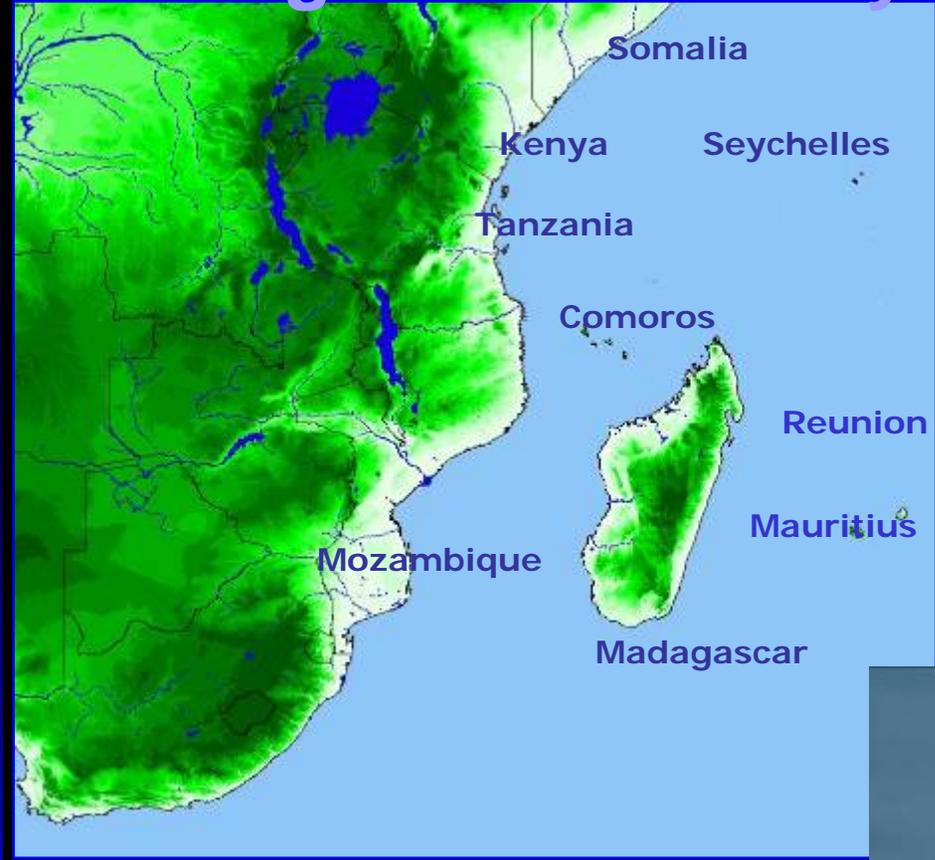
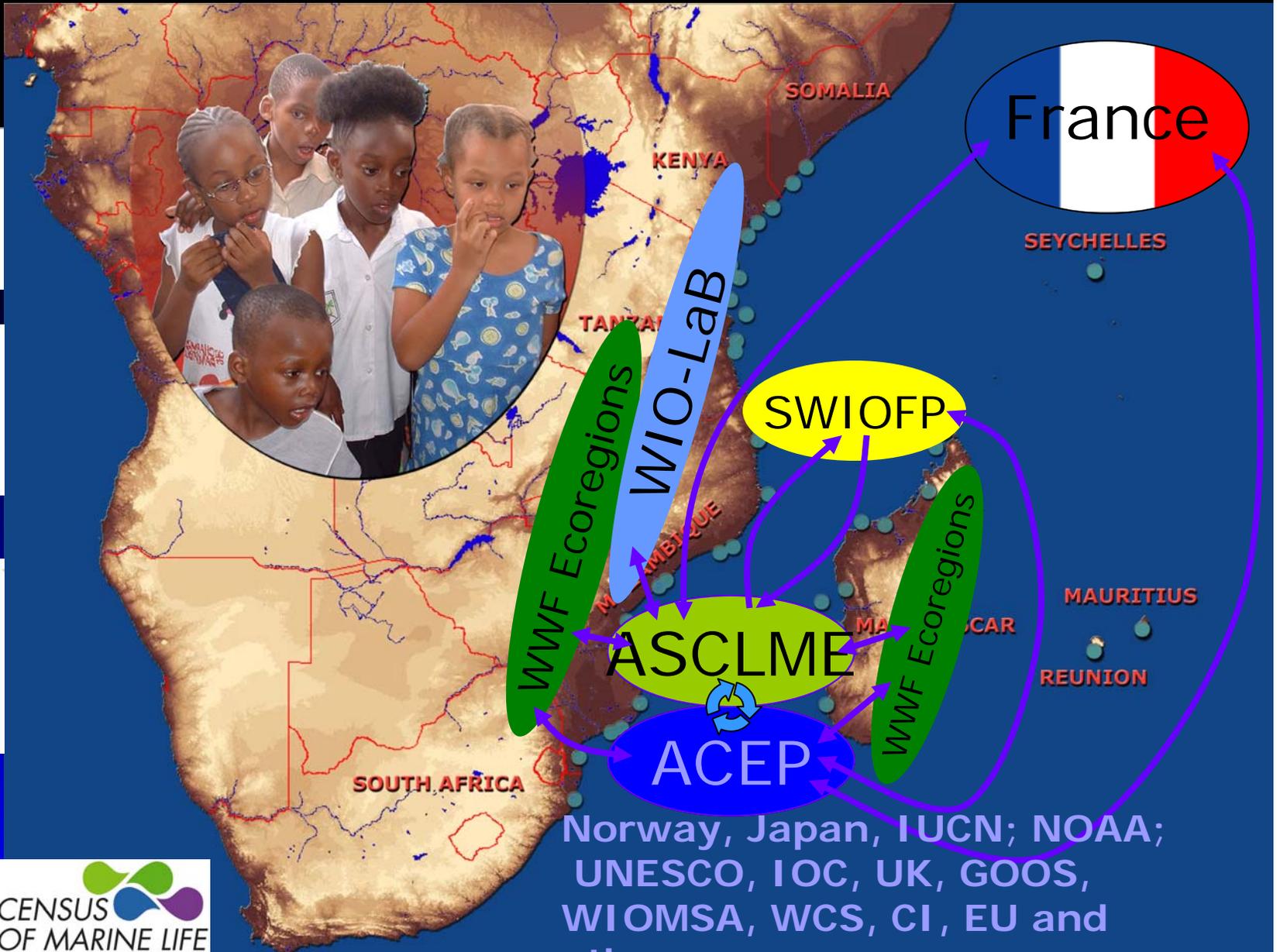


Agulhas Somali Currents Large Marine Ecosystems (ASCLMEs)



Tony Ribbink
on behalf of many

Programmatic approach and partnerships.



Norway, Japan, IUCN; NOAA; UNESCO, IOC, UK, GOOS, WIOMSA, WCS, CI, EU and others



ASCLMEs PROJECT GOALS



- Develop the knowledge necessary to better manage the fisheries and biodiversity through capacity building and ecosystem studies.
- Understand the processes that drive the energy and economies of the western Indian Ocean.
- Contribute to achievement of Millennium Development Goals and WSSD pledges
- TDAs (Transboundary Diagnostic Analyses for Programme)
- SAPs (Strategic Action Plans for Programme)

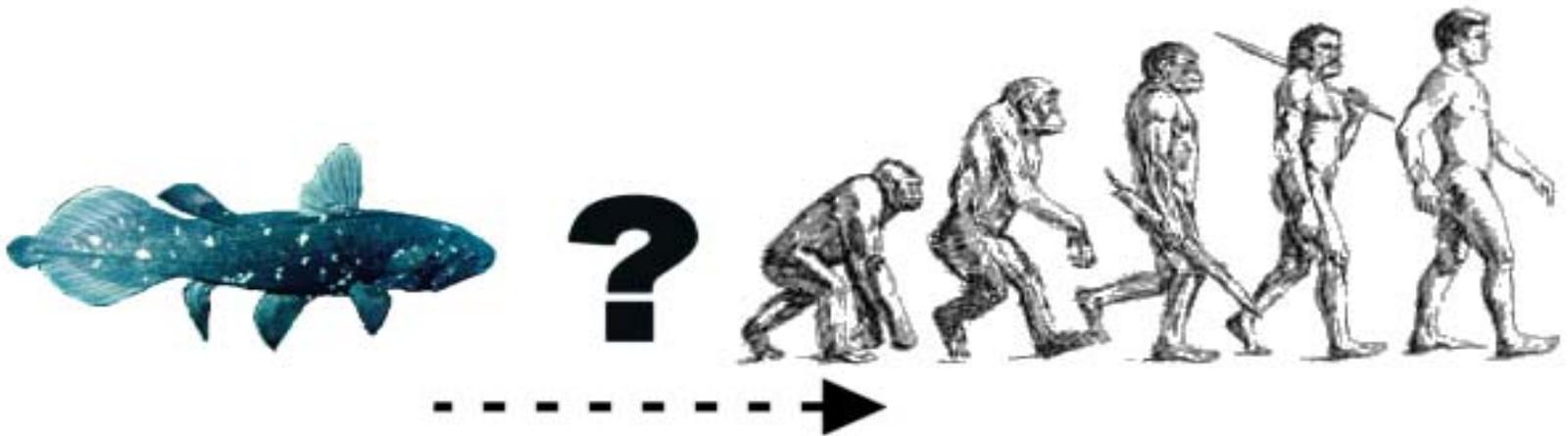
African Coelacanth : window to the past, door to the future



*New Partnerships in Africa Building
Hope for the Future*

African Inspiration: Global commitment

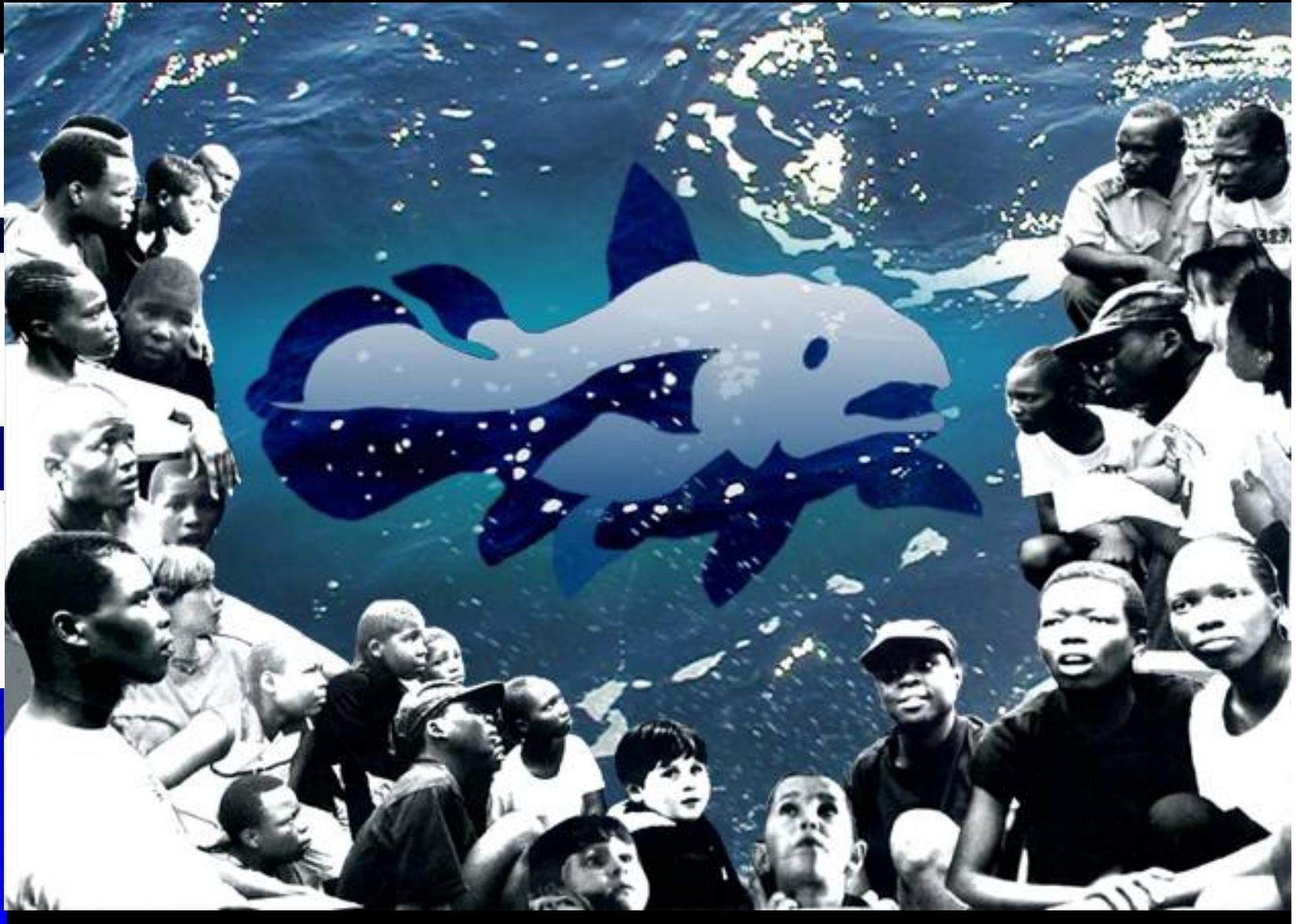
Did "Old Fourlegs" give rise to tetrapods?



Coelacanths live in caves during the day and hunt at night

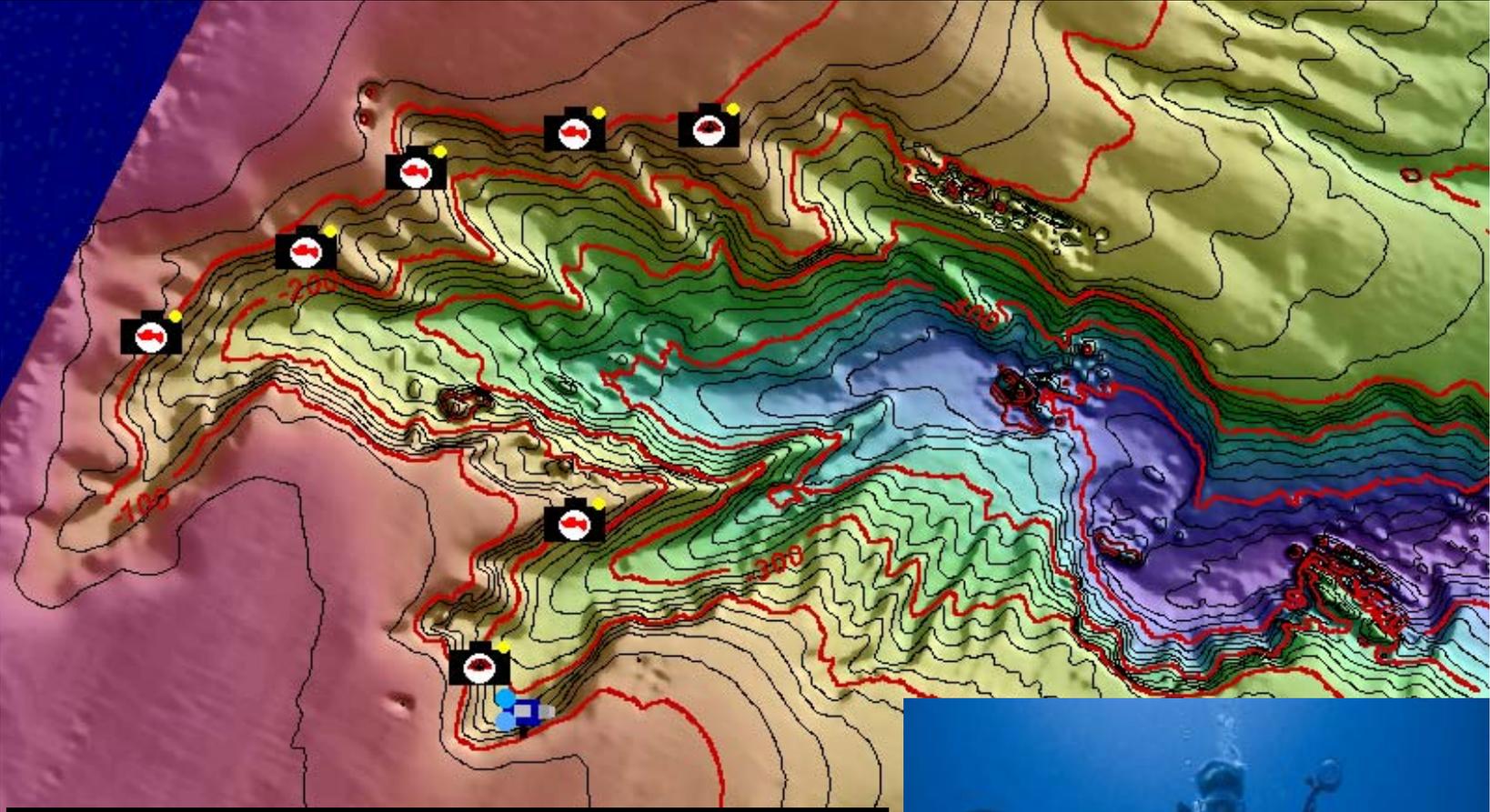


Coelacanth: a regional icon for marine conservation and a symbol of hope





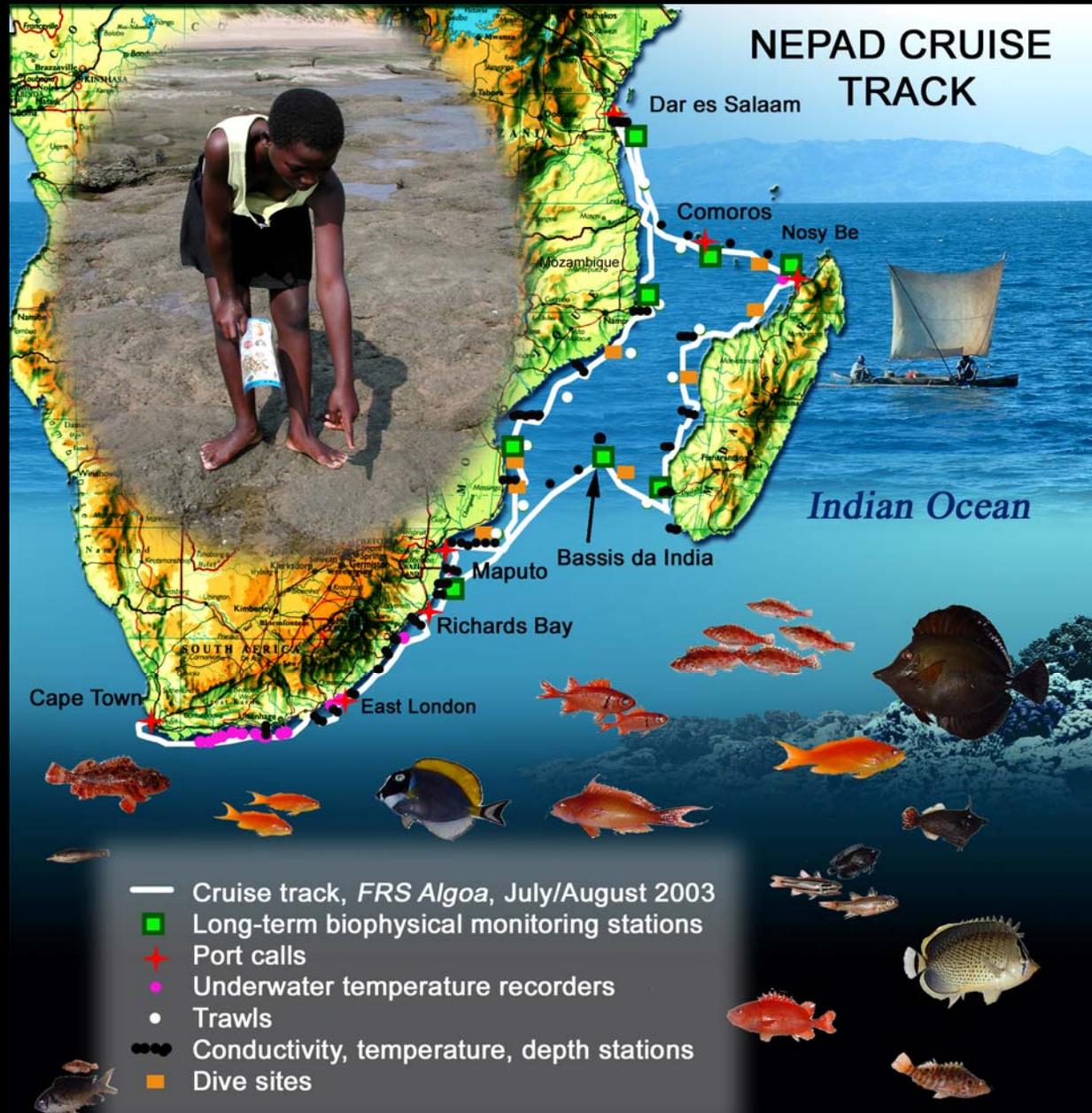
Coelacanths found in shallow canyon heads of MPA: A wake up call!



World's second largest population unwittingly protected! Is there a lost world awaiting exploration? Ecosystem approach necessary.

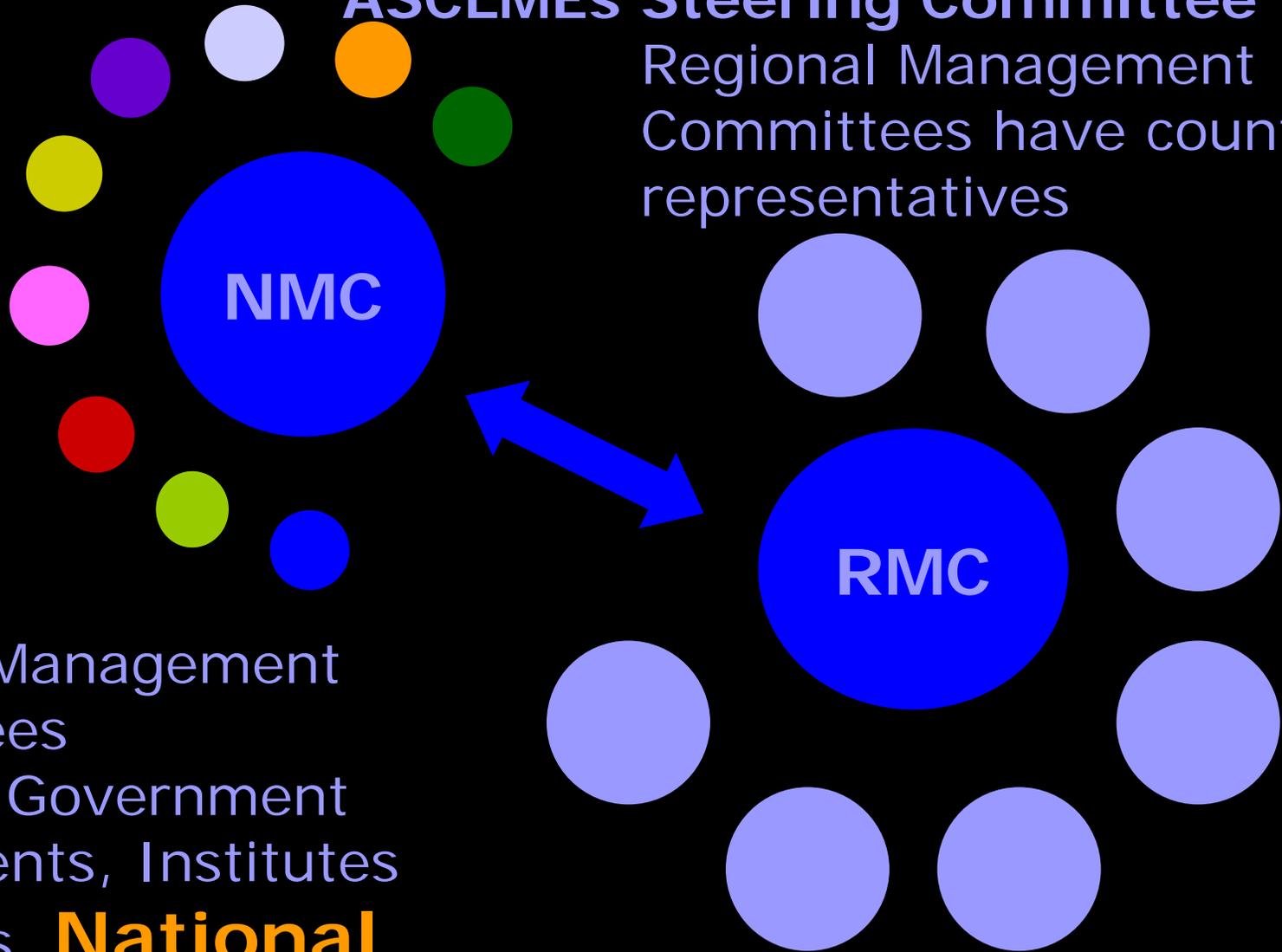


NEPAD a wonderful new opportunities for Africa



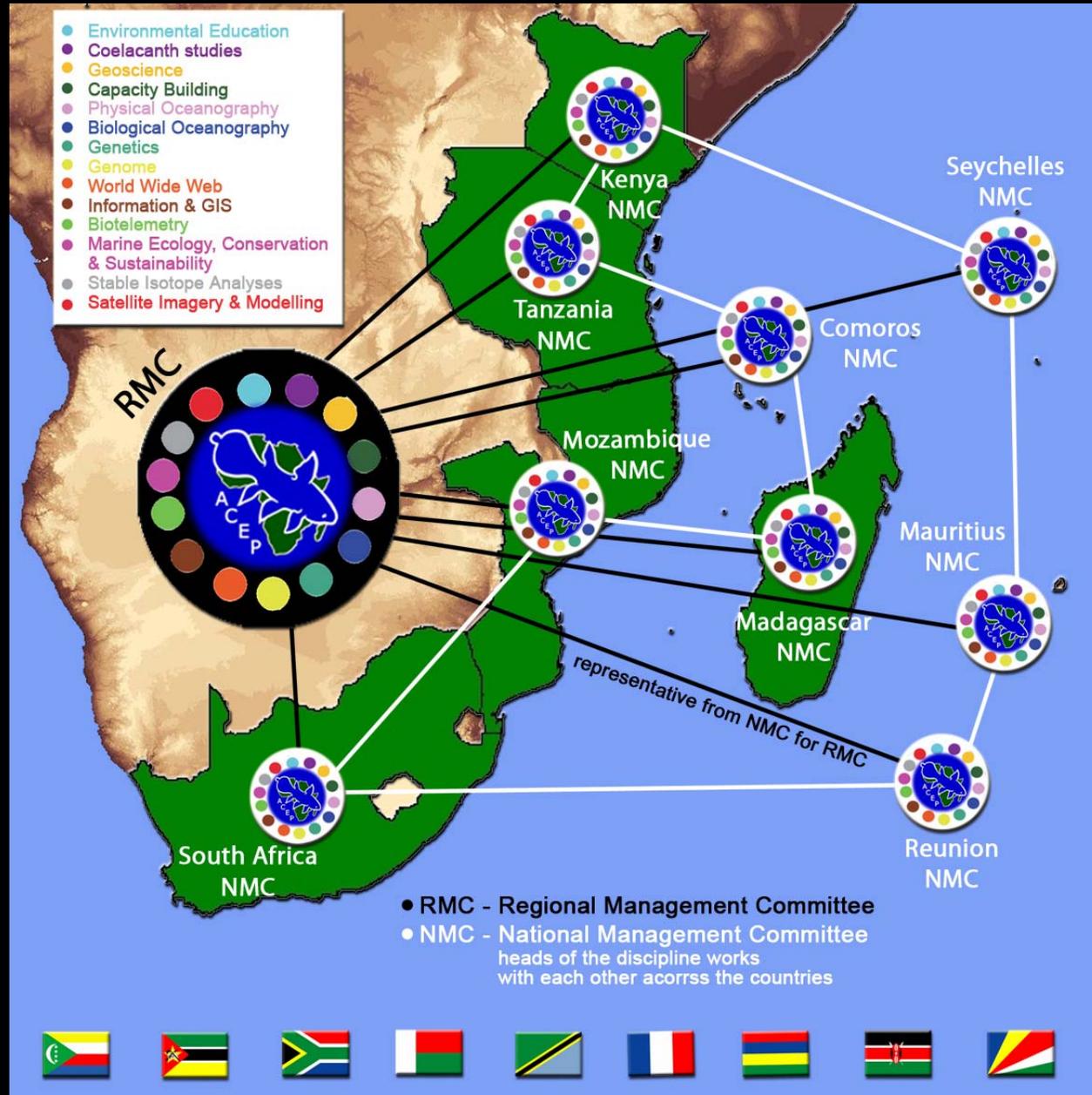


Broad Based through ACEP and ASCLMEs Steering Committee
Regional Management Committees have country representatives



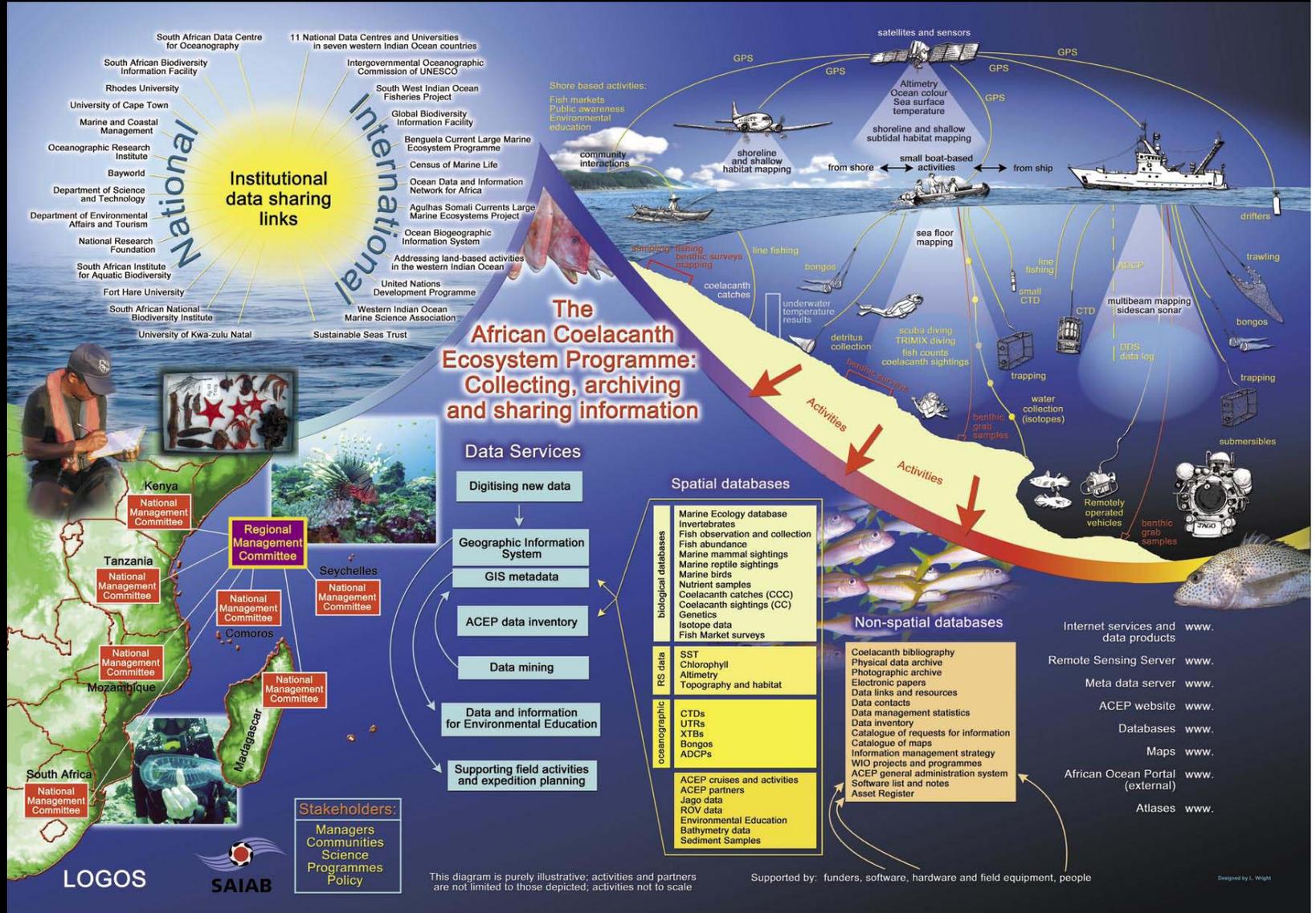
National Management Committees comprise Government Departments, Institutes and NGOs. **National chapters for SST.**

Existing and incipient partnerships



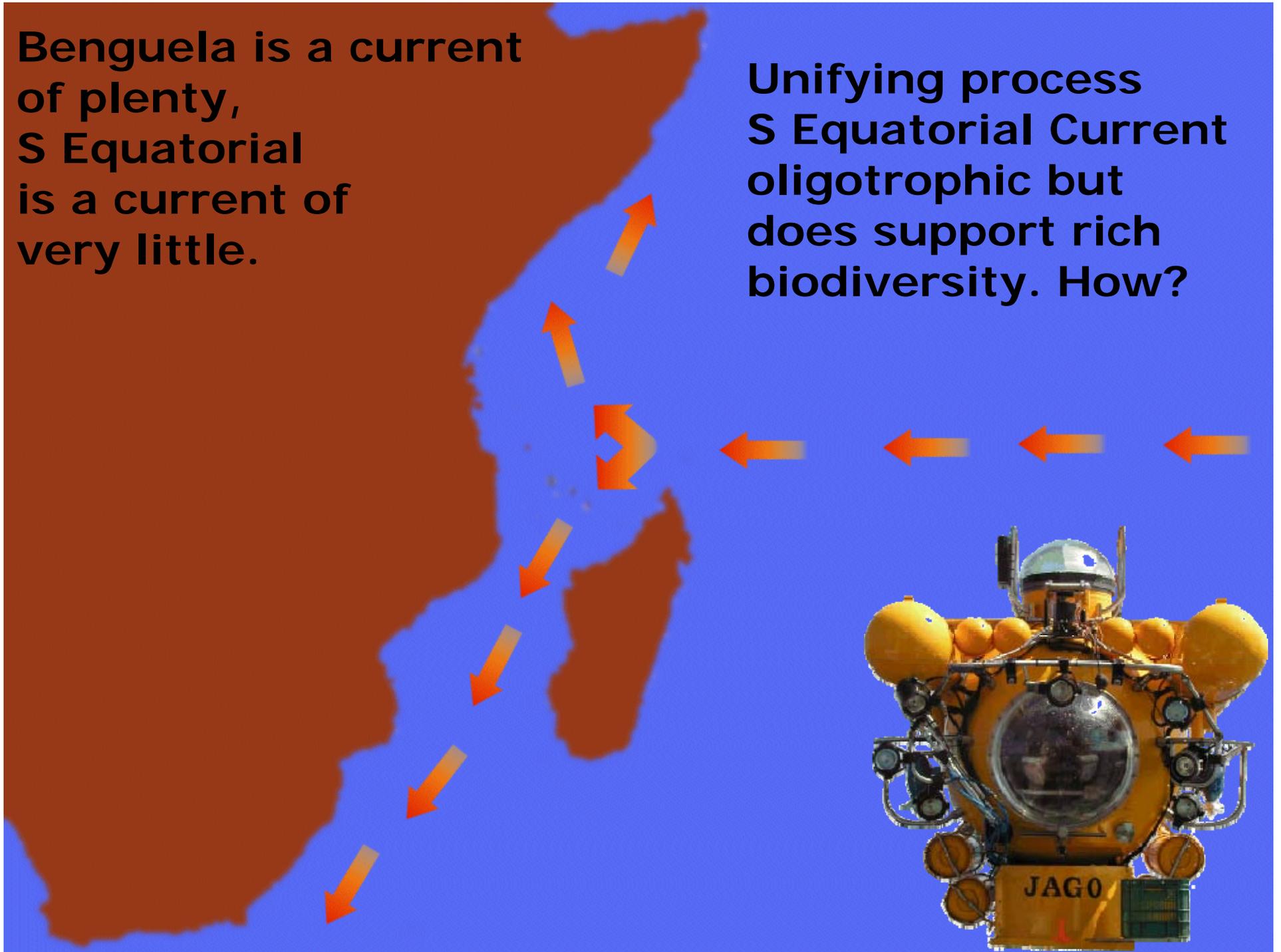


Collaboration and coordination

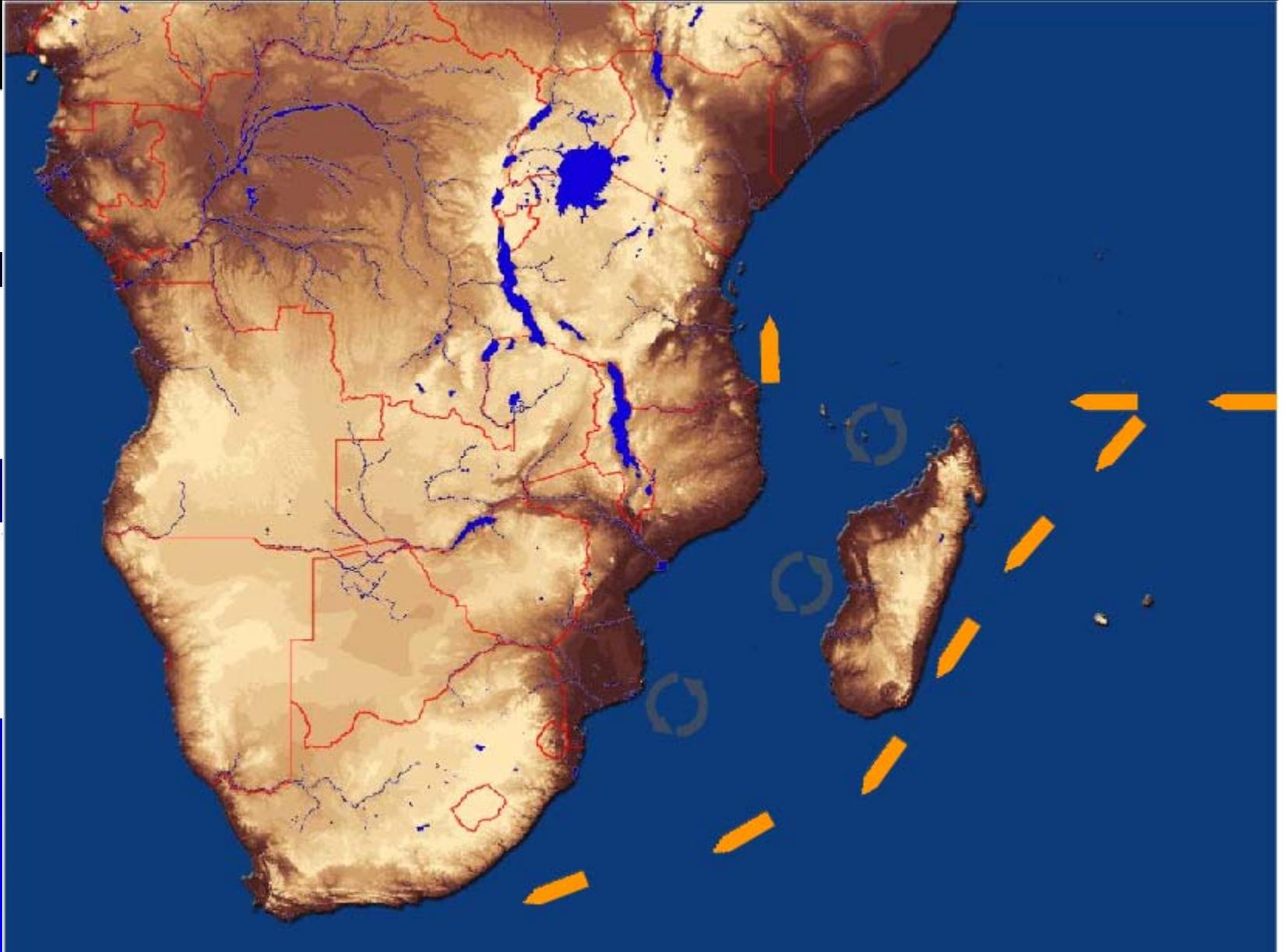


Benguela is a current of plenty,
S Equatorial
is a current of very little.

Unifying process
S Equatorial Current
oligotrophic but
does support rich
biodiversity. How?



Currents work southwards in eddies

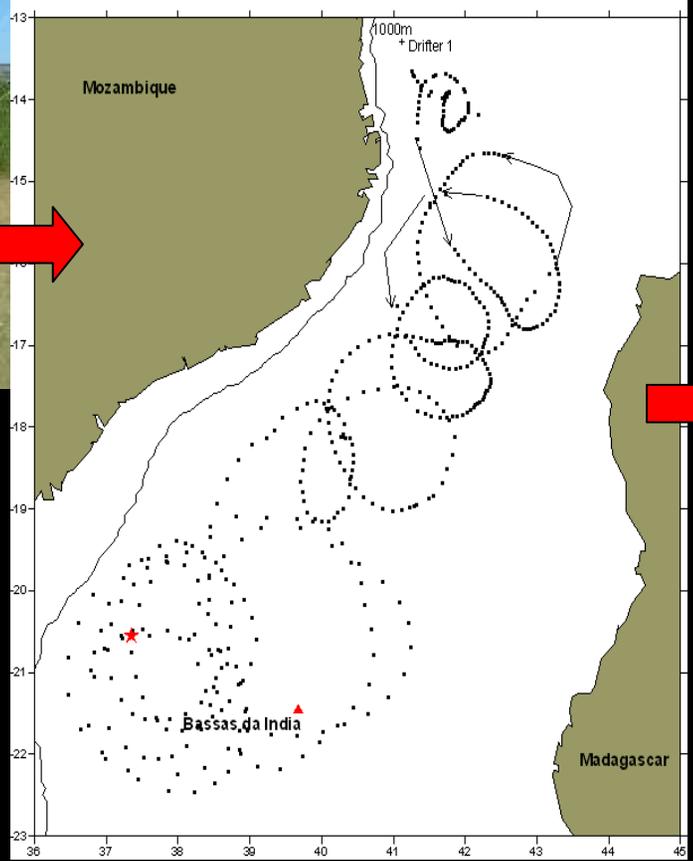




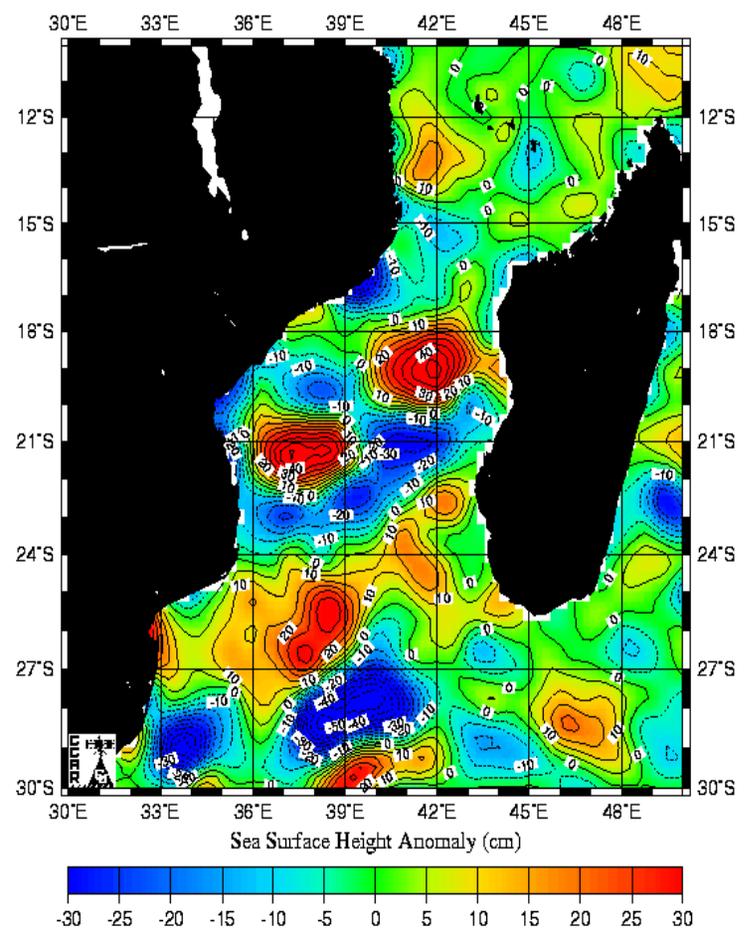
Unique nutrient and energy pumps supporting millions of people, but how. Predictions possible?



Drogue Positions - 04 December 2003

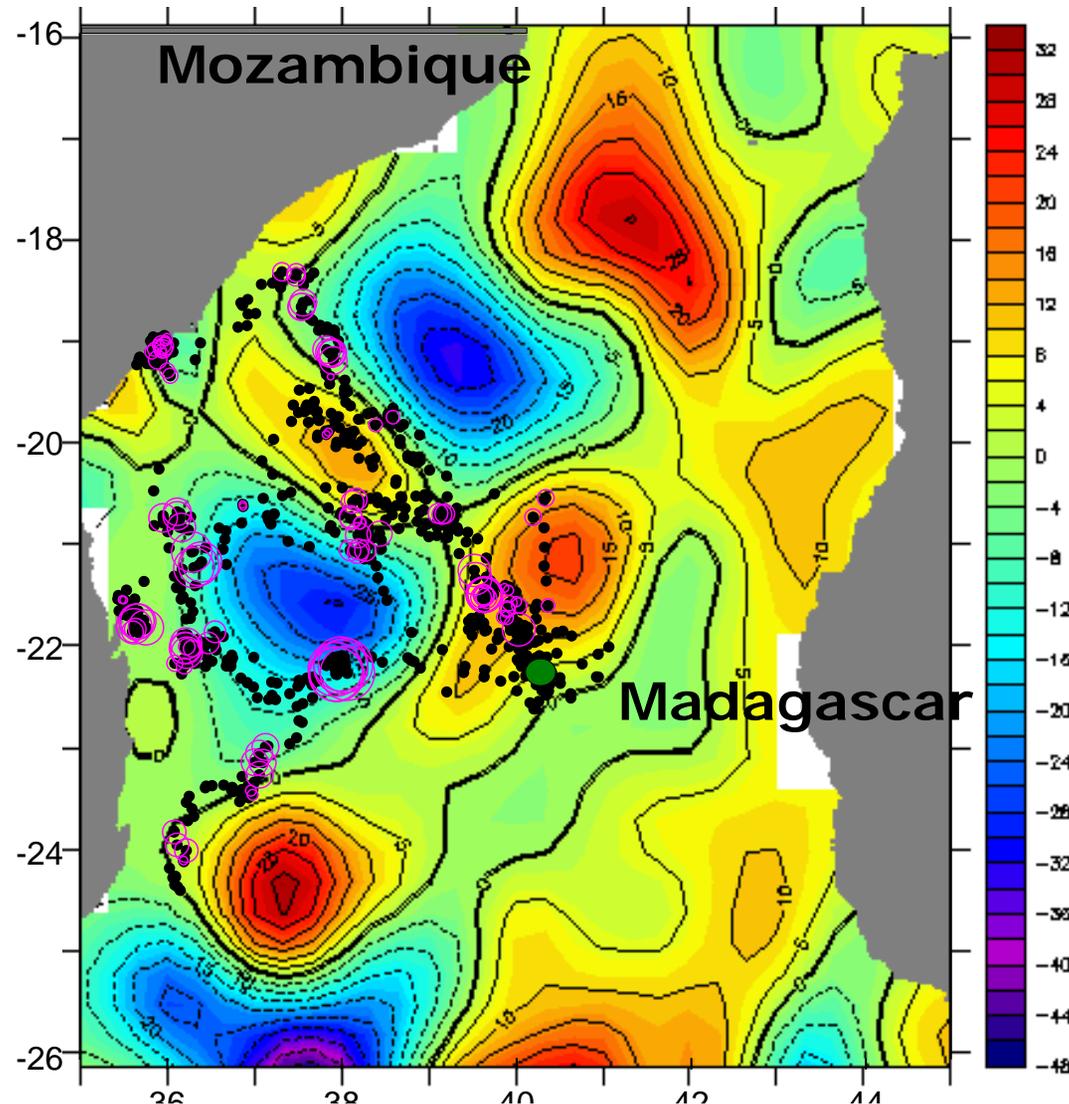


Real-Time Mesoscale Altimetry - Dec 3, 2003





Unique oceanographic patterns and processes



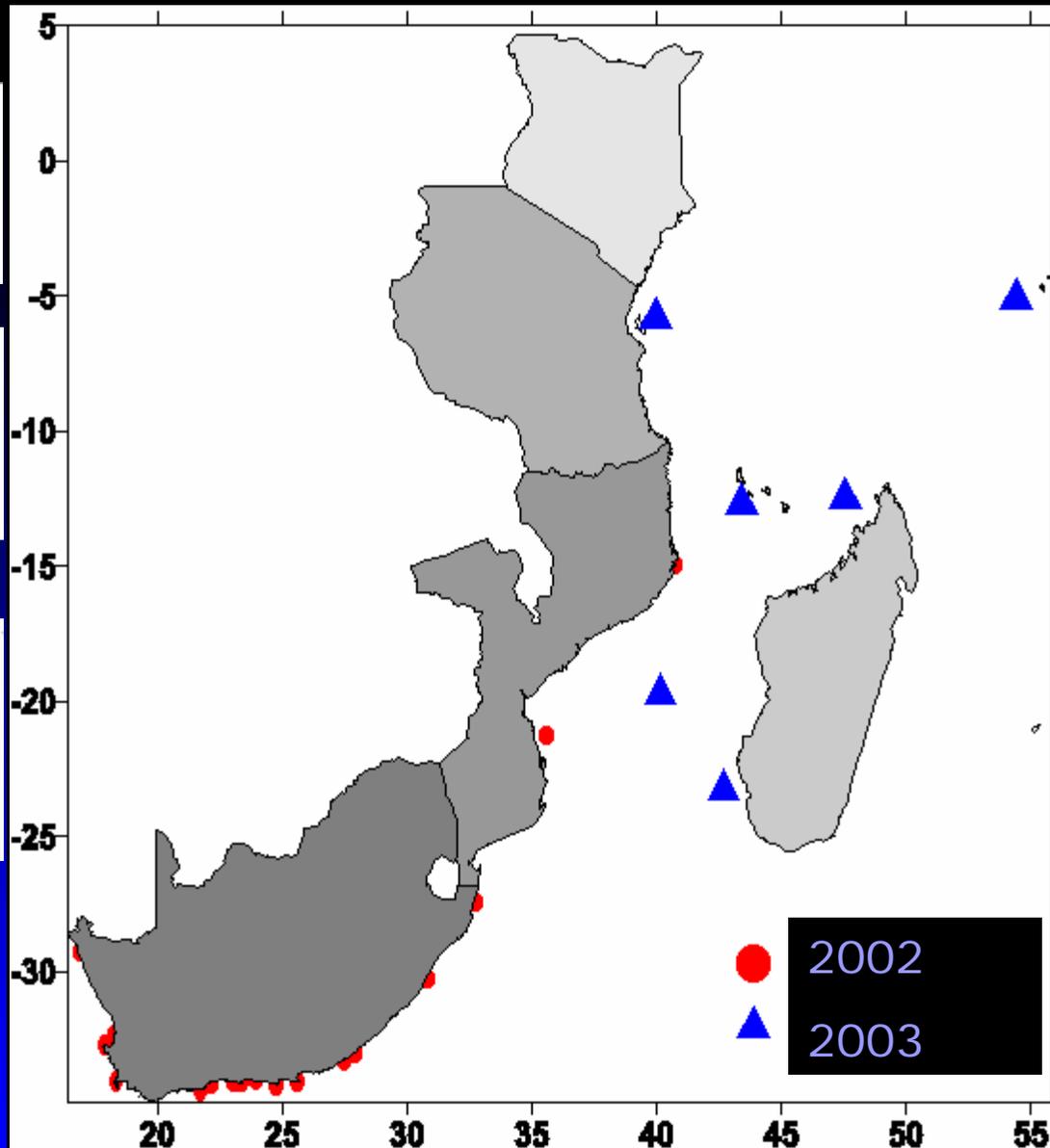
Great frigates tagged

Result : Birds forage in nutrient rich areas (purple circles).

ACEP and Frances Marsac (France)



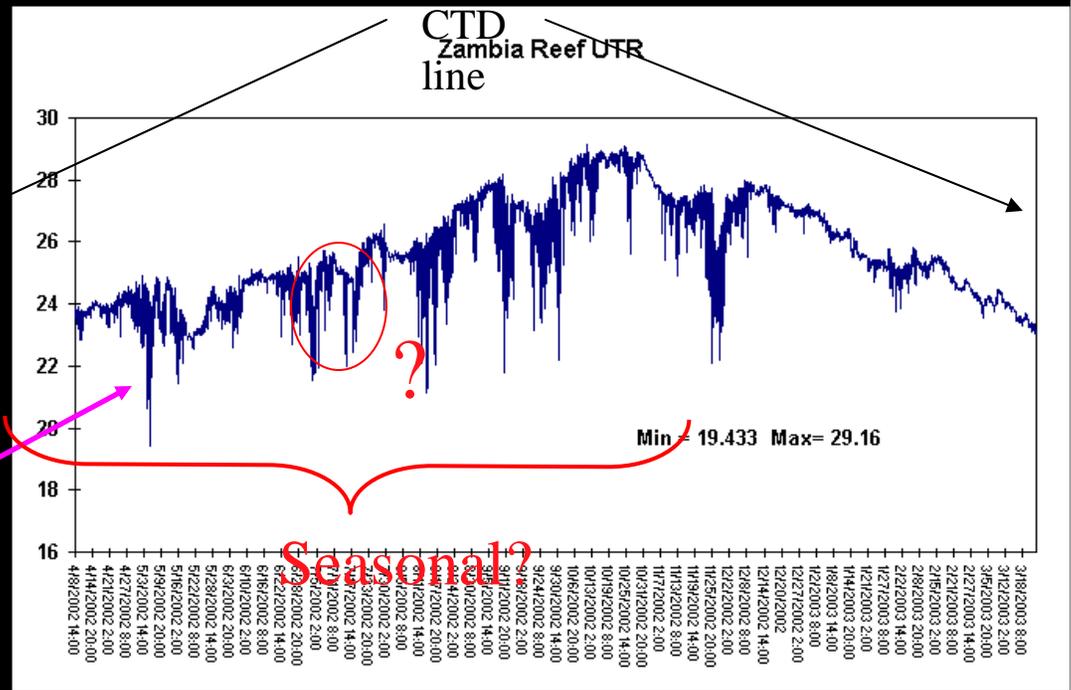
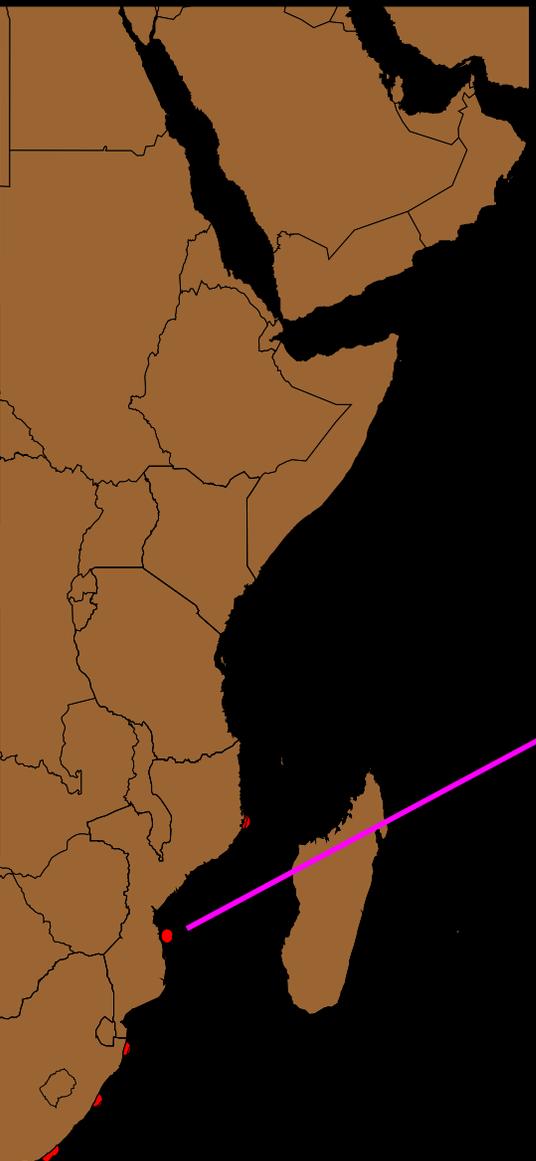
Long-term underwater biophysical monitoring stations



By end of
2003
all sites
were
operational



Upwellings of direct impact on coastal community livelihoods.....???? How?

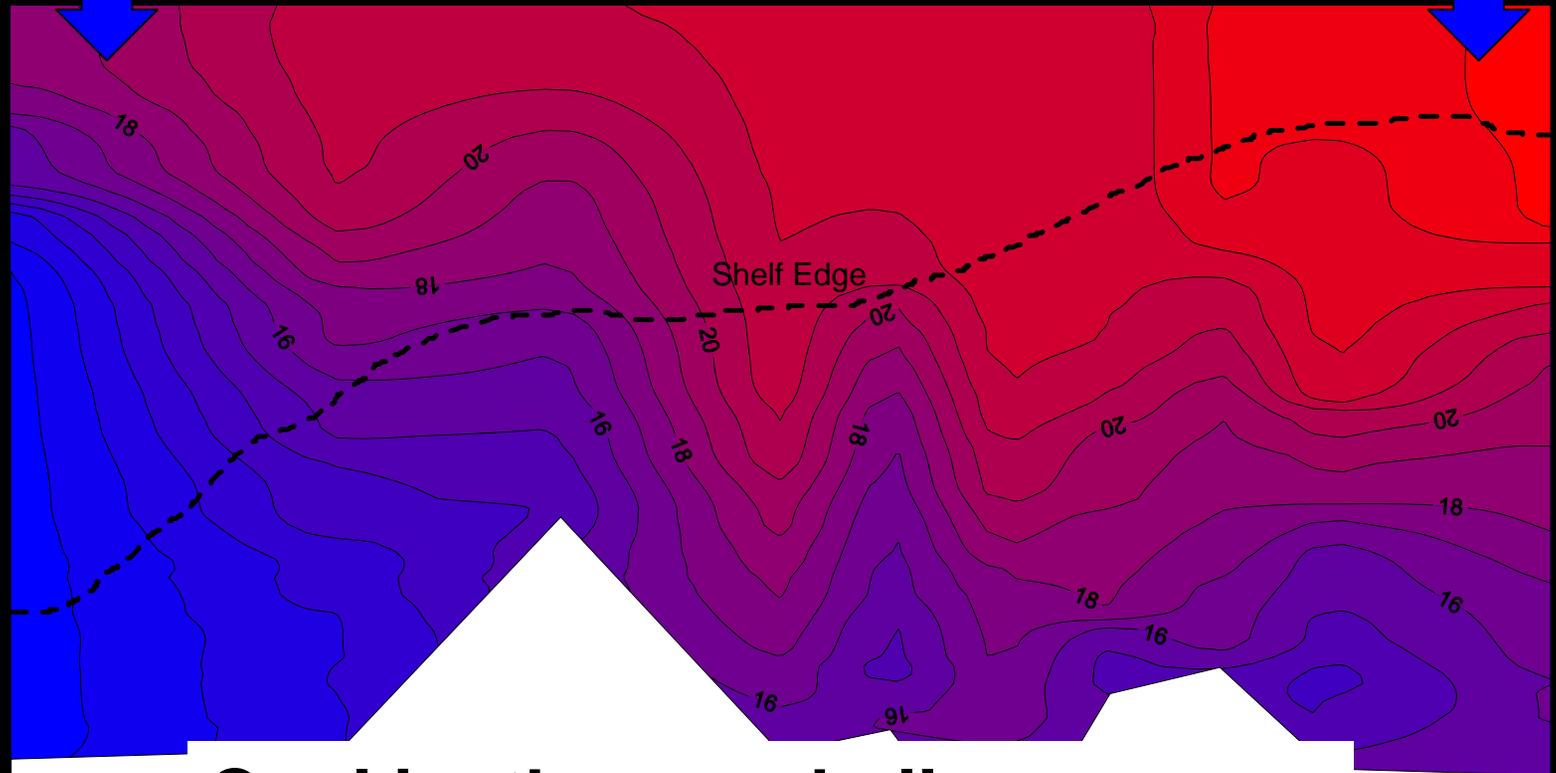


Time scale (days) + lower than seasonal T°C = upwelling?



South Africa

Comoros



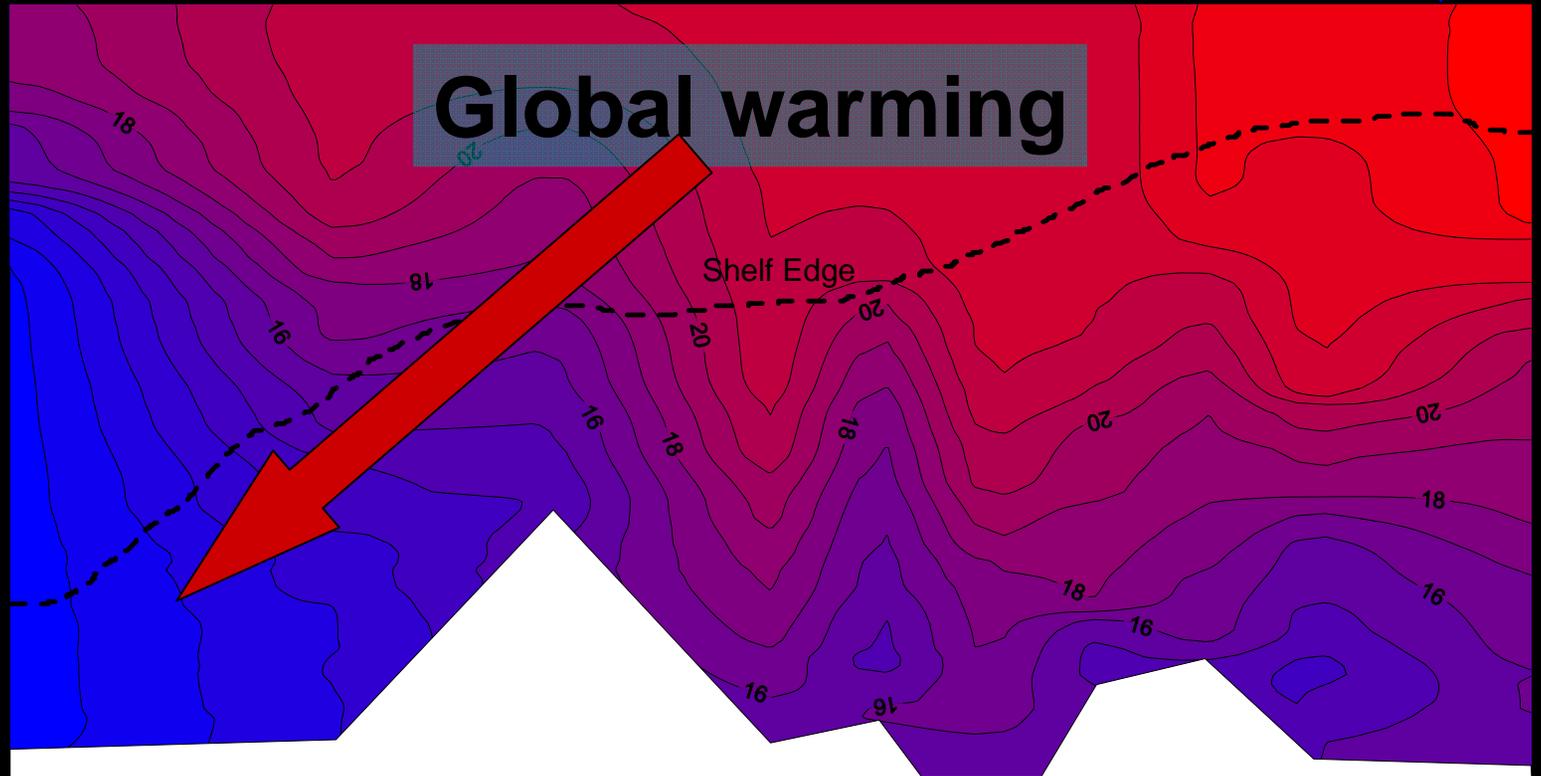
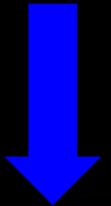
Cool isotherms shallower away from the equator



South Africa



Comoros



Warmer layers could enter deeper water in GSLWP

Rich biodiversity: only 50% described in better known groups



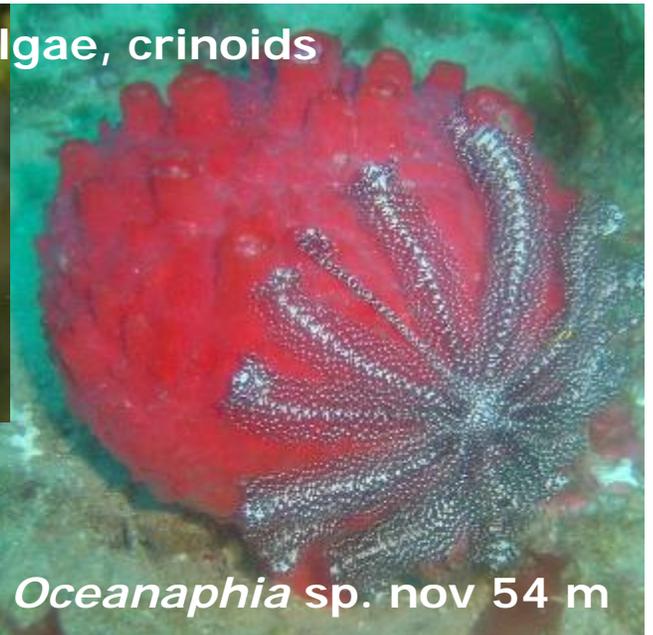
Deep reef: sponges, octocorals, red algae, crinoids



Suberites sp. 56m



+ *Cirrhopathes spiralis*
45m



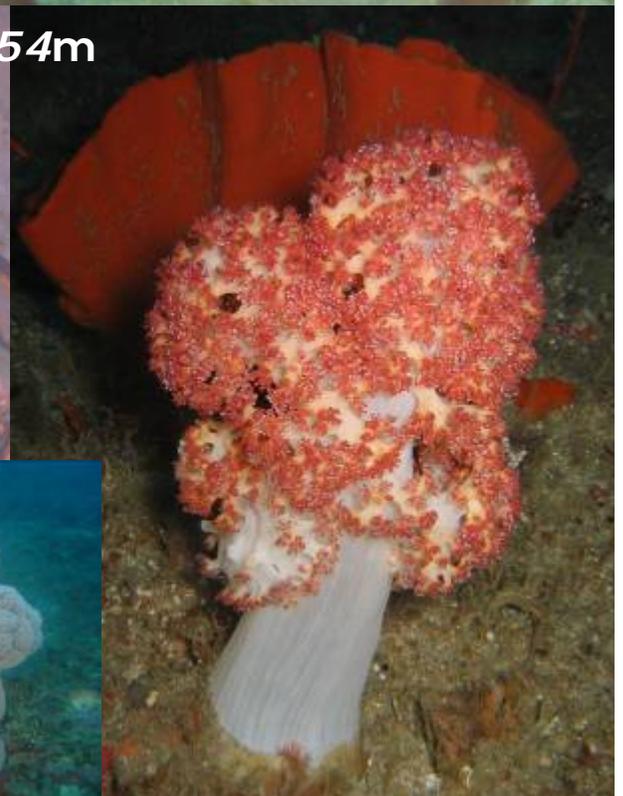
Oceanaphia sp. nov 54 m



+ *Lanthella* sp. 54m



+ *Chaetodon mitratus* 46m

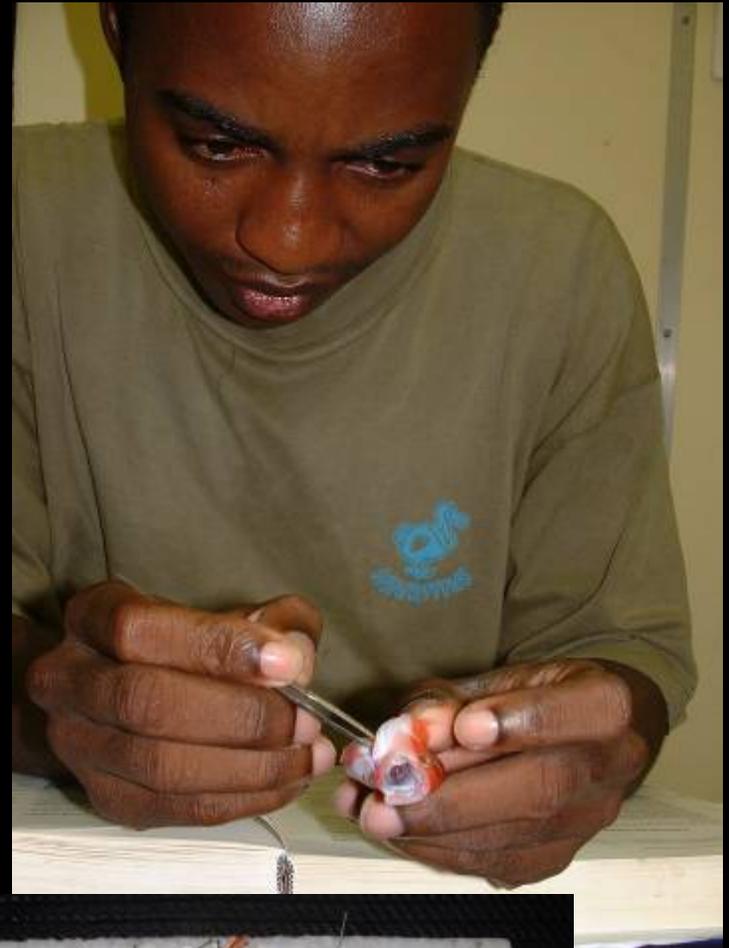




Marine ecology & taxonomy; amazing richness

270 years to describe new invertebrates (CoML)





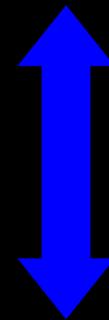
Preparing voucher specimens for museums



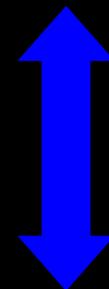
Energy Flow and Trophic Relationships



Pelagic



Midwater



Demersal



Capacity building takes centre stage to stop brain drain and prepare for the future



- Four imperatives of capacity building:
attain, train, retain, sustain.



- Public awareness

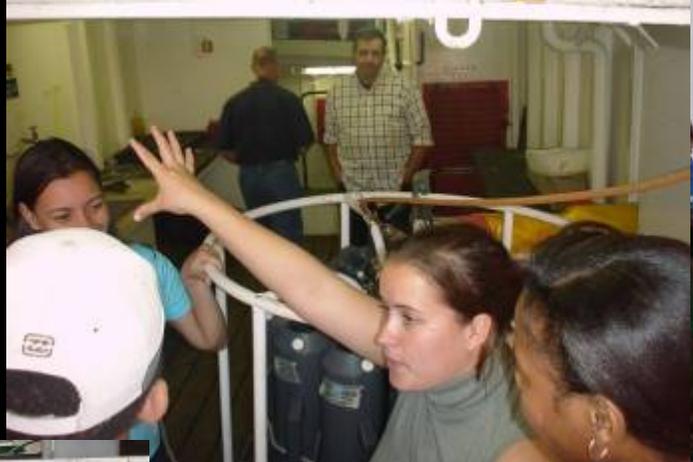


- Don't train in vain





At each port the ship is open to children, students and teachers







Student training



Floating research Facility for all countries needed





Building regional capacity: critical mass

Virtual institution and centre of excellence in geosciences





Building regional capacity : critical mass

Virtual institution and centre of excellence in geosciences, oceanography,





Building regional capacity : critical mass

Virtual institution and centre of excellence in geosciences, oceanography, coelacanths,



Building regional capacity : critical mass



Virtual institution and centre of excellence in geosciences, oceanography, coelacanths, marine ecology





Building regional capacity : critical mass



Virtual institution and centre of excellence in geosciences, oceanography, coelacanths, marine ecology, Genetics & genome resources,

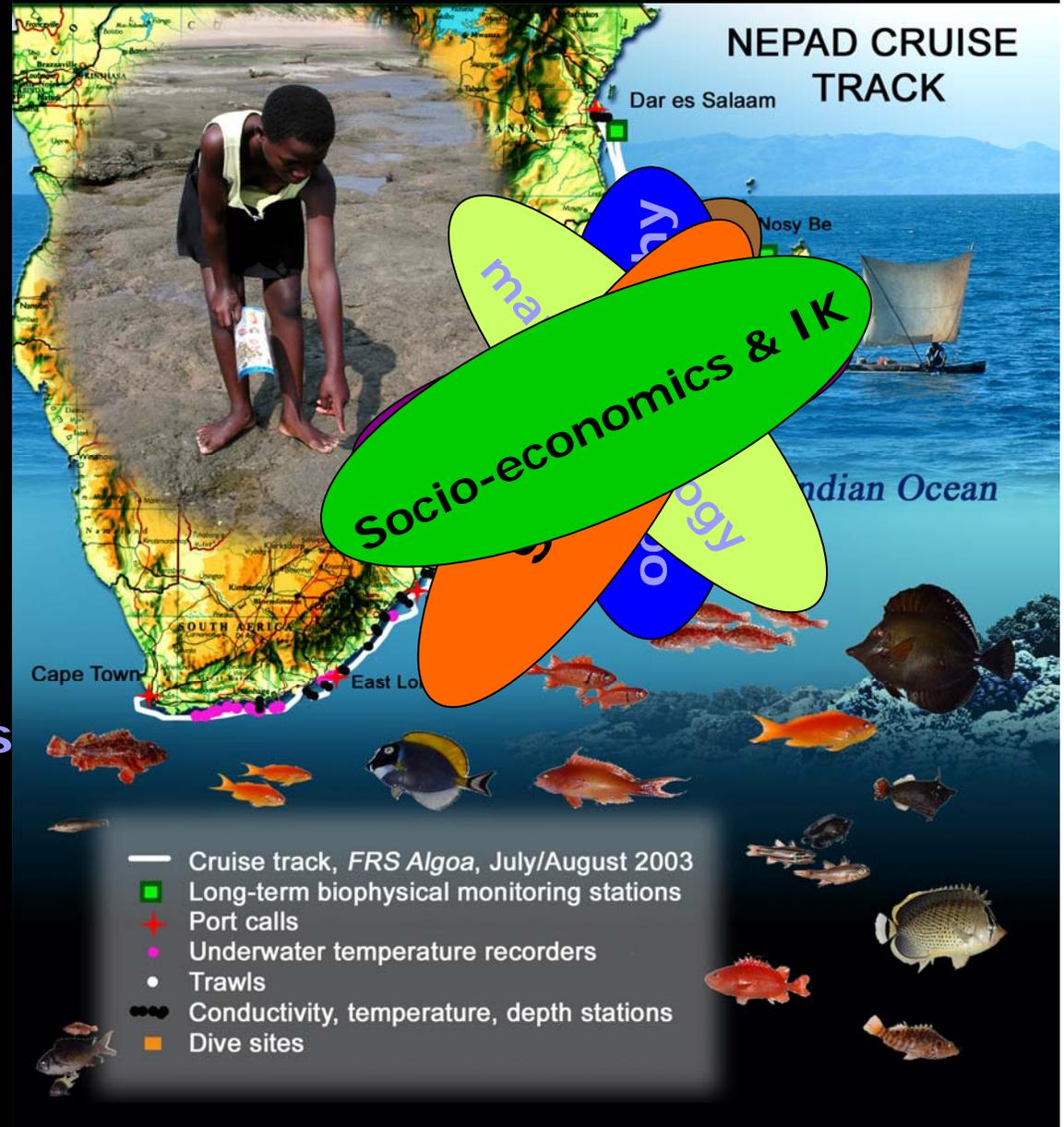




Building regional capacity : critical mass



Virtual institution and centre of excellence in geosciences, oceanography, coelacanths, marine ecology, Genetics & genome resources, socio-economics & indigenous knowledge,

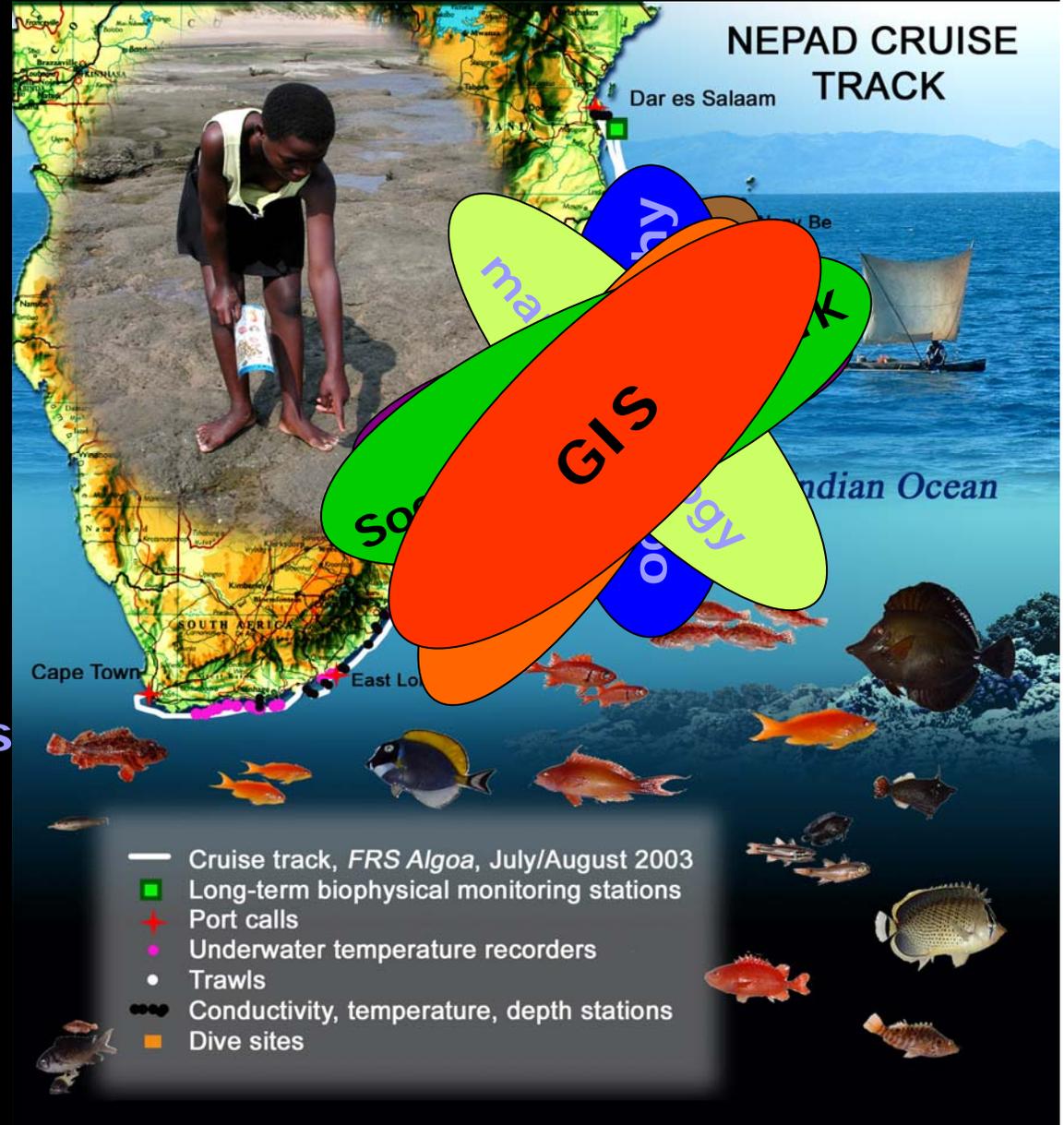




Building regional capacity : critical mass



Virtual institution and centre of excellence in geosciences, oceanography, coelacanths, marine ecology, Genetics & genome resources, socio-economics & indigenous knowledge, GIS





Building regional capacity : critical mass



Virtual institution and centre of excellence in geosciences, oceanography, coelacanths, marine ecology, Genetics & genome resources, socio-economics & indigenous knowledge, GIS all for sustainability



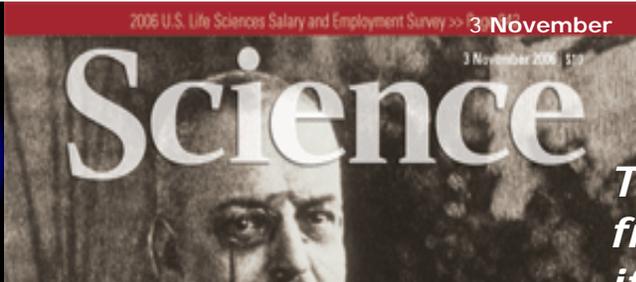


A pressing imperative

Africa
has
a vision
of
a better
future.

Did you
read
Science?

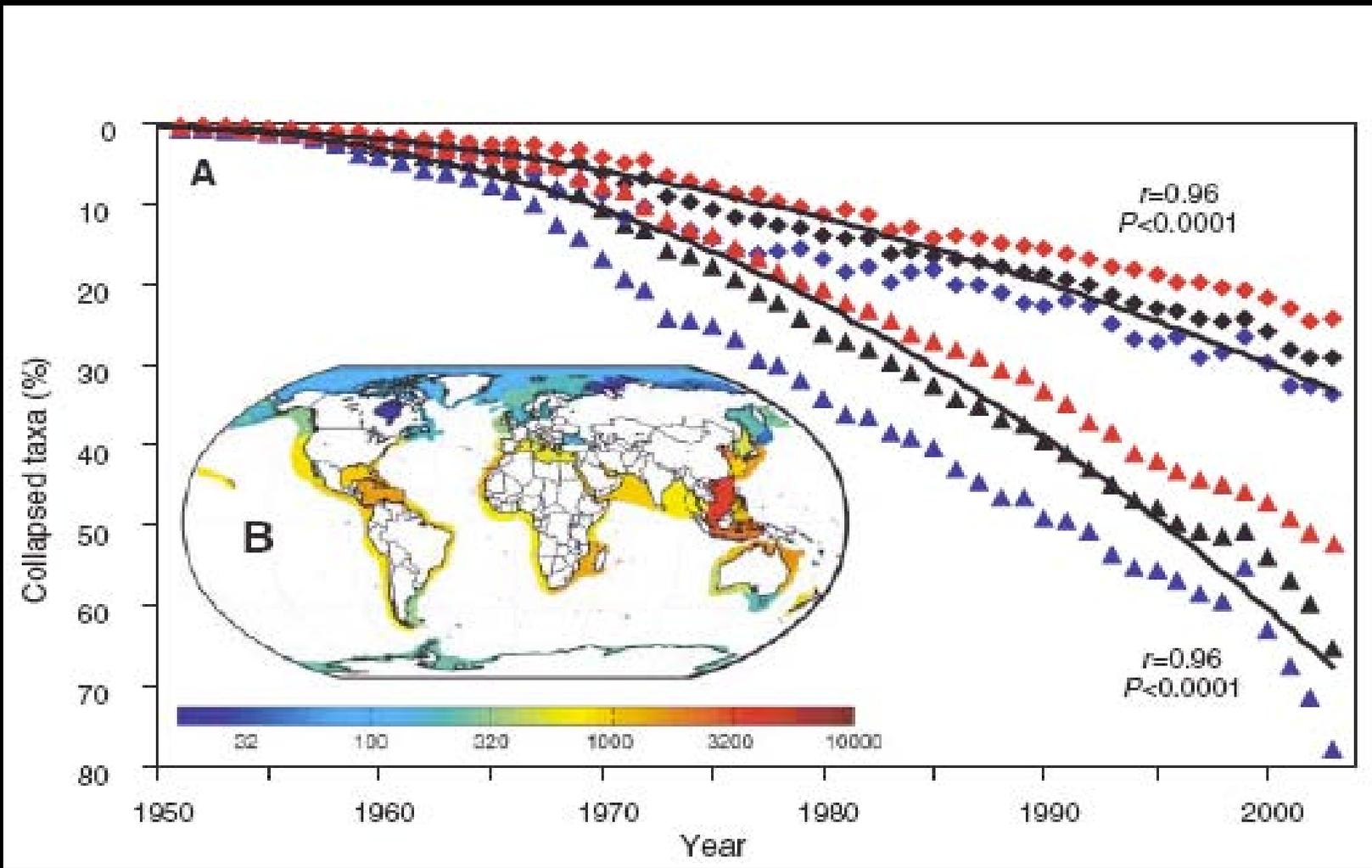




Only 50 years left!!

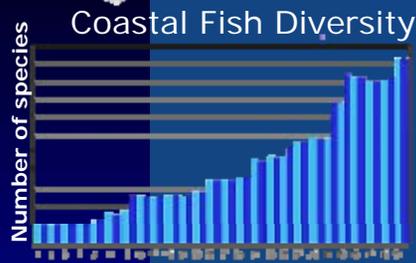
There will be virtually nothing left to fish from the seas by the middle of the century if current trends continue, according to a major scientific study. BBC Nature.

Worm et al 2006

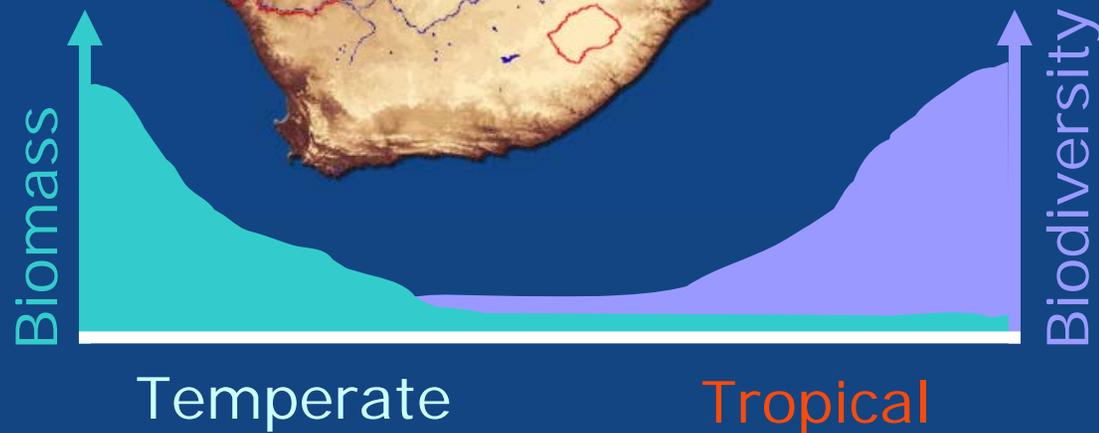




The future is in biodiversity more than biomass



(after Beckley *et al*)





Typical trawl data

1.5kg 8 species

14kg 61 species

6kg 17 species

From our own and other sampling cruises.

Our best 600kg 52 species



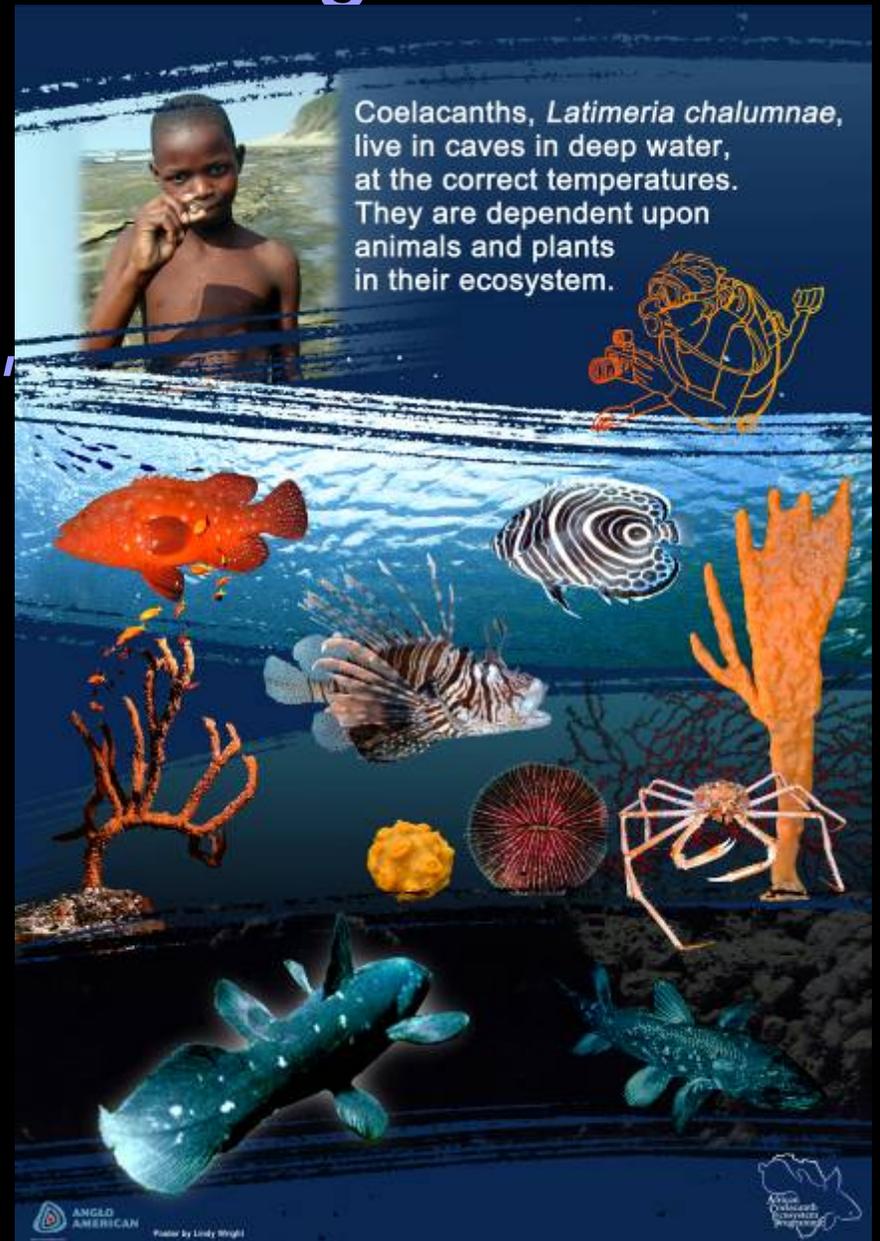
Relying on investments in fisheries alone is short sighted



Economic growth should focus on rich biodiversity, MPAs and sustainability.



Trawling shows that trawling should not take place





Biggest challenge

Providing the power of choice



High demand

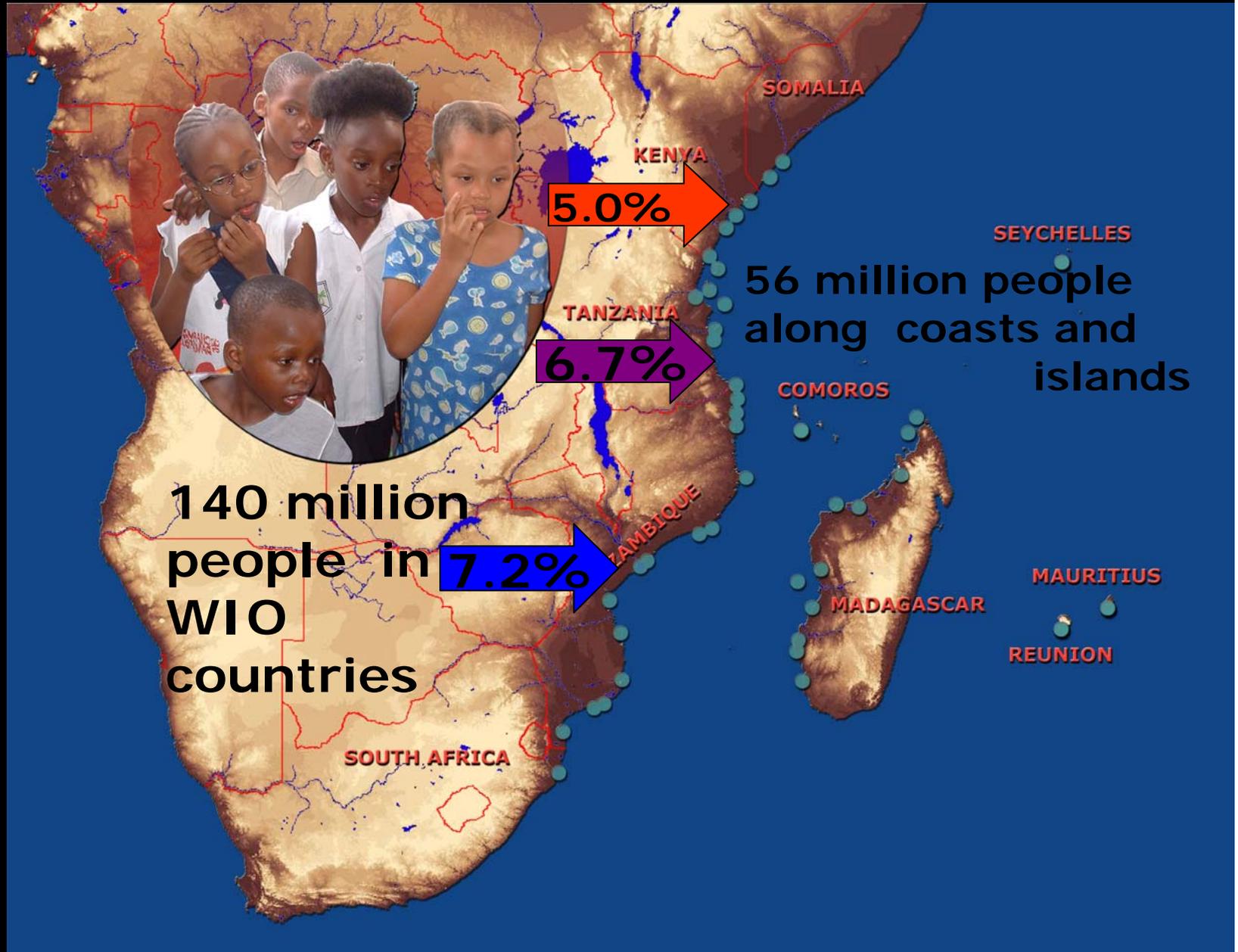




Growing human population depends upon diminishing resources



Coastal areas are becoming heavily populated

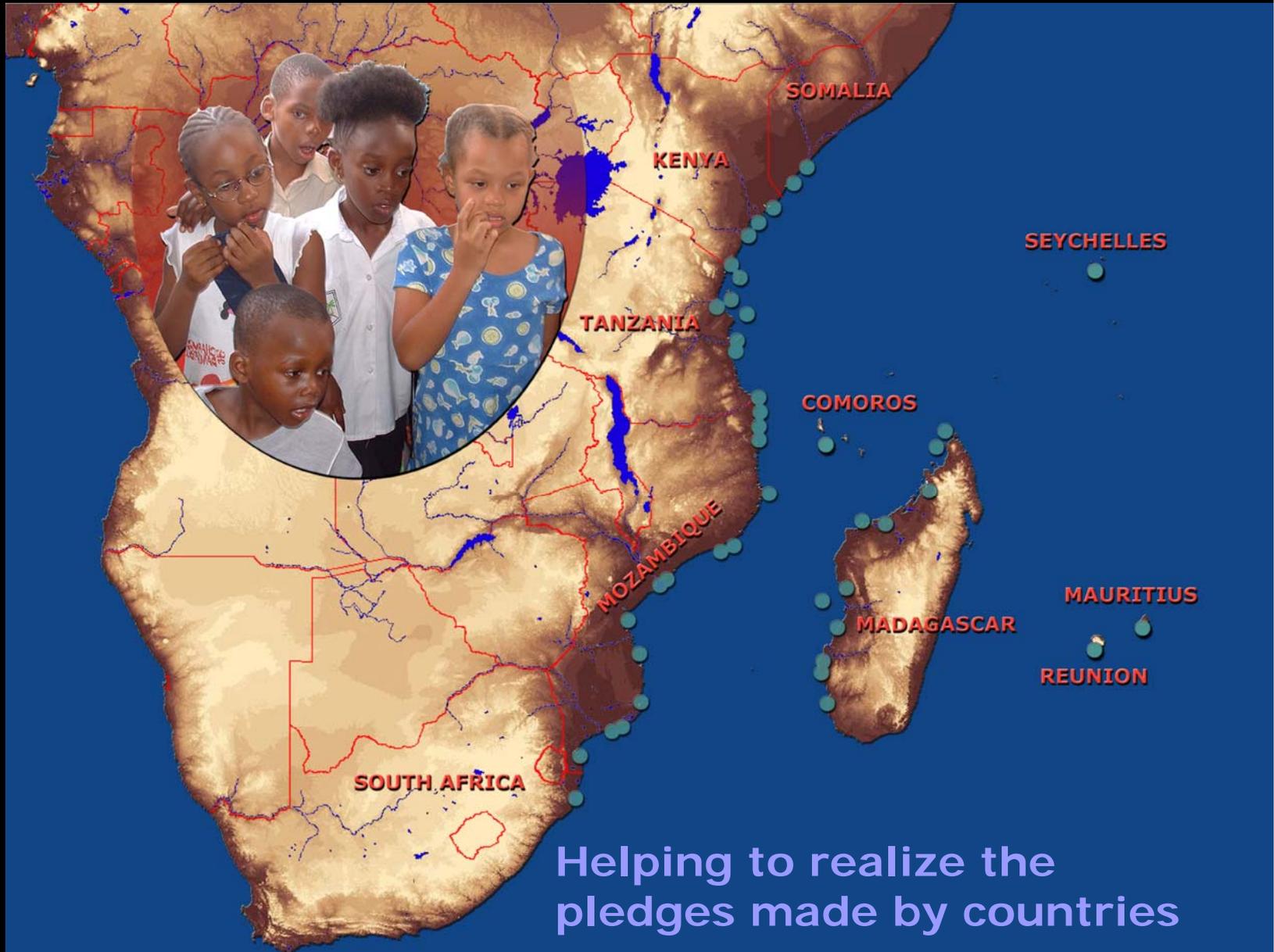




Developing a Sustainable Economy for those who Depend upon the Sea



Integrated network of MPAs



Helping to realize the pledges made by countries



Parks Network must reach the children of the world: information, games and electronic manipulation of the environment



The choice

Act now while the resource has resilience and actions are affordable



Measure the cost of not doing anything!





Sustainable Seas Trust (AFRICA)



- African Inspiration: Global commitment
- Long-term sustainability for LME approach in WIO—vehicle for the future to be driven by WIO Africa
- New vehicle for long-term funding of Africa
- Does provide opportunities to retain scientists
- My role to develop structures and resources; NEPAD and Nairobi Convention to promote it
- Target for full operation 2010





African Inspiration: Global commitment

Some conclusions (messages)



Economic investment needs to be geared to a region that is rich in biodiversity, but not biomass. **Build on good science.**



NEPAD in action

Regional development of a new vehicle for caring for the people of the western Indian Ocean who depend upon living resources



Capacity building is of paramount importance

The time to act is now

New partnerships are desirable because

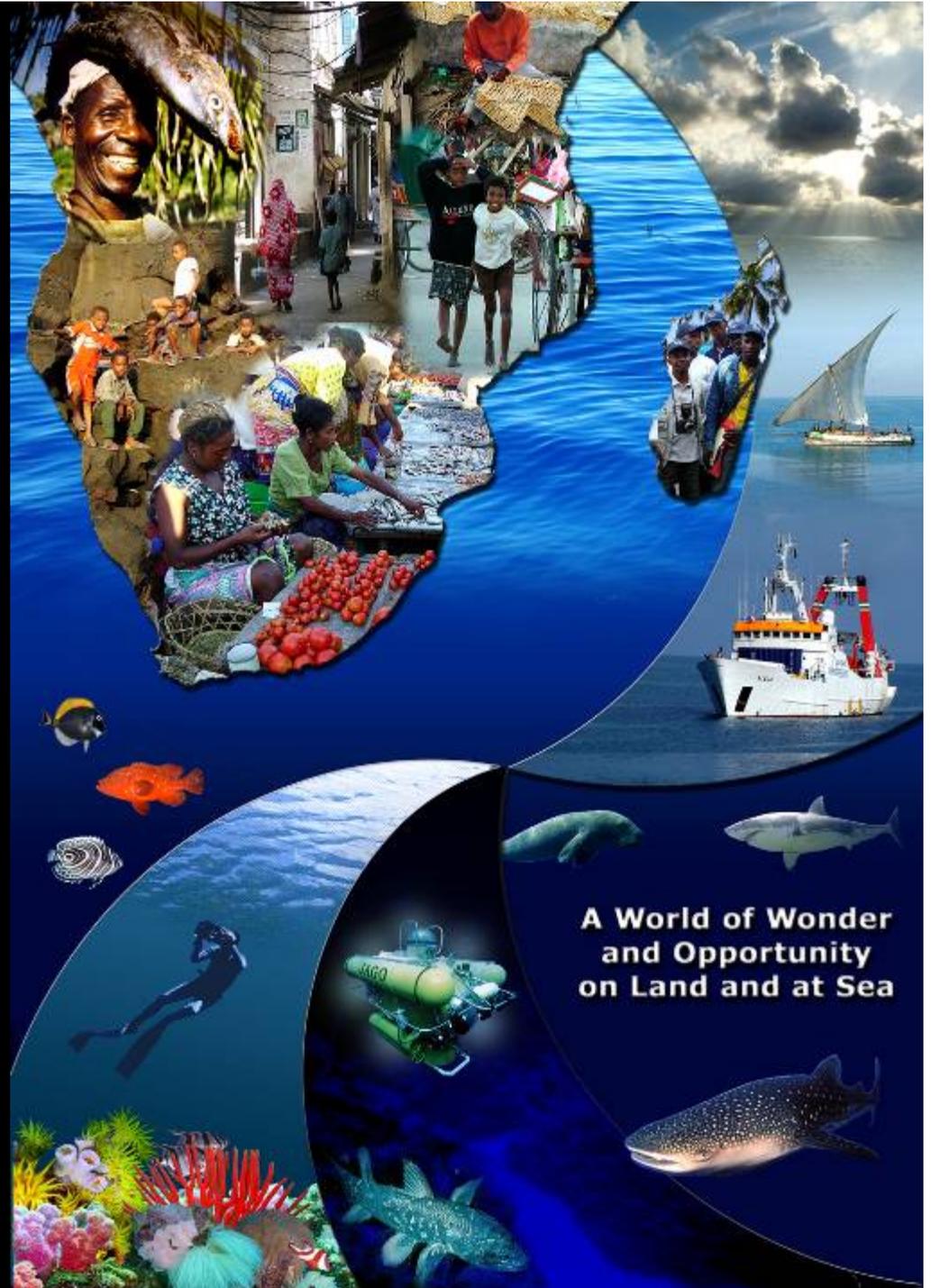




Together we
can do more



A reality
check

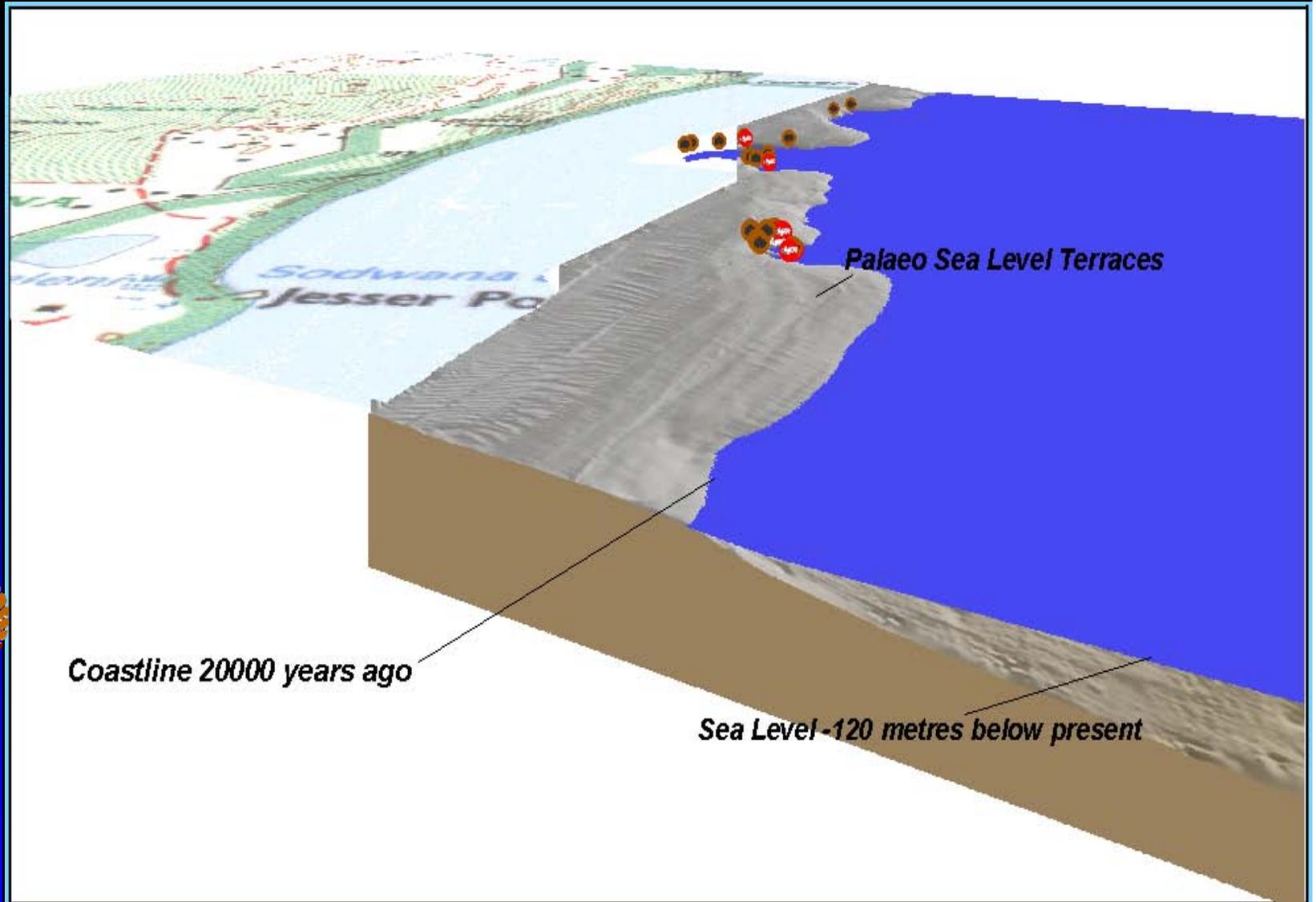


A World of Wonder
and Opportunity
on Land and at Sea





Coelacanth caves in South Africa were eroded in a previous ice age when sea level was much lower



Value of data



INVESTMENT

ACEP has a huge investment in acquiring data



ACEP has a huge investment in data analysis

To ensure a return on investment data must be properly managed, stored and made available to scientists and decision makers

RETURN

Information must be made available to sponsors, partners, scientists and decision-makers, to facilitate better management and improved knowledge of the Western Indian Ocean region

ACEP Information Strategy

Databases

Publications

Geographic Information System

