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española



United Nations
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Intergovernmental
Oceanographic
Commission



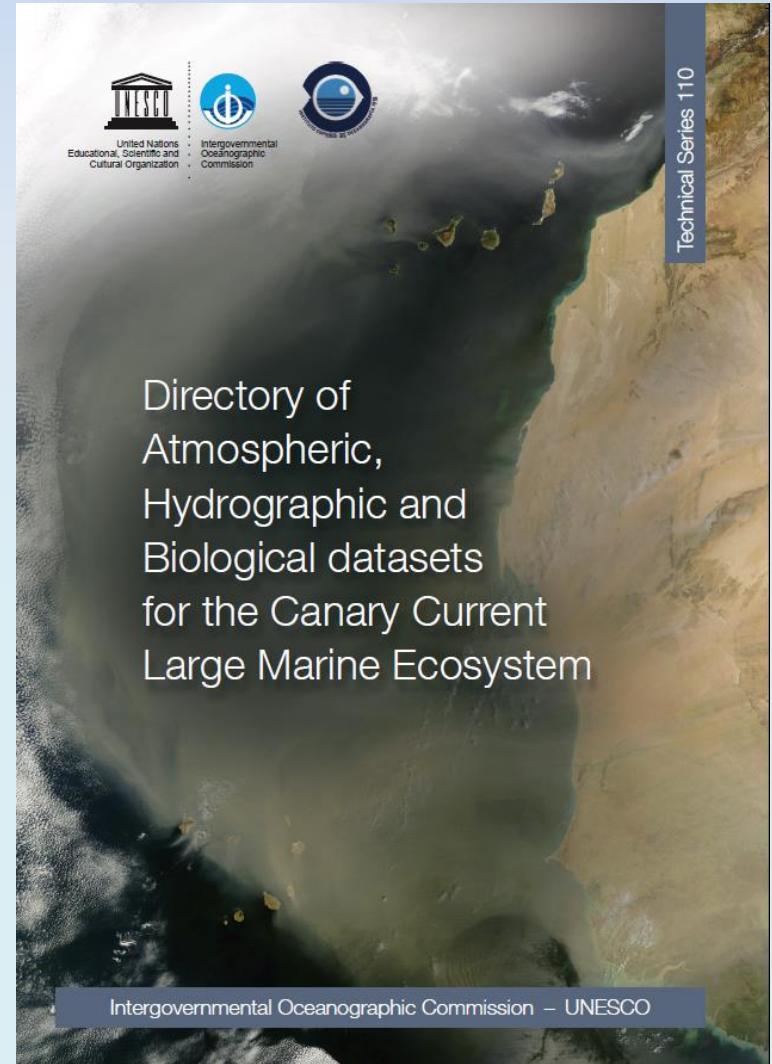
INSTITUTO ESPAÑOL DE OCEANOGRÁFICA 1914

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

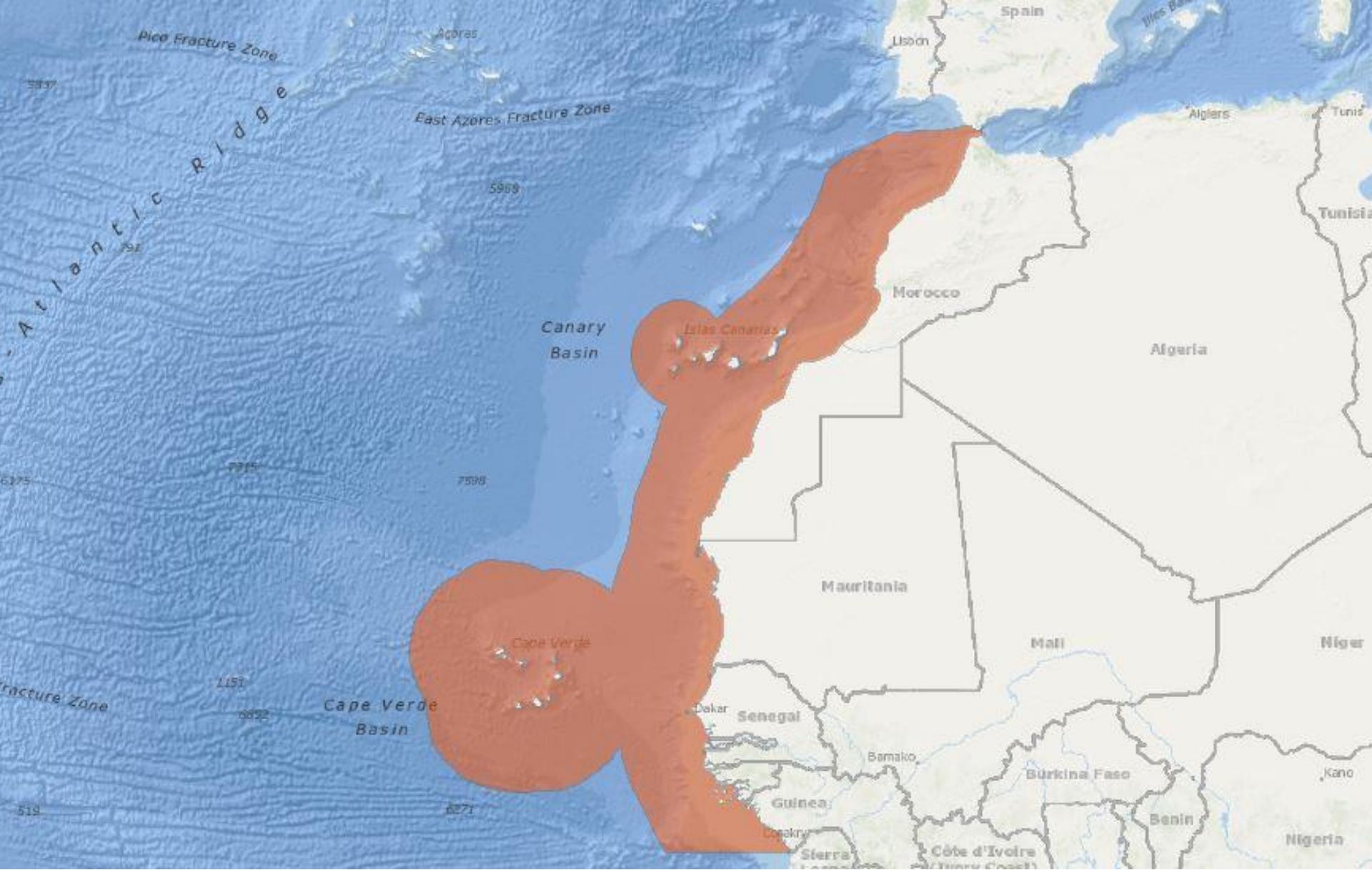
IOC-UNESCO
Luis Miguel Agudo

PREVIOUS PROJECT

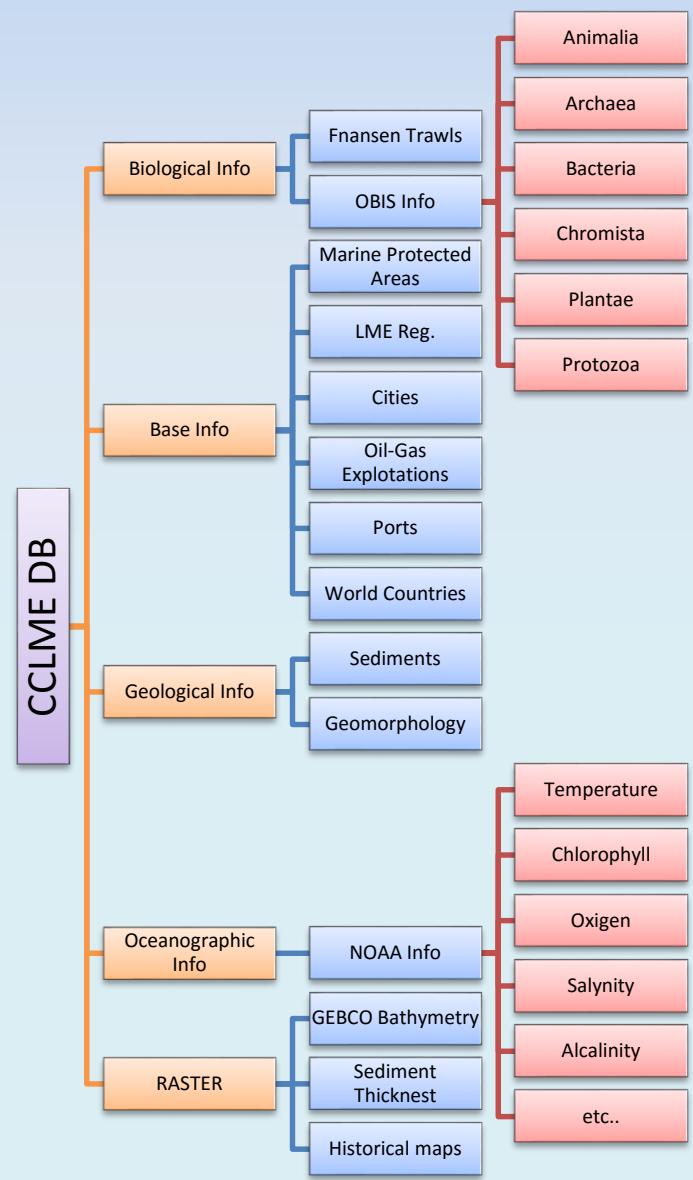
ENHANCING OCEANOGRAPHY CAPACITIES ON CCLME WESTERN AFRICA COUNTRIES PHASE I



CCLME DATA AVAILABLE



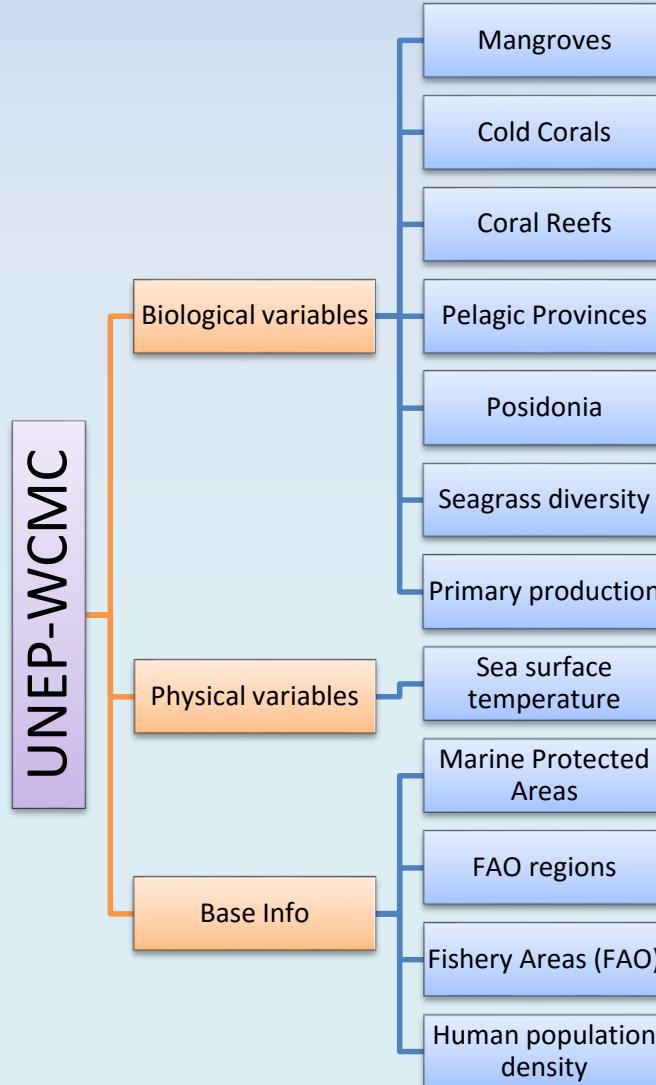
CCLME REGION – CANARY CURRENT LARGE MARINE ECOSYSTEM



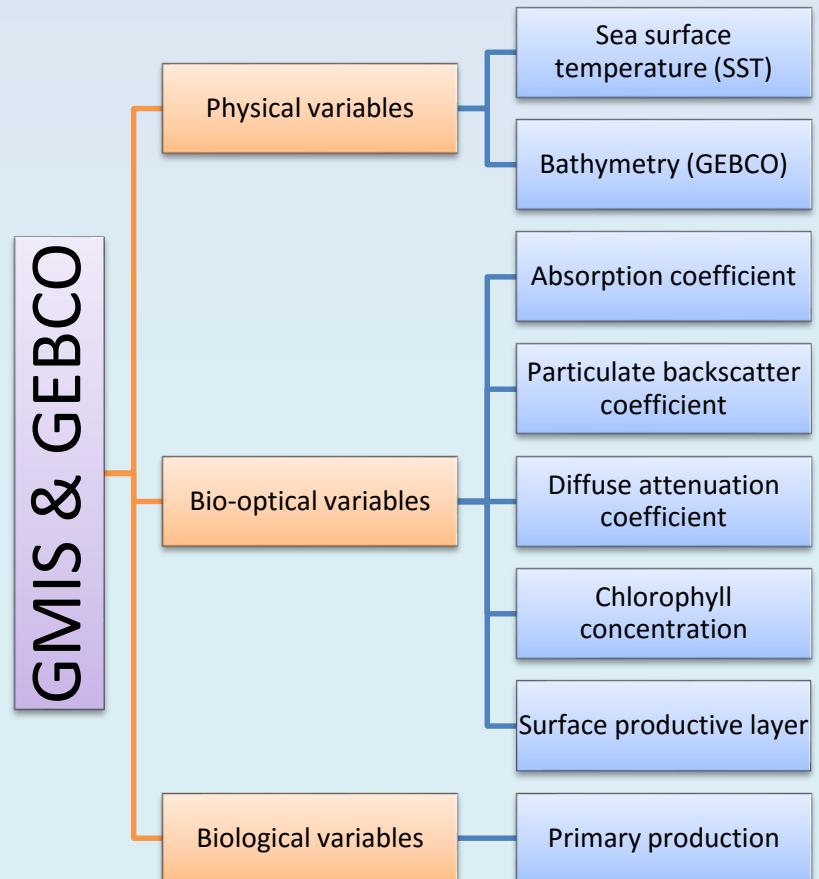
GEODATABASE – ARCHITECTURE



UNEP WCMC



WMS - WFS CONNECTIONS

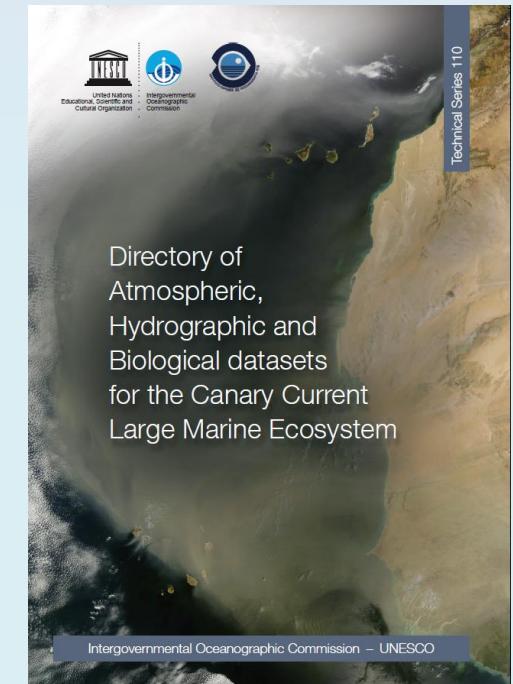


WMS - WFS CONNECTIONS

- 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

Oracle SQL Developer : Tabla SIRENO.LANCES@Triton

Archivo Editar Ver Navegar Ejecutar Equipo Herramientas Window Ayuda

Conexiones

Triton

- Tablas (Filtrado)
 - LANCES
- Vistas
- Vistas de Edición
- Índices
- Paquetes
- Procedimientos
- Funciones
- Colas
- Tablas de Colas
- Disparadores
- Disparadores de Edición Cruzada
- Tipos
- Secuencias
- Vistas Materializadas
- Logs de Vistas Materializadas

Informes

Todos los Informes

- Informes de Diccionario de Datos
- Informes Definidos por el Usuario
- Informes del Modelador de Datos
- Informes de OLAP
- Informes de TimesTen

Página Inicial Triton LANCES

Columnas Datos Model Restricciones Permisos Estadísticas Disparadores Flashback Dependencias Detalles Particiones Índices SQL

Ordenar... Filtrar:

ID	ESPCOD	ESPDESTAX	LANPOSLONGRA	LANPOSLOMIN	LANPOSLONGGS	LANPOSLATGRA	LANPOSLATMIN	LANPOSLATCGS	ABUNDANCIA	BIMASA	SEROBMSMARACRON
1	55 10774	Soleidae	-14	52	(null) 25		22	(null)	0,23949138	0	IBN_SINA8203
2	27 10152	Sardina pilchardus	-14	55	(null) 24		52	(null)	0,0647274	0,9061836	IBN_SINA8203
3	27 10522	Boops boops	-14	55	(null) 24		52	(null)	0,02589096	0,5825466	IBN_SINA8203
4	36 10641	Scomber colias	-15	4	(null) 24		57	(null)	0,0749111776	1,13704466	IBN_SINA8203
5	13 10152	Sardina pilchardus	-15	13	(null) 25		4	(null)	0,289978752	0	IBN_SINA8203
6	13 10641	Scomber colias	-15	13	(null) 25		4	(null)	0,0579957504	0	IBN_SINA8203
7	31 10213	Muraena helena	-15	25	(null) 25		6	(null)	0	0,15534576	IBN_SINA8203
8	31 10507	Spondyliosoma cantharus	-15	25	(null) 25		6	(null)	0,18123672	0,82851072	IBN_SINA8203
9	76 10414	Trachurus trachurus	-15	32	(null) 25		12	(null)	0,147578472	2,3301864	IBN_SINA8203
10	39 10022	Scyliorhinus canicula	-15	59	(null) 25		9	(null)	0,0089323812	0	IBN_SINA8203
11	39 10414	Trachurus trachurus	-15	59	(null) 25		9	(null)	0,03156108024	0	IBN_SINA8203
12	39 10641	Scomber colias	-15	59	(null) 25		9	(null)	0,0029774604	0,059549208	IBN_SINA8203
13	78 10320	Zeus faber	-15	49	(null) 25		7	(null)	0,027617024	0	IBN_SINA8203
14	78 10456	Pomadasys incisus	-15	49	(null) 25		7	(null)	0,1726064	0	IBN_SINA8203
15	12 10490	Pagellus bellottii bellottii	-15	30	(null) 24		57	(null)	1,0032747	7,7025606	IBN_SINA8203
16	32 10641	Scomber colias	-15	20	(null) 24		52	(null)	0,1187100516	0	IBN_SINA8203
17	32 11845	Argyrosonmus spp	-15	20	(null) 24		52	(null)	0,28264298	0	IBN_SINA8203
18	32 30188	Octopus vulgaris	-15	20	(null) 24		52	(null)	2,29901799932	1,808915072	IBN_SINA8203
19	24 10540	Mullus spp	-15	2	(null) 24		42	(null)	0,01042542656	0,130317832	IBN_SINA8203

Mensajes - Log

GEODATABASE – Historical Oceanographic Campaigns IEO

- 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

Web Apps

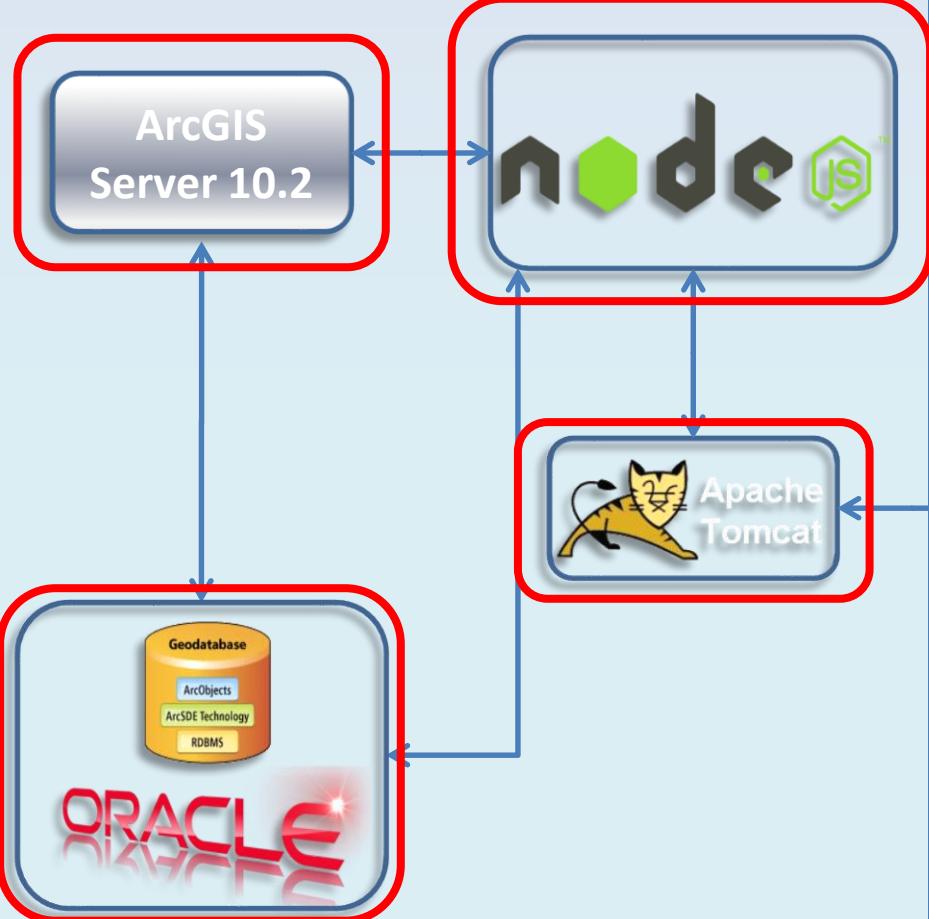
Easy Fast Fun
Simple Smart
Freemium



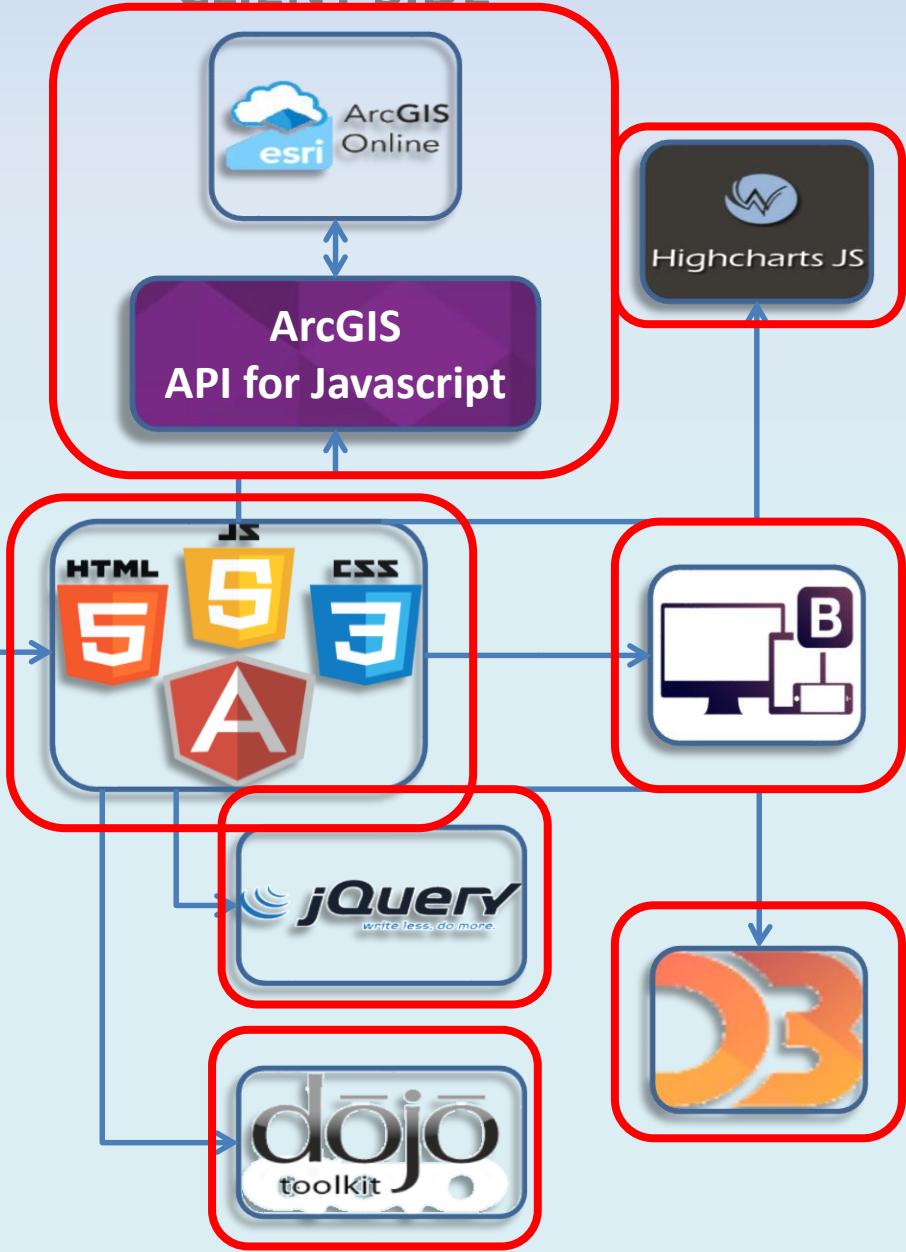
How

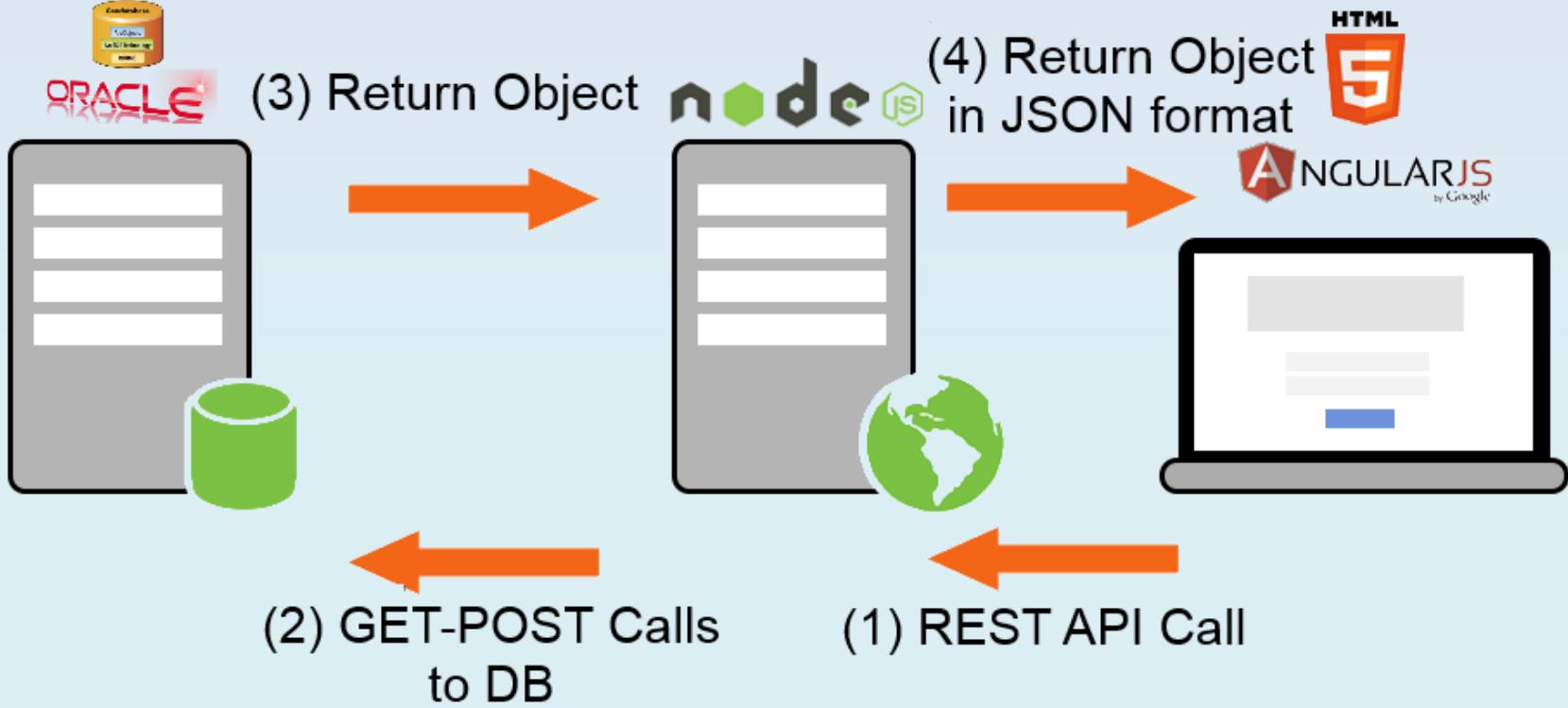
A large, bold, purple text "How" is displayed horizontally across the bottom of the image. Above the letter "O", there is a graphic element consisting of a green horizontal bar with a circular end on the left and a red horizontal bar with a circular end on the right, forming a shape similar to a stylized 'O' or a keyhole.

SERVER SIDE



CLIENT SIDE





NODE & ANGULAR – Model View Controller (MVC)



 **jQuery**
write less, do more.



CCLME DATA ANALYTIC VIEWER

Home

The Project

Dropdown ▾

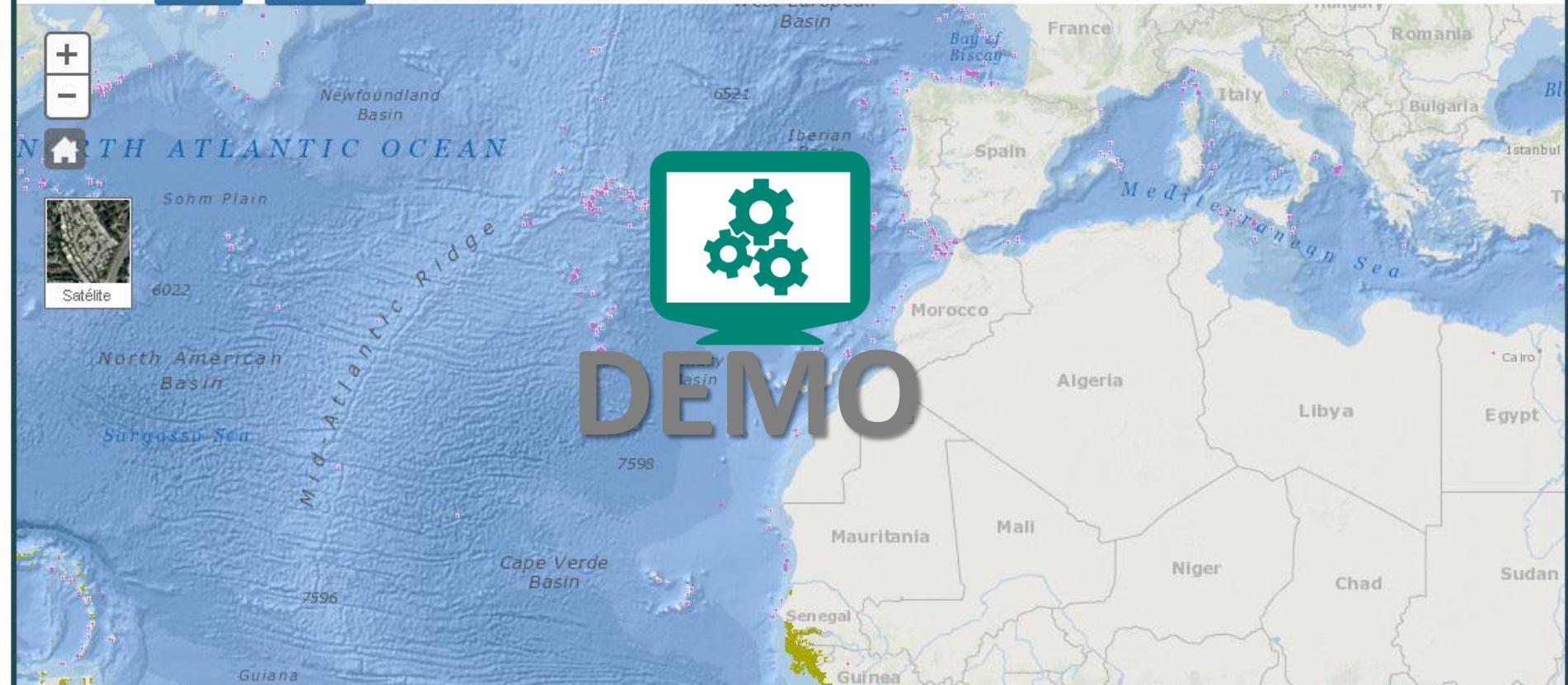
Query

About

Contact

Legend

Print Map



WEB APP –



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Oceanographic
Commission



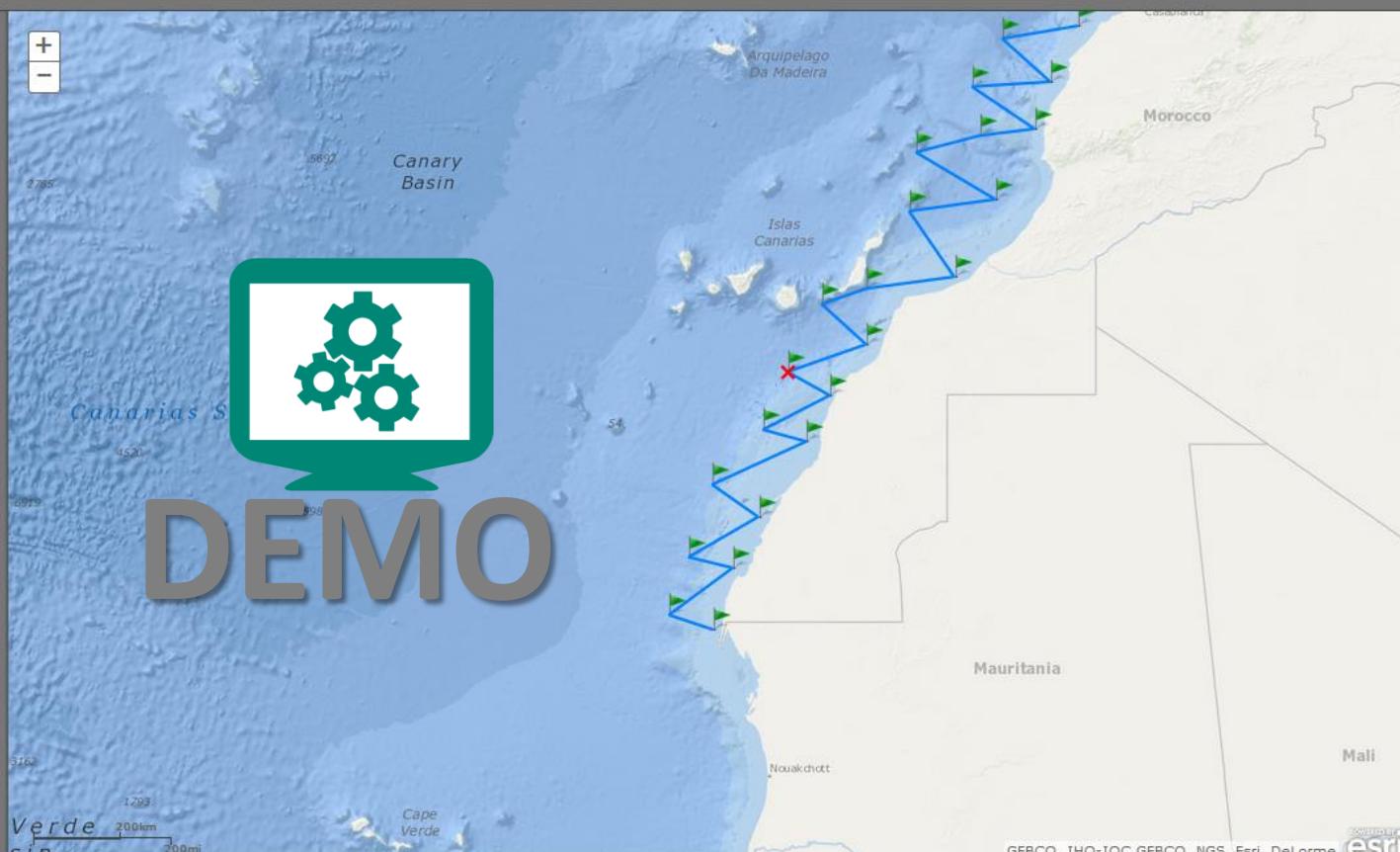
INSTITUTO ESPAÑOL DE OCEANOLOGÍA



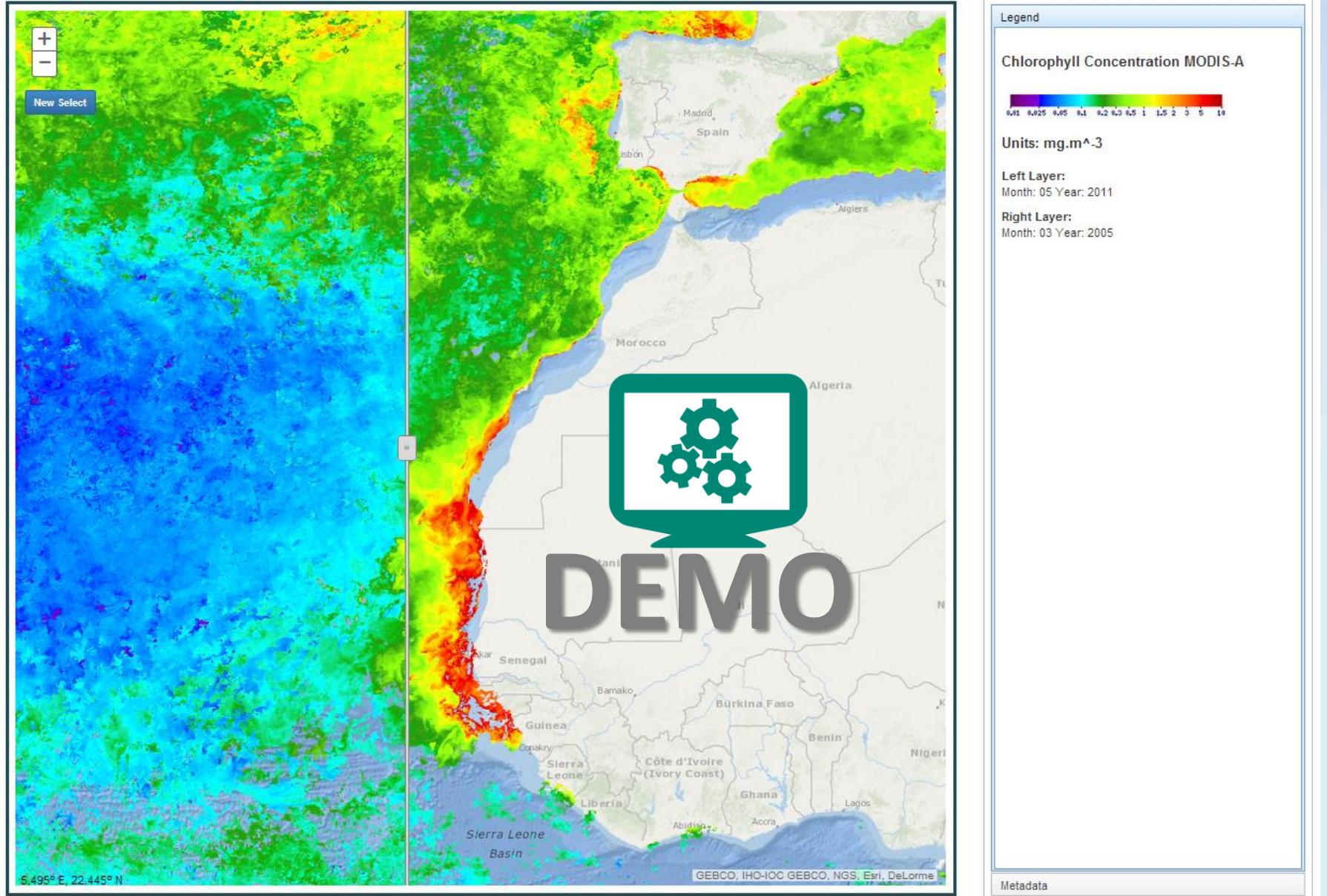
UN OCÉANO, UN FUTURO

CCLME Profile Tool:

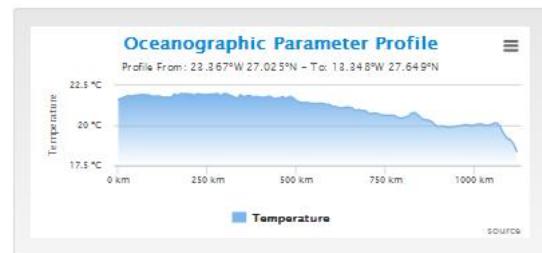
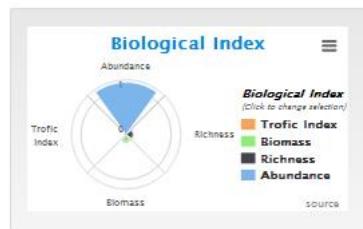
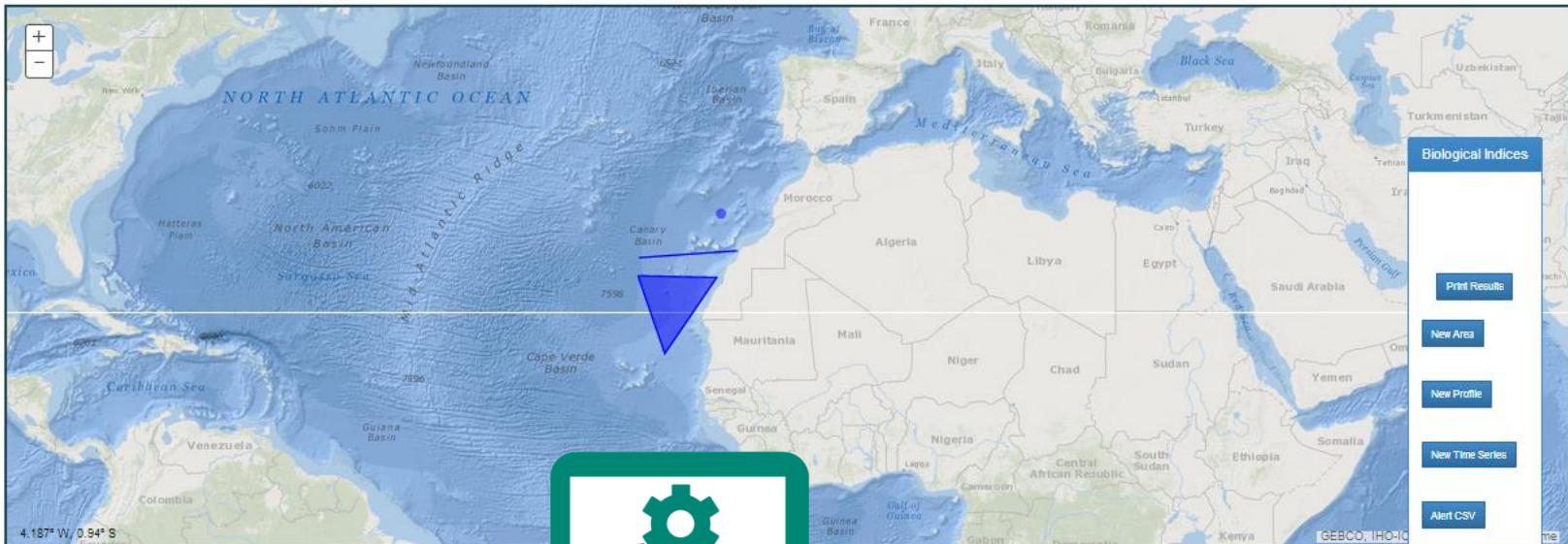
Dibuja con el botón izquierdo una línea. Doble click para finalizar



WEB APP – Elevation Profile Tool



WEB APP – Comparative Tool



WEB APP – Charts & Profiles Tool



Next Step

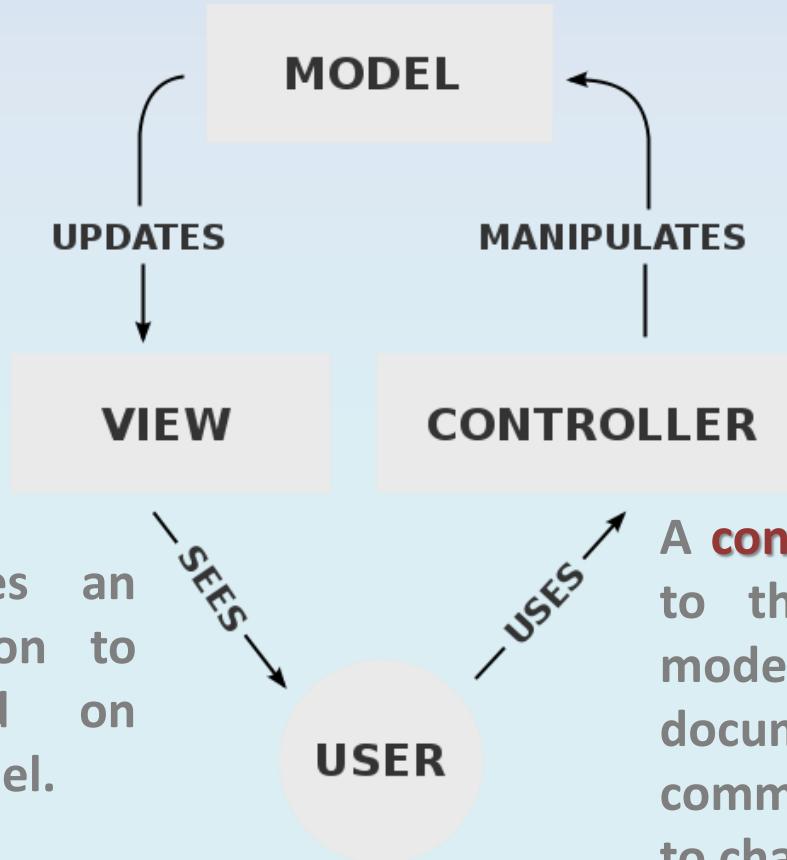
Model–view–controller (MVC) is a software architectural pattern for implementing user interfaces. It divides a given software application into three interconnected parts, so as to separate internal representations of information from the ways that information is presented to or accepted from the user

<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.

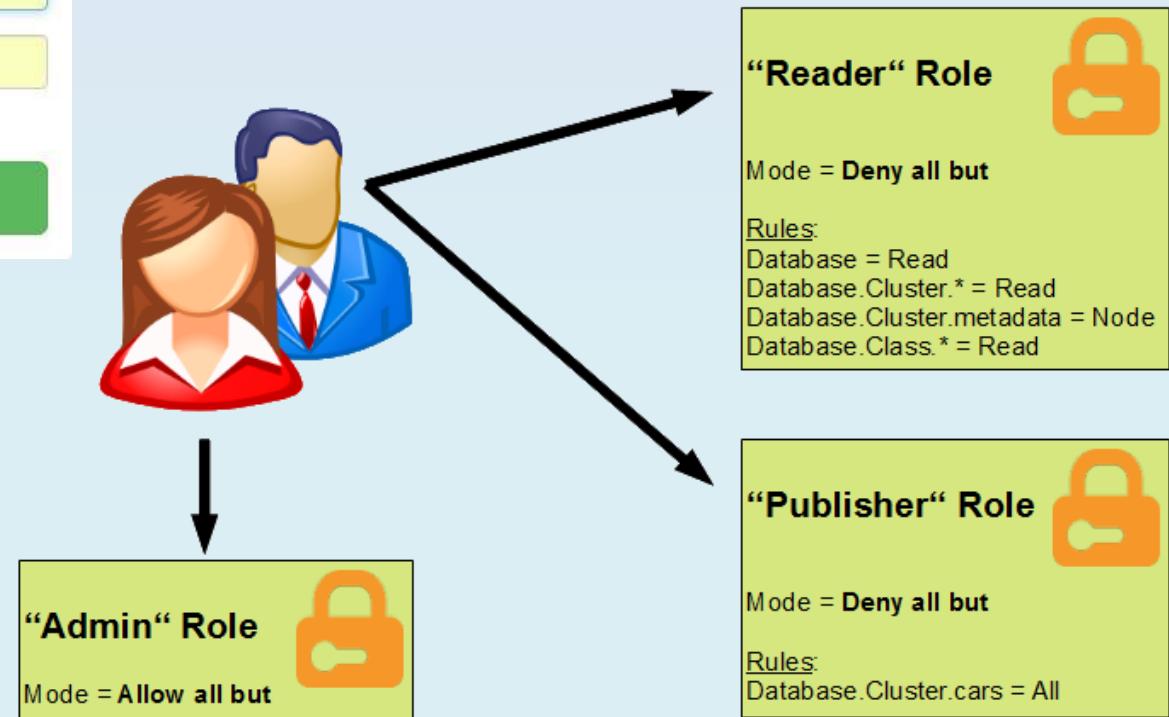
A **controller** can send commands to the model to update the model's state (e.g., editing a document). It can also send commands to its associated view to change the view's presentation of the model.

Security - Management Users/Groups/Roles

Please Sign In

Remember Me

Login



For more information, visit www.2carto.com

NEXT STEPS – Security/Users/Groups/Roles

DEVELOPING NEW ANALYST TOOLS

UPWELLING INDEX



Índice de Afloramiento



www.marnaraia.com

[Upwelling](#) [Data Viewer](#) [Monthly Series](#) [Bibliography](#) [f](#)

WHAT IS UPWELLING?

Upwelling is the rise to the surface of water, that is typically colder and rich in nutrients (nitrates, silicates, phosphates). This water replaces the surface water that was pushed away by winds. If the phenomenon occurs along the coast, is named “coastal upwelling”, otherwise, “ocean upwelling”.



Los vientos del Norte en la costa...





PROGRAMA
COOPERACIÓN TRANSFRONTERIZA
ESPAÑA - PORTUGAL
COOPERAÇÃO TRANSFRONTEIRICA
2007 - 2013



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NEXT STEPS – Analyst Tools

Benthic Terrain Modeler

Contributing Partners: [View all Partners](#)

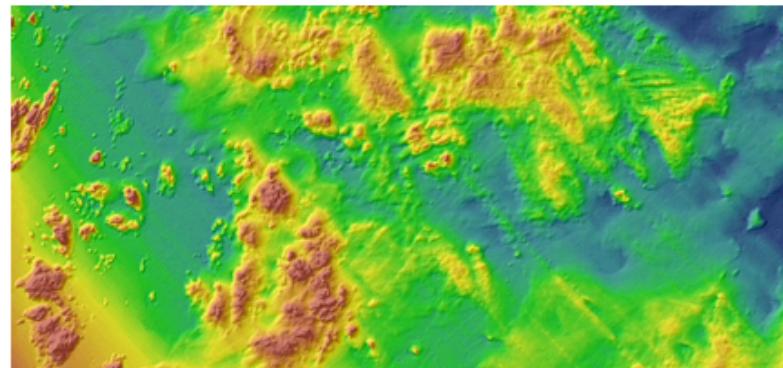


Version 3.0 (beta) of the Benthic Terrain Modeler (BTM) for ArcGIS 10.1 Desktop is a collection of tools that ocean and coastal scientists and resource managers can use with bathymetric data to classify and understand the benthic environment. The current beta release for ArcGIS 10.1 consists of ArcPy scripts in a custom toolbox that allow the user to run the individual processes as separate functions. Alternatively, users can take advantage of the simple Esri Add-In that wraps around all BTM tools, re-creating the full "wizard" experience that was available in the previous releases.

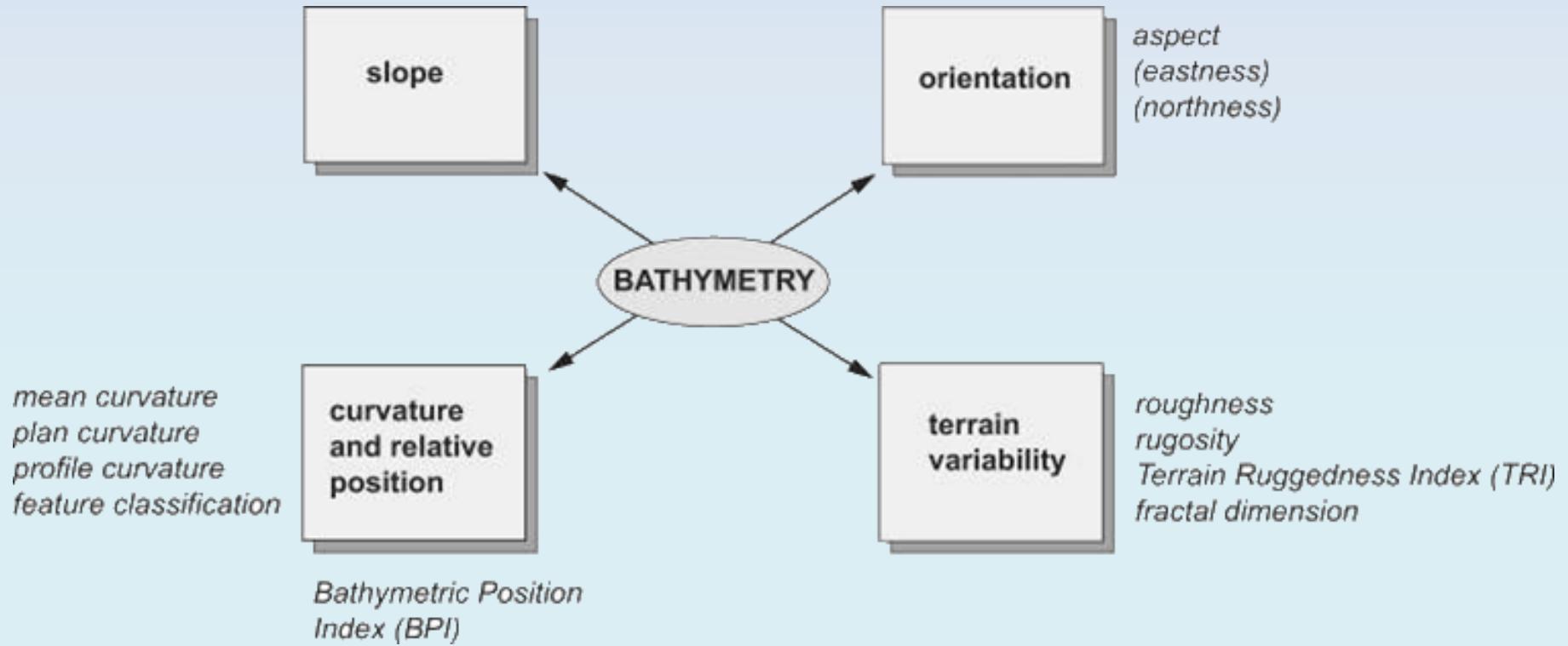
The BTM Toolbox and Add-In contain tools that allow users to create grids of bathymetric position index (BPI), standardized BPIs, and slope and calculate terrain ruggedness from an input bathymetric data set. Additionally, two terrain classification tools give users the freedom to create their own zone and structure classifications and define the relationships that characterize them.

Features

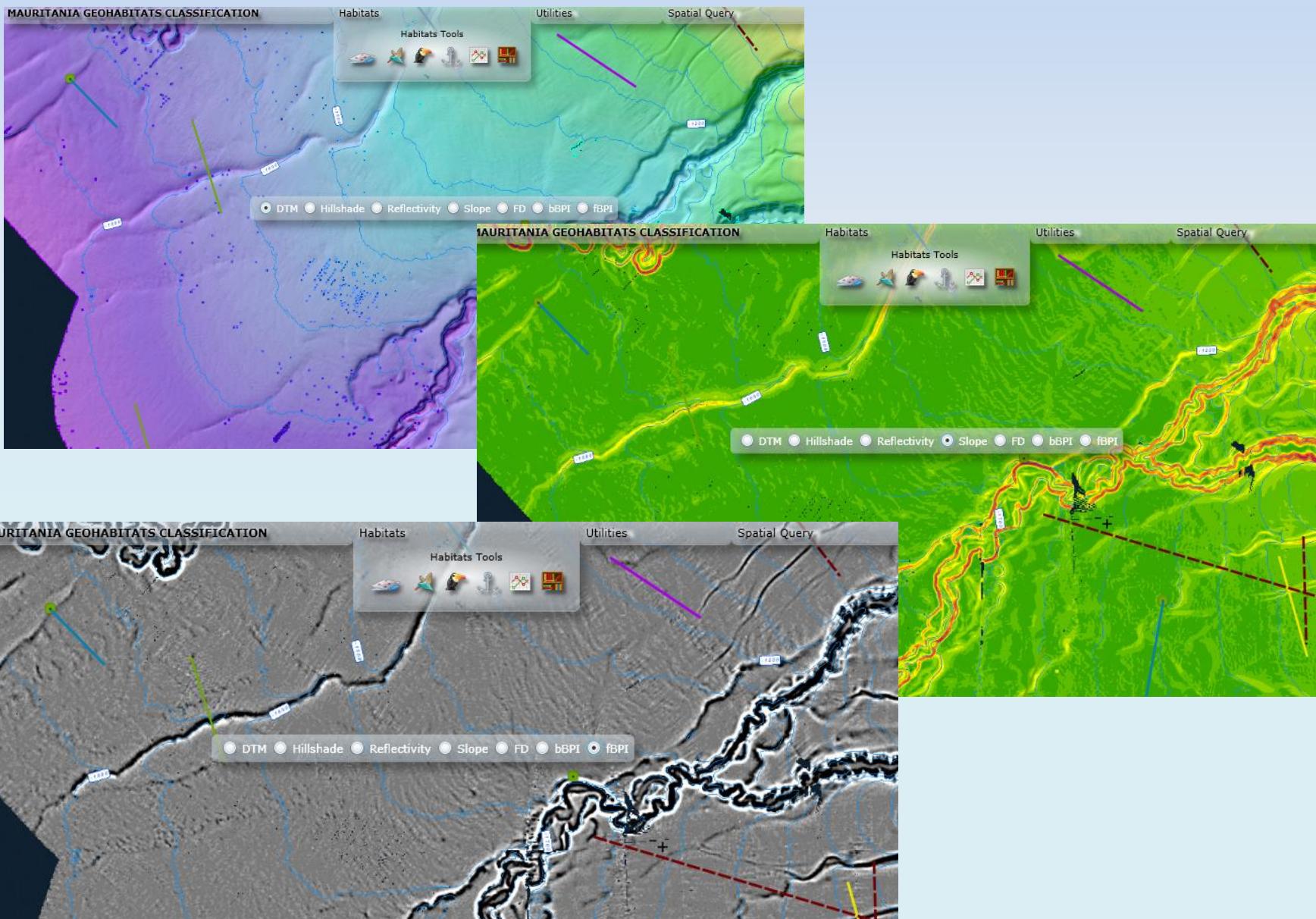
- Guides users through the terrain classification process and allows users to create and distribute their own benthic terrain classifications
- Creates bathymetric position index (BPI) data sets at large or small scales; Depending on user needs, creates BPI data sets for either classifying smaller or larger features within the benthic landscape
- Creates a rugosity data set as a measure of terrain complexity, or the "bumpiness" of the terrain
- Provides functionality to create and edit classification dictionary files in a



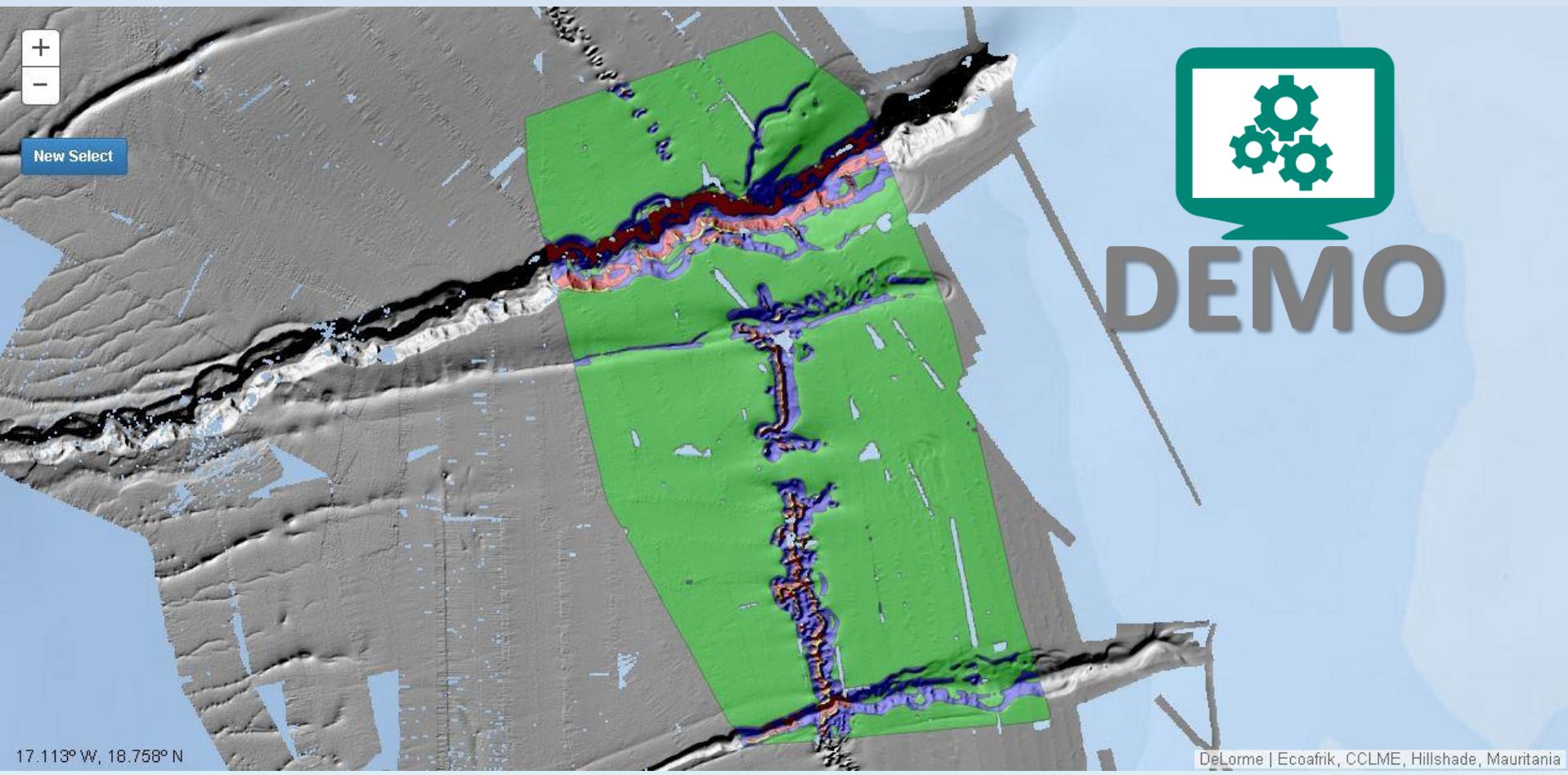
NEXT STEPS – GeoHabitats Tool



NEXT STEPS – GeoHabitats Tool



NEXT STEPS – IsoCluster: Unsupervised Classification

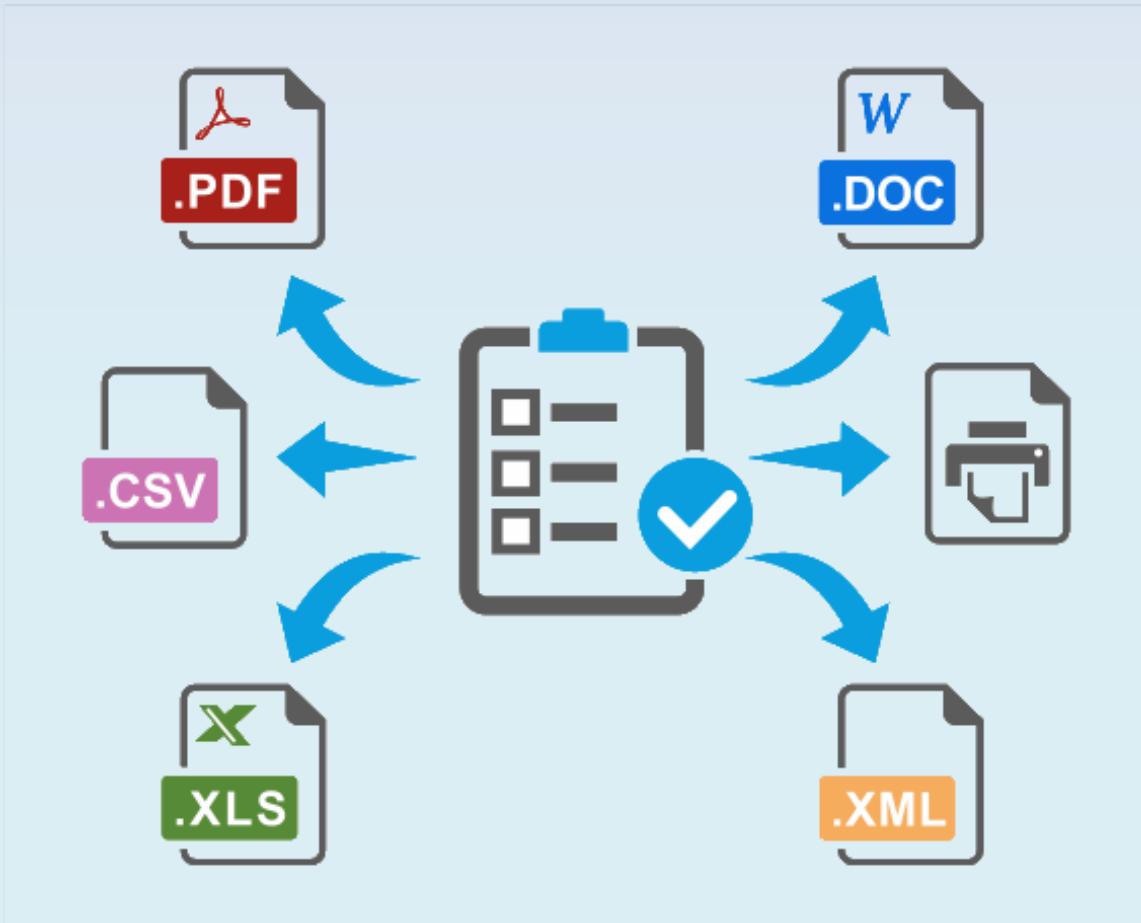


NEXT STEPS – GeoHabitats Tool

- 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

SUMMARY

- **Upload historical campaigns** to SIRENO
- Security - **Management Users/Groups/Roles**
- Export final **Reports**
- New **Analysis Tools** (Geostatistical, New Trends Analysis, Graphs, ...)

NEXT STEPS

WHAT TO EXPECT FROM YOU?



NEXT STEPS

WHAT TO EXPECT FROM YOU?

We will **open forums** to **share ideas** about what **web tools** can be developed under the frame of the project with the data collected.



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>
```



[https://github.com/Imagudo/IOC-UNESCO WORKSHOP](https://github.com/Imagudo/IOC-UNESCO_WORKSHOP)



GIFSFORUM.com

NEXT STEPS – Share Code



United Nations
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Intergovernmental
Oceanographic
Commission



Luis Miguel Agudo
lmagudo@gmail.com



<http://2carto.com/>



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