SCIENTIFIC COMMITTEE
TENTH REGULAR SESSION

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Project 62: Data Query Tool for SEAPODYM output

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Key Issues for SC10

1. The SC10 notes the availability of SEAPODYM reference fits through a web-accessible relational database.

Introduction

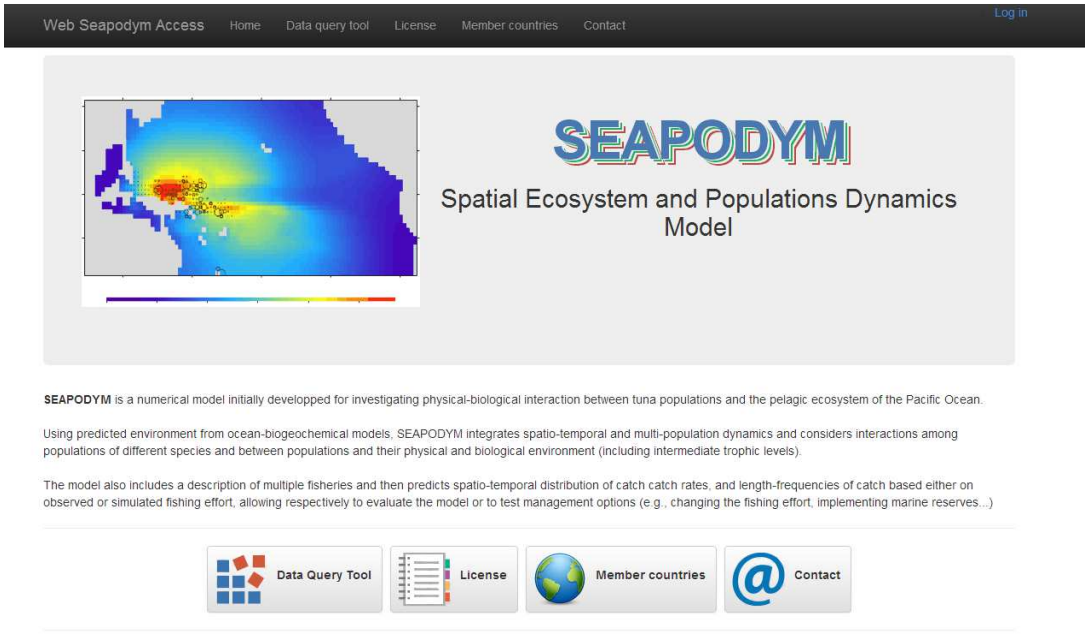
The development of the SEAPODYM model has now progressed to the stage where "Reference Fits" are reviewed by the WCPFC Scientific Committee. To facilitate access to the biomass estimates of these reference fits, a secured web-accessible relational database has been developed. This can currently be accessed at www.spc.int/ofp/seapodym

SEAPODYM Reference Fit Database

The basic options and structure of the database are briefly described below with a range of screenshots to assist with demonstrating the use of the database.

Home Page

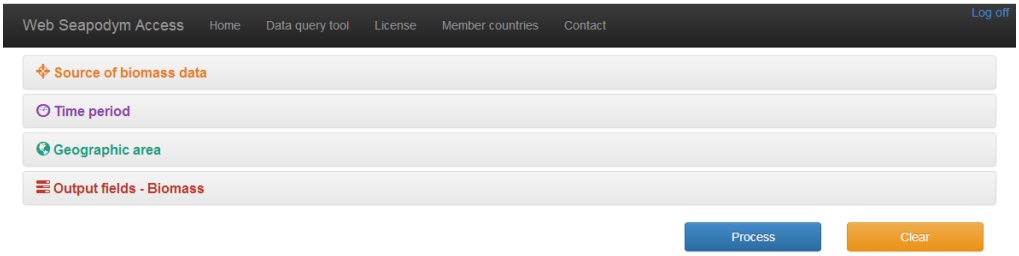
The Home page of the website contains a brief description of SEAPODYM and links to SPC Member Country pages (secured and confidential and containing SEAPODYM based reports), contact details for support and accessing the SEAPODYM model, and Licensing details, in addition to the link to the Data Query Tool.



Data Query Tool

The Data Query Tool requires a user name and password to access. This has been included so that we can monitor the use of the query system but also so we know whom we need to provide support. A user name and password can be obtained through the "Contact" page.

The Data Query Tool consists of four drop down menus: Source of Biomass Data; Time Period; Geographic Area; and Output Fields.

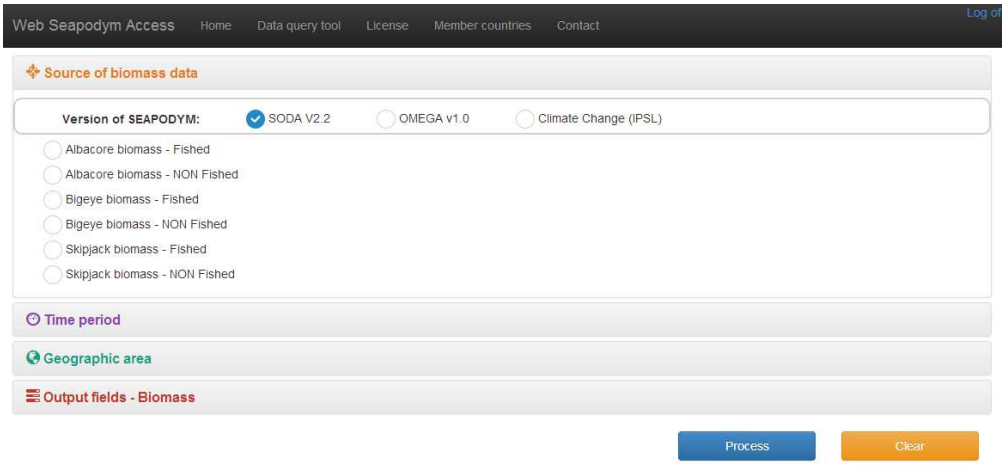


Source of Biomass Data

This menu allows the user to select the reference fit that data will be extracted from. This currently includes reference fits developed using the SODA 1 degree by 1 month and OMEGA 1 degree by 1 month physical forcing for simulations of the historical fishing period. The user has the option of selecting the reference fit by species (Albacore, Bigeye, Skipjack) and whether they are interested in the simulation with historical fishing or without (i.e F=0). The SODA physical forcing provides a simulation from 1998 to 2008 and OMEGA from 2004-2012.

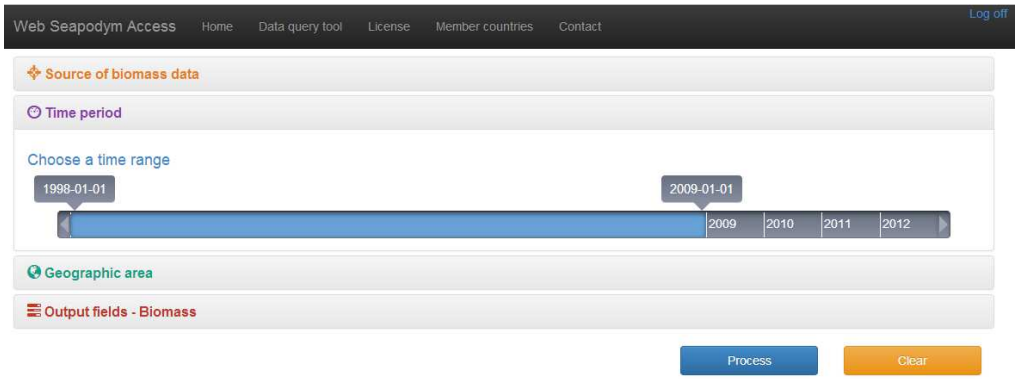
The Reference Fit using the IPSL Physical Forcing for evaluating potential impacts of climate change is also included. The resolution of this physical forcing is 2 degrees by month and the simulation includes the time period 1975 to 2100. The user has the option of selecting the reference fit by species (Albacore, Bigeye, Skipjack).

The meta-data and model description for each of these reference fits are currently not included but are available in past Project 62 reports to the WCPFC-SC. Links to these reports and the meta-data is proposed as part of the development activities for this tool in the coming 12 months. Yellowfin will be added once a reference fit for this species has been finalized.



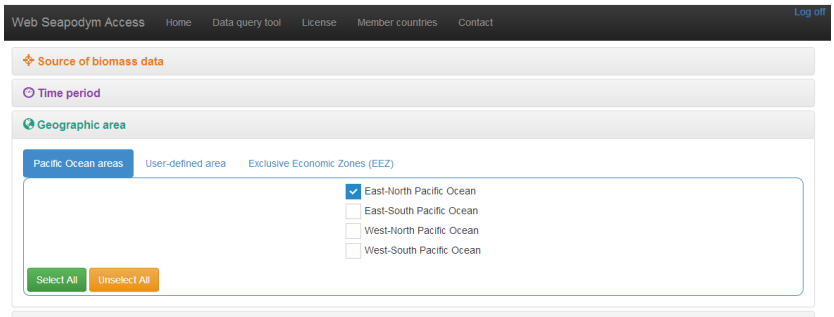
Time Period

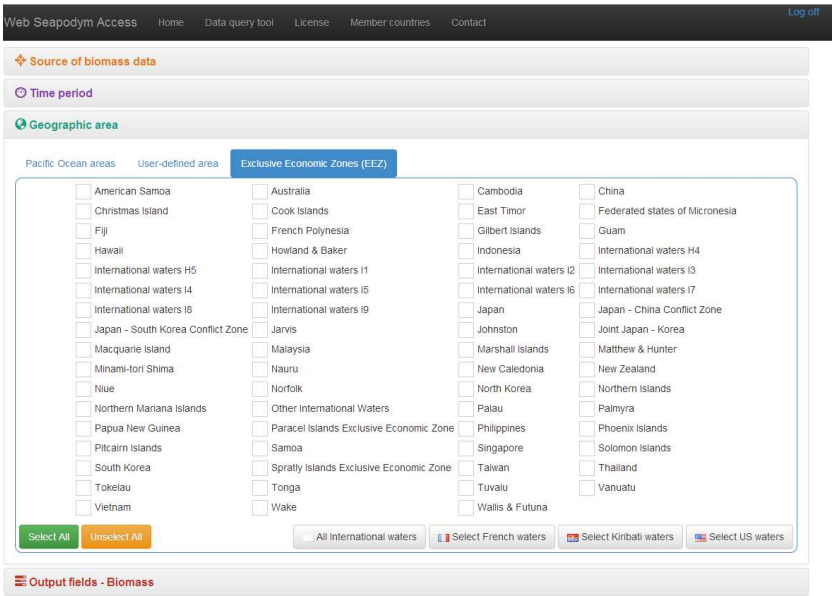
The time period menu allows the user to select which segment of the simulation period to extract data.



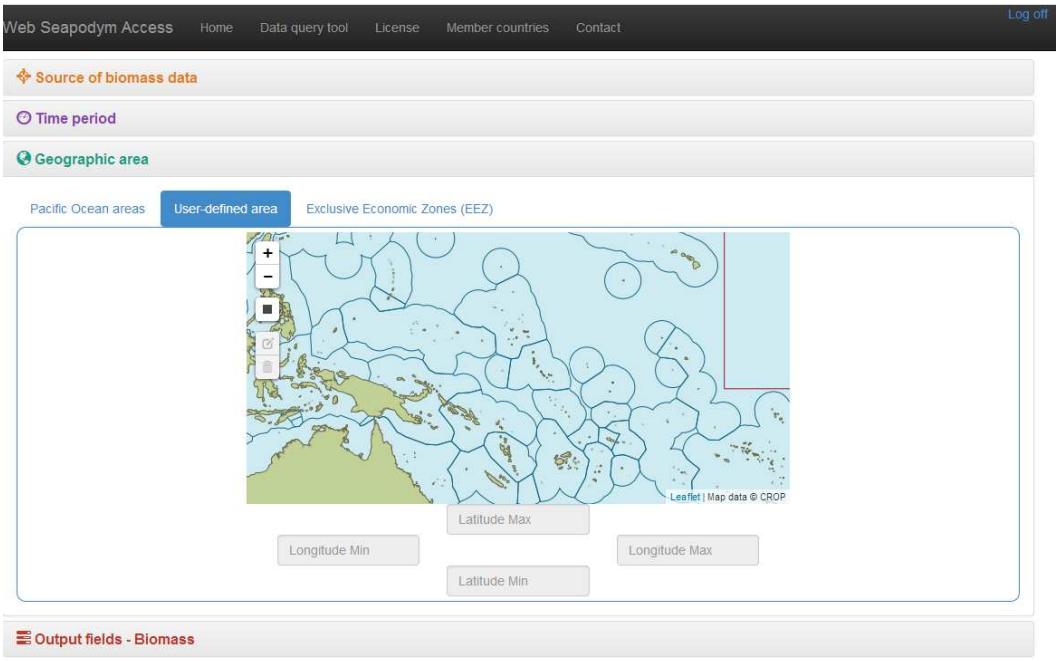
Geographic Area

This menu allows the user to select predefined spatial areas to extract data from or to define their own area. Pre-defined areas include quadrats of the Pacific Ocean, or exclusive economic zones and high seas areas. The user may select one or more area under each of these sub-menus.



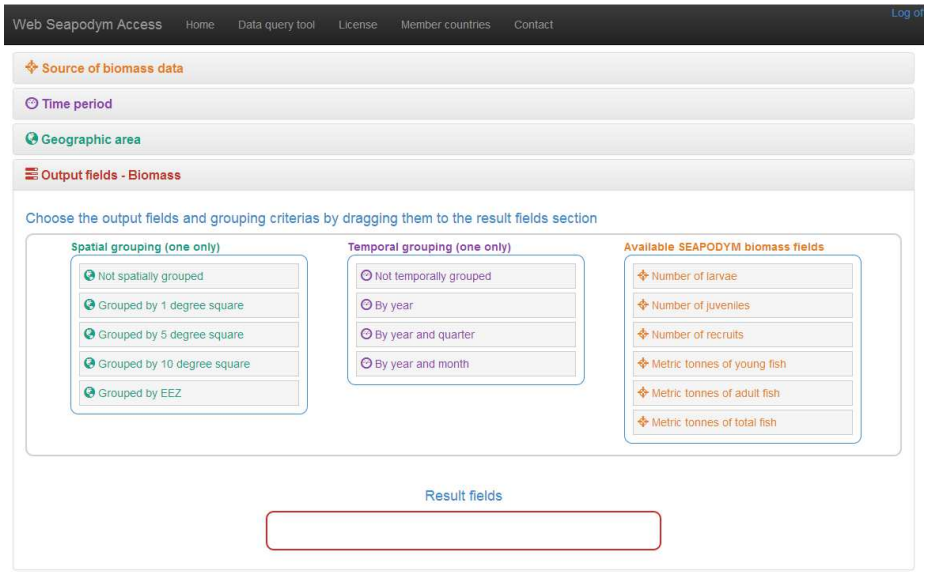


The user-defined sub-menu allows the user to extract from an area they defined. This currently is limited to square shaped extractions. The area can be defined by a graphical interface where the user can draw the square over a map of the Pacific Ocean or can be defined using latitude and longitude coordinates.



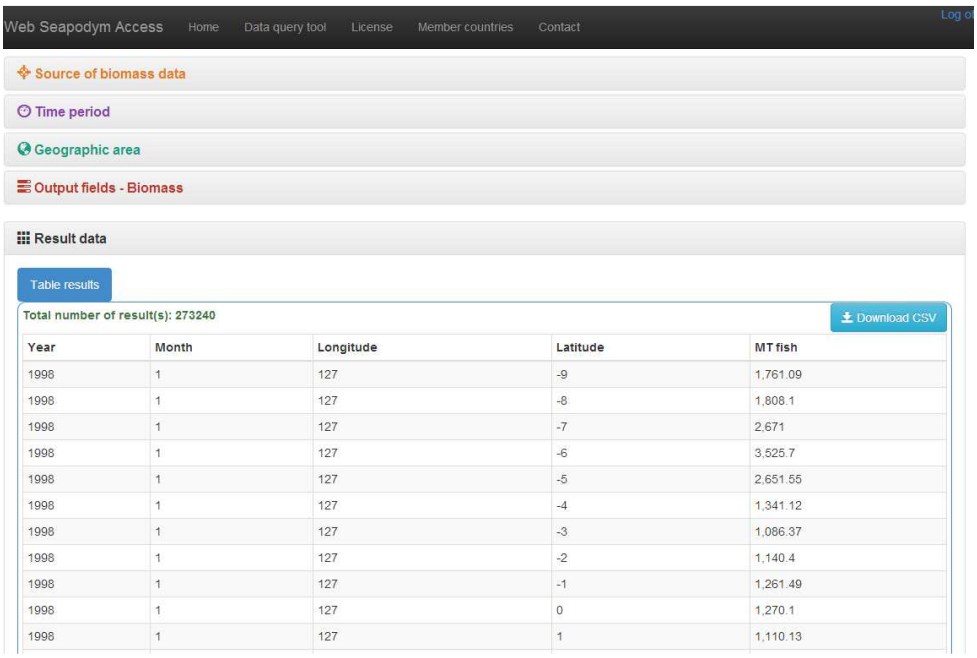
Output Fields

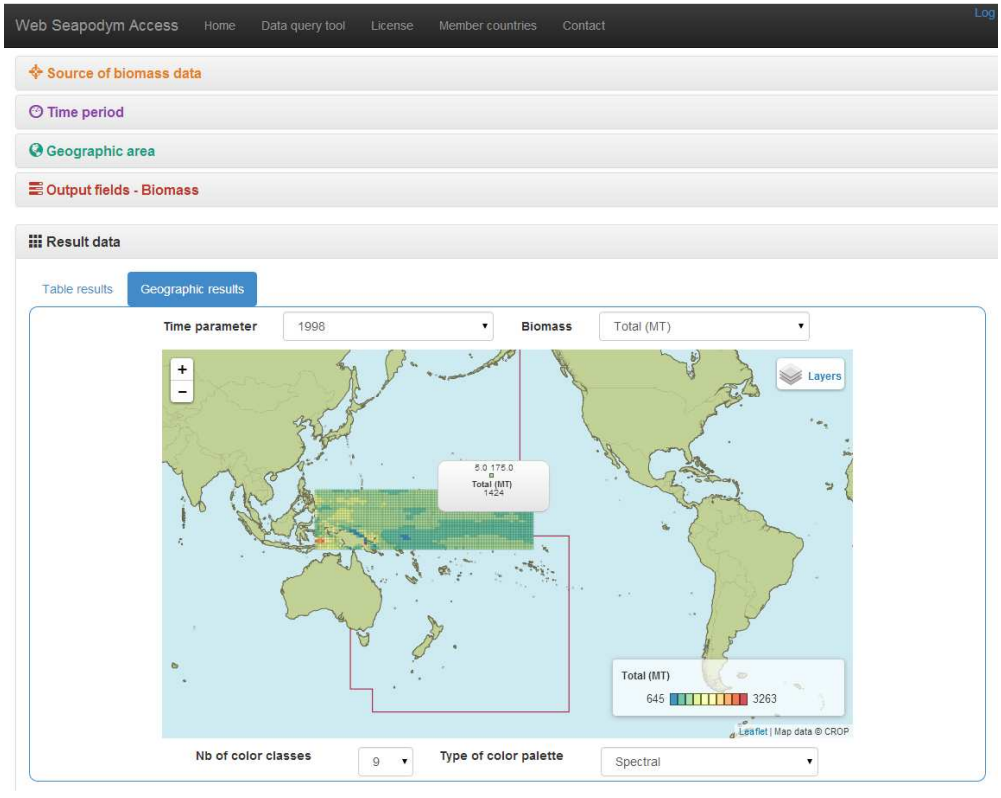
The output fields menu allows the user to specify what information is to be extracted. The first sub-menu allows the user to specify the spatial aggregation wanted (not spatially disaggregated, grouped by 5 degree, 10 degree or EEZ, or by the geographic area), the temporal aggregation wanted (not temporally aggregated, grouped by year, year and quarter or by the entire time period selected), and the SEAPODYM Biomass Fields to be extracted (Larvae, juveniles, recruits, young fish, adult fish, total biomass).



Extraction

Once all options for extraction have been selected the user clicks on the “Process” button and data is extracted from the database. The extraction is then shown visually on the screen. The user then has the option to save this extraction as a csv file or to further visualize the extraction on screen as a heat-map to evaluate how the spatial distribution varies.





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