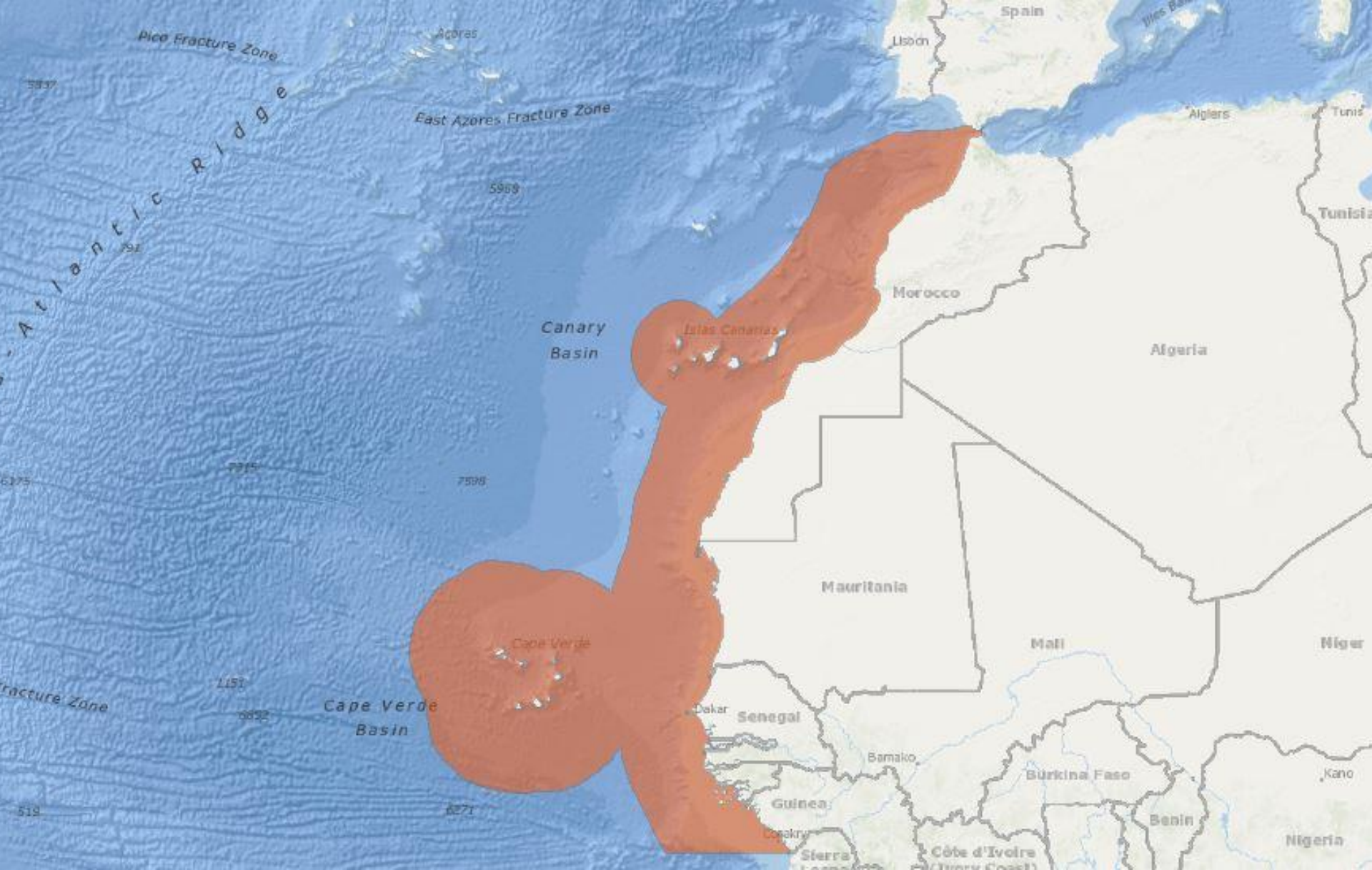


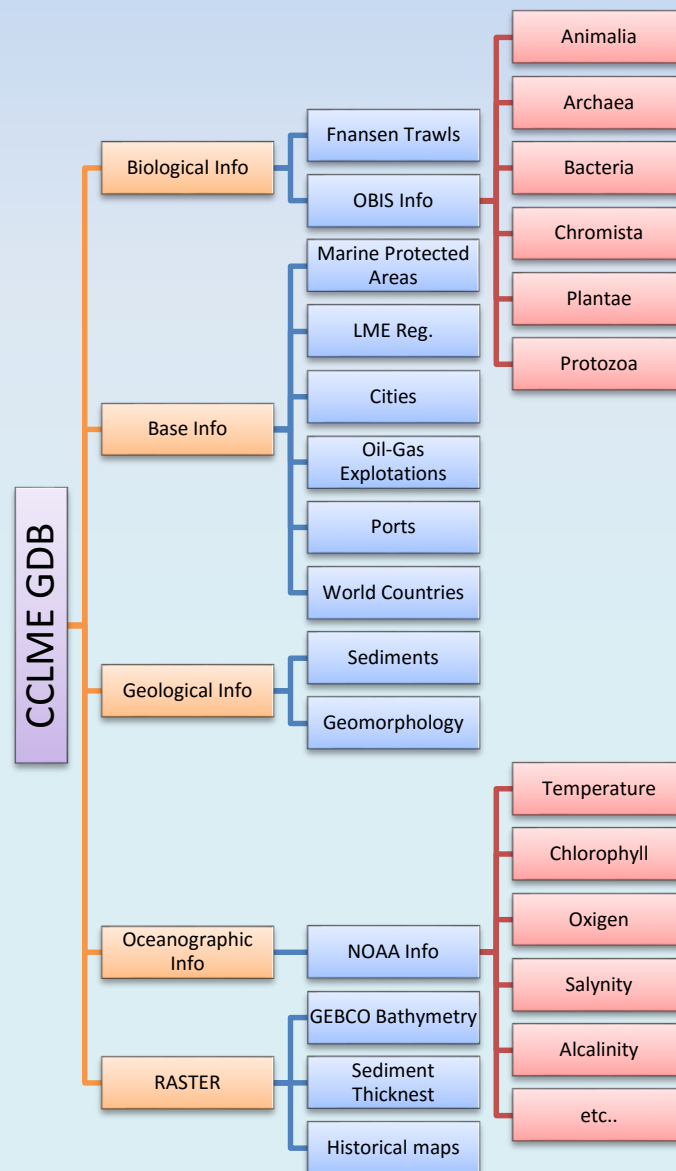


Presentation of the Prototype of the CCLME Eco-GIS Viewer and prospects of needs for applications

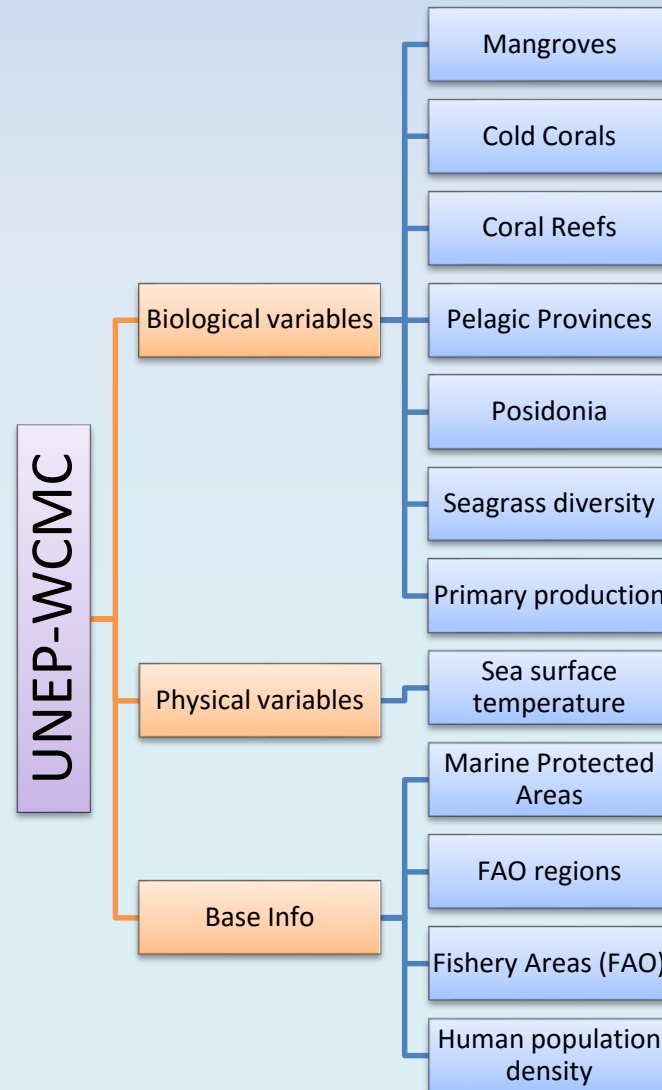
IOC-UNESCO
Luis Miguel Agudo



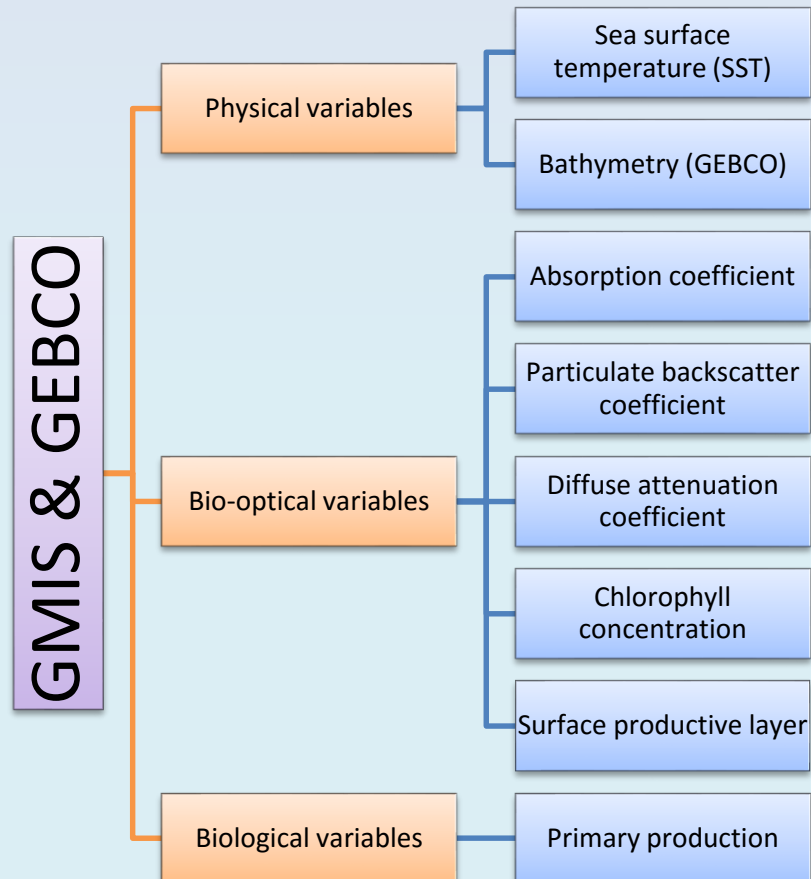
CCLME REGION – CANARY CURRENT LARGE MARINE ECOSYSTEM



GEODATABASE – ARCHITECTURE



WMS - WFS CONNECTIONS



WMS - WFS CONNECTIONS

- **Historical Campaigns IEO from 1980**
 - More than 40 Oceanographic Campaigns
 - Rescue and recovery of 17 IEO fisheries surveys
- **SIRENO DataBase**
 - RDBMS: ORACLE
 - Trawls information
 - Information about species data samples
 - Oceanographic campaigns information
 - Water Column Information (Radials, CTD, etc)

GEODATABASE – Historical Oceanographic Campaigns IEO

- **ABUNDANCE**
- **BIOMASS**
- **RICHNESS**
- **TROFIC INDEX**

- Deliver a product that can be integrated in regular national, regional and global regular **assessments** of the **status, trends and key drivers** of **marine and coastal ecosystems**
- Expected result:
Deliver a dynamic GIS tool to **explore, analyse and compare data** with the aim to produce new scientific knowledge

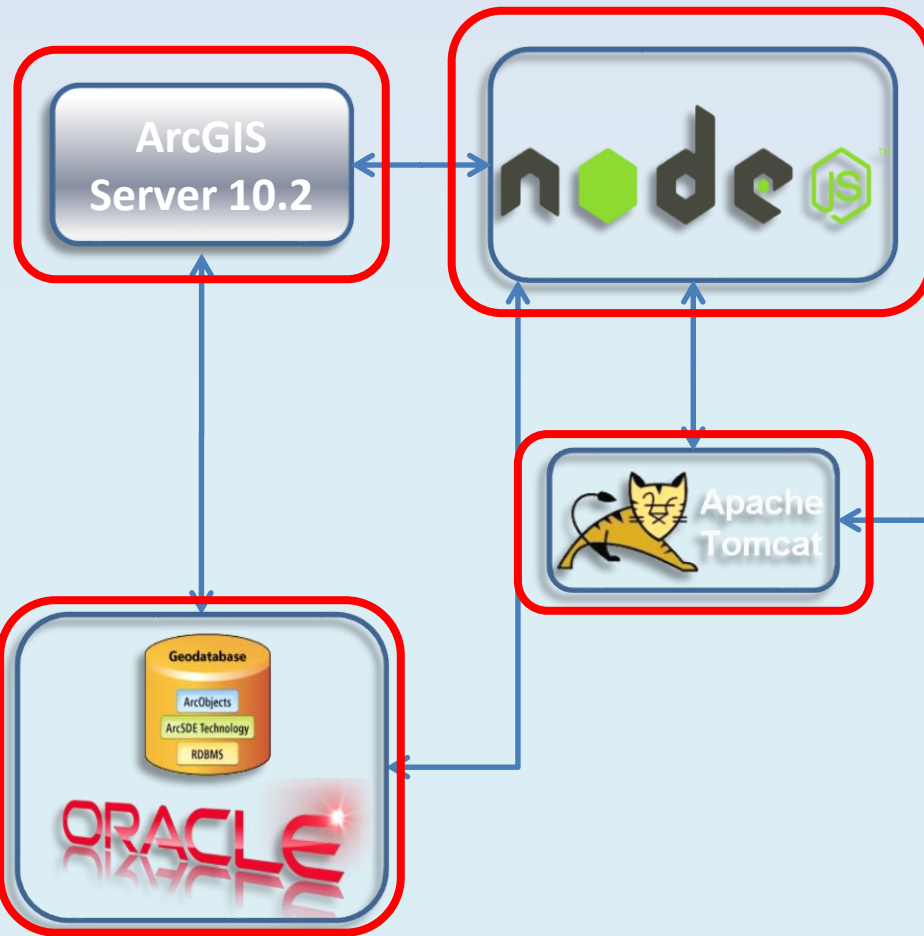
EXPECTED RESULT



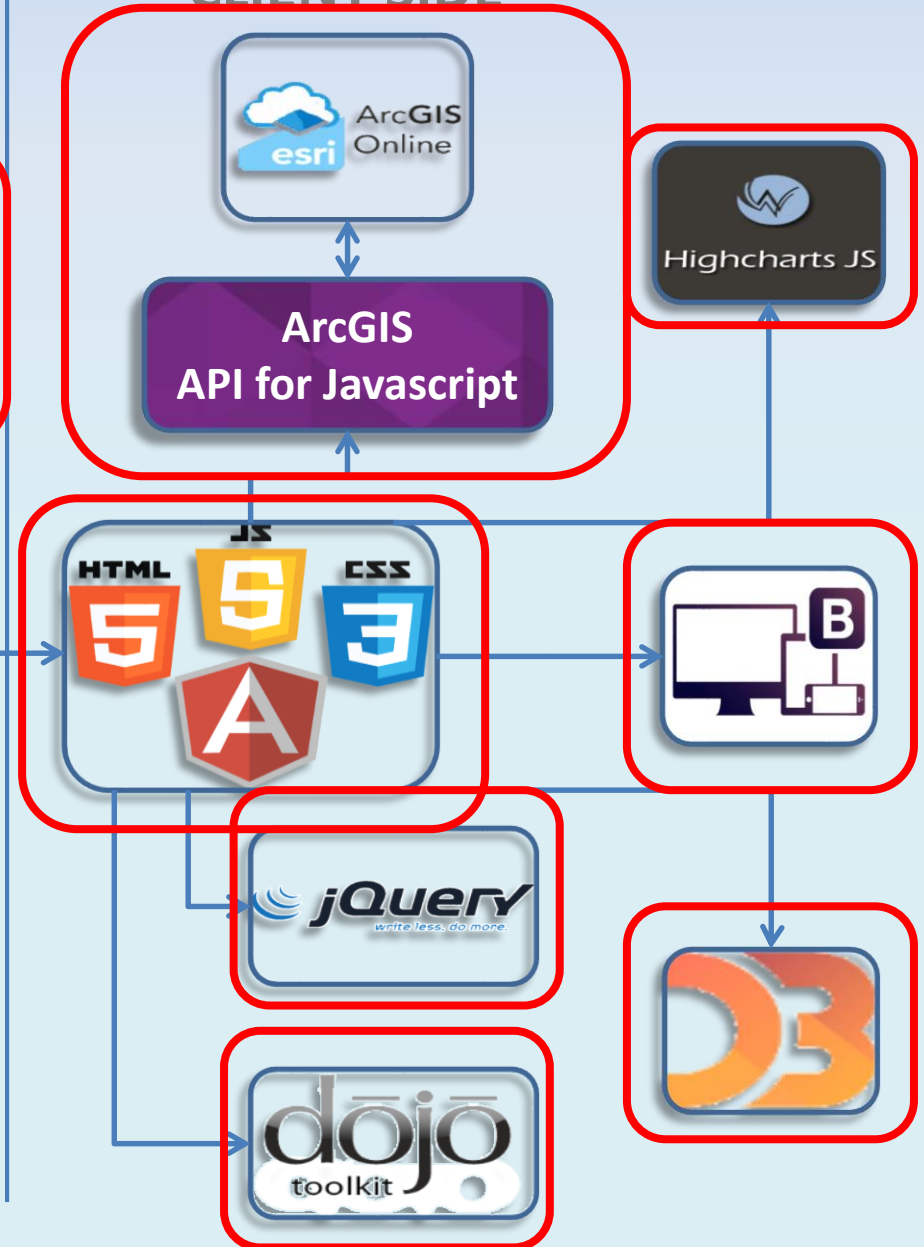


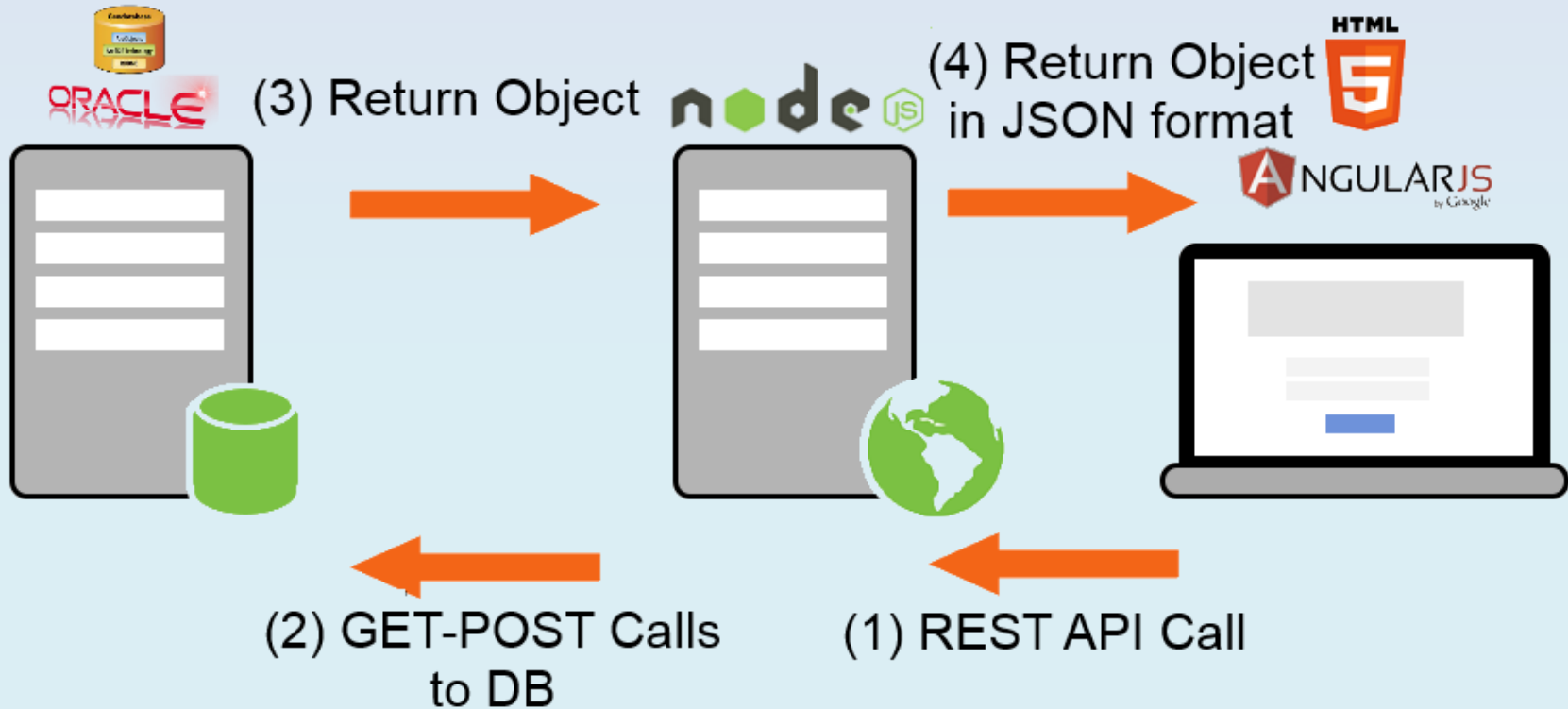
How

SERVER SIDE



CLIENT SIDE





NODE & ANGULAR – Model View Controller (MVC)



CSS



CCLME DATA ANALYTIC VIEWER

Home

The Project

Dropdown ▾

Query

About

Contact

Legend

Print Map



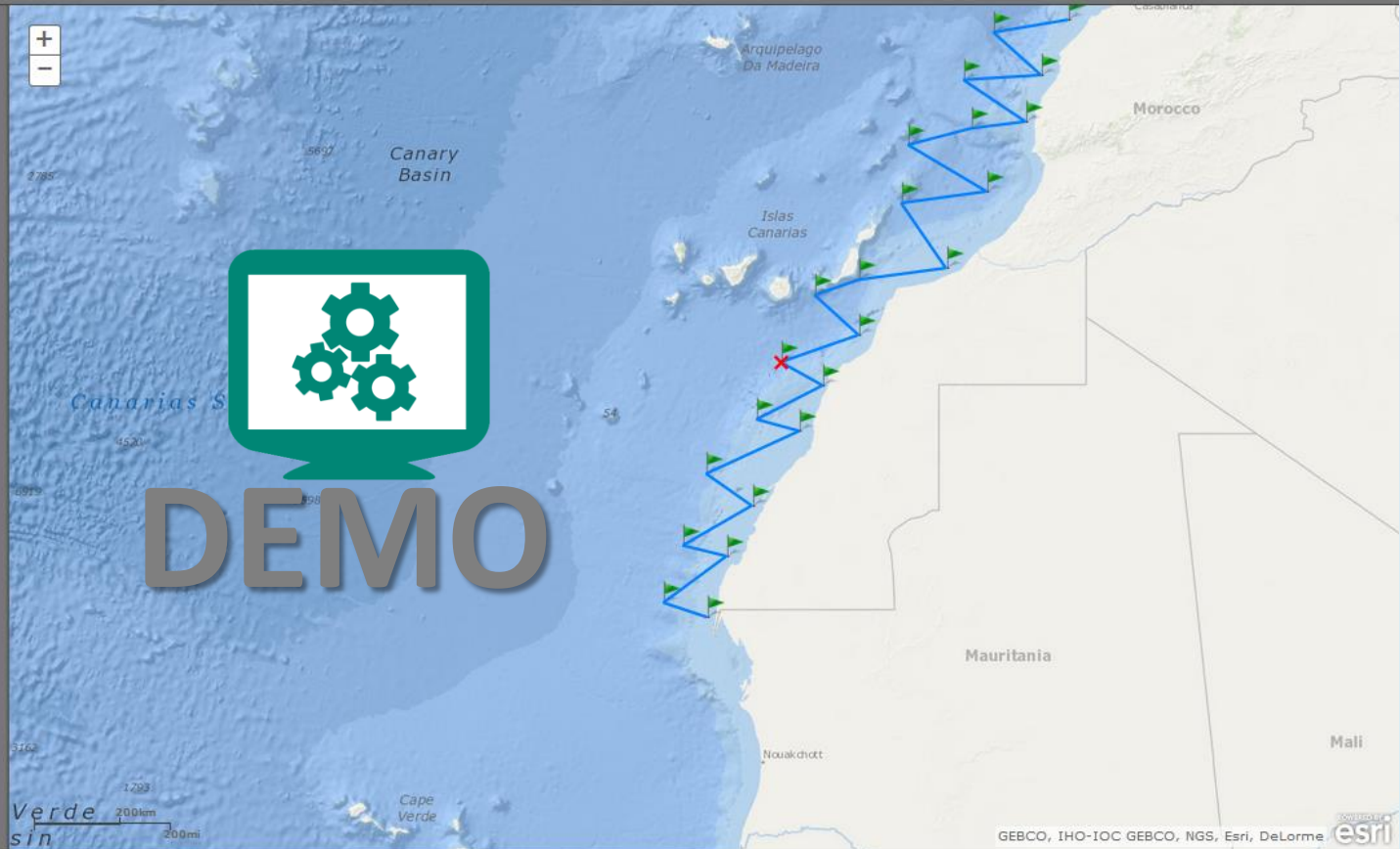
DEMO

WEB APP –

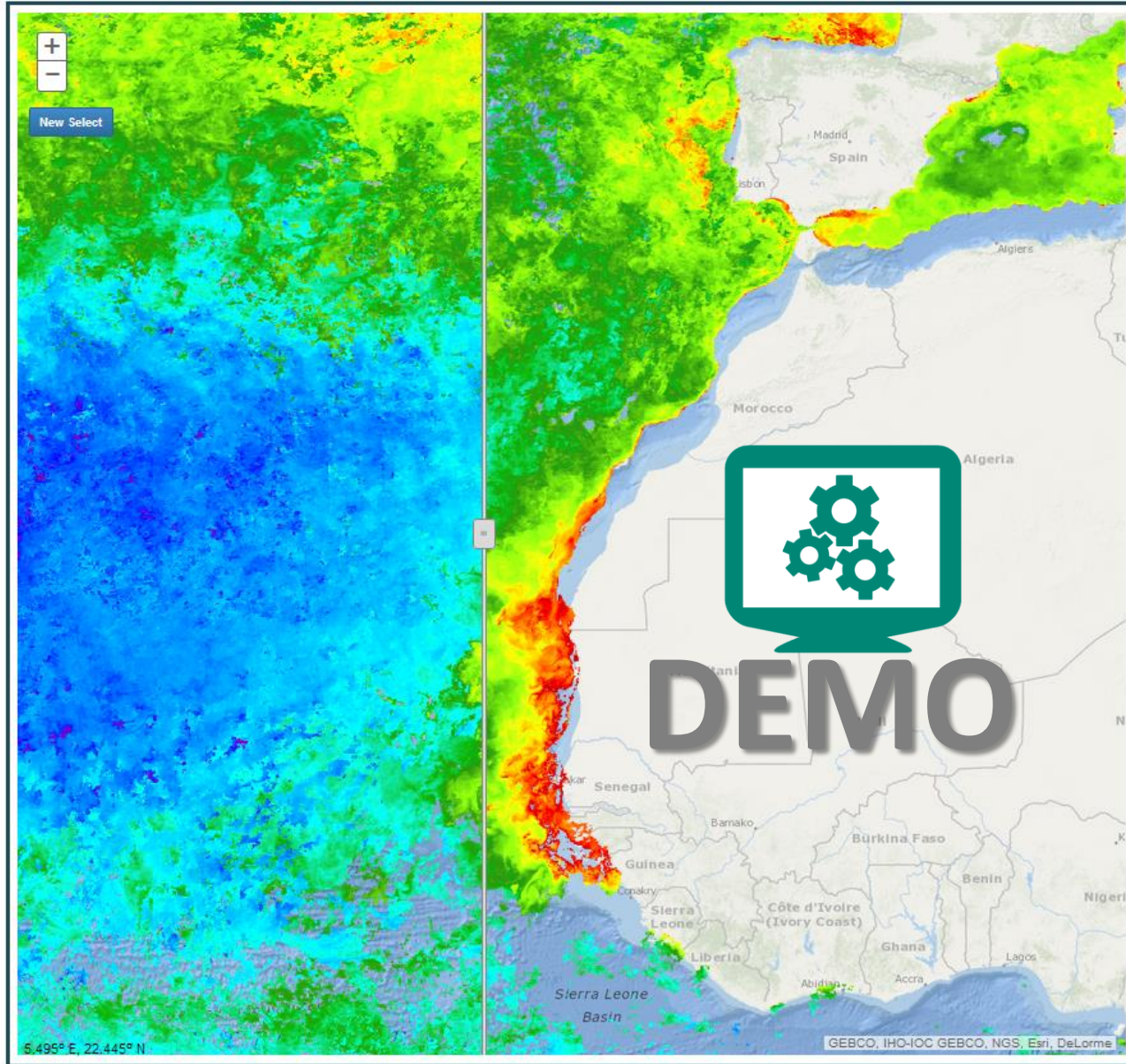


CCLME Profile Tool:

Dibuja con el botón izquierdo una línea. Doble click para finalizar

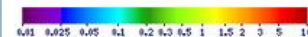


WEB APP – Elevation Profile Tool



Legend

Chlorophyll Concentration MODIS-A



Units: mg.m^{-3}

Left Layer:

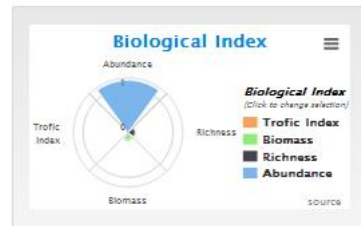
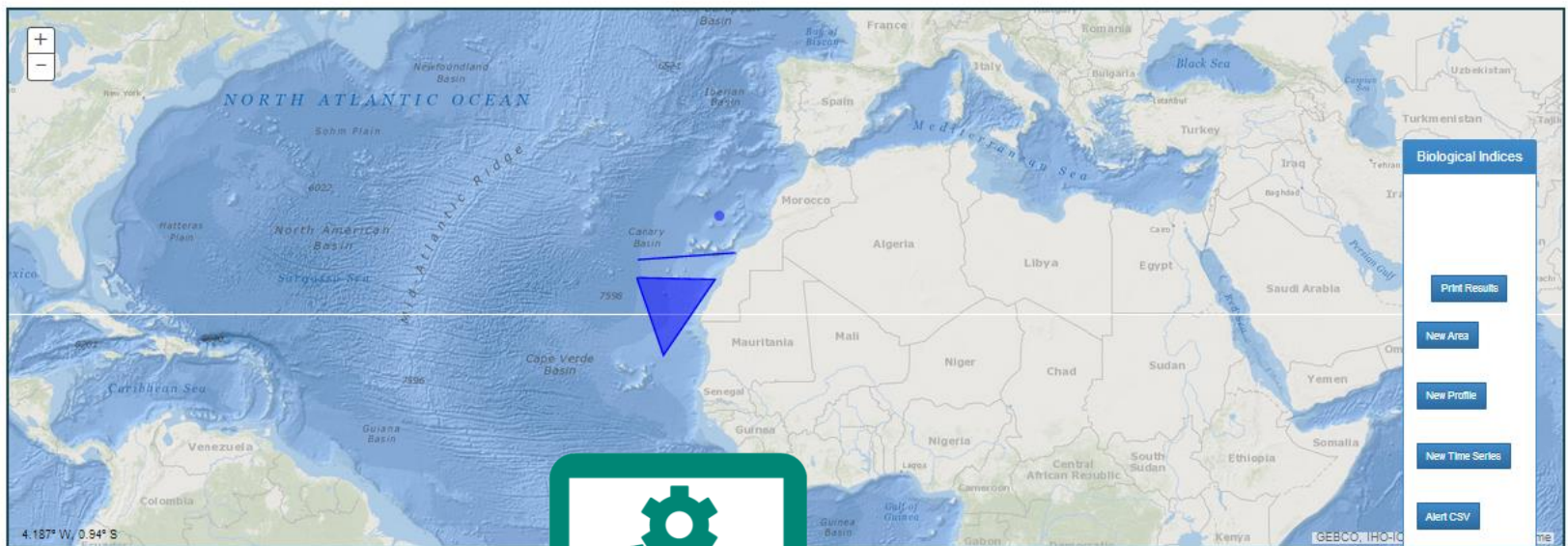
Month: 05 Year: 2011

Right Layer:

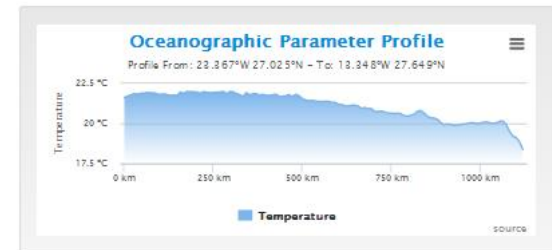
Month: 03 Year: 2005

Metadata

WEB APP – Comparative Tool



DEMO



WEB APP – Charts & Profiles Tool



Next Step

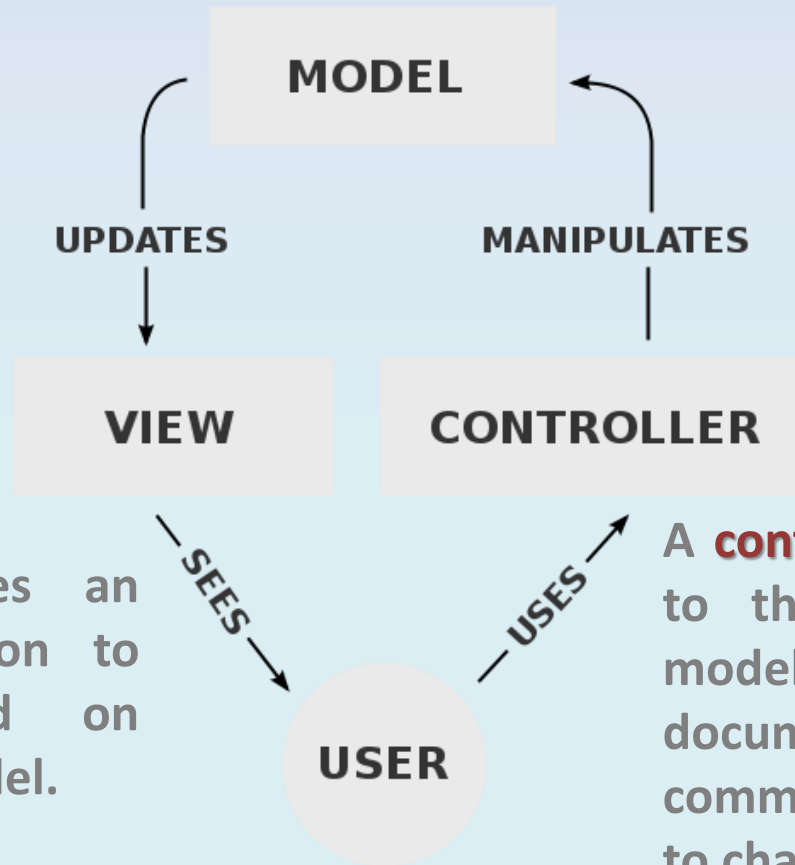
Model-view-controller (MVC) is a software architectural pattern for implementing user interfaces. It divides a given software application into three interconnected parts, so as to separate internal representations of information from the ways that information is presented to or accepted from the user

<https://github.com/lvasquez/sb-admin-2-bootstrap-template-asp-mvc>



ASP.NET MVC5

A **model** stores data that is retrieved according to commands from the controller and displayed in the view.



A **view** generates an output presentation to the user based on changes in the model.

A **controller** can send commands to the model to update the model's state (e.g., editing a document). It can also send commands to its associated view to change the view's presentation of the model.

ASP.NET MVC5

Security - Management Users/Groups/Roles

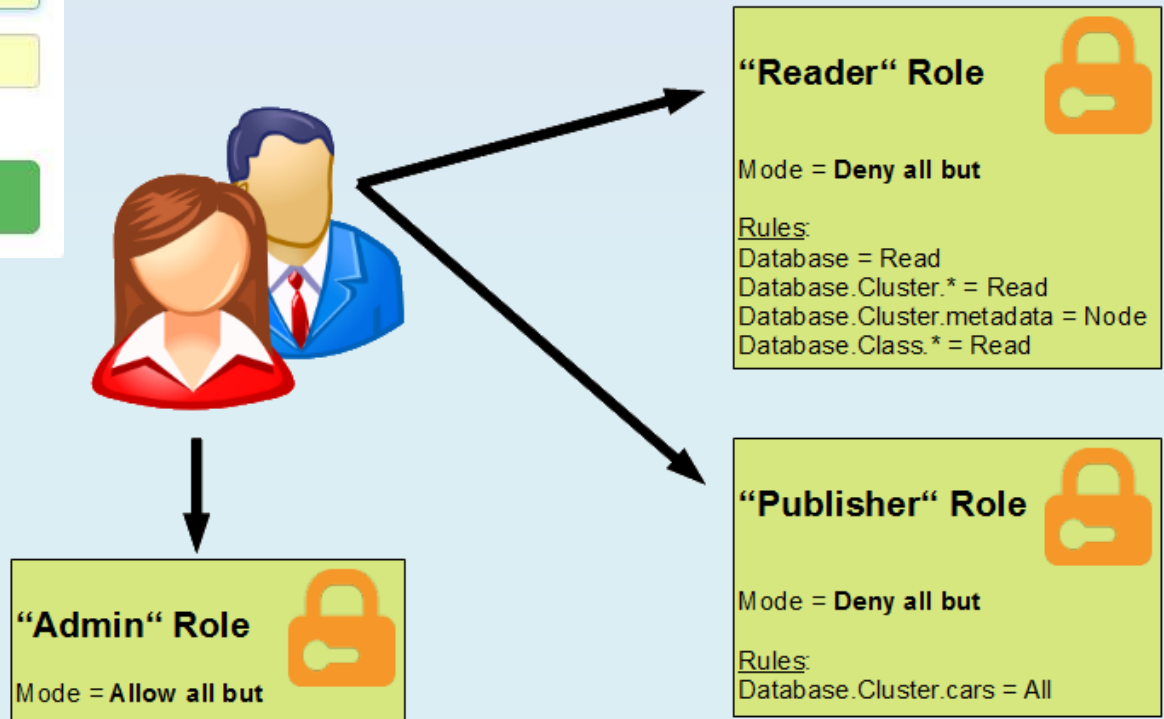
Please Sign In

admin1@2carto.com

.....

☐ Remember Me

Login



For more information, visit: <http://www.orientdb.org/es/1.0/>

NEXT STEPS – Security/Users/Groups/Roles

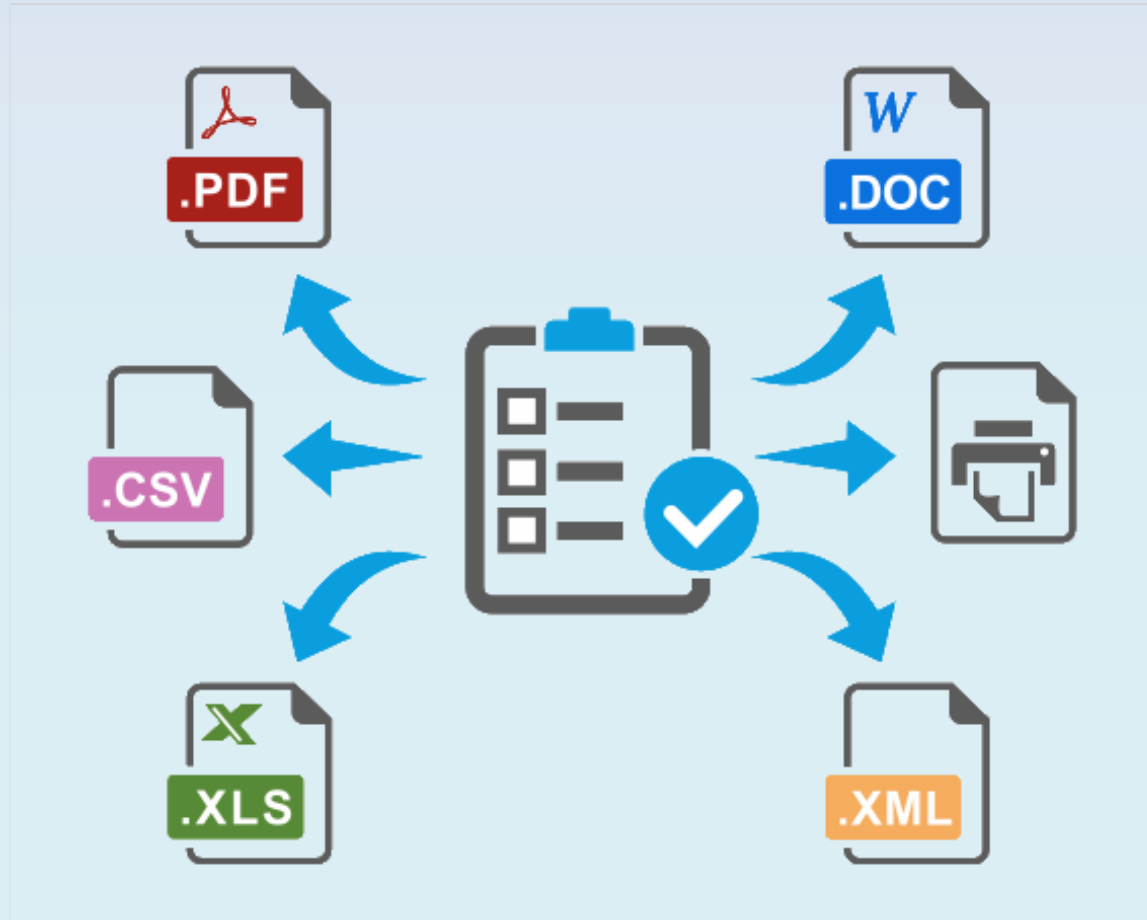
- Calculation of spatial and temporal anomalies → Chl-a, SST?
- Display of regional maps showing different oceanographic parameters (one single parameter, two parameters and anomalies) → Chl-a, SST
- Calculation and/or interpolation of time series of oceanographic data
- Statistical analysis of oceanographic data for an area selected by the user → Trends?
- Calculation of biological indicators in the areas selected by the users according to their needs → Fisheries?

NEXT STEPS – Analyst Tools

- Calculation of spatial and temporal anomalies → Chl-a, SST?
- Display of regional maps showing different oceanographic parameters (one single parameter, two parameters and anomalies) → Chl-a, SST
- Calculation and/or interpolation of time series of oceanographic data
- Statistical analysis of oceanographic data for an area selected by the user → Trends?
- Calculation of biological indicators in the areas selected by the users according to their needs → Fisheries?

NEXT STEPS – Analyst Tools

EXPORT REPORTS



NEXT STEPS – Export Reports

- Migrate to **IEO Servers**
- **Upload historical campaigns** to SIRENO
- Encourage to the Countries in order to enrich the geodatabase with **New Data**
- Export final **Reports**
- New Analysis **Tools** (Geostatistical, New Trends Analysis, Graphs, ...)



NEXT STEPS

```

#CLIENT:
<!DOCTYPE html>
<html>
  <head>
    <title>Leaflet.js Socket.io</title>
    <link rel="stylesheet" href="http://cdn.leafletjs.com/leaflet-0.7.2/leaflet.css" />
    <style>
      html, body, #map {padding: 0; margin: 0; height: 100%;}
    </style>
  </head>
  <body>
    <script src="http://cdn.leafletjs.com/leaflet-0.7.2/leaflet.js"></script>
    <script src="/socket.io/socket.io.js"></script>
    <div id="message"></div>
    <div id="map"></div>

    <script>
      var socket = io.connect('http://DomainName:3000');
      socket.on('connect', function() {
        alert("Connected to WebSocket Server");
      });

      socket.on('pong', function(msg) {
        //document.getElementById("message").innerHTML=msg;
        L.marker([msg.x,msg.y]).addTo(map).bindPopup(""+msg.x+"",""+msg.y+"").openPopup();
      });

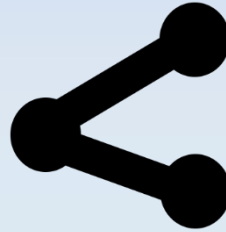
      var map = L.map('map', {
        center: [35.10418, -106.62987],
        zoom: 9
      });

      L.tileLayer('http://{s}.tile.osm.org/{z}/{x}/{y}.png').addTo(map);

      map.on("click", function(){
        socket.emit('ping', {msg: 'Hello'});
      });

    </script>
  </body>
</html>

```



github
SOCIAL CODING

<https://github.com/Imagudo/IOC-UNESCO> WORKSHOP



NEXT STEPS – Share Code



United Nations
Educational, Scientific and
Cultural Organization



Intergovernmental
Oceanographic
Commission



Luis Miguel Agudo
Imagudo@gmail.com



<http://2carto.com/>



es.linkedin.com/pub/luis-miguel-agudo-bravo/7b/630/8b2/