Earth Observation Data to Combat IUU Fishing and Support Safety of Artisanal Fishers in West Africa

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The Blue Economy: Prospects

- Major source for Africa’s wealth and a catalyst for socio-economic transformation.
- Marine spatial planning & ecosystem-based management
- Policy harmonization
- National, Regional and international collaboration
The Blue Economy: Challenges

- Increasing population pressure
- Habitat degradation and pollution
- Rising ocean temperatures & species migration
- Weak enforcement capacities

• West Africa IUU fishing = $7.15 billion/year
ECOWAS Maritime Strategy

✓ Strengthen maritime governance
✓ Maritime security and safety
✓ Maritime environmental management
✓ Optimise ECOWAS maritime economy
✓ Promote maritime awareness and research
GMES & Africa Initiative

**Goal**

Provide decision makers with information and tools for effective coastal management

**Pillars**

- Data Access
- Operational service
- Support decision making
- Capacity strengthening
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Beneficiaries

- Policy & Decision makers
- Resource managers
- Private sector
- Meteorological Departments
- Coastal communities & fishermen
- Academia/Researchers

12 Countries
Data access architecture
Service on Fishing activities

- **Products:**
  - Potential Fishing Zones charts
  - PFZ charts overlaid with fishing vessel traffic
  - Periodic bulletin with daily list of fishing vessels, trip metrics etc.
Service on Coastal Vulnerability

• **Products**
  - Map of Coastal Vulnerability indices (CVI)
  - State of Environment Report
  - Risk and hazard maps
  - Forecast of shoreline change

• **Data source**
  - Sentinel-1 shoreline data
  - Historic aerial photos
  - Geomorphologic coastal maps
  - SPOT; Landsat data
  - Waves and Tides data
  - Sea surface height data
  - Digital elevation data
Service on coastal habitat Mapping

- **Products**
  - Land cover/change maps
  - State of the environment reports

- **Data source**
  - Historical data of coastal area
    - Orthophotos
    - Vector files (shoreline, vegetation cover, sensitive habitats, etc.)
    - Satellite images (Landsat, SPOT, GeoEye, QuickBird, etc.)
Forecast of ocean conditions

- **Products:**
  - Alerts to fishermen
    - #1 = CALM
    - #2 = ROUGH
    - #3 = DANGEROUS
  - Coloured flags used at landing beaches

- **Target users**
  - Artisanal Fishers
  - Semi-industrial
  - Marine Operators
  - Navies and Coast Guards
  - Fisheries Ministries
  - Disaster Mgt. Organizations
Types of fishing fleet in West Africa

- Over 250 industrial fleet monitored by VMS/AIS; operate from two ports
- 450 semi-industrial vessels operating from 6 landing sites; not monitored
- 12,000 canoes operating from 308 landing sites; not monitored

- Bigger boats involved in IUU fishing
- Smaller boats used for transhipment and illicit activities
- Coastal communities are mostly artisanal fishers
Start-ups and innovations

Tracks of fishing vessels monitored with ABSEA transponder

✓ Innovative solutions by start-ups to support fisheries sector

Marine & Coastal Areas Management in Western Africa

Be part of the Competition and Register at UG-GMES INNOVATION CHALLENGE to participate
Registration and submission of concept note ends on Friday May 31, 2019

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Conclusion

- Reinforce cooperation and coordination among stakeholders
- Enhance information sharing
- Political will to prosecute offenders and provide economic security
- Involvement of start-ups to develop innovative solutions
Thank you

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