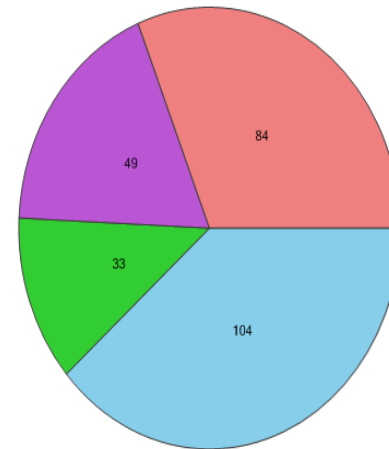
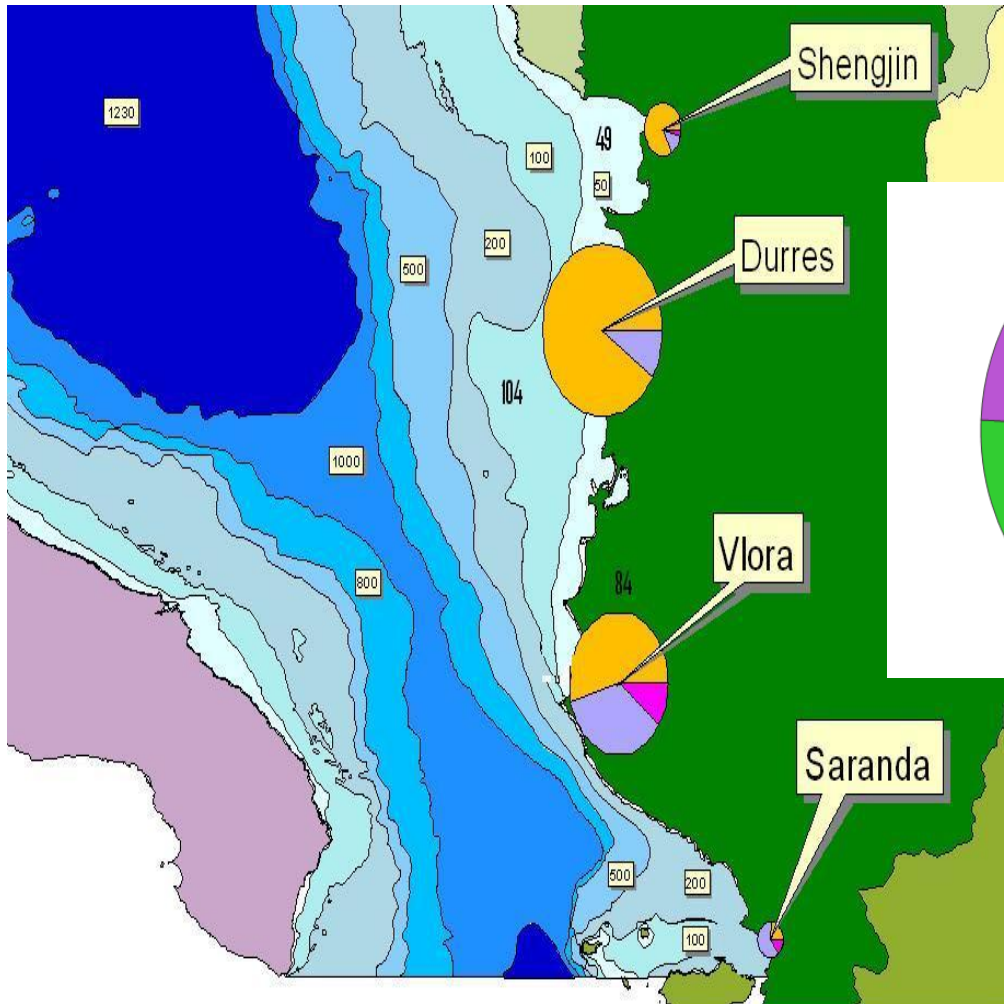


VMS AND CONTROL SYSTEMS IN ALBANIA

Mimoza Cobani

Fishery Directorate
Ministry of Environment
ALBANIA

VMS AND CONTROL SYSTEMS IN ALBANIA



■ Durres / Durres
■ Saranda / Saranda
■ Shengjin / Shengjin
■ Vlora / Vlora

Trawl

Purse seine

Gillnet

VMS AND CONTROL SYSTEMS IN ALBANIA

- Fisheries Policies Directorate is responsible for the management of Fisheries sector in the Albanian and International water.
- Fisheries Management encompasses:
 - *Development of Fisheries Legislation;*
 - *Data collection & processing program application;*
 - *Research into Sustainable Resource Exploiting;*
 - *Surveillance and Monitoring of Vessel Activity;*
 - *Enforcement Programming.*

VMS AND CONTROL SYSTEMS IN ALBANIA

- ◎ Fishery activities control, except institutional strengthening, cannot be understood without establishing and functioning of a central national system of water area surveillance. The basic infrastructure for VMS (Vessel Monitoring System) has been built.
- ◎ The Institutions that has interests and responsibility on the sea, has its representatives in the IMOC Centre to administrate and perform controls on legislation application.

VMS AND CONTROL SYSTEMS IN ALBANIA

How VMS Works?

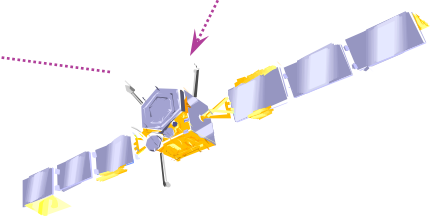
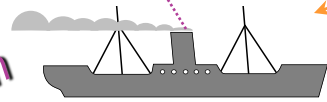
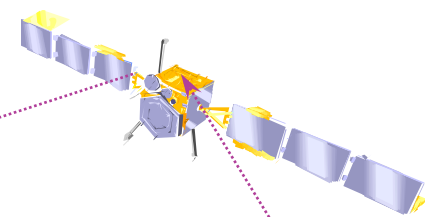
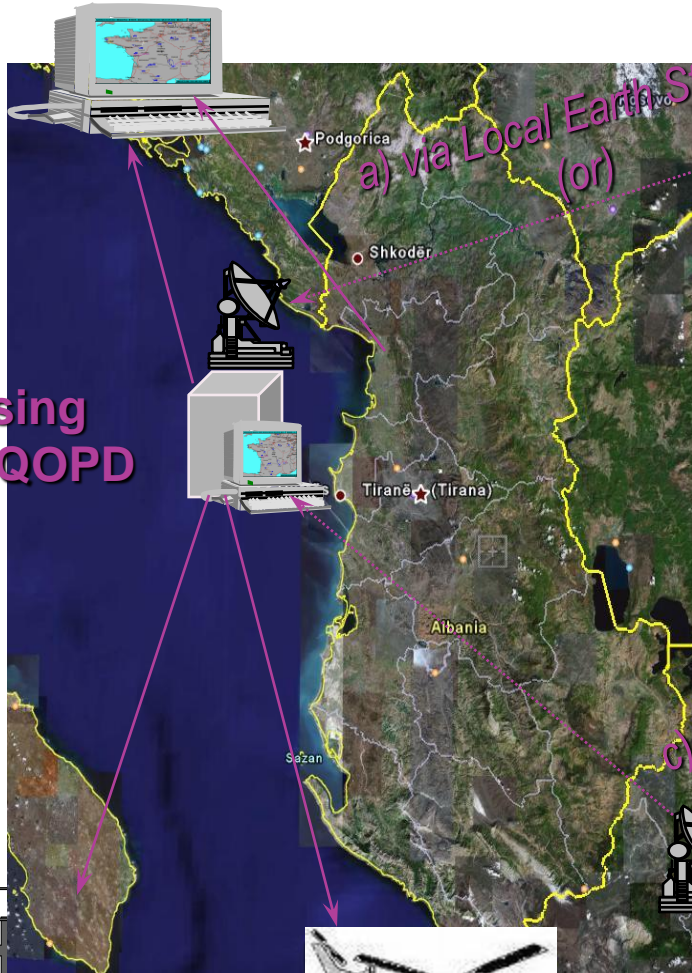
Information is...

- **Collected from Vessels;**
- **Transferred to a Central Site;**
- **Processed;**
- **Validated and Analyzed;**
- **Disseminated to Regional Centers;**
- **Presented to Fisheries Dept Users.**

VMS AND CONTROL SYSTEMS IN ALBANIA

VMS SCENARIOS

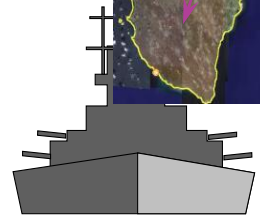
MEFWA Centre



Global Positioning System (GPS)

b) via other Satellite Earth Station

Processing Centre QOPD



Surveillance/Enforcement Craft

VMS AND CONTROL SYSTEMS IN ALBANIA

Collecting Vessel Information:

- **The VMS must know at least the Location of each Vessel that is to be tracked**
- **This is achieved by the deployment of an: Automatic Location Communicator (ALC) on all Vessels that participate in the VMS**

VMS AND CONTROL SYSTEMS IN ALBANIA

Minimum ALC Requirements:

- An ALC must resolve the Accurate Vessel Location and Current Time. The Global Positioning System (GPS) is used to achieve this
- It must automatically report its position. The timing of these reports must be configurable
- It may incorporate other features such as two way messaging and catch/notice-of-port-call reports
- An ALC must be tamper-resistant to prevent a Vessel Owner from misleading the authorities

VMS AND CONTROL SYSTEMS IN ALBANIA

Processing Vessel Information

- **Vessel Information is usually Collected and Processed at a Central Point – IMOC-QPOD;**
- **VMS information may be Stored in any mainstream Relational Database (e.g. Oracle, Sybase);**
- **A VMS makes extensive use of Geographic Information Systems (GIS) to process Vessel Positions.**

VMS AND CONTROL SYSTEMS IN ALBANIA

Analyzing Vessel Activity

- Validation and Analysis of information is performed by a configurable Decision Engine
- The Decision Engine automatically responds to possible illegal activity by watching a vessel more closely
- The Decision Engine prioritizes information by its degree of interest to Intelligence and Enforcement personnel - making human analysis easier and faster.

VMS AND CONTROL SYSTEMS IN ALBANIA

Dissemination

- **Dissemination of VMS information to Regional Surveillance Centers, like MEFWA, is accomplished via a data network (such as a Wide Area Network, or the Internet)**
- **Dissemination of VMS information to Enforcement Craft (air and surface) is accomplished via a Satellite or Radio Link**
- **The Security Issues related to remote deployment of VMS require consideration.**

Presenting VMS Information

- **Specialist tracking tools are used to present VMS information to users;**
- **VMS can be integrated with the on-board Radar on surveillance Aircraft and Vessels;**
- **VMS can be integrated with Land Based Radar Installations to provide identification of contacts;**
- **The presentation of VMS information is most useful when cross-referenced with other tools such as Intelligence databases and catch recording systems.**

VMS AND CONTROL SYSTEMS IN ALBANIA

Uses for VMS

- **To Detect likely Encroachments on Restricted Areas through routine Monitoring of Vessel Movement;**
- **Provides Information on Known vessel Activity allowing Surveillance Missions to quickly identify Unknown vessel Activity and Investigate this more closely;**
- **Provides Near Real-Time monitoring of vessels during an Enforcement or Pursuit Operation.**

VMS AND CONTROL SYSTEMS IN ALBANIA

Uses for VMS

- **Cross-correlation of Claimed Catch Location (from Vessel's Log) with Reported Vessel Location at time the catch occurred**
- **Detection of likely Trans-Shipment of catch while vessel was at sea by analysis of possible Rendezvous with Other Vessels**
- **Provides an indication of Fishing Activity and Targeted Species by analysis of the vessel's track pattern, location and speed (if vessel speed is 4 nm/hour means bottom fishing)**

VMS AND CONTROL SYSTEMS IN ALBANIA

Uses for VMS

- **Collection and processing of Catch Reports (and other reports) from Vessels;**
- **Two-way electronic mail communication between the Authority and Fishing Vessels;**
- **Search and Rescue:**
 - **Finding Vessels near to a Ship in Distress.**
 - **If the Ship in Distress is carrying an ALC then the last reported position may be used to narrow the search area.**
- **Tracking of non-fisheries related vessels such as Hazardous Chemical and Oil Tankers.**

VMS AND CONTROL SYSTEMS IN ALBANIA

Weak points of VMS System of ALBANIA

- Albania has implemented a VMS for 223 fishing vessels, over 12 m LOA combining satellite and GPRS communications channels but the system doesn't work from one year. Lately has been some efforts to put under operation this system, hoping to restart soon.
- This system was built to strengthen the surveillance and monitoring system in fisheries and enable the sector to apply the satellite-based VMS and to combat illegal, unreported and unregulated fishing, but if the entire MCS system is in field.

*Thank You for the
attention!*