

Ministry of agriculture - Directorate of fisheries

Croatian Vessel Monitoring System (VMS)



2013.

Croatia Vessel Monitoring System

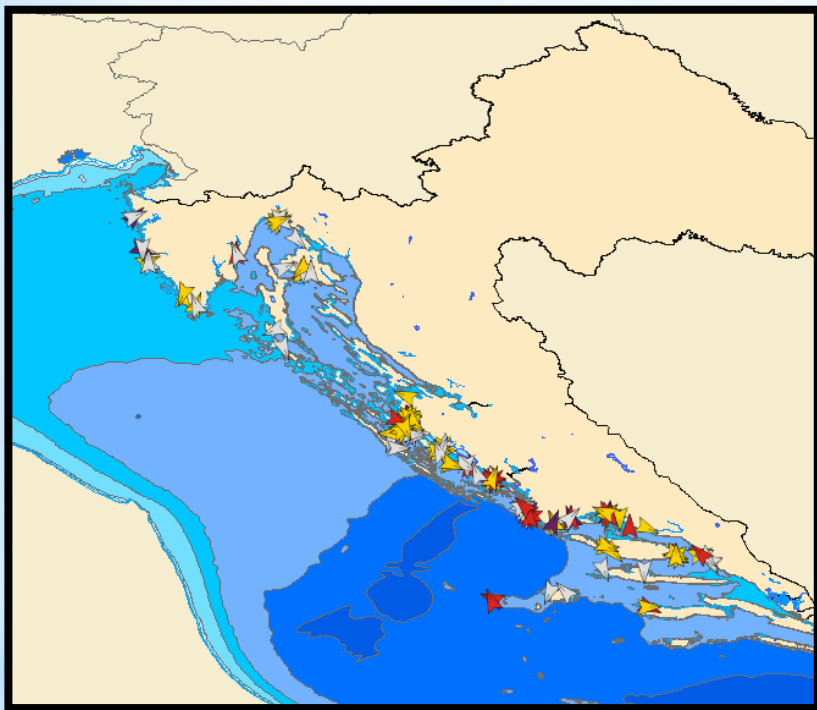
Introduction

General VMS functions:

- Control of restricted and closed areas
 - Surveillance of fishing operations, position, course and speed ...
 - Assistance in conventional surveillance methods of fisheries inspection by making them more efficient in time period
 - Data cross checking
 - Gathering information for e-logbook system

Croatia Vessel Monitoring System

Introduction



- First instalations in 2007.
- About 350 devices installed
- Both satellite and GPRS communication channels

Croatia Vessel Monitoring System

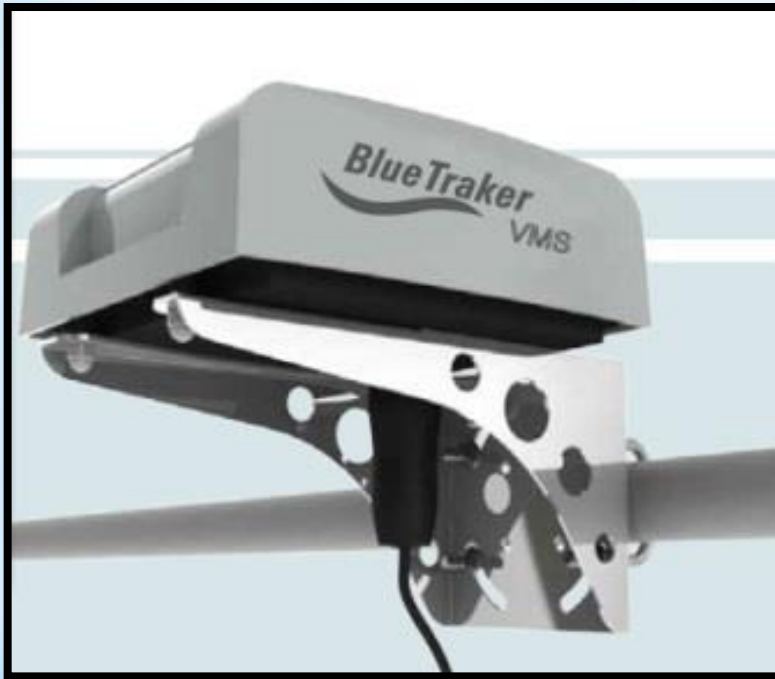
Device



- The BlueTraker VMS solution
- Hybrid VMS device
- Iridium and GSM/GPRS

Croatia Vessel Monitoring System

Device



Design and operation

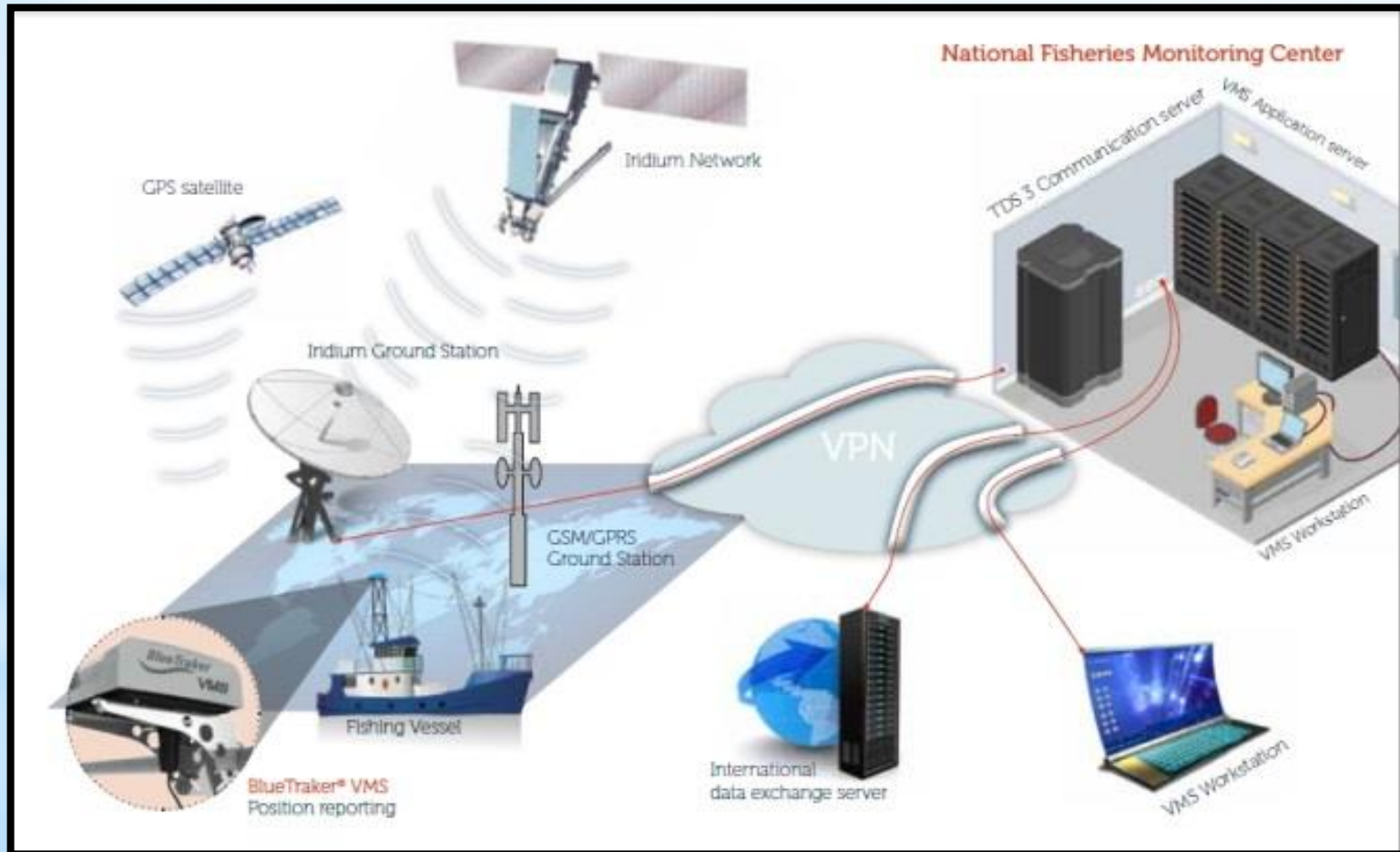
- robust, weather resistant double shell housing,
- mechanically and electrically fully integrated design

containing all communication modules and SAT, GSM and GPS antenna,

- exceptional autonomous operation of up to 72 hours, with embedded back-up battery,
- compatible with any third party VMS software

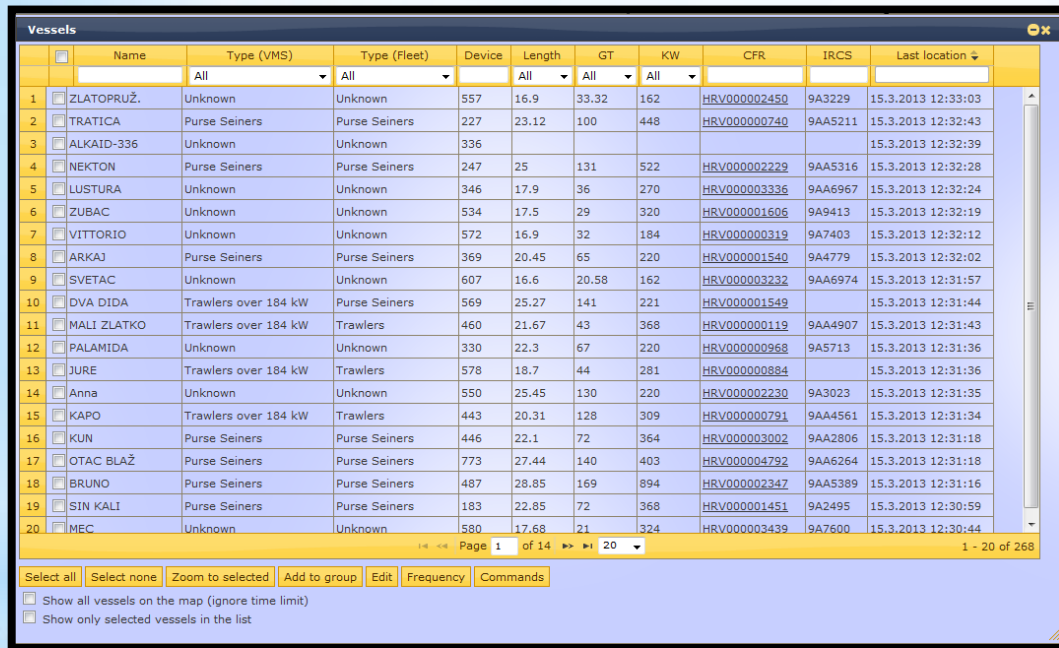
Croatia Vessel Monitoring System

VMS Communications sheme



Croatia Vessel Monitoring System

Fishing fleet



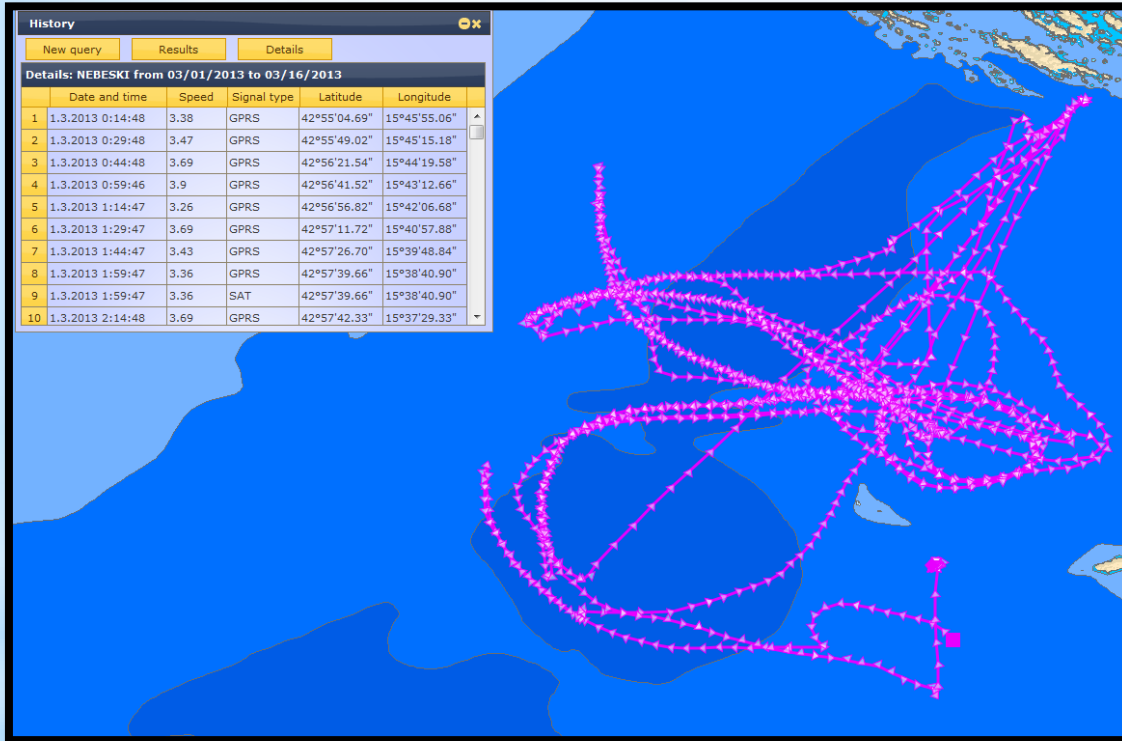
The screenshot displays a web-based interface for the Croatia Vessel Monitoring System. The main content is a table listing 20 vessels. The table has columns for Name, Type (VMS), Type (Fleet), Device, Length, GT, KW, CFR, IRCS, and Last location. Below the table, there are navigation controls including 'Page 1 of 14', '20', and '1 - 20 of 268'. At the bottom, there are buttons for 'Select all', 'Select none', 'Zoom to selected', 'Add to group', 'Edit', 'Frequency', and 'Commands'. There are also two checkboxes: 'Show all vessels on the map (ignore time limit)' and 'Show only selected vessels in the list'.

	Name	Type (VMS)	Type (Fleet)	Device	Length	GT	KW	CFR	IRCS	Last location
1	ZLATOPRUŽ.	Unknown	Unknown	557	16.9	33.32	162	HRV000002450	9A3229	15.3.2013 12:33:03
2	TRATICA	Purse Seiners	Purse Seiners	227	23.12	100	448	HRV000000740	9AA5211	15.3.2013 12:32:43
3	ALKAID-336	Unknown	Unknown	336						15.3.2013 12:32:39
4	NEKTON	Purse Seiners	Purse Seiners	247	25	131	522	HRV000002229	9AA5316	15.3.2013 12:32:28
5	LUSTURA	Unknown	Unknown	346	17.9	36	270	HRV000003336	9AA6967	15.3.2013 12:32:24
6	ZUBAC	Unknown	Unknown	534	17.5	29	320	HRV000001606	9A9413	15.3.2013 12:32:19
7	VITTORIO	Unknown	Unknown	572	16.9	32	184	HRV000000319	9A7403	15.3.2013 12:32:12
8	ARKAJ	Purse Seiners	Purse Seiners	369	20.45	65	220	HRV000001540	9A4779	15.3.2013 12:32:02
9	SVETAC	Unknown	Unknown	607	16.6	20.58	162	HRV000003232	9AA6974	15.3.2013 12:31:57
10	DVA DIDA	Trawlers over 184 kW	Purse Seiners	569	25.27	141	221	HRV000001549		15.3.2013 12:31:44
11	MALI ZLATKO	Trawlers over 184 kW	Trawlers	460	21.67	43	368	HRV000000119	9AA4907	15.3.2013 12:31:43
12	PALAMIDA	Unknown	Unknown	330	22.3	67	220	HRV000000968	9A5713	15.3.2013 12:31:36
13	JURE	Trawlers over 184 kW	Trawlers	578	18.7	44	281	HRV000000884		15.3.2013 12:31:36
14	Anna	Unknown	Unknown	550	25.45	130	220	HRV000002230	9A3023	15.3.2013 12:31:35
15	KAPO	Trawlers over 184 kW	Trawlers	443	20.31	128	309	HRV000000791	9AA4561	15.3.2013 12:31:34
16	KUN	Purse Seiners	Purse Seiners	446	22.1	72	364	HRV000003002	9AA2806	15.3.2013 12:31:18
17	OTAC BLAŽ	Purse Seiners	Purse Seiners	773	27.44	140	403	HRV000004792	9AA6264	15.3.2013 12:31:18
18	BRUNO	Purse Seiners	Purse Seiners	487	28.85	169	894	HRV000002347	9AA5389	15.3.2013 12:31:16
19	SIN KALI	Purse Seiners	Purse Seiners	183	22.85	72	368	HRV0000001451	9A2495	15.3.2013 12:30:59
20	MEC	Unknown	Unknown	580	17.68	21	324	HRV0000003439	9A7600	15.3.2013 12:30:44

- About 350 fishing vessels with VMS devices
- 100 new devices by the end of April 2014.
- Total goal of around 450 vessels

Vessel monitoring system

Functionality - history

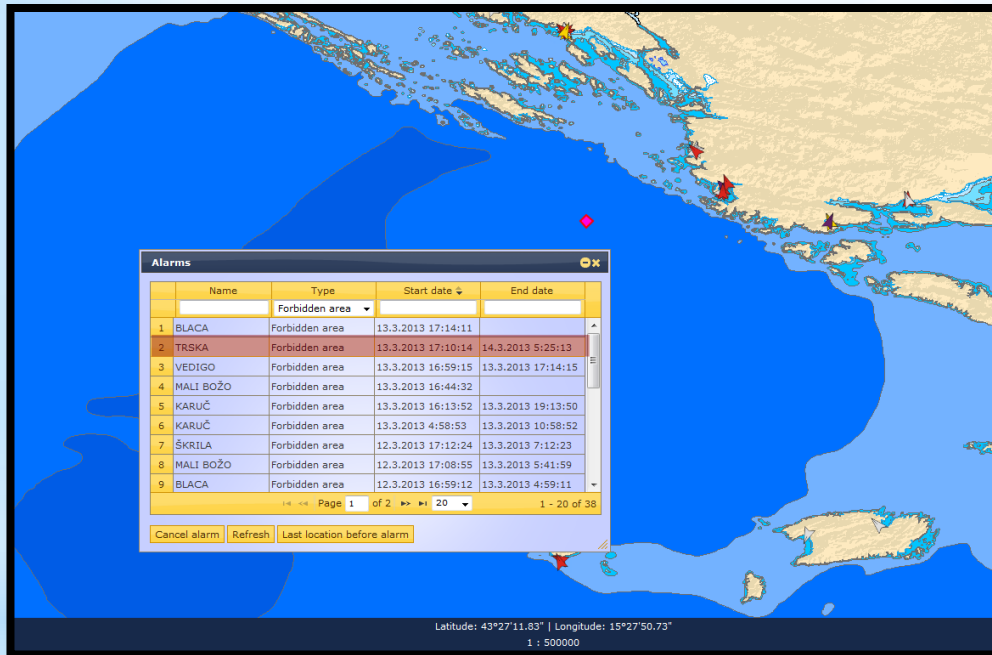


Multiple levels of authority

- FMC - complete history
- Non specific inspection - only current position
 - Ministry of the Interior Affairs
 - Ministry of Maritime Affairs, Transport and Infrastructure
 - Coast Guard

Croatia Vessel Monitoring System

Functionality - alarms



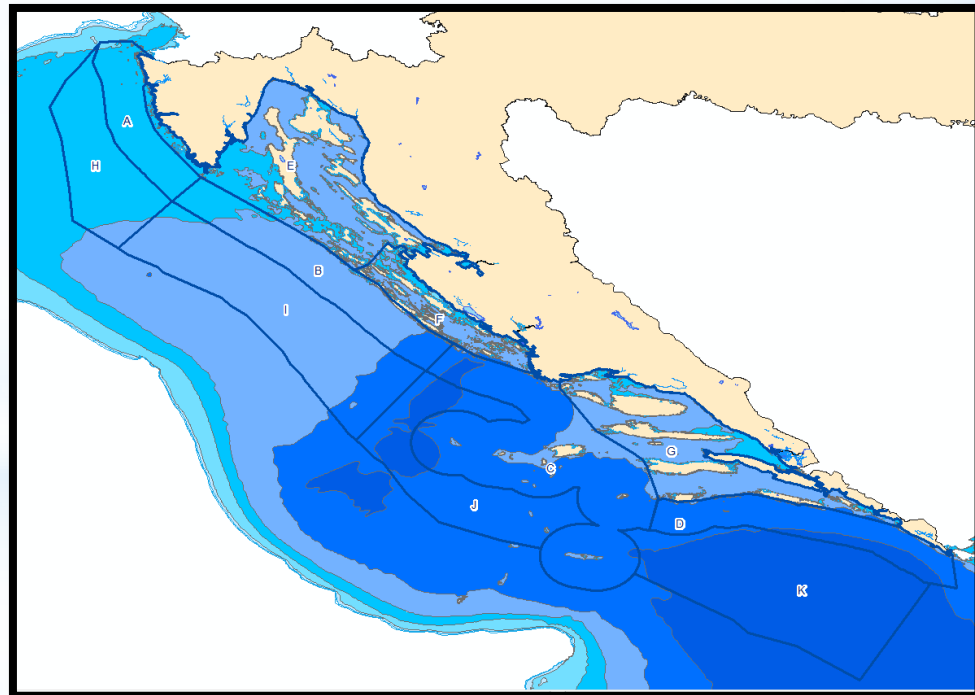
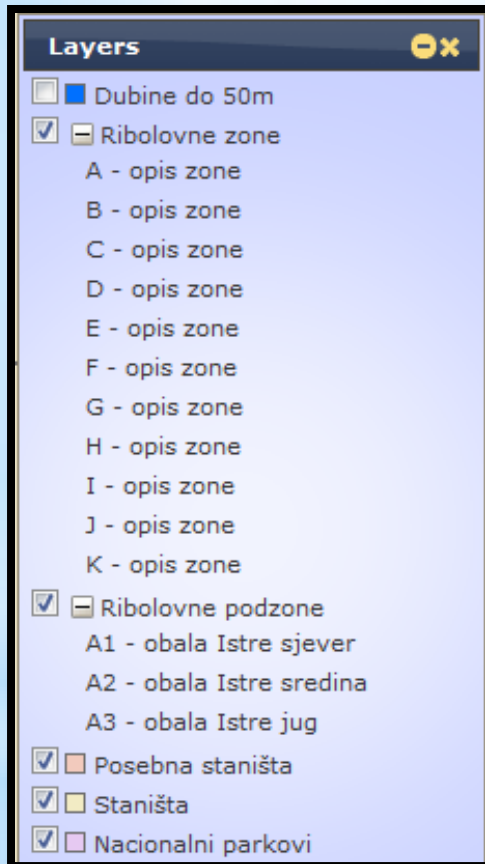
- Entry into EFPZ (Ecological and Fishery Protection Zone)
- Return to territorial sea (from EFPZ)
- Exiting EFPZ
- Retention in EFPZ for longer than 24 hours
- Prohibited fishing zones
- Entering protected areas (national parks)
- Power supply - cessation of signal transmitting
- Checking the e-logbook and time of departure from port
- Checking the e-logbook and time of return to the port
- Fishing in fishing zones for which the vessel is unlicensed

Croatia Vessel Monitoring System

Functionality - layer projections

- Data layers

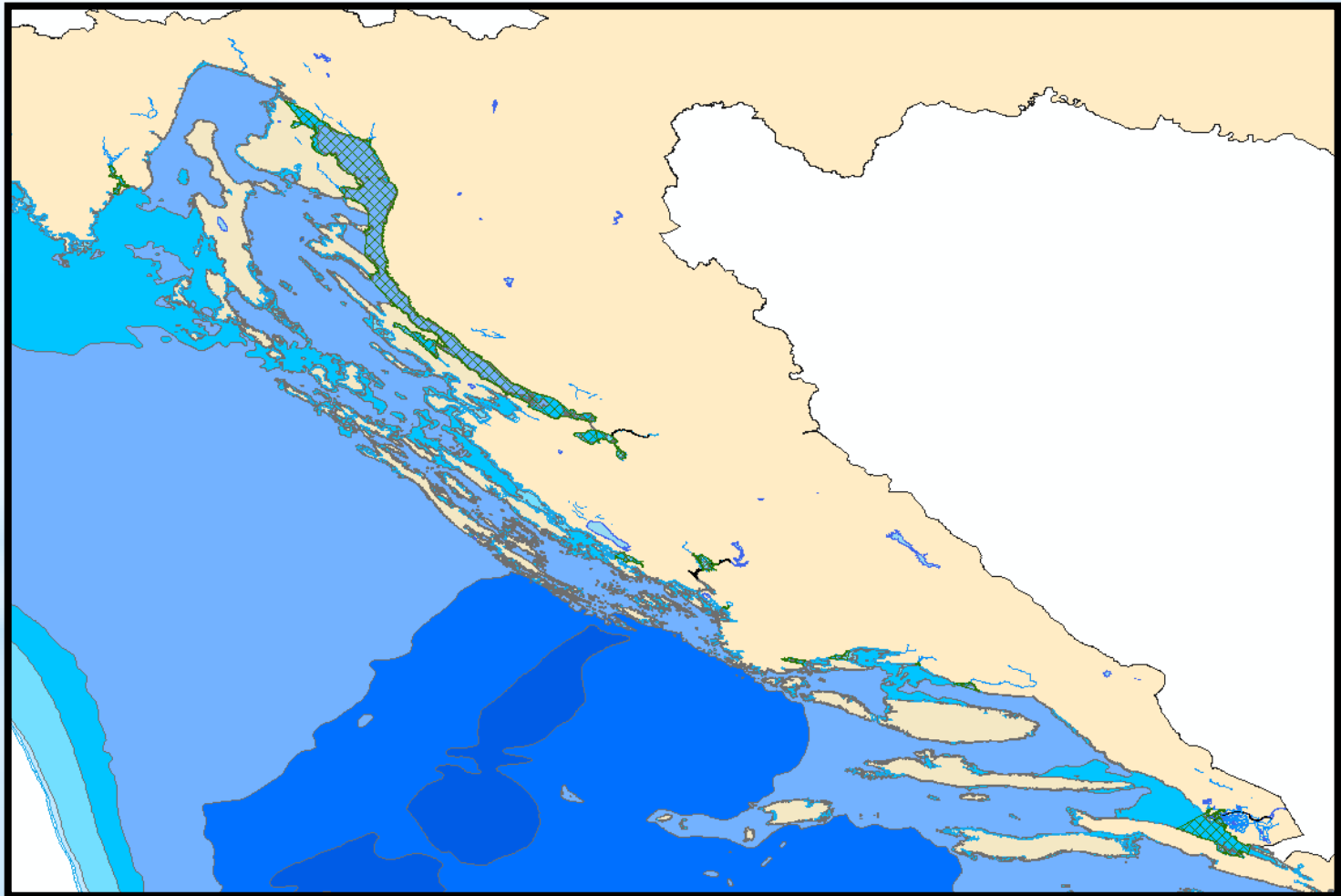
-fishing zones



Croatia Vessel Monitoring System

Functionality - layer projections

-special habitats



Croatia Vessel Monitoring System

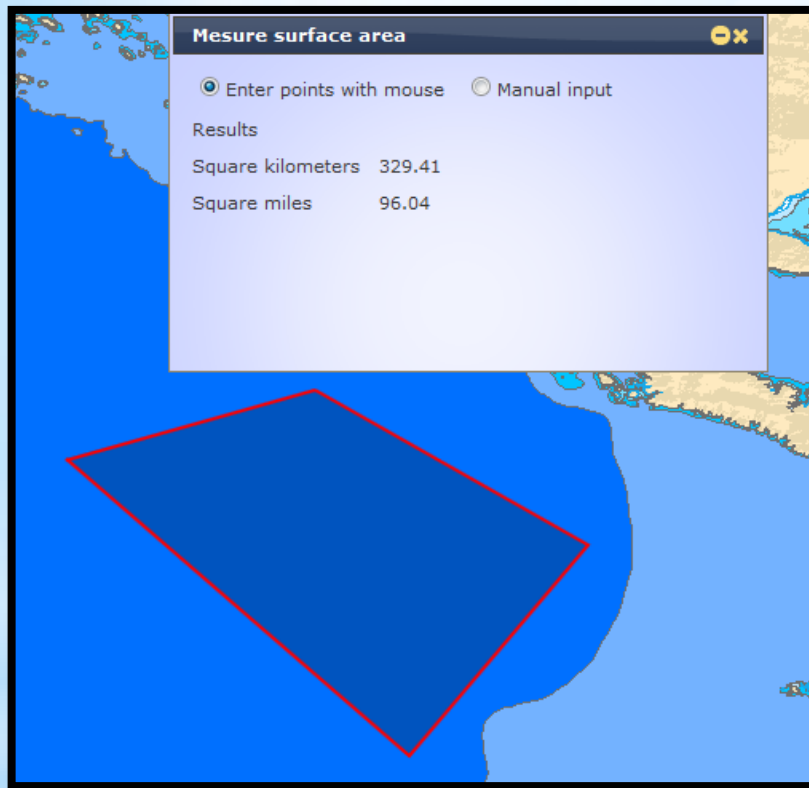
Functionality - layer projections

-national parks



Croatia Vessel Monitoring System

Functionality



- Map measurement
 - Measure surface area
 - Measure length

Map points

Latitude: ° ' " DMS Dec

Longitude: ° ' "

<input type="checkbox"/>	Latitude	Longitude	Show

- Manual input of coordinates

Croatia Vessel Monitoring System

Croatia VMS future goal:

- improve functionality with other systems such as:
 - a. E-logbook system -automatic input of SAT position (catch and landing place...)
 - transferring data in low or no GSM signal areas
 - b. AIS system
 - Efficiency improvement of conventional inspection at sea
 - Installing VMS devices on all fishing vessels over 12m of length overall and on all trawlers and purse seiners no matter the length
 - Connecting other measuring appliances (fuel consumption probes, depth and temperature probes, fishing tool activity reports...)



Hvala

Thank you

Josip Marković/Damir Grgić