

# GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN

CoC Working Group on VMS and related  
control systems in the GFCM Area

*Tunis, Tunisia, 1-2 October 2013*



## **The way forward: the phased development of a GFCM centralized VMS**

by GFCM Secretariat



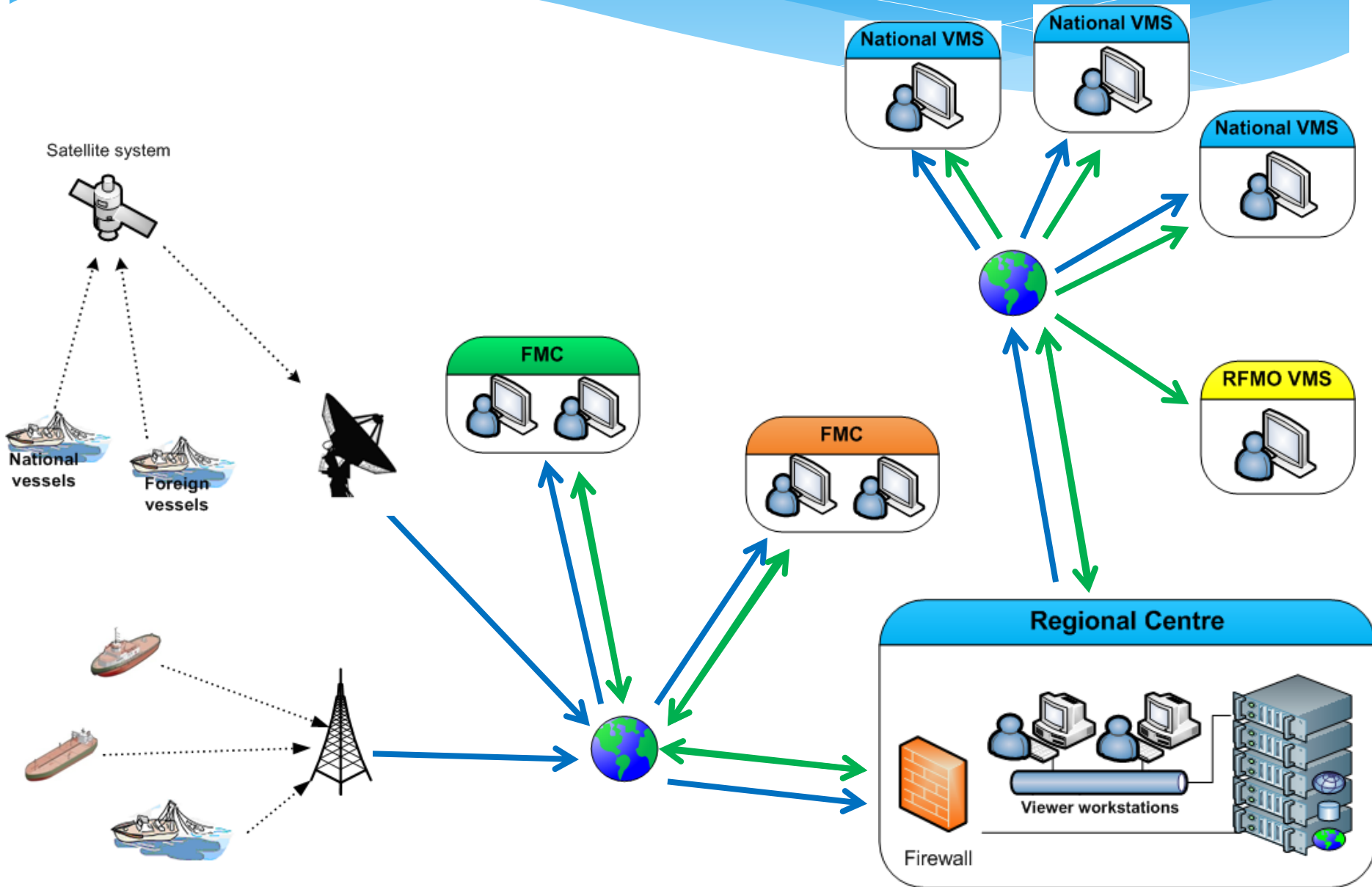
# Phased development of a GFCM centralized VMS system

- At the 2008 *Ad Hoc Working Group on Vessel Monitoring System as a Monitoring, Control and Surveillance tool* of the Compliance Committee, it was advised that the GFCM opts for a decentralized VMS system as a first step;
- In 2009, at the 33rd Session of the Commission, recommendation GFCM/33/2009/7 on VMS was adopted (decentralized VMS);
- GFCM has continued to follow developments relating to VMS and controls in other fora in light of the need to ensure the phased development of VMS;
- At the 2011 *Workshop on the Implementation of a Vessel Monitoring System (VMS) in the Mediterranean and the Black Sea* it was concluded that an information system centred around GFCM would permit the distribution of data at regional and foster common methods for the GFCM Area;
- In April 2012 a meeting of experts was convened at the GFCM HQs to draw up guidelines for the implementation of VMS in the GFCM Area. They acknowledged the need for a modular approach (artisanal fisheries) and advised for the establishment of a centralized VMS;
- A report on VMS was presented to the 7th Session of the Compliance Committee for GFCM Members to decide on step forwards;
- This WG was convened, inter alia, to examine whether a centralized VMS system should be established within GFCM and, if so, how;

# Key factors of success for a centralized VMS

- **Good functioning** - Fisheries Monitoring Center fulfilling high-level requirements
  - Several types of satellite providers (and others)
  - Minimum standards of IT architecture (redundancy, standby, archiving data)
  - “Common language” (formats and protocols)
- **Efficiency** - Added value services for the Monitoring, Control and Surveillance (MCS)
  - Register of identification information of the vessels (Register)
  - Monitoring of the devices (Alarms)
  - Zone management and activities detection (Alerts)
  - Knowledge management (Reports)
- **Sustainability** – Tools to fight IUU fishing
  - Capacity building
  - Integration of complementary systems (ERS, Weather, Radar, etc.)
  - Technical assistance to implement VMS in some countries

# Modular approach for the GFCM



# Alternative systems of tracking

		GSM ONLY	AIS	SATELLITE				HYBRID (GPRS + IRIDIUM)
				ARGOS	INMARSAT	IRIDIUM	SAT-AIS	
MONITORING	NEAR COASTAL (up to 11 Nmi)*	X	X	X	X	X	X	X
	FAR COASTAL (up to 40 Nmi)*		X	X	X	X	X	X
	HIGH SEAS (above 40 Nmi)			X	X	X	X	X
	POLAR ORBITS (70° N and S)			X		X	X	X
	SMALL-SCALE FISHERIES BEACON			X				
COMMUNICATION	ONE WAY	X	X	X	X	X	X	X
	TWO WAY	X	X		X	X	X	X
	REAL-TIME	X	X		X	X		X
	NEAR REAL TIME					X		X
	NOT REAL TIME			X			X	
SECURITY	TAMPER PROOF			X	X	X		X
	GPS INTEGRATED	X	X	X	X	X	X	X
	DATA ENCRYPTION	X		X	X	X		X
	CONFIDENTIAL BROADCAST			X	X	X		X
	SEARCH AND RESCUE			X	X	X		X
COSTS	EQUIPMENT ON-SHORE		€€€€					
	EQUIPMENT ONBOARD	€	€/€€	€€	€€€	€€	€/€€	€€€
	AIRTIME SERVICE	€		€€€	€€€	€€€	€€€	€€

\* Maximum in ideal conditions, this highly depends on the site of installation of the antenna network and numerous other conditions (climate, traffic, equipment, etc.)

X	YES
	NO

# Hosting of the centralized VMS 1/2

<b>GFCM FMC (OPTION 1)</b>	
<b>PROS</b>	<b>CONS</b>
This is a one-shot undertaking.	There is a heavy initial financing
All data are stored at the premises of the main FMC administrator	Requires the maintenance of an IT infrastructure
Total autonomy	Operational effectiveness depends on the administrator
Low yearly fees,	
This is a tangible product	
Other modules could be added to the FMC	

# Hosting of the centralized VMS 1/2

The first option is to procure a complete FMC system for the following main elements: hardware, software, installation, training and technical support/maintenance contract.

	Scenario 1 (FMC only)	Scenario 2 (FMC + Web)
Procurement costs “one-shot”	<b>135,000 EUR</b>	<b>225,000 EUR</b>
Recurring costs (yearly fees)	<b>20,000 EUR</b>	<b>30,000 EUR</b>

# Hosting of the centralized VMS 2/2

<b>GFCM FMC HOSTED BY A PROVIDER</b>	
<b>PROS</b>	<b>CONS</b>
High quality of service (min. 95% 24/7/365)	The service has to be contracted for the duration of the project.
No heavy financing at once	This is an internet service
The maintenance is included	
This is an easy-to-implement, cost-effective and innovative solution	



# Hosting of the centralized VMS 2/2

The second consists of the hosting of the FMC by a certified provider.

	Up to 1,000 vessels	Up to 3,000 vessels	Above 3,000 vessels
Estimated costs (yearly fees)	<b>35,000 EUR</b>	<b>45,000 EUR</b>	<b><u>TBD</u></b>

# Tentative time schedule

- Agreement on the legal framework
- Assessment of the technical capability of the Contracting Parties
- Request for proposal/budget validation for the technical option selected
- Protocol and technical framework requirements
- Sourcing of a provider
- Installation and implementation of the system
- Training of the operators and involved stakeholders
- New developments and extension of the system

**6 to 18 months depending on the establishment of a common framework.**

**Thank you for your  
attention !**

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