GIS for Border Management and Surveillance

Risk Analysis Unit - Operations Division

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Frontex Mission

- Frontex promotes, coordinates and develops European border management in line with the EU fundamental rights charter applying the concept of Integrated Border Management.
EU External Borders

- 44 000 km of coastline
- 9 000 km of land borders

Border Crossing Points
- 811 Sea
- 481 Land
- 675 Air
Frontex Situation Center

01 To promote enhanced situational monitoring

02 To act as an information exchange hub - contact point

03 To drive Eurosur operational running

04 To perform media monitoring
GIS for Border Management and Surveillance

- Incidents (JORA)
- Vessel Detection
- Vessel Monitoring and Tracking
- Satellite Imagery
- Digital Surface Model
- Weather forecast
- Operational Areas
- ...

Situational Picture

DATA SOURCES

INTERAGENCY COOPERATION + COMMERCIAL SUPPLIERS

Frontex Situation Centre

SITUATIONAL PICTURE
GIS for Border Management and Surveillance

Situational monitoring
## Risk Analysis Unit

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<th>No.</th>
<th>Description</th>
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<tr>
<td>01</td>
<td>Situation at EU’s external border and <strong>key factors influencing it</strong></td>
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<td>02</td>
<td>Establish <strong>trends and identifying risks</strong></td>
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<td>03</td>
<td>Advice for high-level decision making as well as <strong>joint operations</strong></td>
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<td>04</td>
<td>To produce relevant, accurate and timely <strong>intelligence products</strong></td>
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Risk Analysis Unit - Sectors

Strategic Sector

Operational Sector

Analytical Sector

- Border authorities of Member States and non-EU countries
- EU partners
- International organisations
- Joint Operations
- Intelligence debriefing
- Open sources

Information is requested, collected, analysed, and disseminated
ANALYSIS LAYER Earth Observation SERVICES (ALEOS)

Coastal Monitoring
Delivery of surveillance information on specific external coastal areas

Pre-frontier Monitoring
Delivery of surveillance information on specific Pre-frontiers areas

Reference Mapping
VHR imagery and vectors covering specific third-country areas identified through risk analysis
Coastal Monitoring: Illegal immigration and criminal networks
Monitoring areas of embarkation in Libya

Image dated 15 Aug shows the previously reported well-secured compound at Alge. The comparison between the 01 Aug 2010 and 16 Aug images reveals significant changes on the localized routes to possible illegal migration activity. Inset 1 shows the swimming pool area where five inflatable rubber boats (5x3.5 m in size) have been noted. The area has direct access to a beach suitable for launching operations. The better resolution of the GeoEye 1 image has facilitated the identification of eight inflatable rubber boats in Inset 2. The scene images have revealed that the inflatable rubber boats have been in the same position during the monitoring period suggesting that they are probably abandoned. Inset 3 shows the compound where the gate was moved and two unidentified vehicles (2x3 m in size) and one cargo vehicle in its surroundings have been added. Inset 3 displays the main building of the compound. One unidentified vehicle, with the same dimensions as the ones described in Inset 3, located near the entrance of the building and another one situated on the building have been observed. Inset 1 shows one rubber vehicle in the vicinity of the Inset 2.

The presence of inflatable rubber boats probably suggests that the compound is currently being used by the migrants' smuggling networks. There were no significant changes or addition to the other previously reported named locations.
Coastal Monitoring: Illegal immigration and criminal networks
Changes in areas of embarkation in Libya
Coastal Monitoring: Illegal immigration and criminal networks
Confirmation and continue monitoring and analysis for critical intelligence
Pre-frontier Monitoring: CBC activities

- Identify groups of offenders
- Identify main routes used by smugglers
- Identify the exact crossing points
- Key objects of interest: groups of people, vehicles and MO

Illegal migration
Firearms
Tobacco smuggling
GEOINT products and services

- Supporting tool for intelligence analysis
- Gathering additional information (contextualisation AoI)
- Support detection-prevention-combating CBC & other security threats
- Validation/confirmation of hypothesis
- Improve specific analysis
RAU GIS Portal

A Portal to collaborate, share and integrate information

- Access to GIS products and services
- Create and share content
- Access point for Web map applications
- GIS collaborative environment
- Support other Frontex Divisions/Units (JOU; PRU; Press)
GIS products and maps

Access to the latest updated information and indicators
Web Map Applications

• Interactive way to display and analyze geographic information

• Customized for analysts requirements

  - Operational
    - Incidents
    - Number of migrants
    - Nationalities
    - Density
    - Time slider
    - Clusters
    - Distances
    - Statistics
    - ...

  - Third Country Monitoring
    - Reports
    - Validation
    - Notifications
    - Collaborative

  - Liaison Officers
GIS for Border Management and Surveillance

**RAU Products - Dissemination**

- Annual, Quarterly, Monthly, Weekly...
- Map production
Thank you