



VMS / SSN

The Tunisian Vessel Monitoring System

Workshop on the Implementation of a Vessel Monitoring System (VMS)
in the Mediterranean and the Black Sea
Zagreb, Croatia 28-30 November 2011



Tunisian Fisheries

Importance of the sector

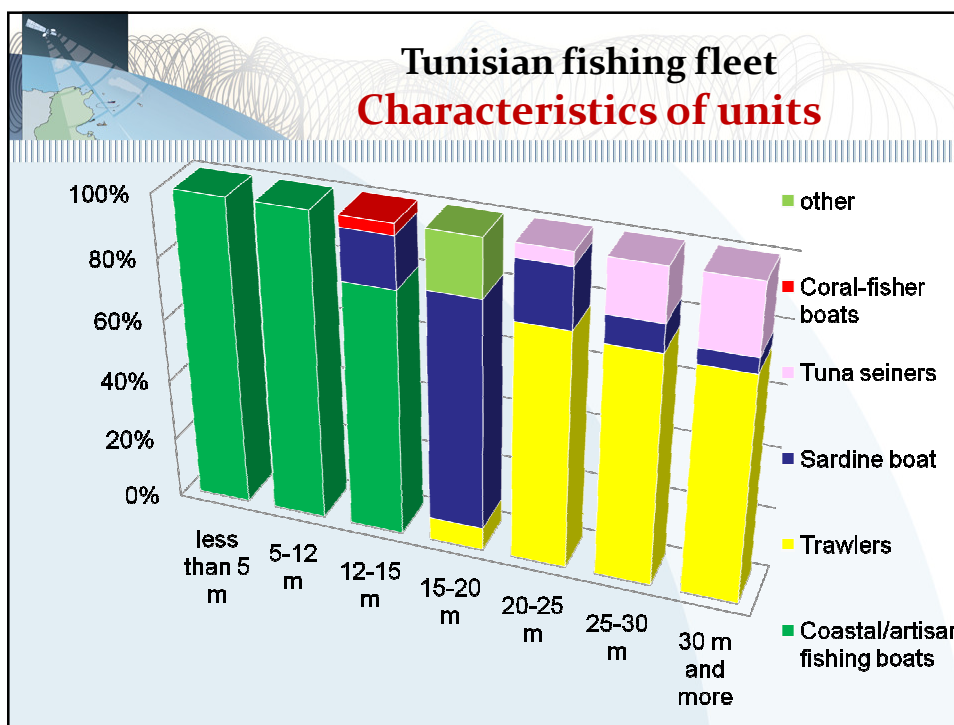
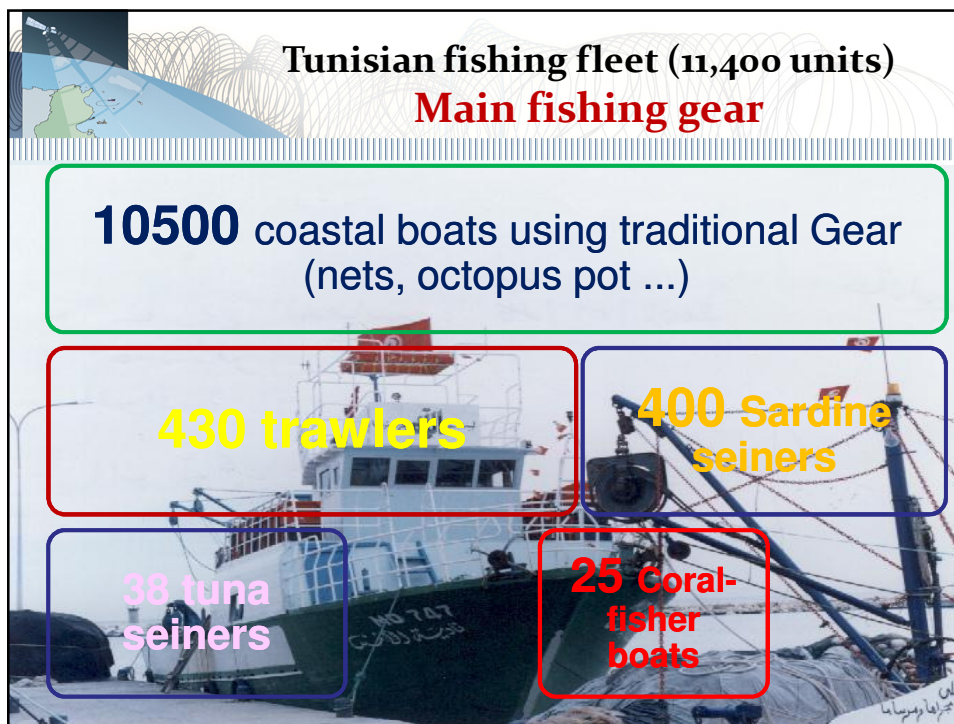
Tunisia, occupying a central place in
Mediterranean

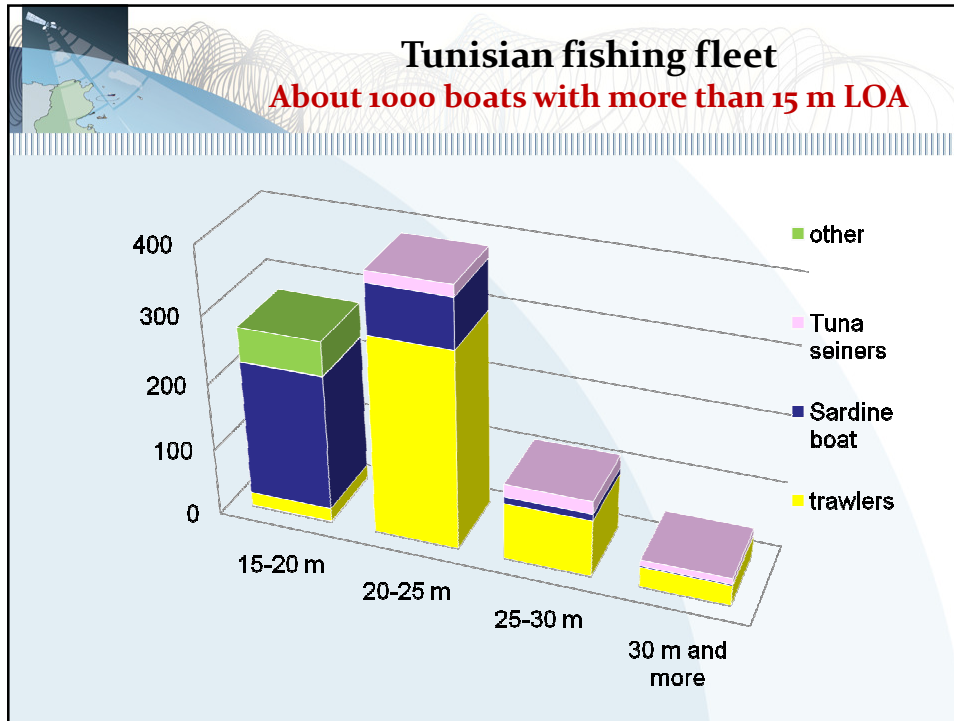
A coastline of over 1 300 km long with 41 fishing ports

An extended continental shelf in the Gulf of Gabes (area of about
88 000 km²)


About 100 000 people are directly and permanently employed in
aquaculture. (55000 Employed fisheries)

an annual production of 100 000 tonnes produced in 2008







the principal target species by the Tunisian fishing fleet




The majority of trawlers targeting benthic species
Cephalopods (octopus, cuttlefish ...), shrimp, groundfish (red mullet, sea bream, sole, Saupe, porgy, Marbled, hake, sea bream ...).



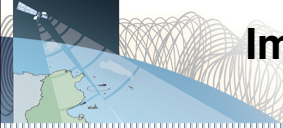
- **Tuna seiners** : Bluefin Tuna and other
- **Coral fisher boat** : only the red coraail



Sardine boat: small pelagic
Sardine (*Sardina pilchardus*) and Sardinella (*Sardinella* spp) 60% of production
the Allache (*Sardinella aurita*) (14% of production)
the Saurel (*Trachurus* spp) (15% of production)
Mackerel (*Scomber* SP) (9% of production)



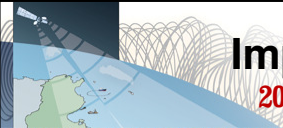
Coastal and artisanal fisheries target benthic species in general.



Implementation of VMS in Tunisia

Technical characteristics

- **Central system:**
 1. Exchange of data and report with boats.
 2. Remote configuration by group, zone or individually
 3. Distress management system
 4. Software for the management of data (positions and alarms)
 5. GIS including the regulation of the Tunisian fishing activities..
- **Inboard terminal** (Communication unit with the control center U3C):
 1. Recognizes and displays the legal status of the navigation area of the boat according to national regulations Exchange of data and report with boats.
 2. Anti tamper system,
 3. The VMS equipment must be remotely managed and able to provide the ship's position at request,
 4. VMS equipment have a distress button,
 5. VMS equipment that can encrypt/decrypt data



Implementation of VMS in Tunisia





2006/2007: Application development and installation

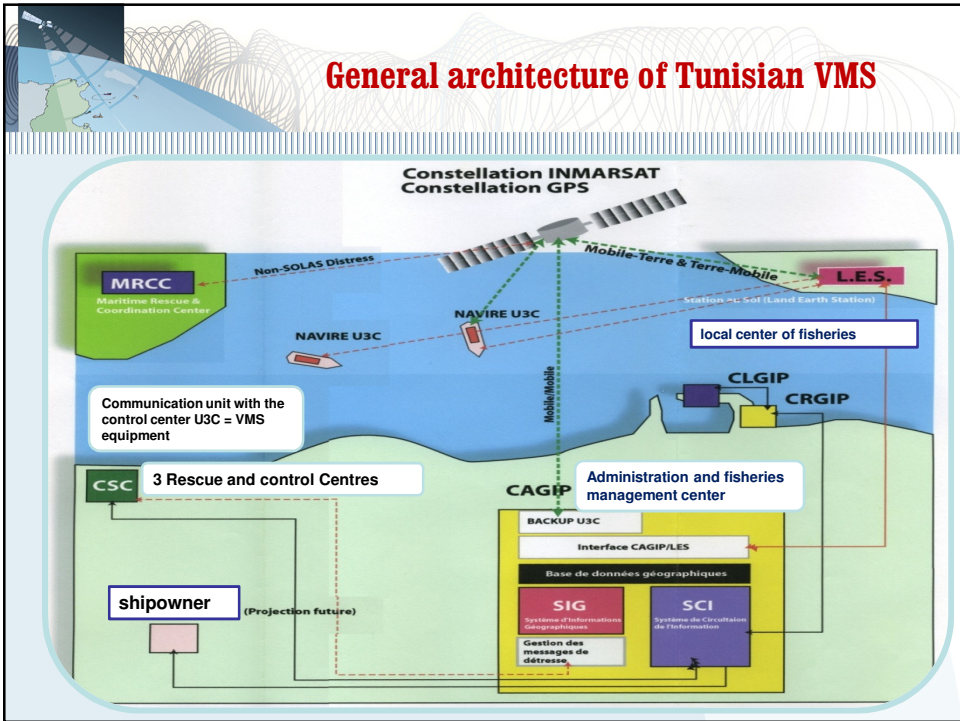
Prototype and testing:

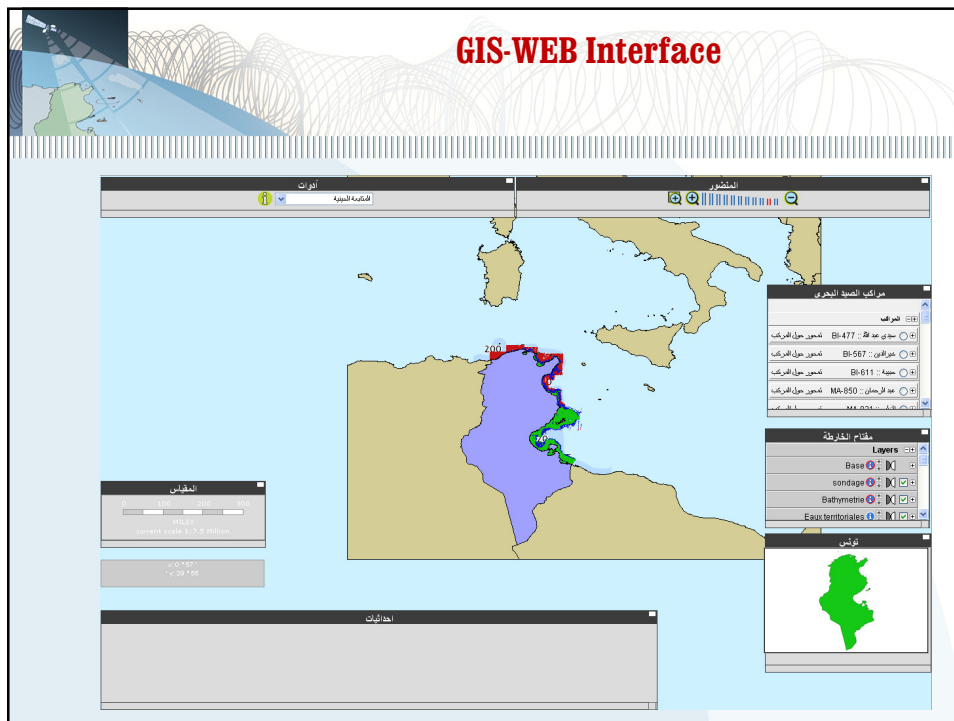
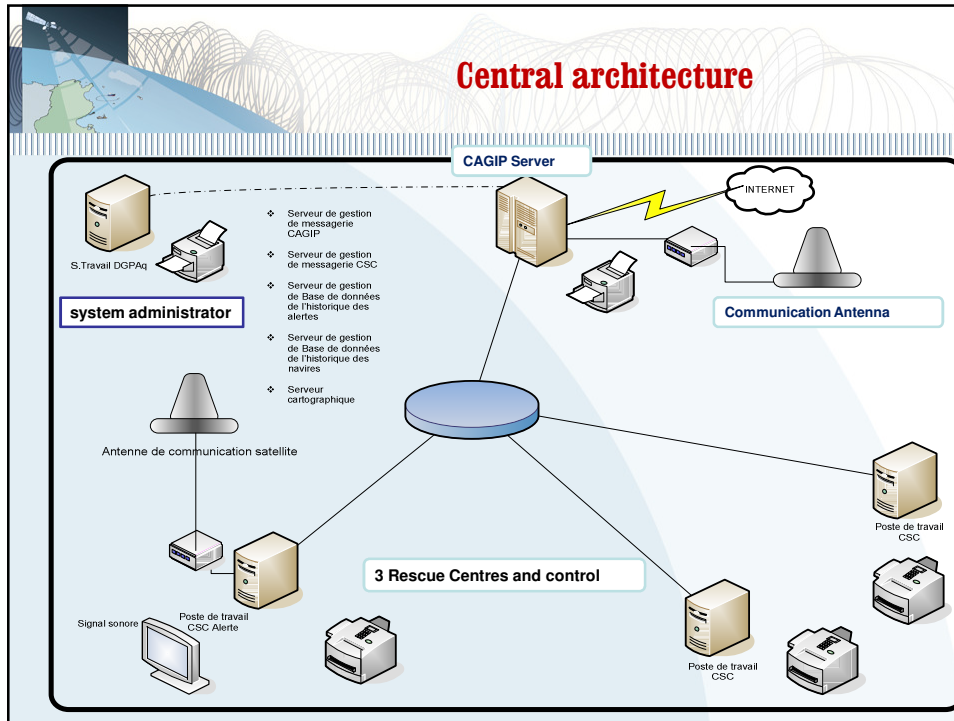
- Government permissions for satellite communication hardware
- VMS equipments installation on 20 fishing boats.
- Central hardware acquisition and installation
- Interconnection of different parties
- Equipment and software tests

Implementation of VMS in Tunisia

2008: Conducting a pilot with 20 fishing boats

Two coastal boats (+15m)	
Two sardine seiners	
4 trawlers	
12 Tuna seiners	





GisWeb

Legend of the layers of information
Displayed on the map

List of ships of the system
Displayed on the map

You can:

- See the condition of the vessel (distress / Normal)
- Fit a ship positions
- View the history of the tide current

مفتاح الخارطة

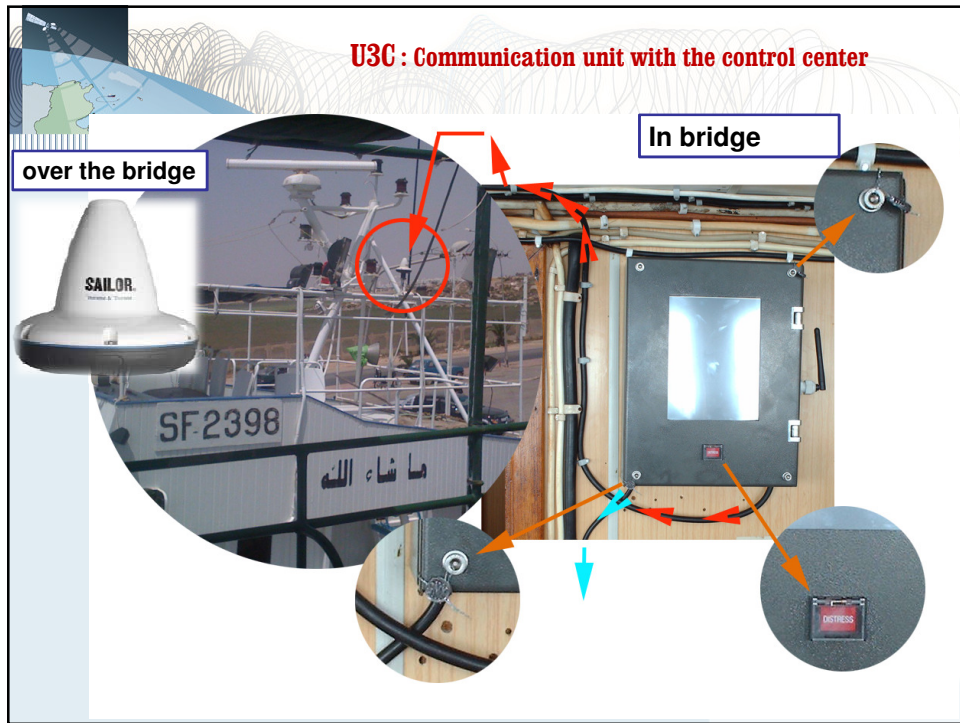
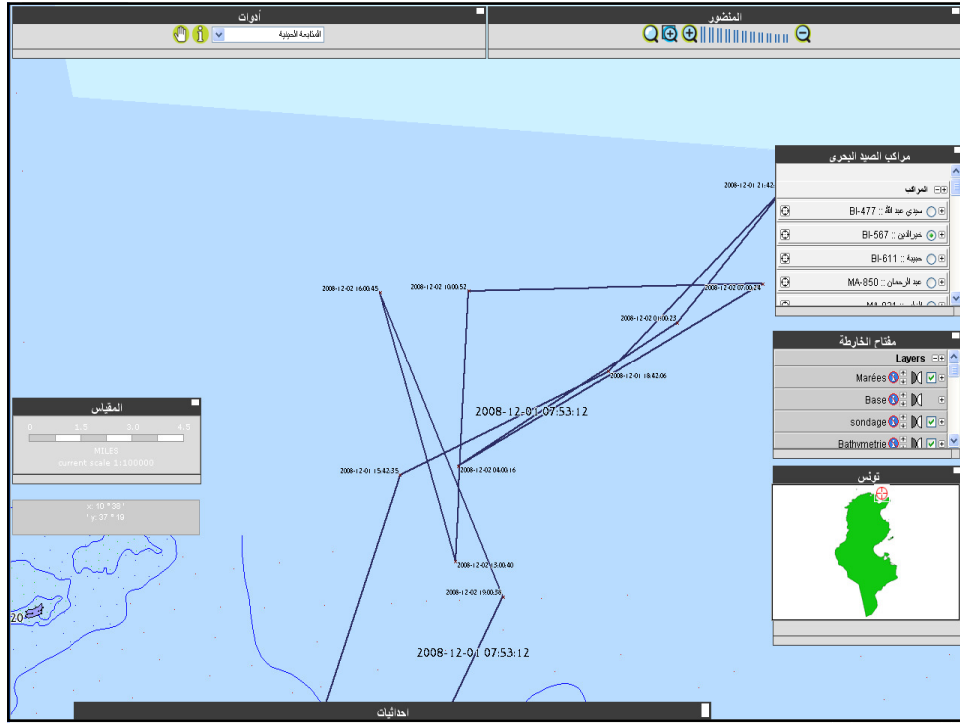
Layers

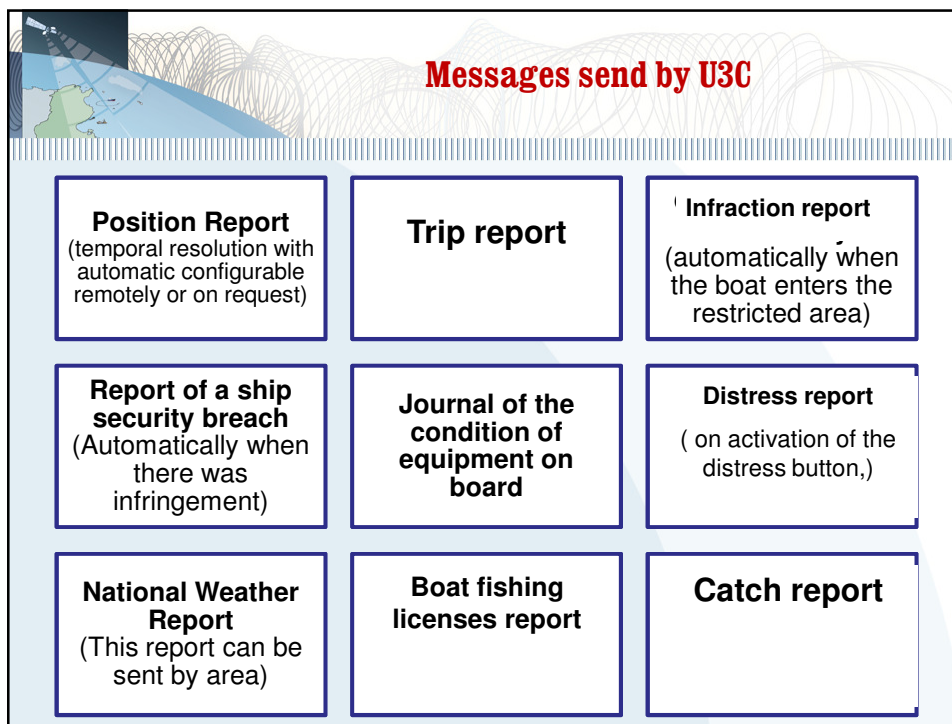
- Base
- sondage
- Bathymetrie
- Eaux territoriales

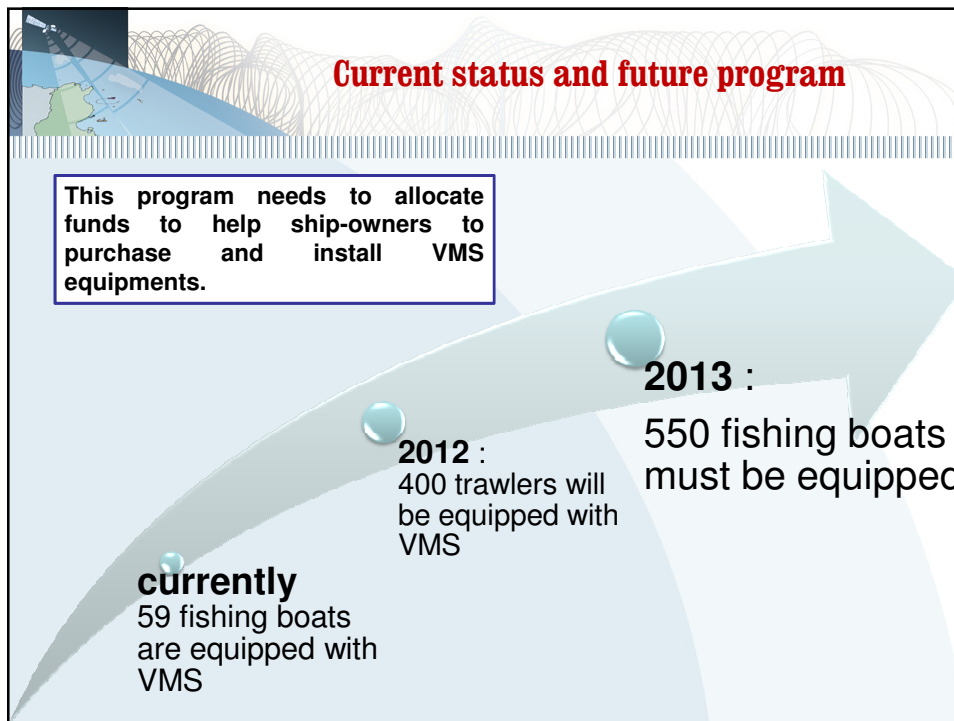
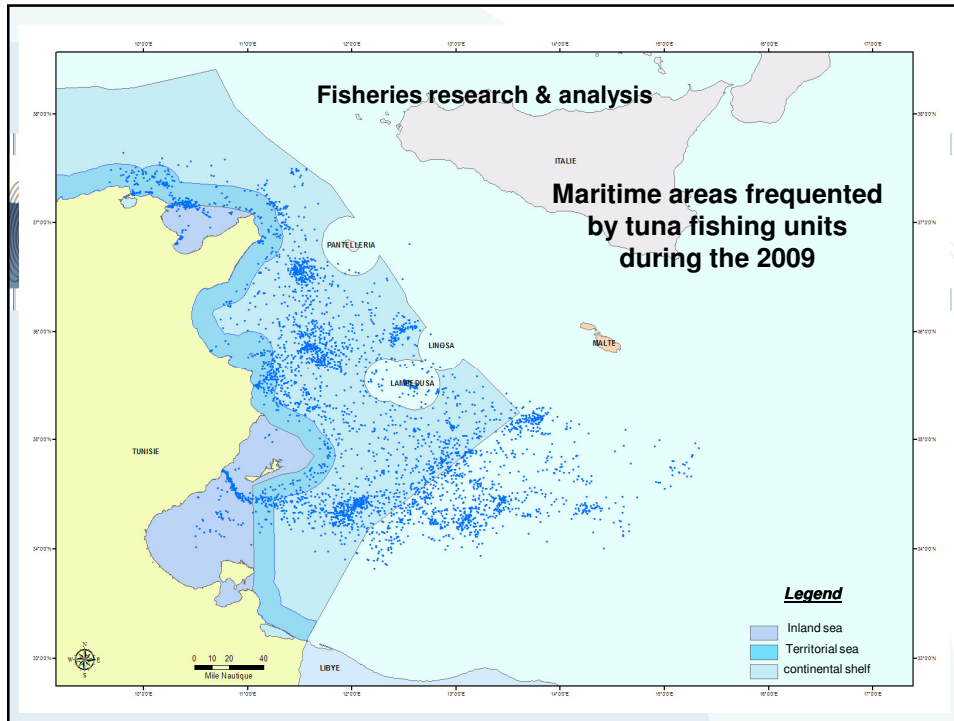
مراكب الصيد البحري

المراكب

شعور حول المركب	BI-477 :: سيدي عبد الله	<input type="checkbox"/>
شعور حول المركب	BI-567 :: خير الدين	<input type="checkbox"/>
شعور حول المركب	BI-811 :: حبيبة	<input type="checkbox"/>
شعور حول المركب	MA-850 :: عبد الرحمان	<input type="checkbox"/>









Conclusion and Recommendations

- The tested system have met the initial expectation.
- The implemented system has shown robustness, efficiency, manageability, scalability and stability.
- Central servers and network redundancy to ensure high availability
- Provide the needed hardware and human resources;
- Provision of maintenance and communication costs
- Integrate the VMS in Tunisian fisheries information system.



Thank you for your attention

Contact

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