













CCLME Eco-GIS viewer development: an overview from idea to product

Luis Valdés

Hands-on Workshop on "The use of the CCLME Eco-GIS Viewer"

11-13 July 2017



- 1. Rapid prototyping
- Seeking for expert guidance on the contents, needs and resources (1st Workshop, Praia CV)
- 3. Review by corporate "labs/orgs" (FAO)
- 4. Case studies for internal validation and corrections
- 5. Getting the product into the hands of interested users (2nd Workshop, Tenerife Sp)



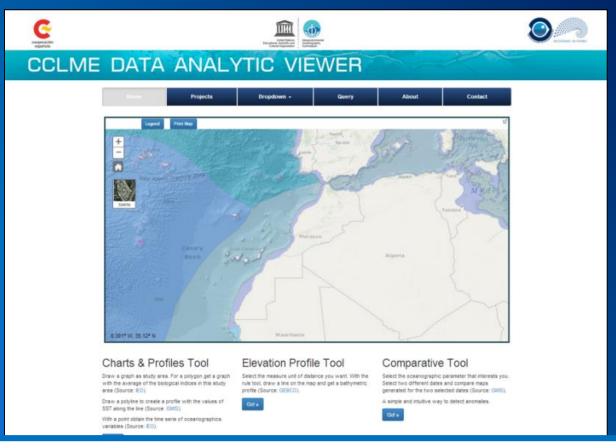






1. Rapid prototyping

Prototype of a CCLME Data Analytic Viewer (bonus 1st phase)



Developed to **test the feasibility** of the initiative:

- > to use most recent advances in GIS geo-technology and
- > to develop a **dynamic application** tailored to do concrete analysis and **to produce new scientific knowledge**



Workshop on the "Data availability and application needs for a CCLME Eco-GIS viewer" held in Praia, Cabo Verde (3-5 November 2015)













WS Cabo Verde (Praia, 3-5 November 2016)











Activity (identified at the workshop)	Priority High-	Geographic Scope	Feasibility	Scale	Representation	Comments
	medium -low	CCLME-Country	Yes/No/Maybe, it is necessary to study it		XY Graphs, Map with isolines, Profiles	
Upwelling Index Tool (based on wind and pressure data)	High	Disaggregated by regions	Yes		XY Graphs, Map with isolines	
Juvenile Ratio (using samples from IEO surveys) to detect potential nursery areas	High	Disaggregated by regions	Maybe		Мар	To be further evaluated. It depends on countries engagement
Anomalies detection over different oceanographic parameters	High	CCLME Region	Yes		XY Graphs, Maps	
Spatial-temporal dynamic models	Medium	CCLME Region	Maybe, it is necessary to study it		Мар	
Delimit special areas (Hot spot special sensibility)	Low	CCLME Region			Map	
Time series interface for Correlation	Medium	CCLME Region	Maybe, it is necessary to study it			Based on IGMETS experience and methods
Buffer tool/Clip tool	Medium	CCLME Region	Yes		Graphic	
Bathymetric transects				Mesoscale	XY Graph	Already available
Oceanographic transects	High	Disaggregated by regions	Yes		XY Graph	Only one interface Depth/Surface. Put a button to select another depth
User interface to generate biological Index	High	CCLME Region	Yes		Мар	Dynamic legends (necessary study)
Drag and Drop facilities	High	CCLME Region				For temporary visualization of user GIS data
Interpolation functions	Medium	CCLME Region	Maybe, it is necessary to study it		Мар	
Metadata manager interface (ORCID)	High	CCLME Region				Data policy, validation, workflow, share
Upload map result	High	CCLME Region				
Analytic models			Development tools			Data management

3. Review by corporate "labs/orgs" (FAO)

Joint meeting between FAO and IOC-UNESCO on a CCLME ECO-GIS VIEWER: Needs, Experiences, Options, and Opportunities

June28-30, 2016, Rome, Italy

Organized by FAO and the IOC-UNESCO

Hosted by FAO



FAO meeting 28-30 June 2016











Activity (identified at the workshop)	Priority High-	Geographic Scope	Feasibility	Scale	Representation	Comments	Current status
	medium -low	CCLME-Country	Yes/No/Maybe, it is necessary to study it		XY Graphs, Map with isolines, Profiles		
Upwelling Index Tool (based on wind and pressure data)	High	Disaggregated by regions	Yes		XY Graphs, Map with isolines		
Juvenile Ratio (using samples from IEO surveys) to detect potential nursery areas	High	Disaggregated by regions	Maybe		Мар	To be further evaluated. It depends on countries engagement	
Anomalies detection over different oceanographic parameters	High	CCLME Region	Yes		XY Graphs, Maps		
Spatial-temporal dynamic models	Medium	CCLME Region	Maybe, it is necessary to study it		Мар		
Delimit special areas (Hot spot special sensibility)	Low	CCLME Region			Мар		×
Time series interface for Correlation	Medium	CCLME Region	Maybe, it is necessary to study it			Based on IGMETS experience and methods	
Buffer tool/Clip tool	Medium	CCLME Region	Yes		Graphic		
Bathymetric transects				Mesoscale	XY Graph	Already available	
Oceanographic transects	High	Disaggregated by regions	Yes		XY Graph	Only one interface Depth/Surface. Put a button to select another depth	
User interface to generate biological Index	High	CCLME Region	Yes		Мар	Dynamic legends (necessary study)	Ŏ
Drag and Drop facilities	High	CCLME Region				For temporary visualization of user GIS data	
Interpolation functions	Medium	CCLME Region	Maybe, it is necessary to study it		Мар		
Metadata manager interface (ORCID)	High	CCLME Region				Data policy, validation, workflow, share	×
Upload map result	High	CCLME Region					







Analytic models



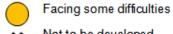




Data management



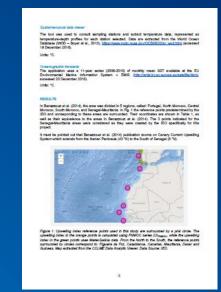
Facing important difficulties

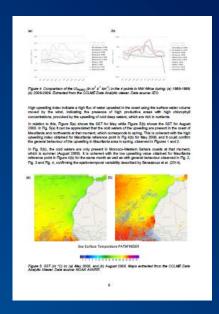


Not to be developed

4. Case studies for internal validation and checklist for corrections

















4. Case studies for internal validation and checklist for corrections

Checklist (Dec 2016)

consciousness considerés les constitues par son constituent principal constitue de la constitu

software.

The answer of the took should be revised to be more appealing and cleancled the topic in exchange in the control of the control

Dalastre markor "The prolect". Julio the with name of the organizations: transpovermental Oceanographic Commission and loutine, Repetitive Oceanographic Unity the commissional (see 80 official generic ones). Register "email" by "e-mail".

PLEVATION PROFILE The live handle assembledly move down in the grafts, which is bloken from the main view. The tills of the elevation profile in the language of the country the user is connected from it should be in Biglish buy is setuit, but the option of choosing the languagepooks be given (see example) that they would be profile in the stand in the language of the country the user is connected from the stand in the language of the country the user is connected from the stand in the language of the country the user is connected from the stand in the language of the country the user is connected from the stand in the language of the country the user is connected from the standard language of the country the user is connected from the standard language of the country the user is connected from the standard language of the country the user is connected from the standard language of the country the user is connected from the standard language of the country the user is connected from the standard language of the country the user is connected from the standard language of the country the user is connected from the standard language of the country the user is connected from the standard language of the country the user is connected from the standard language of the country the user is connected from the standard language of the country the user is connected from the standard language of the country the user is connected from the standard language of the country the standard language of the standard language of the country the standard language of the standard language of the country the standard language of the sta

connects volvy.

The coordinates of the starting and ending goints should be included in the title or the subtile of

Study the feasibility of including in the subtile the intermediate stop points in the line drawn (or glying the option to add to the graph).
While moving the mouse on the profile, the point is shown in the map. On the profile, 5 numbers. times mixing and measurement assuming point (2) total depth or elevation(15) depth or elevation (15) depth or elevation (15) depth or elevation (15) depth or elevation from the standing point is (2) ready useful for the total aims? In the tit is necessary if the date confinues to not be downloadable, as it helps the user readiles on the depth or elevation of the

saming jump. (2) (gap privious garagragh) is shown in coloured borse, rad for negative values and grean for positive over. (7)(j. popupopopopopopos codd to more useful to indicate the scall depetit or elevation. In case feate a fundament are enabled, it is not fraction to understand the immediate and plaining and interest and enabled and or experience of the control of the coloure and application of the good of the coloure and application of the good of the coloure and application of the good of the coloure and application of the coloure and applicatio

Use of command as expressor from a focusaria, and a destructural or a small future of County de manage of Massackata Milit. Teaching (m) on a "filantial" or a "filantial" busined. County de manage of Massackata Military destructural or a manage of Massackata Military destructural destructur

SOURCEPONEL:

mentals as graph as tray is noticed, it is necessary in this has copic colors in Yellow as and in colors and in the colors and in the colors and in colors a Some of the lines are not regressered even if data exists. This is due to the fact that there is a lack of data in one or more months of that year (it is indicated as IIAN).—Not a Number—in the

Series can be deachised when clicking in the legend, so the scale is adjusted to the only series displayed. However, I am not sure it is useful the tipophythe-deap

"Clear" buson is not active.
 Block the busons which will not be used, i.e. appeariogic grey colour.

Offset error (see examples in the innex).
The diffican countries are the main collective of the project Therefore, all the diffican surger countries mustbe shown when opening the application (instead of barton Perincula).
The panel in which the map is included is entitled "Oceanographic chomaly panel", and that is not

The parel in which the map is included is entired to be anopping convergence; an or train to adaptive which represented the map. Therefore, if he cape zooms out the application will have been also been controlled to the application will have the parel with the parel with the parel will be a common the map op and down to cover southern countries in the application will be applicated to the parel between the

limbs, cannothes the color hyperrepresenting the variables does not adopt to the connections. The press without the value largest as transpersed, sease conventing violent. Therefore, when comparing not byses, the user can be contained as can see does from the layer below set and of the apple by judgest, the parameter advanced striking to provide the provided of t

Site the possibility of downloading layer results, to be used in other viewers or user software. Study the possibility of downloading the data.

In the "chomaly" function, the legend does not appear, it is necessary to include the calcumsthods used in the "chomaly" function.
Site a thing possibility of dominicating the legend.

Include the messdass, including the dass source.

22T obtained from JUHER Ckl- arobained from CZCS, SepUJES, MODIS

MUP AND SAMPLING PONTS

Of When his information valued to a goint is eyen, mank is an arron gointing depopil⁴—at right in his context, bit is blanked to close his invition if his, does it have he as an incolorman a Down in financial for the context of the context o

Possibility of doing alternative search, as it would be useful operageneral overview frequested by the user oper timber information and choose, i.e. — by giving the option "Show all or any others considered more adequate, ag while looking for pranests, it would be interesting to know if they do exist independently on the samporal

Wating shall needed, is, once the user selects the month, sometimes the "britidistin" symbol § appears on some of the months and it does not mean that there is no date, but the application is highly. This can be includeding. Wating shall needed so the pool of the Wating shall needed so the pool messages indicating the lack of date for a specific month shall needed so the pool of the

If it is known that the calculation will take some time once the selection is done, invovid be useful to show a message indicating this, i.e. a popular, so the user knows the application is thinking.

Training.

Some data requested are not represented, e.g. GLD → Temperature → May → 1999;
DRS → Temperature → Jugget → 1999.

comparable with other graphs. Indicate SST in cage when moving the mouse on the groffe (so the value for each point is

DIVENDATION OF DEPOSTS AND DOWNLOAD OF SOLEDIS AND DATA-

□ Need of a "Download data" command.
□ It would be useful to gur graphs in the regions together with the mage including the calculation galps, localisation (if regional by the user).

"Clear" button is not active.
 The user connectick on "Draw grotfe" and needs to select the variables free, which is good However, it is not does not seem to be self-speaking for freedmanager. Possibility of golding the

user, Ia. yellow square appearing when moving the mouse on the button, including a text like: "Onew appapageand double-click to obtain you graffe".

SELECTION PUNEL:

The "Season prime" is anchored to the citys citie. Therefore, it is considered hillion following—
citys in or in a let us alone commonic service is extended to the expert in a let'll commonic
citys in or in a let'll us alone commonic service is extended for exemption and the commonic
city of the commonic of the city of the commonic of the commonic of the city of the c

Usetiness of Geodesic bole?? Verify the value obsided when the transact crosses the Islands; when it is extended into the confinent the profile is calculated only up to the coast.

Is no value is given when the papeage; is extended into the confinent study this possible to not allowing the user to extend the line up to there, alternatively, and if possible, show a window exhabited them, often will be extended for the company of the confinence of the suitable of the confinence of the confin

explaining-time data with extraordiv transcent in According.

The coordinate of the saming and exclusing point indicated in the statile of the graph are conclusion with the library ways. The stating or entiring spaint is blank clausese, only excluded or the product inclusion of the statile of the graph area collections for a secondar collection of the product in the statile of the spaint are collections for the secondar collections for the statile collection of the statile collecti

Obstractively, allow the generation of various graphs at the same time. This is maybe not useful the graphs selected by the user are just expend to "Report" (see next idea in the list, the single-graph optoposition keps Possibility of extracting the map with the payagest selected together with the graph to eleborate

remaining manneaus and TAVARIDES ESECTED.

When the line is very long, i.e. longer than 4500 km, sometimes the graph does not show the entire profile; it just shows a gard in the snauk followed by an ellipsis (...) at the right part of the snauk.

METADATA: It is necessary to make the meadow available, indicating always the date scorce, i.e. when the user series the graph, in the right-down corner of the figure is indicated "Scorce", but it not indicated infinite the scorce.
When clothing on "Scorce" the application redirect the user to the SO website. Confirm fifthe dapple, managing by the SO anticulate further meadow.

labiling or own data.

O did a safe-applicatory pop-up to golds the user, illernatively, include further information in a
"literated or "lability busin.
In case preclude, like is incorporated, give the user the option of choosing "Not showing this
message any more".
(Such shouser prior option of opening the explanatory pop-up message when rescessary.)

Usatificks

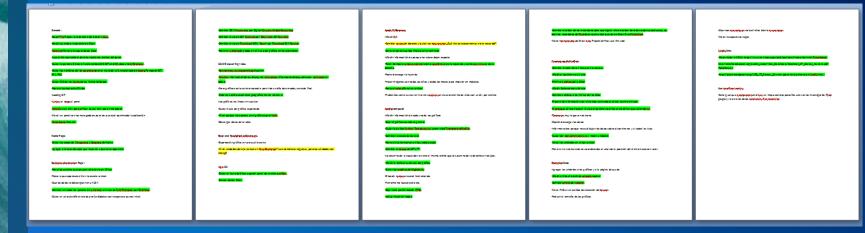
| Add the One Shared Ocean tone/heaths the CCLMS to the list http://onesharedocean.com/LMS 27 Careary Companiescensed 9 Oceanthr 5016).



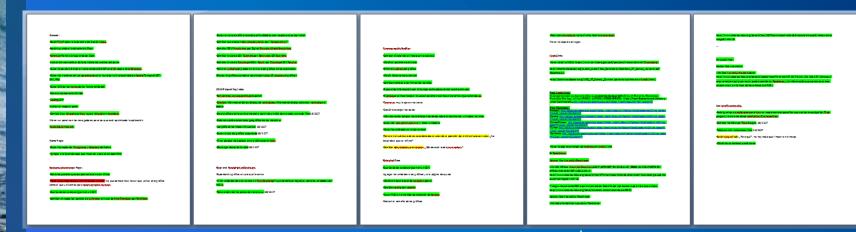
4. Case studies for internal validation and checklist for corrections

Checklist (monthly reviews, Jan-June 2017)

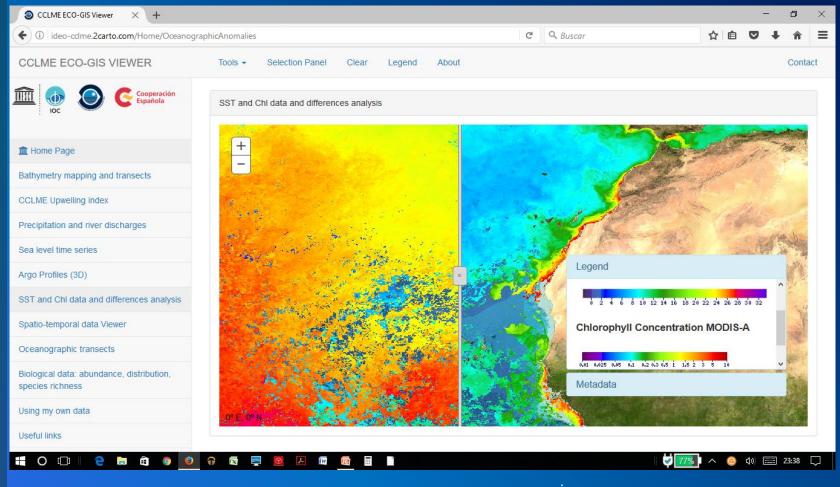
April 2017



June 2017



5. Getting the product into the hands of interested users (2nd Workshop, Tenerife Sp, July 2017)















I would like to encourage all the participants to be active in this workshop. During the next three days we will have the opportunity to exchange experiences, share new ideas, identify synergies, and build new bridges, and I hope that the result of the discussions will be successful and the conclusions fruitful

And please use the application and help us to disseminate it in your countries!

Thank you very much for your help and support!





