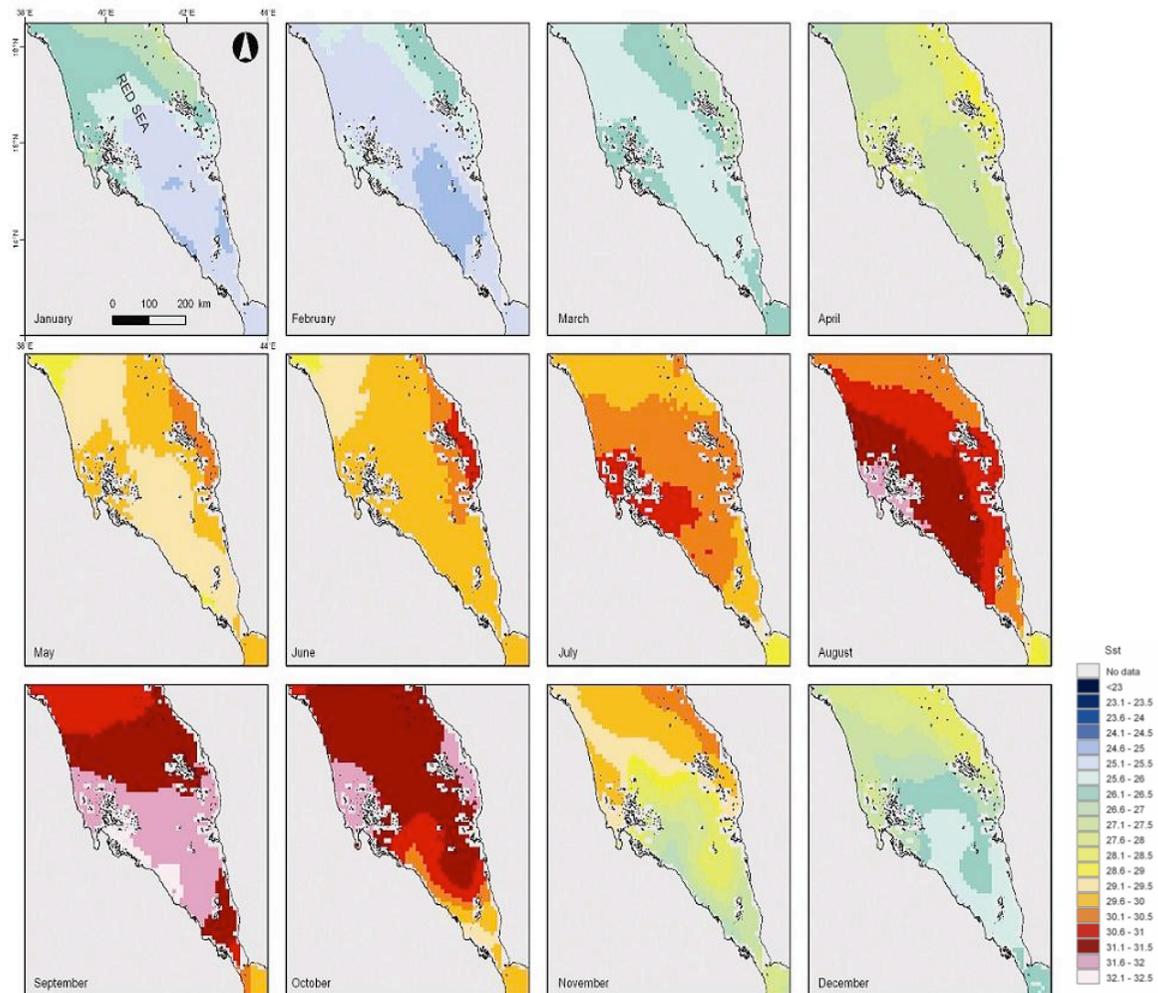
125,000-year-old stone tools from Abdur discovered in this biological zone are the earliest, best dated evidence of human occupation of a coastal environment

- Only 10 islands support human population at present, historical evidence suggest more islands where inhabited in the past;



Despite the hot sea surface temperature this biological zone is home to the highest degree of endemic species

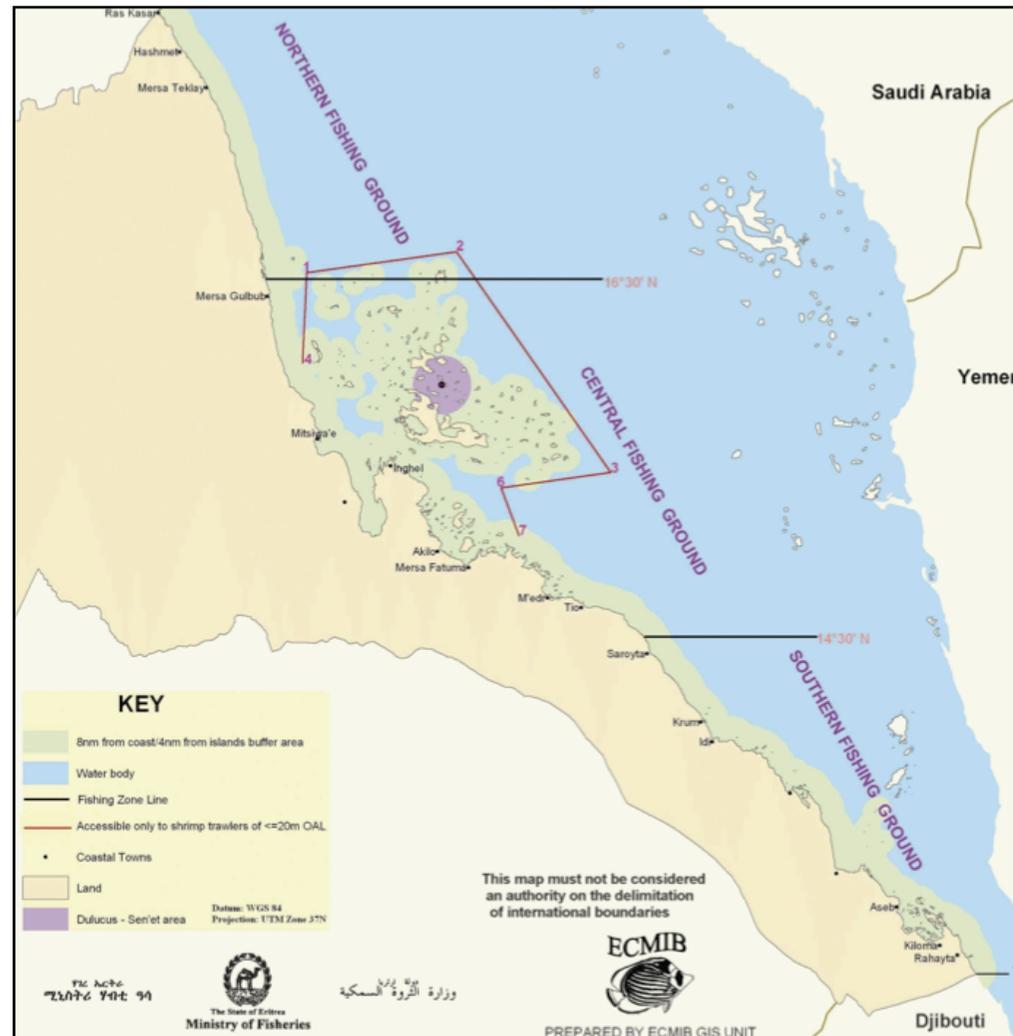
- The coast and **354 off shore coral islands** are home to globally important coral reefs, mangroves, sea grasses and other habitats, as well as **numerous vulnerable or globally endangered species**
- The coast and the islands include three distinct biological zones of the Red Sea and Gulf of Eden containing **a globally important and unique assemblage of marine and coastal habitats**



Eritrea Sea Surface Temperature by ECMIB

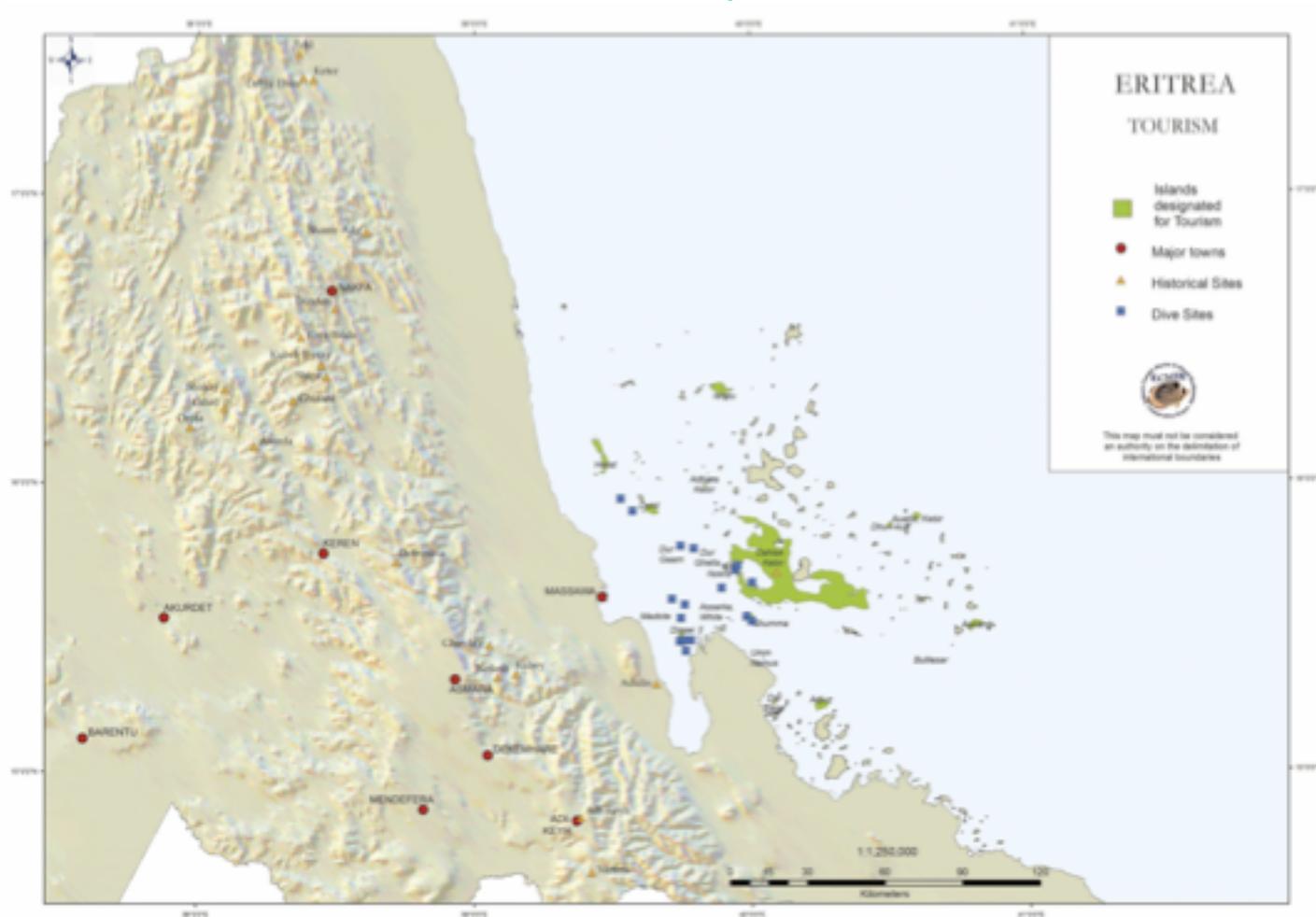
17% of the 1,400 known fish species and 20% of the 250 coral species - so far recorded in the coast of Eritrea - are found nowhere else

- Coral reefs: 250 species
- Sea grasses, sea weeds: 10% of the world species
- Sea birds, shore birds: 78 species (22 breed in the islands)
- Endangered marine turtle: 5 species (60 species globally)
- Endangered Dugong: 350-400 in number found in the Northern Coast
- Dolphins: most common mammal
- Endangered Whales: spotted sometimes
- Mangroves: about 389km



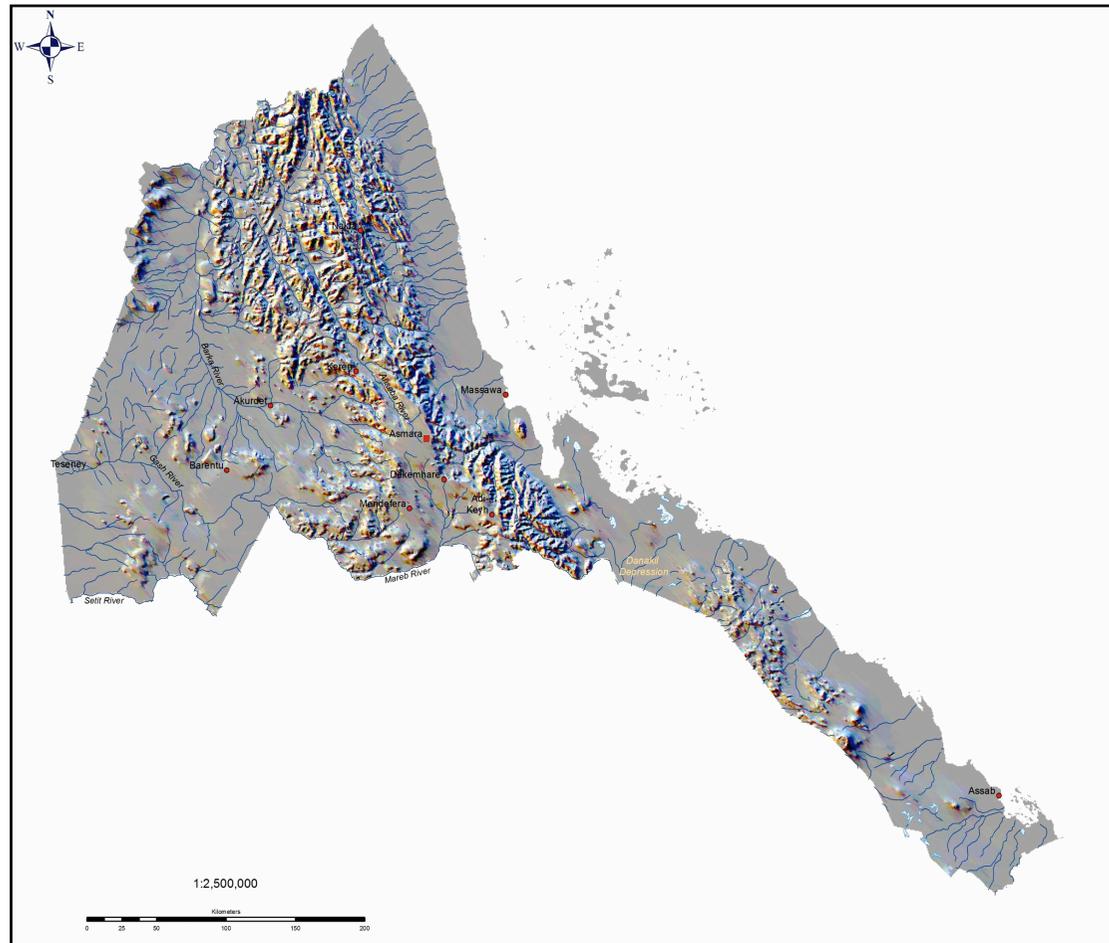
Eritrea's Territorial Water Fishing Grounds

The coast and the islands include 3 distinct biological zones of the Red Sea and Gulf of Eden containing the historical route of mankind and the Danakil depression (Salt Plain)



This biological zone has a distinct geographic, climate range conditions with a natural variety of eco-system in short distances

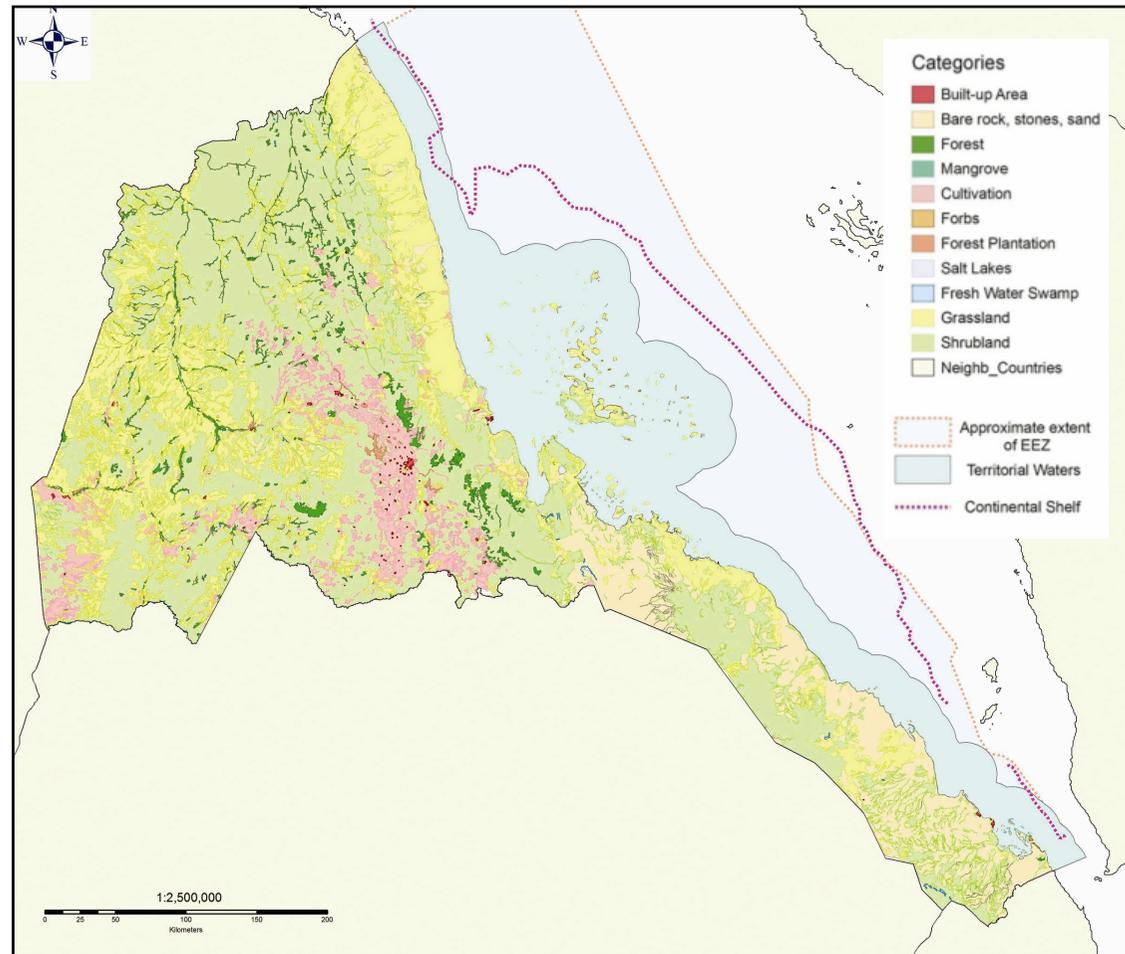
- Distinct geographic features: experiences sea level (below sea level) and mountains reaching 3200 meters
- Climate: wide range of conditions in short distance



Unique Land Cover

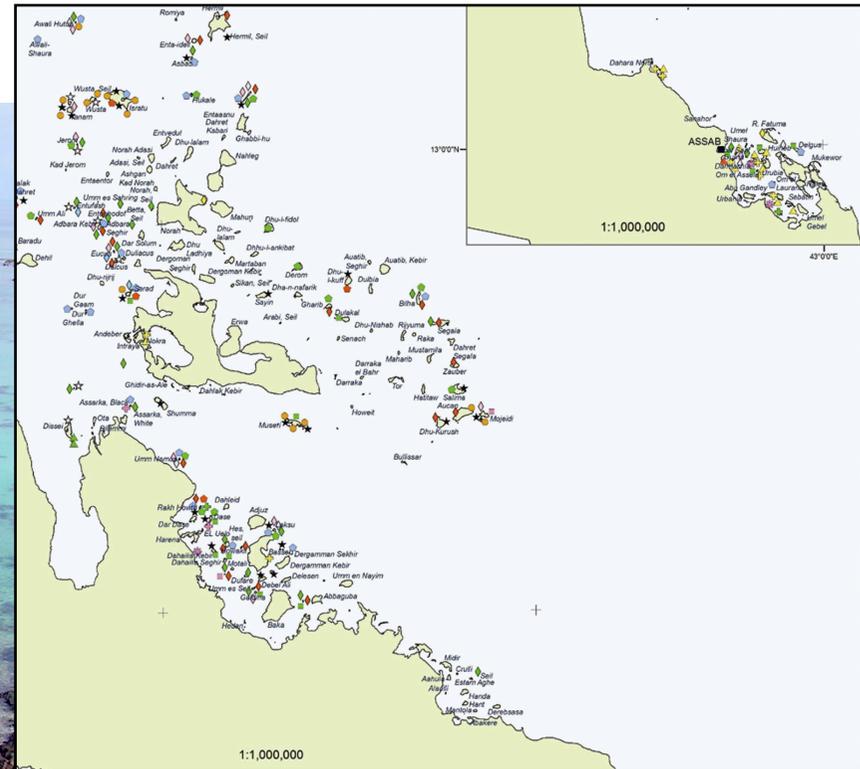
-rolling acacia woodland, brush land, semi desert vegetation, mangrove swamp, juniper and wild olive, East African Laburnum, native hops and eucalyptus, dense evergreen and tropical woodland, baobab, toothbrush, woodland savannah, brush land, thicket, groves of doum palm

- Mainland coastline: 3330 km
- Islands and islets coastline: 1950 km
- (Country) Area: 124,000 Km square



Eritrea Land Cover

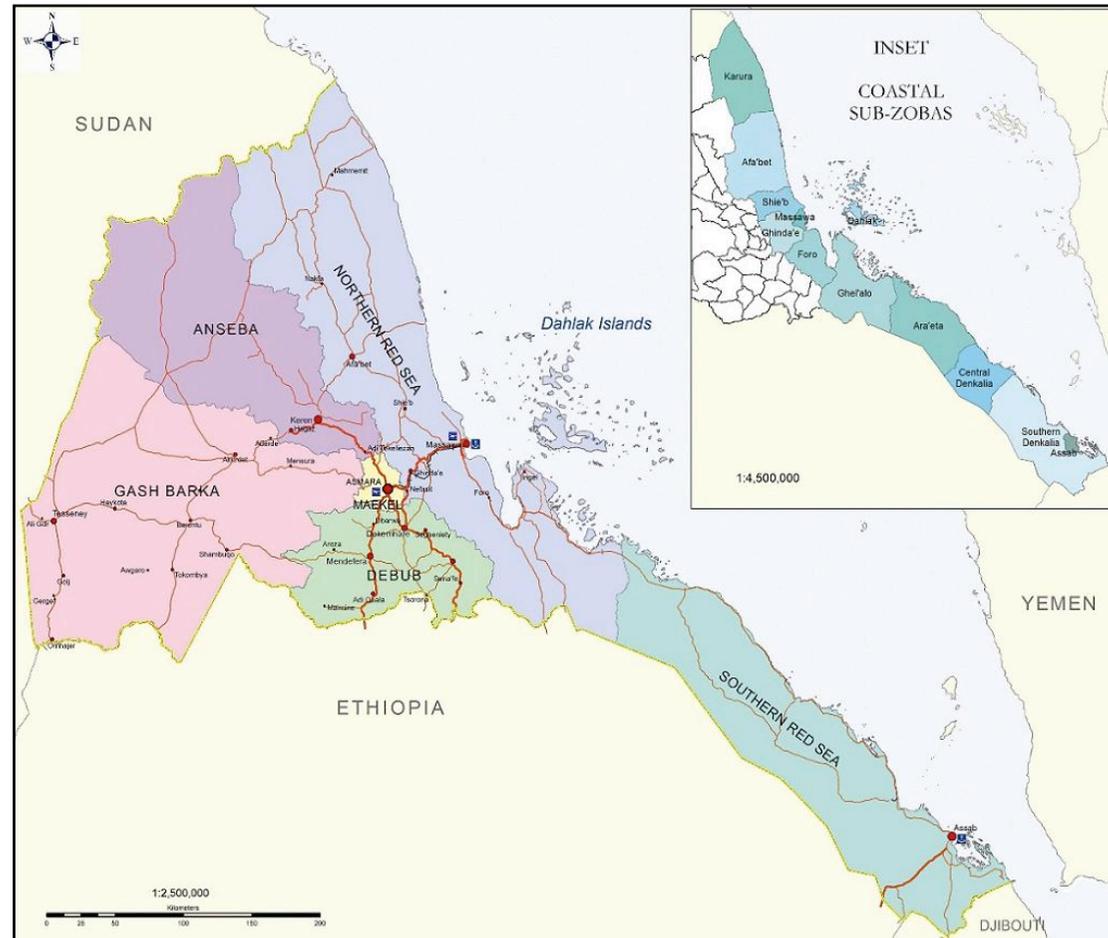
Sea shore and hinterland landmass is home for bird nesting and fish breeding



Sea and shore bird nesting sites

This biological zone is also unique in animal habitat

- **Cattle in pasturelands:**
>2,023,830
- **Sheep in pasturelands:**
>2,235,39
- **Goats in pasturelands:**
>4,894,863
- **Camels in pasturelands:**
>450,000
- **Birds: > 537 identified**
- **Is also home to Vervet ,
Monkeys, baboons, gazelle,
jackal, hare, fox,
mongoose, wild cat,
warthog, Dikdiks and
Dorcas gazelles, Ostrich,
Elephant, Caracal, Serval,
Oryx, Crocodile, Greater
kudu, Endangered African
ass etc**





ROOST OF LESSER-CRESTED TERN
PHOTO BY DAWIT SEMERE
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Challenges

- Climate change, coastal erosion, sea level rise
- Studying historical data of environmental evidence
- Urbanization and associated infrastructures and services
- Mining, petroleum extraction, industrial zone expansion threats etc



What is the local wisdom about marine and coastal biodiversity in Eritrea?

- **A deep respect for all living things and the natural environment upon which they depend.**
- **A firm endeavor to make use of the environment in such a fashion that no species will disappear as a result of domestic actions to maintain perpetually an adequate fraction of both the terrestrial and marine environment in their natural state; and to eschew any trade in species of plants or animals threatened with extinction.**
- **A staunch commitment to cooperate with neighboring states and the world community of nations to protect and enhance the regional environment, the environment of regions beyond national jurisdiction, and the global biosphere, and a constant devotion to resolve any environmental or other interstate dispute solely by amicable means.**

Can Eritrea's Local Wisdom be used for Global Solutions?

- Formulate **joint research projects** that examine the unique biodiversity of the coastal areas including the Danakil Depression.
- **Enhance the local wisdom** rooted at preserving the environment **through existing science and technology knowledge base**.
- Learn the local wisdom to **device state of the art environmental friendly development skills** for the better of our planet.

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Thank you