



### ZanSEA – capacity building in GIS/EIA on Zanzibar

Impact Assessment in the Digital Era / IAIA15, Florence Presented by Sigurd Juel Kinn, Statoil

Classification: Internal

# Outline of presentation

 $\checkmark$  Challenges faced on Zanzibar on EIA/SEA and data management

- ✓ Shortly about the involved parties
- ✓ Presenting the framework of ZanSEA-project
- ✓A quick glance into ZanSEA GIS tool

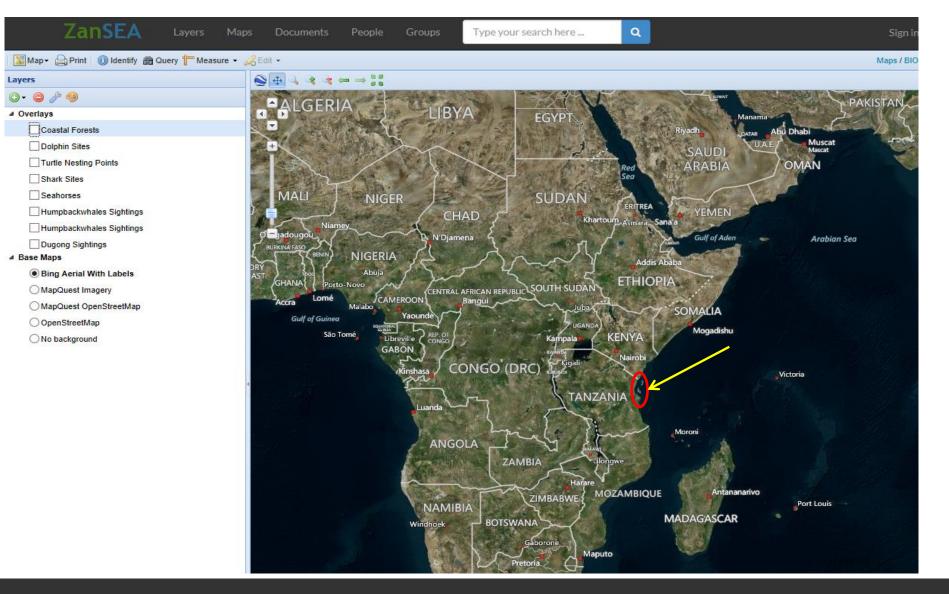
✓ Conclusions

>Contributors/contacts

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## Where are we in Africa?





# Short about Zanzibar

- Independency 1963/64, formed union with Tanganyika in 1964 to become Tanzania
- To main Islands, Unguja and Pemba
  - 1,3 million inhabitants, strong growth in population
- Tourism, artisanal fisheries and agriculture (famous for spices)
- Oil&Gas has been disputed within union, but now likely to be under Zanzibarian soverignity
  - Oil and Gas industry likely to kick off in Zanzibar in coming years
- Lack of institutions and capacities for EIA/SEA









# Short about SUZA

- SUZA: State University of ZAnzibar
- Started in 2001 with 55 students
- 2015: More than 1500 students
- School of Natural and Social Sciences (one of four schools)
  - Includes Department of Computer/IT
- Establishing a centre for "Environmental Management in Tropical Coastal and Marine Areas"

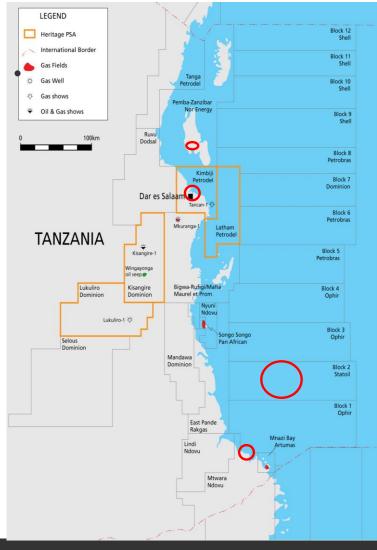


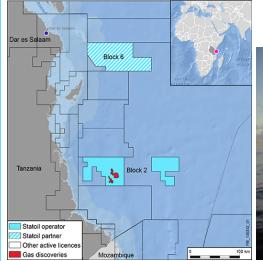






## Short about Statoil in Tanzania







- Statoil is operator for Block 2, Tanzania
- Main office in Dar, offices in Mtwara (base) and Zanzibar
- Block 2 Huge gas discoveries
- Part of a Joint Venture to develop an onshore LNG-plant for Block 1-4.
- CSR: Capacity building programs with universities in Tanzania



# SUZA-Statoil cooperation

- Statoil-SUZA MoU signed 2013
  - Focus area: Capacity building on Environmental Management in Coastal and Marine areas
- 3 workshops held in 2013 (1/2Q) scoping the projects with help from international specialists
  - 1. Environmental&social data management
  - 2. EIA/SEA
  - 3. Environmental monitoring







# Main findings during the workshops

- Many challenges on sustainability due to tourism industry , population growth, climate change, upcoming oil&gas activities
- ✓ Coastal Zone particular sensitive
- ✓ EIA/SEA important tools for a sustainable development
- ✓ Quite well developed EIA-legislation in Zanzibar, but general lack of enforcement
- ✓ Lack of regulations on SEA
- ✓ Lack of capacity/competence within regulators
- ✓ Lack of data in coastal and marine areas
- ✓ Lack of sharing existing data between authorities

Which role can SUZA play?

- How to involve authorities?



# Projects initiated from the workshops

### Vision:

SUZA to become a national and regional centre within sustainable management of coastal and marine areas

### **Project 1: EIA/SEA-training**

SEA-seminar Febr.2014 (Eco-Management Support)
EIA-training course Febr-July 2014 (Samaki Consultants)

### **Project 2: ZanSEA-project**

- ✓ About data needed for EIA/SEA
- ✓ Supported by all relevant stakeholders on Zanzibar
- ✓ Running 2014-2017







# What is ZanSEA about ?

### Capacity building at SUZA

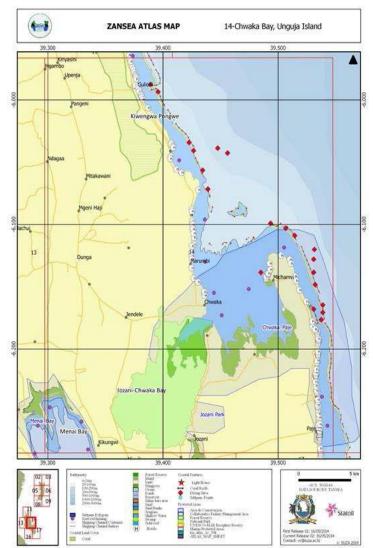
- Build competence and skills on Geographical Information Systems (GIS)
- Implement GIS into Research and Education at SUZA
- Educate/train stakeholders/partners

### Promote data-sharing on Zanzibar

- Develop a Coastal Spatial Data Infrastructure (SDI)
- Implement a tool for data management in the coastal and marine areas

### • Support EIA/SEA in Coastal and Marine areas

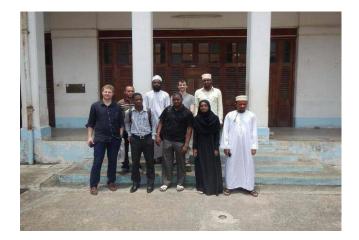
- Climate change and biodiversity
- Hotels/tourism
- Oil and gas industry





# ZanSEA management

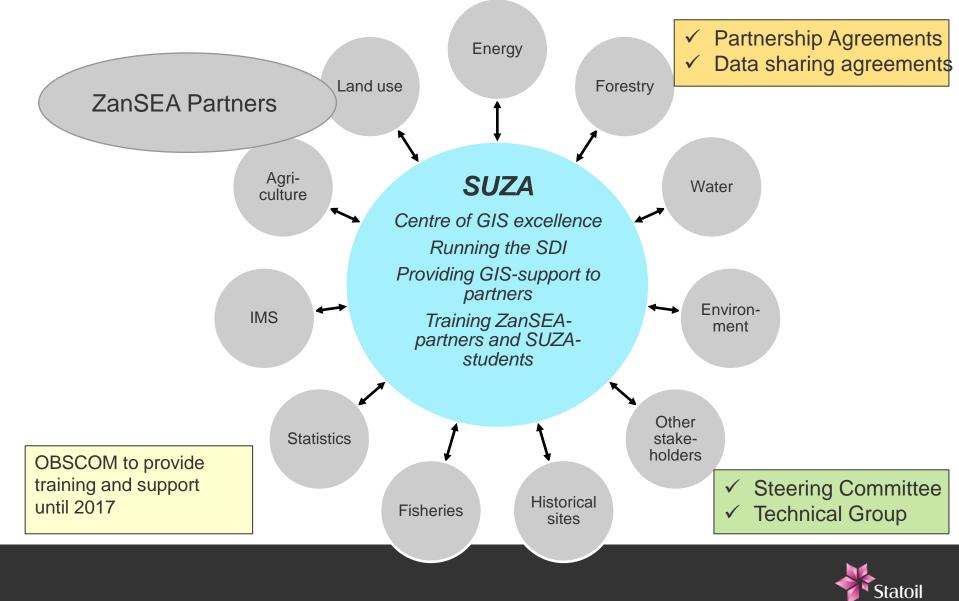
- ZANSEA-contractor: OBSCOM (France)
- Statoil is the ZanSEA sponsor
- The «ZANSEA team» at SUZA established
  - Separate GIS-lab dedicated at SUZA
  - Project manager and all key team functions
- Steering committee
- Technical group to be trained
- Using open source GIS-tool (Geonode) <u>http://geonode.org/</u>



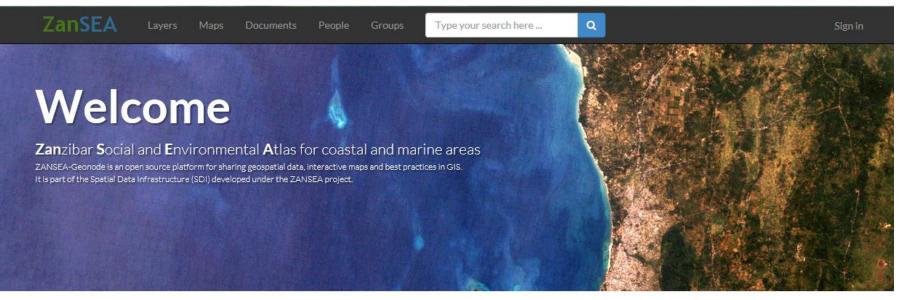




### ZanSEA – creating a "data sharing community"



# A "taste of ZanSEA" – using the Geonode Tool





### 70 Layers

Click to search for geospatial data published by other users, organizations and public sources. Download data in standard formats.





#### Data is available for browsing, aggregating and styling to generate maps which can be shared publicly or restricted to specific users only.

Explore maps »

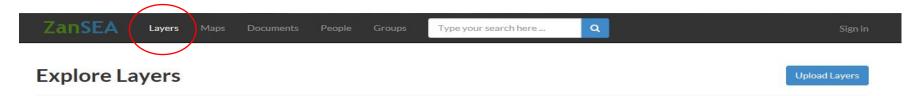


### 37 Users

GeoNode allows registered users to easily upload geospatial data in several formats including shapefile and GeoTiff.

-		
See	users	30









Total: 70

#### zan\_ugunja\_wards\_nbs2012\_wgs84

#### Boundaries by admin\_geonode

Most recent Less recent A-Z Z-A Most popular

The 2012 Population and Housing Census (PHC) of Tanzania was preceded by the preparatory geographic work, which involved field visiting of all regions, districts, wards/shehia, villages/mitaa, localities and sub-villages in the country, primarily to create and delineate Enumeration Area boundaries (EAs) so as to produce maps required for census operations. The most important principle followed in delineating an EA was that under no circumstance should an EA overlap the existing administrative boundaries of regions, districts, wards/shehia or villages/mitaa. Adherence to this principle was necessary since the census results were to be presented at the level of these administrative units.

💾 1 Apr 2015 | 👁 3 | 🏞 0 | ★ 0

• Create a Map

#### unguja\_lt51660642009182mlk00\_321

#### Imagery Base Maps Earth Cover by admin\_geonode

Satellite Image acquired by LANDSAT5 on the 1st of July 2009. The "natural color" band combination. Because the visible bands are used in this combination, ground features appear in colors similar to their appearance to the human visual system, healthy vegetation is green, recently cleared fields are very light, unhealthy vegetation is brown and yellow, roads are gray, and shorelines are white. This band combination provides the most water penetration and superior sediment and bathymetric information. It is also used for urban studies. Cleared and sparsely vegetated areas are not as easily detected here as in the 4.5 1 or 4.3.2 combination. Clouds and snow appear white and are difficult to distinguish. Also note that vegetation types are not as easily distinguished as the 4.5.1 combination. The 3.2 1 combination does not distinguish shallow water from soil as well as the 7.5.3 combination does.

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Create a Map

#### Natural Areas

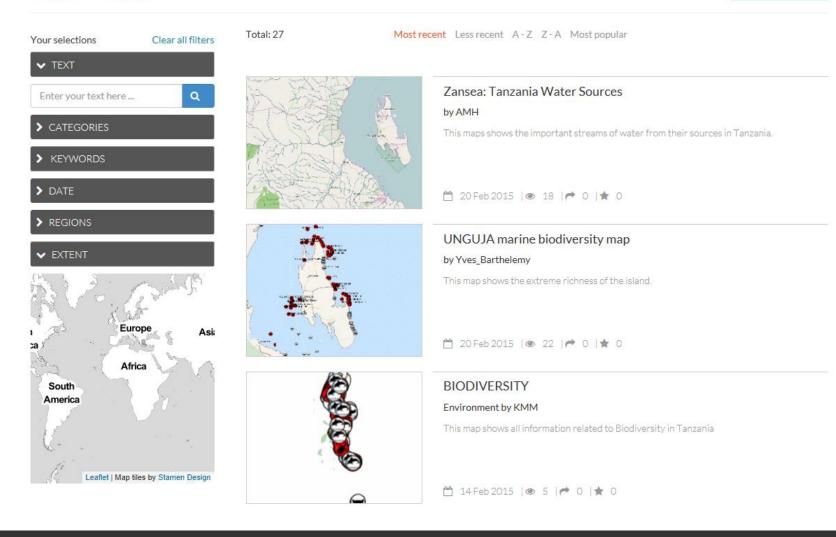
Environment by admin\_geonode



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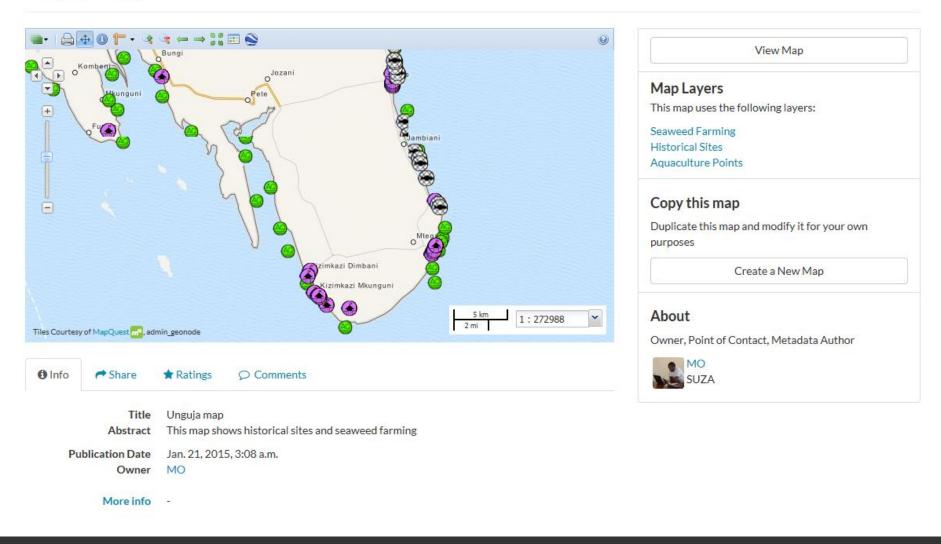
### **Explore Maps**





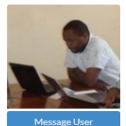


### Unguja map





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Keywords	Not provided	

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#### Resources

All contents	Layers	Maps	Documents
Most recent	Less recent	A-Z Z-	A Most popular



#### Mapping hotspots of malaria transmission from pre-existing hydrology, geology and geomor...

#### Health by MO

Larval source management strategies can play an important role in malaria elimination programmes, especially for tackling outdoor biting species and for eliminating parasite and vector populations when they are most vulnerable during the dry season. Effective larval source management requires tools for identifying geographic foci of vector proliferation and malaria transmission where these efforts may be concentrated. Previous studies have relied on surface topographic wetness to indicate hydrological potential for vector breeding sites, but this is unsuitable for karst (limestone) landscapes such as Zanzibar where water flow, especially in the dry season, is subterranean and not controlled by surface topography.

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no image

#### Unguja map

by MO

This map shows historical sites and seaweed farming



### **Explore Groups**

е овѕсом

#### 📽 obscom

OBSCOM is a consulting company specialized in geographic information and communication.

2 Members 1 Manager



#### 🖀 statoil

A leading energy company in oil and gas production.

Most recent Less recent A-Z Z-A Most popular

1 Member 0 Managers



#### 🚰 ims

Institute of Marine Sciences

0 Members 0 Managers



#### 🖀 dof

Department of Forestry and Non Renewable Natural Resources

0 Members 0 Managers



#### 🐸 suza

The State University of Zanzibar

9 Members 0 Managers

#### 🚰 ZAWA

Zanzibar Water Authorities

1 Member 1 Manager

#### FISHERIES

Department of Fisheries

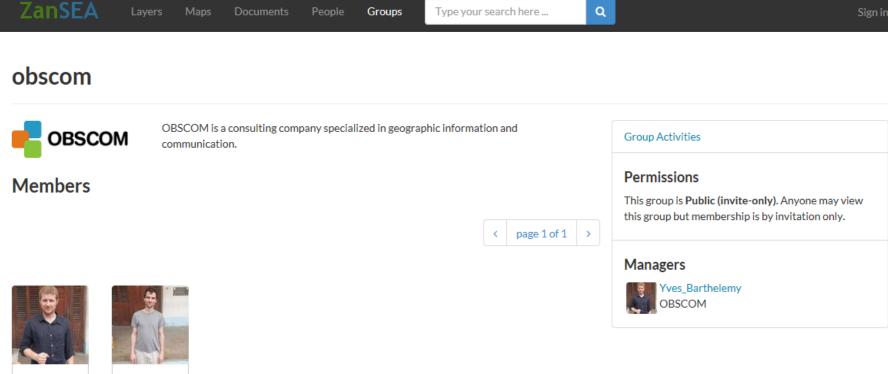
1 Member 1 Manager

#### **MUSEUM AND ANTIQUITIES**

https://www.facebook.com/pages/Department-of-Museums-and-Antiquities-Zanzibar/341006822631660



## The trainers









# Conclusions

- ZanSEA envolved from GIS-project at SUZA to become a SDI-project on Zanzibar
- ZanSEA has created enthusiasm for GIS and develops a data sharing community
- ZanSEA will support highly needed EIA/SEAwork on Zanzibar
- ZanSEA has a potential for supporting further development of SUZA as a institution
- SUZA has a great potential to become a competence centre to support development on GIS&Impact Assessment on Zanzibar







## Thank you for your attention.

## Questions/Comments ?

