





## Collecte Localisation Satellites (CLS)

Page 3



- **Created:** 1986 – Operator of the Argos System
- **Shareholders:** CNES (57%) and Ifremer (15%)
- **Locations:** Toulouse, France + 16 offices & subsidiaries worldwide
- **Staff:** 480 people worldwide
- **Turn-Over:** 85 M€ (2012)
- **Core activities:**
  - Commercial operation of satellite systems for positioning, data collection, ocean observation and radar surveillance
  - Developing added-value applications and services based on satellite remote-sensing data;
- **Sectors of activity:**
  - environmental surveillance,
  - sustainable management of marine resources,
  - maritime security,
  - oil and gas;



## Satellites data

Page 4

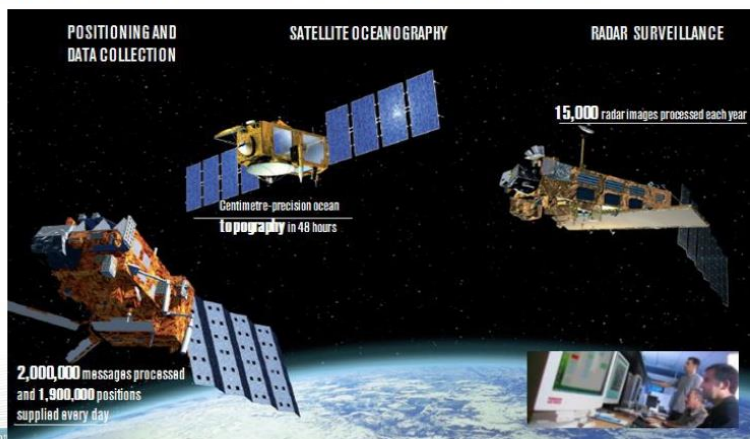


### 24/7 operations



Receiving, processing, validating, distributing and archiving data from approximately 80 instruments carried on almost 40 satellites

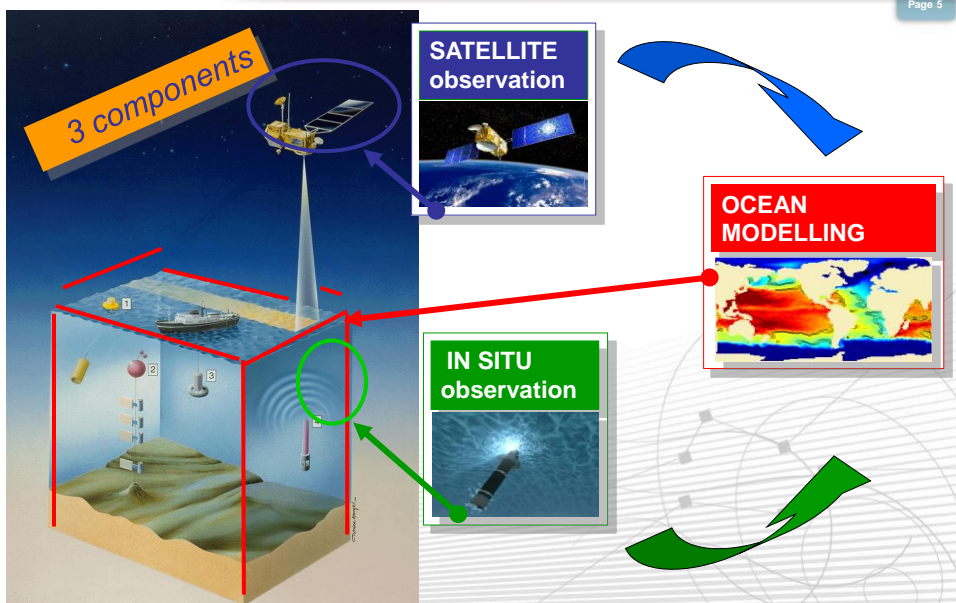
PAGE 6



<http://www.cls.fr>

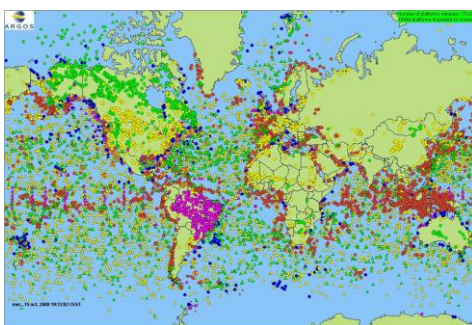
# Ocean Monitoring technologies

Page 5



## Satellite services: tracking for scientific purposes

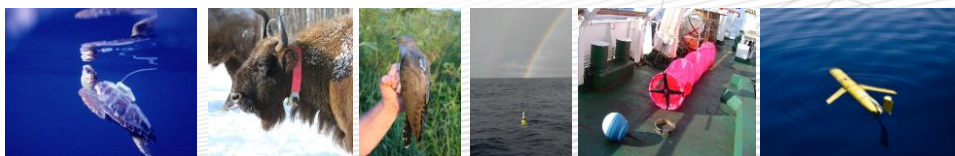
Page 16



**CLS Services:** equipment and expertise with which to implement ocean monitoring systems, deploy *in situ* data-acquisition networks, and process the data collected. Systems for fitting and tracking species by satellite (ARGOS/GPS, archival tags), processing the data collected.

**Objectives:** monitoring the oceans, studying the climate, protecting the great migratory species.

**Customers:** ARGOS, NMDIS-NMEFC, DBCP, JCOMMOPS, WWF, FAO, ICCAT,



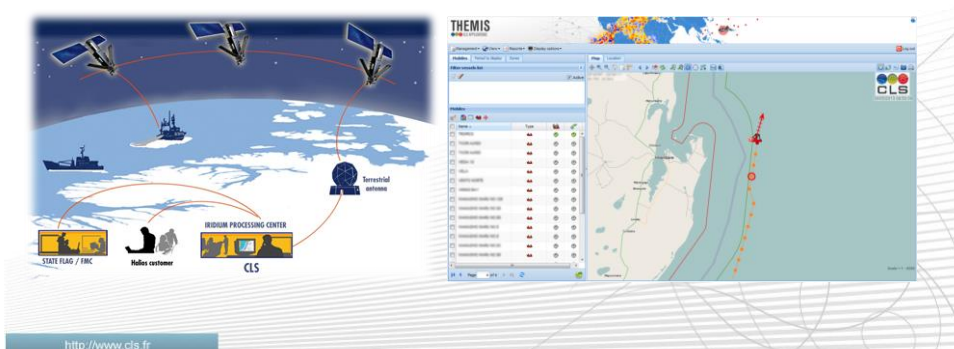




## VMS: Vessel Monitoring System

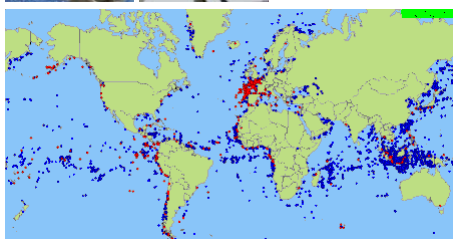
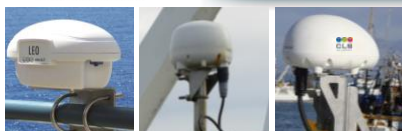
Most of the world countries have or will imposed their industrial fishing fleet to equip their vessels with a satellite transponder, which emits a GPS location with speed and heading at fixed interval.

Fisheries Monitoring Centres (FMC) receive, process and display this information so to monitor and control the fishing activity.



## Satellite services: Monitoring fishing activities (VMS and Fishing Logbook)

Page 18



**Services:** Location and electronic log books in compliance with national and international regulations.

**Objectives:** Monitoring legal fishing, quota surveillance, protecting stocks.

**Customers:** More than 6000 fishing vessels tracked at this moment

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## Various fleets equipped

Page 18


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## Various markets

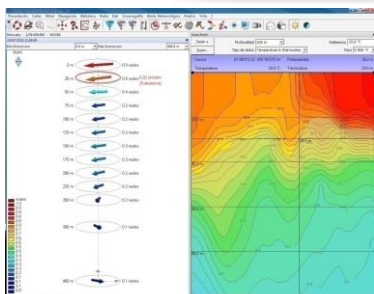
Page 18


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## Satellite services: supporting local fishing activities, preserving fish resources and economic development

Page 9


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### Service:

Provision of real time and very accurate ocean and weather data, directly on board.

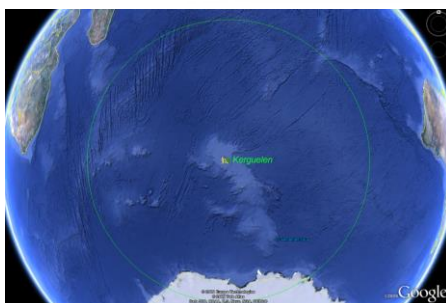
### Objective:

Improving safety for sea-borne operations,



## Satellite services: combating illegal fishing

Page 11


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**Services:** high-resolution satellite-based radar imagery..

**Objectives:**, reducing the cost of sea-borne monitoring operations.

**Success story:** Patagonian Toothfish (Chilean sea bass) saved.





## Satellite services: operating the Cospas/Sarsat alarm system for the French authorities

Page 19



INFORMATIONS DETRESSE AU : 29/05/2012 1015 UTC

1/ TYPE D'ACCIDENT/ MARITIME

2/ DATE ET HEURE DE DETECTION BALISE: 28/05/2012 à 1849 UTC  
DATE ET HEURE DE 1849 LOCALISATION BALISE: 28/05/2012 à 1852 UTC  
ROLE JOUE PAR COSPAS/SARSAT: PREMIERE ET SEULE ALERTE.

3/ LIEU DE L'ACCIDENT (LAT AND LONG): 49° 29' N 001° 05' W (Est Cotentin, St Marcouf)

4/ IDENTIFICATION: F/V TOIRETTE ; C/5 FP4784

5/ CIRCONSTANCES DE L'ACCIDENT: NAUFRAGE proche des côtes du cotentin.

6/ NOMBRE DE PERSONNES:  
- IMPLIQUEES : 2  
- RETROUVEES : 1  
- DISPARUES : 1  
- SECURISEES : -

7/ AUTRES INFORMATIONS UTILES: balise enregistrée en base de données.  
MRCC Coordonnateur: MRCC GRIS NEZ.

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**Services:** Since 1997, CLS has been responsible for issuing alerts on behalf of the Cospas-Sarsat French Mission Control Centre (FMCC).

**Objectives:** The State's mission to provide search and rescue services on land, sea and in the air.

**Customers:**  
The French Maritime Affairs Directorate (DAM).  
The French Civil Aviation Authority (DGAC).

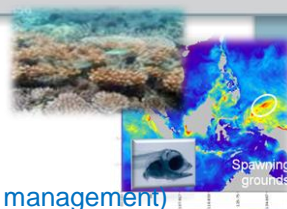


## Marine Protected Area's

« Marine Reserve »



**Areas for conservation**  
(strict nature reserve, wilderness high seas area, national park, habitat/species management)



Multi-usage Coastal areas



**Aimed for conservation with restrictions for access & usages,**  
(ie. managing interaction of people and nature over time)



Adaptive Managed Areas



**Space & Time for fish and fisherman**  
protecting marine population when shifting from marine reserves to maritime zoning, managing stocks, & optimising fisheries for sustainability


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**CLM COLLECTE LOCALISATION SATELLITES**

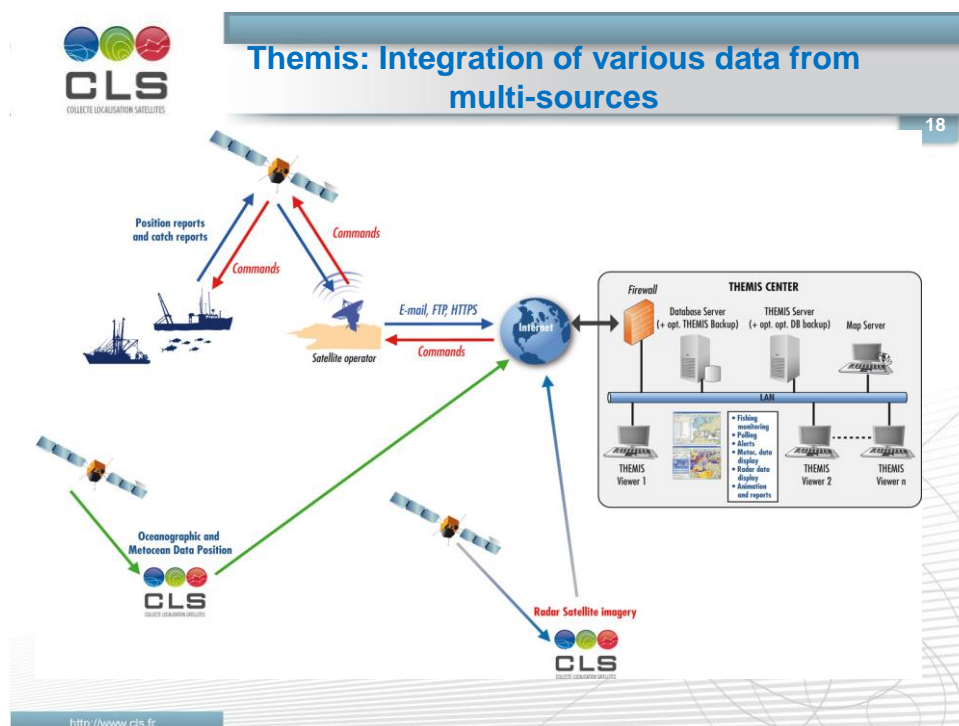
## THEMIS integrated platform

**Tracking: VMS + AIS**

**RADAR-SAT**

**OCEANOGRAPHY**

15/02/2012  
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## MOVIMAR – Small Scale Fisheries project

Page 20

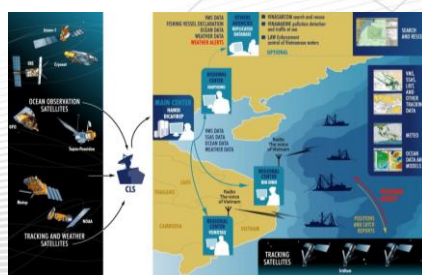


**Services:** Satellite-based fishery monitoring system and cyclone warnings,

**Objectives:** Improving the safety of Vietnamese fishing crews at sea and assisting with the sustainable management of marine resources.

**Customers:** Ministry of Agriculture and Sustainable Development.

3000 vessels carrying location and data collection transmitters.



## Solutions for Small scale fisheries


20

**Small scale fisheries equipment is definitely our next decade challenge**

**VMS regulations & recommendations give a legal frame to fleets over 12 m**

**But Small scale fisheries keep today out of legal scope**

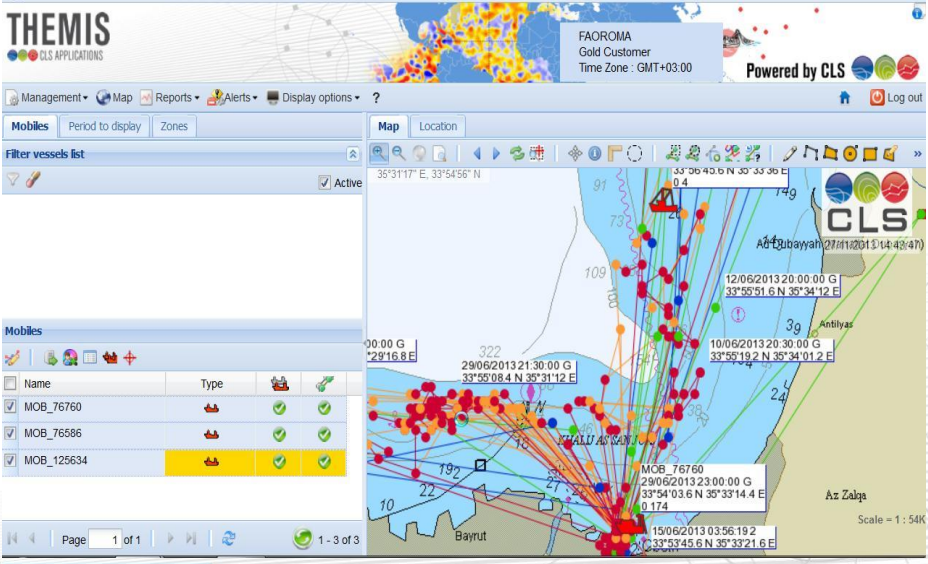
**Thanks to GFCM for allowing some trials in this environment**



CLS  
COLLECTE LOCALISATION SATELLITES

## GFCM Trial with Lebanon Fishing Authorities

21



**THEMIS**  
CLS APPLICATIONS

FAOROMA  
Gold Customer  
Time Zone : GMT+03:00

Powered by CLS

Management Map Reports Alerts Display options ?

Mobiles Period to display Zones

Filter vessels list


Active

Mobiles

Name	Type	Icon 1	Icon 2	Icon 3
MOB_76760				
MOB_76586				
MOB_125634				

Page 1 of 1 1 - 3 of 3

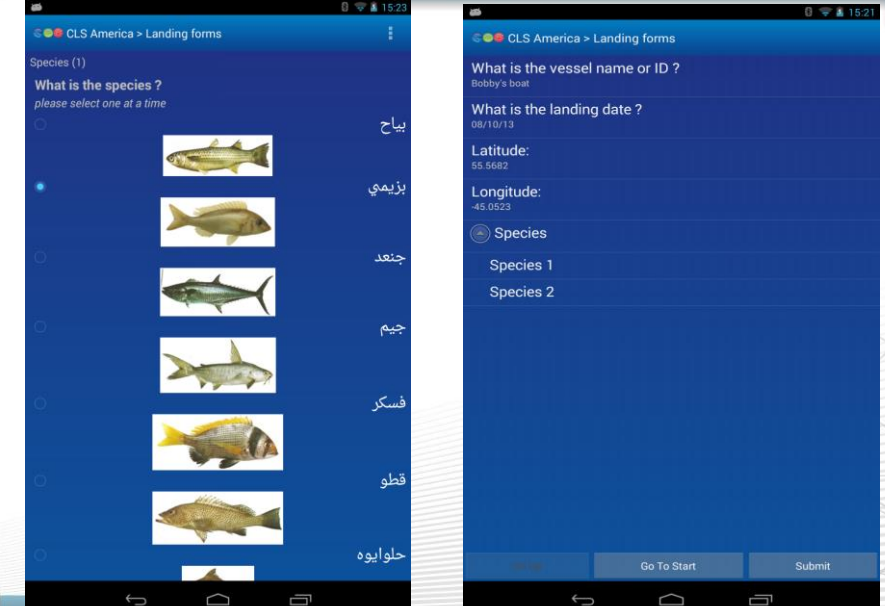
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CLS  
COLLECTE LOCALISATION SATELLITES

## Collecting catch data for small scale fisheries

22



CLS America > Landing forms

Species (1)

What is the species ?  
please select one at a time

☐ بياح  
☒ بزيمي  
☐ جند  
☐ جيم  
☐ فسكر  
☐ قطو  
☐ حلوايوه

CLS America > Landing forms

What is the vessel name or ID ?  
Bobby's boat

What is the landing date ?  
08/10/13

Latitude:  
55.5682

Longitude:  
-45.0523

Species

Species 1

Species 2

Go To Start Submit





## CLS aside GFCM

23

**CLS is keen to participate actively in this major challenge, with Small Scale Fisheries actors, in: *(no limitative)***

- Data collecting platform
- Trial periods
- Consultancy
- Types of Terminal

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## Thank you for your attention

**Any question or note will be very welcome at:**

**[pgirard@cls.fr](mailto:pgirard@cls.fr)**

**In case of emergency...or not...feel free to call,**



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