

## Third SCOR Meeting on Coordination of International Marine Research Projects

### Background Information from the CoML

#### Data Management/Publication Discussion

1. Please present the status of your project in terms of management of data and/or metadata.

The data repository of the CoML is OBIS, the Ocean Biogeographic Information System based at Rutgers University. Each of the projects of the CoML (total of 16 plus OBIS), is constantly updating information in OBIS. FMAP, the Future of Marine Animal Population Project has several sets of global data and metadata and there have been discussions among them and OBIS to incorporate those databases into the system.

2. Is your project keeping track of project cruises and collecting any information about the cruises?

Most of the CoML affiliated projects have cruises (exceptions are NaGISA, POST, HMAP, FMAP). The CoML has kept track of all past cruises which are posted in the web page (<http://db.coml.org/schedule/>) along with a schedule of upcoming activities. Between 2008 and 2010, CoML projects have scheduled between 30 to 50 cruises to the Atlantic, Pacific, Indian, and the Polar Oceans.

<b>Atlantic</b>	<b>Pacific</b>	<b>Indian</b>	<b>Polar Seas</b>
Benguela Azores Mid Atlantic Ridge Mediterranean Sea Arabian Sea Gulf of Mexico Gulf of Guinea Western Europe South Mid Atlantic Ridge NW Africa margin South America North Atlantic Deep Water from off Brazil to eastern basin of the Atlantic	Macquarie Ridge South East Pacific Kuroshio Region: off southern Honshu and off Sanriku Phillipines Western USA Australia New Zealand Chile margin South Pacific Bering Sea Canada Alaska Russia	Indian Ocean SW Indian Ridge	<b>Arctic:</b> Svalbard Shelf Norwegian, Greenland and Barents Seas Canadian Arctic Chukchi Sea Greenland - Uumannaq  <b>Antarctic:</b> Sub-Antarctica Drake Passage Elephant Island Weddell Sea King George Island Bellinghausen

through the Romanche Fracture Zone Porcupine Abyssal Plain Deep-Sea observatory			Sea
---	--	--	-----

3. Are your project cruises included in the POGO research cruise database (see <http://www.pogo-oceancruises.org/cruises/>)?

The CoML Secretariat web page has a direct link to the POGO international ship and cruise database (<http://www.comlsecretariat.org/>). We encourage all projects to enter their cruise information into the POGO cruise database and many are there, though not searchable as “Census of Marine Life” specifically.

4. Has your project discussed and/or encouraged data publication?

Distribution and observation data from CoML projects is accessible freely and openly through OBIS.

The CoML has a bibliography database that provides a comprehensive and platform-independent literature resource of the CoML network science publications (<http://db.coml.org/comlrefbase/>). This database has currently 1446 records, and is being updated on a regular basis.

Currently, there is a general effort towards publishing synthesis products among (cross project synthesis) and within projects. Some of the overall expected outputs of this synthesis initiative are:

- \*Seven Seas, One Ocean: Voyages of Discovery in the Census of Marine Life. A book about the Census of Marine Life (P. Snelgrove)
- \*Increments of Knowledge: Advancing from the Known to the Unknown to the Previously Unknowable (A. McInthyre). Each field project of the CoML with contribute with one chapter of this book
- \*Marine Biodiversity and Biogeography: regional comparisons of global issues (C. Griffith & M. DuRand). Each NRIC will contribute with at least one chapter/article of this compilation (collection of articles in PLoS ONE)

Other synthesis products include collections of papers in specific journals as special issues (mostly within projects), as well as individual submissions to high ranked journals (e.g. Science, Nature).

CoML encourages open access publishing of scientific literature.

## **Education and Capacity Building**

1. What activities, plans, and ideas does your project have in relation to education and capacity building?

An Education & Outreach Team associated with the Census of Marine Life project oversees program-wide education and outreach, communications, and public relations initiatives on behalf of the program. Each of the 17 individual Census projects, and its Affiliated Projects and Regional and National Committees, has identified its own Outreach Liaison who coordinates project-related E&O activities and serves as the conduit for project-based information to the Census of Marine Life program as whole. In terms of capacity building, one of the strengths of the Census of Marine Life is that the program-wide communications activities orchestrated by the E&O Team as well as the Secretariat have fostered the building of lasting partnerships between 2,000 scientists interested in marine biodiversity from more than 80 nations who are involved in Census research activities.

Besides these general initiatives from the E&O group, the projects also have individual education and capacity building initiatives. Some examples of these are NaGISA, ChEss (DESEO program and TAWNI grants). Outreach activities of NaGISA cover public presentations and media coverage, hands-on involvement of local communities in NaGISA field work, training of students, and training of local researchers in countries where scientific knowledge and training is less developed. The TAWNI grant from ChEss is aimed to provide the necessary funds for upcoming investigators (ranging from undergraduates to post doctoral researchers) to visit international laboratories with specific taxonomical expertise, participate in taxonomy workshops or join research cruises involved in deep-sea chemosynthetic biological research. DESEO is the Deep-sea education and outreach group of the CoML, mainly coordinated by the ChEss project. One of their products is the book (Deeper than light) which is available in 5 languages.

All education and outreach activities of the Census of Marine Life are building toward the international release of "Census of Marine Life 2010" in October, 2010 in London. A rollout of products focusing on the synthesis of Census of Marine Life results, including a wide array of scientific papers and essays as well as books, films, exhibits, and other products, will begin to emerge in the Fall of 2009.

2. How are you funding your education and capacity-building activities?

Funding for the Census-wide E&O efforts is supported by infrastructure grants from the primary sponsor of the Census of Marine Life. Project-oriented efforts are supported, in part, by the same infrastructure funding that is successfully used to leverage additional project-focused support for a range of E&O activities.

3. Are you, or would you like to, work with other projects on education and capacity-building activities?

The Census of Marine Life has already worked with a number of other projects and organizations (GEO, POGO, NGOs, scientific organizations and collaborators around the world) on its education and outreach efforts, and intends to continue doing so through the end of 2010.

4. Would you be interested in jointly supporting a Web site that could be used to Webcast project events?

Most probably yes (for the periods 2009 to 2010).

### **Projects and Ocean Observations**

1. Is your project cooperating with any existing time-series sites and/or establishing new ones?

Each of the projects independently is either establishing new time series (e.g. NaGISA worldwide), or cooperating with existing ones. The TOPP and POST projects are producing new time-series on animal migrations. FMAP cooperates with existing time-series by building predictive models. CMarZ partners with the SAHFOS continuous plankton recorder survey.

2. Is your project cooperating with the Global Ocean Observing System?

The CoML's TOPP, POST and affiliated OTN projects are pilot projects of GOOS. CoML works with POGO to actively promote GOOS and ocean observing systems in general, particularly within the Group on Earth Observations (GEO) forum and contributes to the development of GEOSS implementation plans. Our goal is for CoML technologies and OBIS can become ocean biology components of ocean observing systems.

3. Will your project potentially contribute to global assessments, such as next IPCC, the next Millennium Assessment, or the Global Marine Assessment?

The CoML recently reviewed the Assessment of Assessments, a document prepared by the UNEP (UNESCO) (January 2009 by Ron O'Dor et al.). This "Assessment of assessments," which does recognize CoML as a contributor to current assessments, is a valuable document compiled by well respected authorities, which competently indentifies the major sources of information about key issues that are impacting the ocean. Despite not being an updated synthesis of current knowledge, it does effectively identify gaps in knowledge on a global scale in a very broad sense.

While CoML is not an active participant in the development of assessments like that of UNEP, IPCC or the Global Marine Assessment, we hope that our work will contribute to ongoing updates on the state of our knowledge as reported by these organizations.

## **Project Publicity/Visibility**

1. What does your project do in terms of publicizing itself to the scientific community and the public?

CoML-wide education and outreach activities are coordinated by the Census Education and Outreach Team based at the Office of Marine Programs at University of Rhode Island Graduate School of Oceanography. Most Census projects also have their own education and outreach initiatives.

The Census of Marine Life prepares regular Highlights Reports featuring its findings, and maintains two program-wide websites—one for the Secretariat that primarily serves as a communications vehicle for the audience within the Census' scientific community (<http://www.comlsecretariat.org>), and a more public Census of Marine Life web portal that showcases Census results for the broader international public and scientific community (<http://www.coml.org>). Each year the E&O Team works closely with the Census leadership and the individual Census projects to develop three major press releases that are widely reported by the international news media. Individual Census projects produce their own news releases, as well as websites, events, public and scientific lectures, exhibits, arts initiatives, educational activities, and other forms of communication of their scientific efforts to public and scientific audiences.

2. What visibility do you gain from your project's publicity efforts?

At the CoML web page, there is a section on media resources which includes files with short news stories about the activities of CoML projects and researchers, press releases, a section on frequently asked questions, CoML perspectives, news coverage and reports archives, an image and video gallery, artwork inspired by the research of CoML scientists, and maps and diagrams illustrating CoML research and data.

The Census of Marine Life has gained wide visibility for its communications efforts. Its most recent news release focusing on the Census' polar initiatives during the International Polar Year, involving more than 500 scientists from 25 countries, has been picked up by newswires and news organizations in more than 50 countries and reported in more than 20 languages. The story was spread across 19 newswires, 12 broadcast outlets, 74 newspapers and magazines in print, and some 450+ online stories. In addition, through its news releases, Highlights Reports, presentations at scientific and other national and international

meetings, etc., the visibility of the Census of Marine Life as a major marine biodiversity initiative has grown tremendously among public audiences, as well as the global scientific community, since its public launch in 2003.

An example of this is how the traffic through the web page increases after press releases. The CoML web page has had an average daily hit for the last year of about 21,500. After the Polar press release, the page had a peak of 345,000 hits on Monday. From Sunday to Friday after the release, the page had ~760,000 hits, about 7 times above the average traffic. After the highlights release in November 2008, the page had a peak of 1.5 million hits the Monday after the release and about 2.9 million hits from the release through that Friday. That was about 26 times above the average traffic. Traffic remained significantly above average for 2 weeks after the highlights release.

3. Are you, or would you like to, work with other projects on publicity and visibility?

As the Census of Marine Life moves toward October 2010 when the results of this 10-year global initiative will be released, we welcome the opportunity to work with other projects on publicity and visibility.

## **Modelling**

1. Is modelling a component of your project?

Modelling is an important component of the FMAP project. The goal of FMAP is to describe and synthesize globally changing patterns of species abundance, distribution, and diversity across ocean realms, including the modeling of the effects of fishing, climate change and other key variables on those patterns. The major legacies of this project will be to understand past changes and predict future scenarios by providing actual models related to:

- Biodiversity patterns in the ocean
- Animal distribution and movements
- Long-term trends in animal abundance and ocean ecosystems

2. If so, how are modelling, research, and data management linked?

During the synthesis phase of the CoML, FMAP will be working closely with other projects such as NaGISA, TOPP, HMAP and the deep sea projects (in the synthesis of the deep: SynDeep). These projects will provide with data obtained from research (ideally inputted in OBIS) and work with FMAP in the major legacies described above. Also, the FMAP databases will be merged with OBIS (where permissions exist) within a 2009 schedule.

3. Would there be benefit in any cross-project modelling activities or agreements?

Certainly. within the Census projects there are several cross-project synthesis activities taking place, these are:

Global Species Richness  
Polar Biodiversity Macroscope  
New Global Biogeographies  
Predictive relationships between seabed species & environment  
New estimates of Biomass  
Deep Sea Synthesis (SYNDEEP)  
Roles of the Rare  
Nearshore Synthesis Topics: History of the Nearshore & Drivers of Marine Coastal Biodiversity  
Regional Comparisons: Sampling Biodiversity at a Regional Scale  
Marine Predator Traffic  
Animal Size Distribution & Changing  
Range Maps, Complete List of Named Species & Marine Species  
Marine Barcodes & An Updated "Leafy" Evolutionary  
Transparent Ocean, Animals as Ocean Sensors & Integrating Tracking

The CoML supports the idea of cross-projects also outside the CoML, however given the short timeframe to complete current synthesis activities, it is not likely that the CoML will be able to engage in anything new now.

## **Interactions with Intergovernmental Organizations**

1. Do you regularly cooperate with any intergovernmental organizations (e.g., IOC, PICES, ICES, etc.)?

The IOC, ICES and PICES have all been key partners of the CoML. In 2004, the IOC formally endorsed CoML. At this moment, discussions are being held about the possibility of the IOC adopting OBIS as a programme after 2010, when the first Census comes to an end. In June 15-25/2009, during the IOC-UNESCO Executive Council & Assembly (Paris), the long-term sustainability of OBIS under the umbrella of IOC, either as a direct programme of IOC or under the auspices of the IODE, will be discussed. Dr. Edward Vanden Berghe is working on the development of a business plan to illustrate how this relationship could be established.

We are currently working to partner with IUCN and the CBD to highlight the more society-relevant applications of CoML information and to support informed decisions for managing ocean resources, particularly on the high seas and deep-sea.

2. If so, what have been the benefits of such cooperation, as well as the costs?

In the case of ICES and PICES, joint reports and workshops have helped to shape CoML and progress synoptic understanding of the oceans. Endorsement by the IOC has helped raise the visibility and credibility of CoML within member countries.

**Use of Conference Manager System** (SCOR leases this system for use by its projects)

1. Do you use the Conference Manager system to manage your events, and if so, what are its benefits?

No.

2. What would you like to change about Conference Manager?

Not applicable.