iMarine Data Services
SDG 14.4

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Session: **8 - 11:35**
Day of presentation: **8 12 2016**

In 1533, a **narwhal tusk cost** almost 6 times as much as **Michelangelo** was paid to paint the ceiling of the **Sistine Chapel**

SDG 14.4 target	**By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics**
14.4.1	**Proportion of fish stocks within biologically sustainable levels**
14.2	**By 2020, sustainably manage and protect marine and coastal ecosystems**
14.5	**By 2020, conserve at least 10 per cent of coastal and marine areas**
14.a	**Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries**
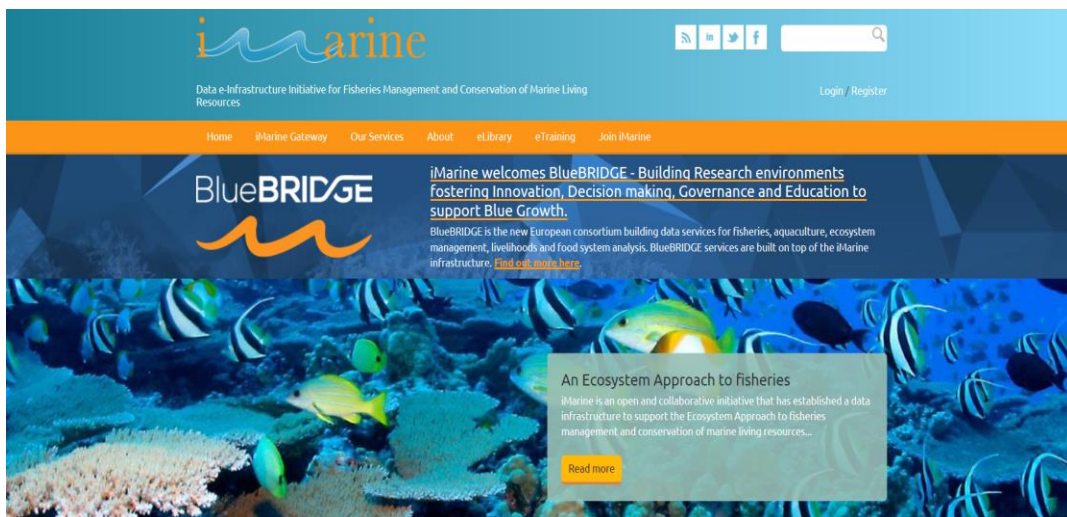
iMarine: e-Infrastructure

BlueBRIDGE: Data services
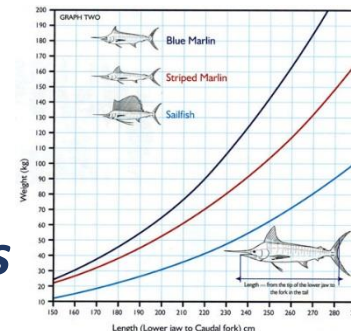
iMarine services – Virtual labs and communities

- **Global Record of Stocks and Fisheries, (SDG 14.4.1)**

  - Show status and trend of regional and global stocks and fisheries

  - Responsible consumer practices by supporting certification (14.b)

- **Regional Databases (SDG 14.4.1)**

  - Support Stock Assessment; data collation, harmonization and Analysis (CMSY, SS3,VPA,…)

  - But also mobile data collection, portals, map display

  - For example (test) http://vps282167.ovh.net/ocpudev/cmsy_reports/

- **Aquaculture detection (SDG 14.4 & 14.2)**

  - Semi-automated identification from satellite imagery

  - Combined with a vegetation classification (mangrove, padi, fishpond)

- **Assessment of Marine Areas; LME, MPA, EEZ (SDG 14.a)**

  - Data access services for fisheries, biodiversity, habitats

  - Analysis services; plot, review and compare maps, compute intersections
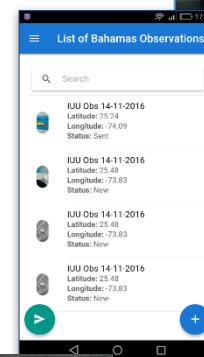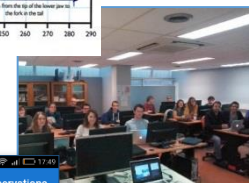
Global Record of Stocks and Fisheries (GRSF) (SDG 14.4.1)

With the objectives to

- **Show the status and trend** of regional and global stocks and fisheries
- **Support responsible consumer practices** by supporting certification

- Combine the knowledge of 3 organizations (FAO-FiRMS, RAM, and SFP) in a dynamic on-line knowledge base

- Create a platform (VRE) to match and merge core information related to stocks, but also ancillary information such as socio-economic context

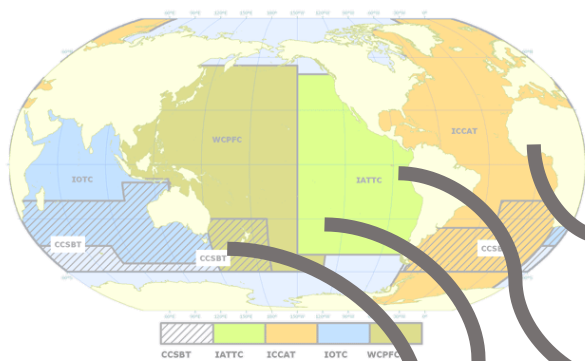- Develop a collaboration to create a rich information platform for stock and fisheries related information

Global Tuna Atlas SDG14.4.1
An iMarine data-flow; from fishnet to internet

Collate global public tRFMO data   **Integrate and harmonize**   **Publish locally and in 'your' website**
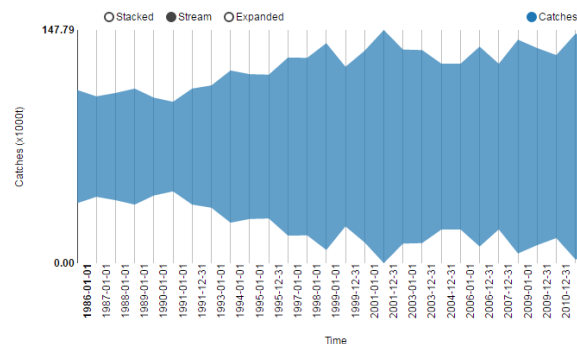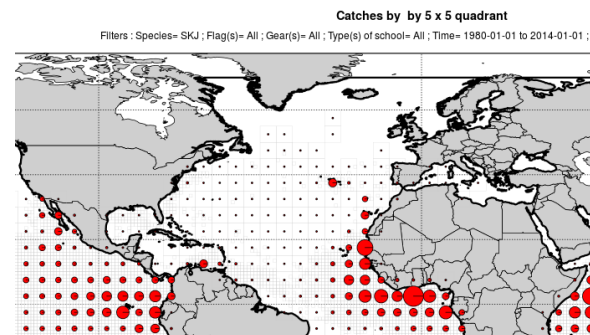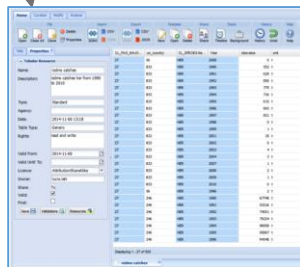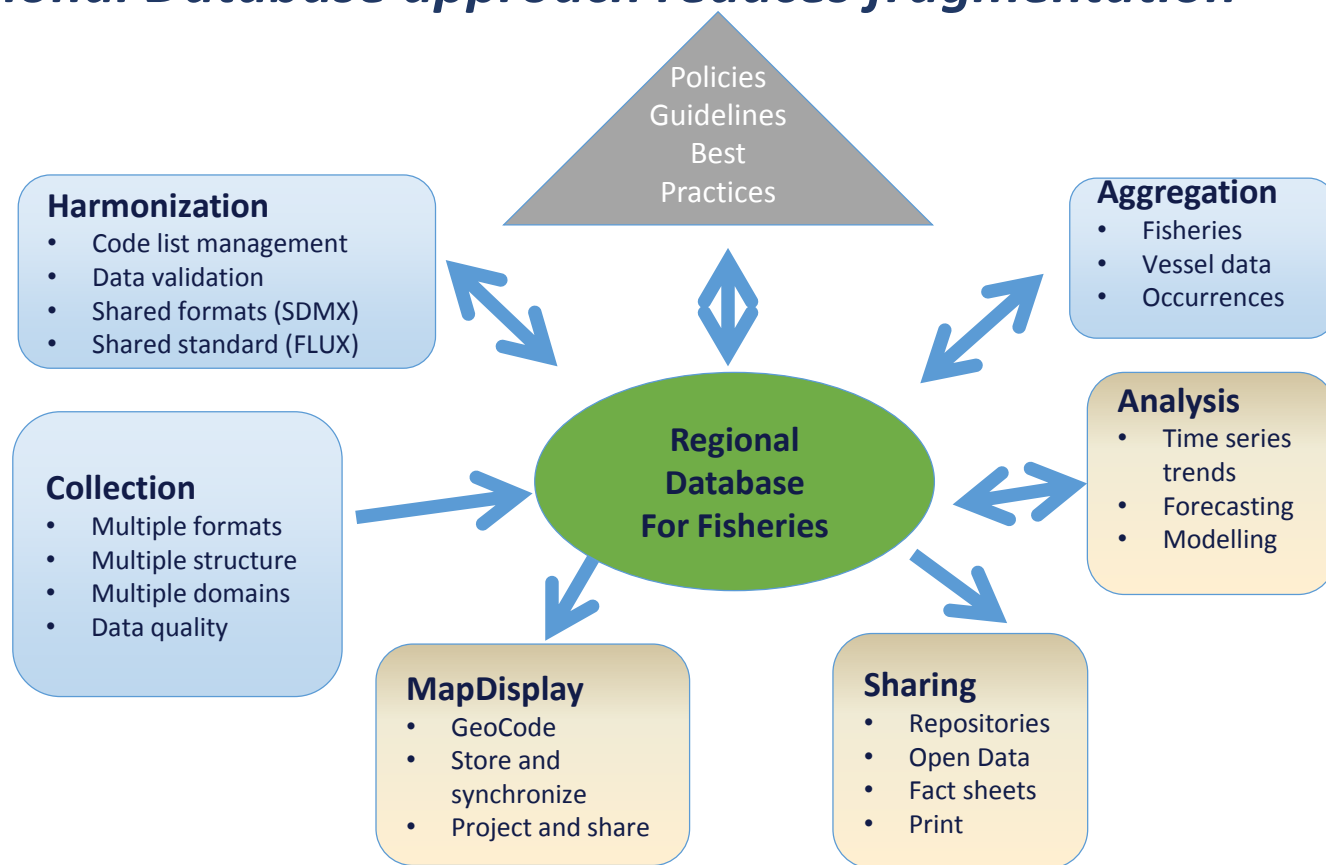
From sites to sharing /BlueBridge/Tuna_Atlas/

The iMarine Regional Database approach reduces fragmentation

Policies
Guidelines
Best
Practices

Harmonization
- Code list management
- Data validation
- Shared formats (SDMX)
- Shared standard (FLUX)

Aggregation
- Fisheries
- Vessel data
- Occurrences

Analysis
- Time series trends
- Forecasting
- Modelling

- Not for a specific region

- But a generic DB

- With local data

- And global services

Collection
- Multiple formats
- Multiple structure
- Multiple domains
- Data quality

Regional Database For Fisheries

MapDisplay
- GeoCode
- Store and synchronize
- Project and share

Sharing
- Repositories
- Open Data
- Fact sheets
- Print

WECAFC-FIRMS Regional Database
In support to Stock Assessment and Regional Fishery Management Plans (SDG14.4.1)
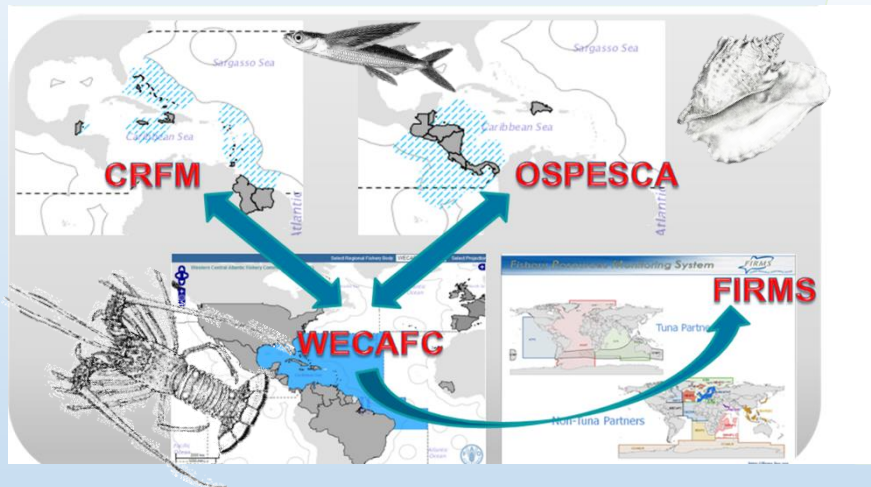
iMarine and BlueBRIDGE enable:
- *WECAFC RDB Capacity development*
- *Services for stock assessment*

FIRMS dissemination
- *State of stocks to CLME+ DSS on*
- *State of Marine Environment*

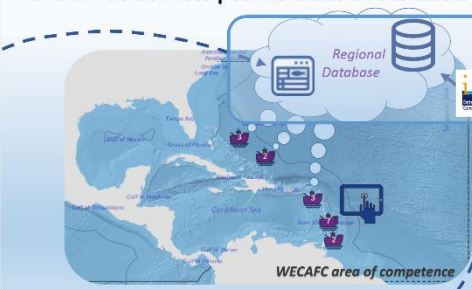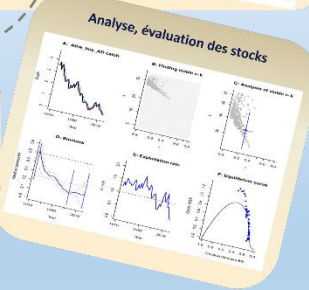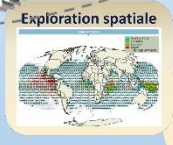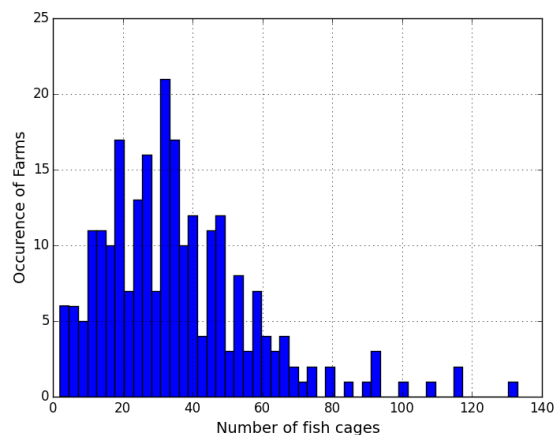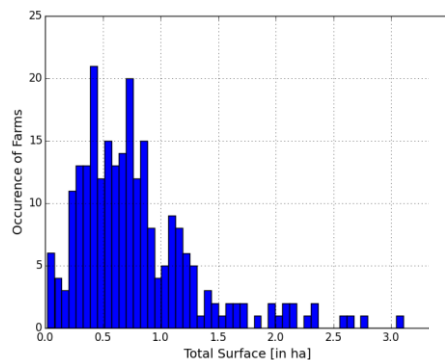# The iMarine platform for Aquaculture Inventories

(SDG 14.2 & SDG 14.5)
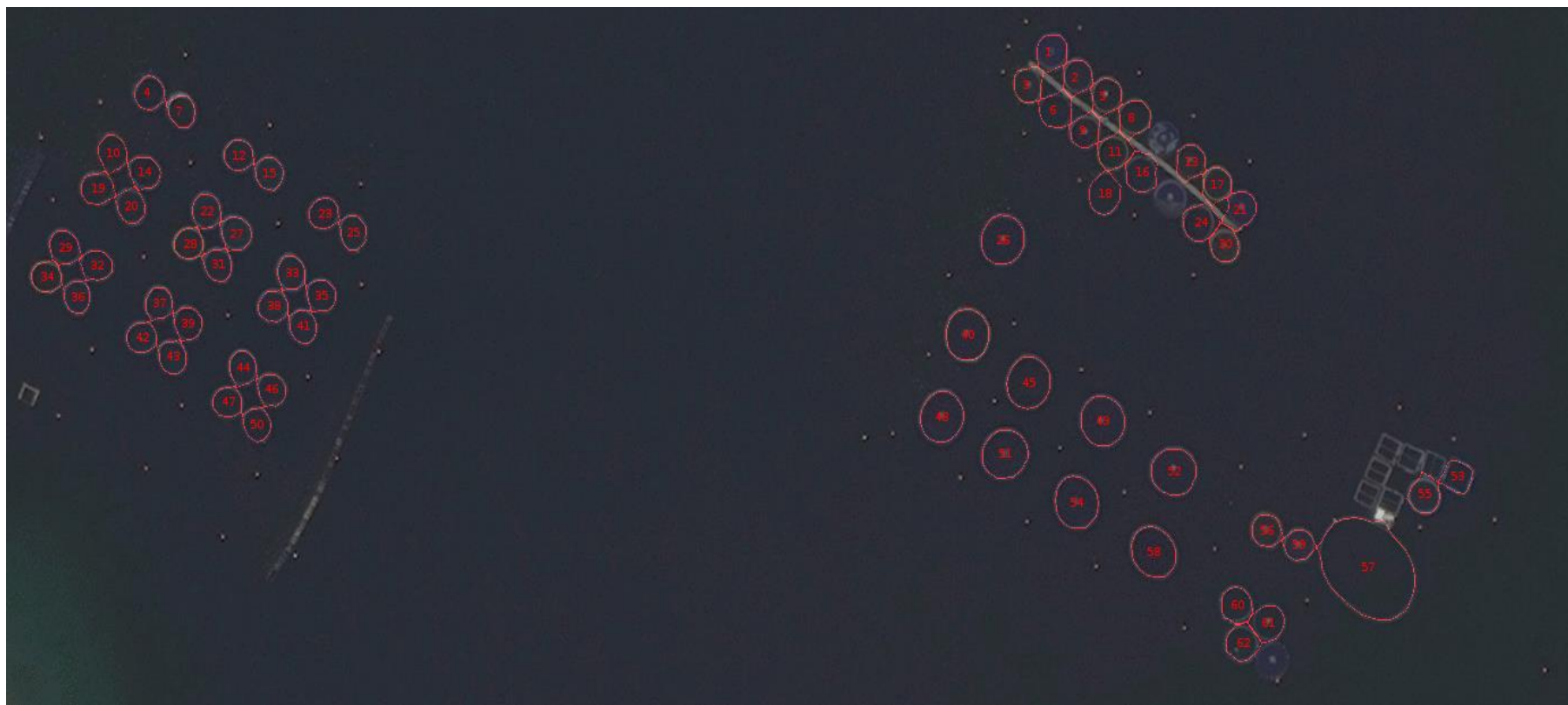
The iMarine platform for Aquaculture Inventories

semi-automated identification based on satellite imagery (with CLS)

- Detect aquaculture structures
- Using free optical image analysis
- To facilitate environmental monitoring
- And spatial planning

iMarine - to support marine spatial planning (SDG 14.a)

- Analyze the features of a marine managed area (e.g. LME, MPA, EEZ) using standard and relevant environmental and human use data layers stored in BlueBRIDGE or as WMS (Biophysical, Environmental, Species occurrence)

- Create a platform (VRE) to produce easily accessible regional maps and information products

- Develop a baseline set of indicators against Aichi target 11
    "**By 2020** […] **10 per cent** of coastal and marine areas, **especially areas of particular importance for biodiversity and ecosystem services**, are protected […]"

Assessment of Marine Areas (LME's, MPA's, EEZ) SDG's 14.2 & 5

Combine data on fisheries, biodiversity, habitats (with GRID Arendal, CLS)

Compute something; e.g. coverage of habitats in MPA's

The iMarine platform for geospatial and time aware fact-sheets

- **Fact Sheet 'Geo'Editor**

  - Collaborative fact sheets

  - Spatial boundaries editing

  - User management

  - Review features

  - Time aware

  - Drop a portlet in 'your' site
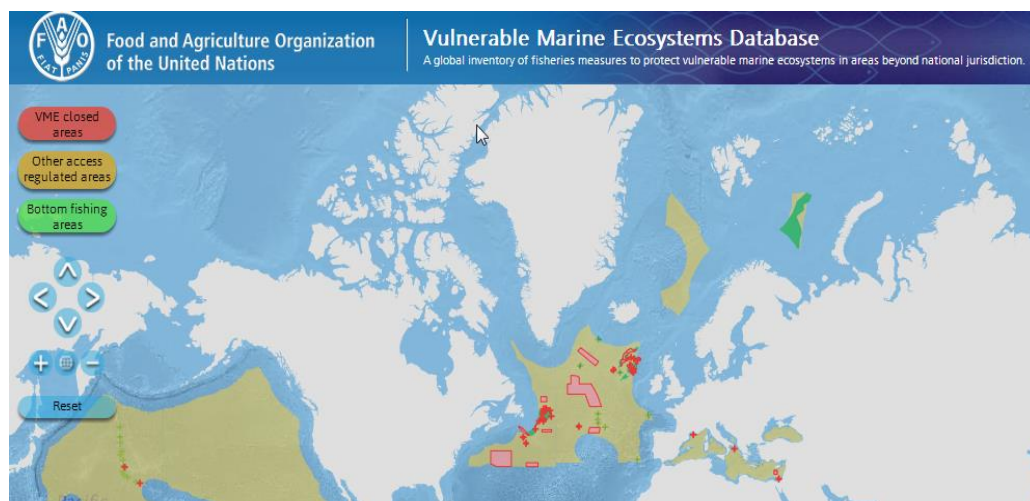
- FAO infrastructure hosts the VME-DB website and ALL Private data

Links

VME-DB

Example report

See a VRE? info@bluebridge-vres.eu

Want access to VREs? i-marine.d4science.org

More information on BlueBRIDGE? www.bluebridge-vres.eu

If want to join us at future events? www.bluebridge-vres.eu/events

Real time updates from BlueBRIDGE? www.twitter.com/bluebridgevres

See you in Brussels ??