INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
(of UNESCO)

IODE Officers Meeting
Oostende, Belgium, 28-30 November 2007

Report of Activities 2007 and
Proposed Work Plan 2008-2009

OCEAN DATA AND INFORMATION NETWORK FOR THE
CARIBBEAN AND SOUTH AMERICA REGIONS

(ODINCARSA)

Submitted by:
Rodney Martínez Güingla
Regional Coordinator
PROGRESS REPORT 2007
OCEAN DATA AND INFORMATION NETWORK FOR THE CARIBBEAN AND SOUTH AMERICA REGIONS (ODINCARSA)
by
Rodney Martínez Güingla
Regional Coordinator for South America and the Caribbean
ODINCARSA (IOC-IODE)

I. THE GOAL OF ODINCARSA

To strengthen Ocean Data and Marine Information Management capacity in the Caribbean and Latin America for the purpose of contributing to Ocean Sciences, Operational Oceanography development and Integrated Coastal management activities at the regional level.

II. OBJECTIVES

- Activate a cooperative network on Ocean Data and Marine Information Management in Latin America and the Caribbean regions.
- Assess the current and potential state of development of national data centers in Latin America and the Caribbean regions.
- Create the means for mutual capacity building in Latin America and the Caribbean.
- Assist in the search for funding to implement the necessary elements to strengthen the current data and information management capacity in the region.

III. SUMMARY OF ODINCARSA ACTIVITIES (March-November 2007)

1. National Ocean Data management in Cuba

From 28-30 March 2007, the first national training workshop on Ocean data management was held in the Oceanology Institute of Cuba. Seven experts participated in the training which included the application of Ocean data View on ocean data bases and information and data management. It is planned to conduct two more National workshops for GEOCUBA on September 2007 and the Fisheries Research Center on October 2007. The objective of he last workshop will be to start the building of a National Ocean collection.

2. ODINCARSA experts attended to the IODE/MarBEF Biodiversity Data Management Course in IOC Project Office in Oostende.

Experts from INVEMAR (Colombia) and Ministry of Agriculture, Forestry and Fisheries (Saint Lucia), attended to the IODE/MarBEF Biodiversity Data Management Course which was held from 19-23 March 2007 in IOC Project Office in Oostende. Trainees will conduct national training in their countries in order to contribute with OBIS and other initiatives in the region.

3. ODINCARSA experts attended to E-Repositories Training course in IOC Project Office in Oostende.

Experts from Baja California University (Mexico), INIDEP (Argentina) and IFOP (Chile) attended to the E-Repositories training workshop which was held from 23-28 April 2007 in IOC Project Office in Oostende. This allowed coordinating the Regional Action Plan for Latin America for the implementation of Ocean Docs in ODINCARSA regions.

4. ODINCARSA experts attended to the Young Scientists Training course in IOC Project Office in Oostende.

Experts from DHN (Venezuela), CCCP (Colombia) and DHN (Peru) participated in the Young Scientists training course which was held from 04-09 June 2007 in IOC Project Office in Oostende. The main objective of the training was to give the

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1 Oceanographer, International Center on Research El Niño (CIIFEN), Guayaquil-Ecuador
r.martinez@odincarsa.net
young scientists working in oceanographic institutions / data centers knowledge on the full process of oceanographic data management starting from the cruise preparation and execution till the final products (maps, transects, time series, etc). The training includes one day expedition on board of Zeeleeuw (VLIZ research vessel).

5. ODINCARSA expert attended to Data buoy Cooperation Panel Panel Training workshop in IOC Project Office in Oostende.

One expert from DHN (Brazil) attended to the DBCP Training course which was held from 11-15 June 2007 in IOC Project Office in Oostende. The Training Course on Buoy Programme Implementation and Data Management was primarily designed for buoy operators and researchers. The curriculum covers the application and management of data from various in situ oceanographic and marine meteorological platforms, and trainers were being drawn from a wide spectrum of the international data buoy community. To maximize the impact and benefit of this course, practical work and assignments were given to participants during the training course.

6. ODINCARSA was invited to the Census of Marine Life International Scientific Committee meeting

The Regional ODINCARSA Coordinator was invited to the Census of Marine Life meeting on June 27 2007 in Quito, Ecuador. During the meeting several relevant issues were discussed, ODINCARSA was identified as a regional partner that could contribute in specific activities such as the promotion and increased contribution to OBIS data base, some possible combined capacity building activities among others.

7. Regional Training Course on E-Repositories for Ocean Docs Latin America

From 20-24 August 2007, a Regional training course on E-repositories was held in facilities of National fisheries Institute in Guayaquil, Ecuador. 16 participants from Chile, Peru, Colombia and Ecuador attended to this workshop. Ms. Patricia Muñoz (IFOP-Chile) and Ms. Andrea Cristiani (IIP-Uruguay) acted as regional trainers. The workshop was supported by IOC through the Flanders Government support, CPPS and FAO. The main outcome of the event was the agreed action plan and the inclusion of 7 new libraries as contributors of Ocean Docs digital repository.

8. Promotion of Ocean Docs in Argentina

Ocean Docs Latin America was been well promoted in several relevant events in Argentina through the participation of Gabriela Silvoni and Guillermina Cosulich (INIDEP). The project was presented during the V Census of Marine Life South American Committee meeting in September 2006. On December 2006 was presented during VI National Congress of Marine Sciences in Madryn Port, Argentina. In the same way, the project was presented to 25 international researchers from Latin America during the annual training course JICA-INIDEP on Evaluation and Monitoring of Fisheries in October 2006.

9. Marine Atlas Project for the Caribbean region

Within the framework of the Caribbean Marine Atlas (CMA) project it is proposed to discover the above mentioned baseline data and to prepare a mapping product that enables the visualization of multiple layers. A secondary objective will be to create a "portal" that makes the data sets for all relevant subject areas available for download (delayed mode data). This project includes a training workshop to be held in IOC Project Office in Oostende and will include to more than 7 Caribbean islands. Ms. Lorna Irniss (CZMU-Barbados) will lead this relevant initiative.

10. Saint Lucia Agricultural Information System Management and Statistical Data Capture Initiative

In Saint Lucia, data capture and utilization activities within the Ministry of Agriculture, Forestry and Fisheries are fragmented and there is limited integration of data from various stakeholders and allied agricultural institutions. Recognizing that the availability of accurate data is an important prerequisite for planning and the decision making processes, the Ministry of Agriculture, Forestry and Fisheries has embarked on a new initiative to develop a data and information management policy and strategy to facilitate efficient management of data within the sector. There are also plans to establish network and infrastructure in support of the development of Saint Lucia Agricultural Resource Information Systems (SLARIS). SLARIS will streamline and rationalize the entire data network and computing infrastructure at the Ministry of Agriculture, Forestry and Fisheries. SLARIS will allow functional mechanisms for data exchange between the Ministry of Agriculture, Forestry and Fisheries and external entities; national, regional and international.
11. Training Courses in Oceanographic Data Management organized by ODINCARSA, contributes to the elaboration of data products in ECUADOR

Based on the knowledge about data analysis tools and access to world data sources, acquired in the oceanographic data management training courses organized by ODINCARSA, researchers from the Oceanographic Institute of the Navy of Ecuador, are performing a monthly and seasonal climatology of oceanographic parameters. For this, was used the data source of the World Ocean Database/05. The processing was performed using the Ocean Data View software, developed, and freely distributed by the Alfred Wegener Institute of Germany. Results of this work are useful to establish monthly and seasonal average patterns of temperature and salinity in the sea surface and in depth and to compare them with actual conditions. The use of the database takes advantage of the big amount of data obtained by oceanographic cruises and other mechanisms during more than 40 years. The information will be available for public dissemination at the beginning of the next year.

12. Reactivation of Colombian Data and Information Center in progress

Thanks to the commitment of Maritime General Affairs Direction (DIMAR), in 2007, it is been forwarded useful activities to reactivate CECOLDO.

a) Augment monitoring network of oceanographic parameters

A total of 5 TRIAXYS directional wave buoys has increased to this network in Colombia; two of these (located in Tumaco and Providencia) had an Acoustic Doppler Current Profilers (ADCP). These measurements, along with those executed in coastal stations, will serve to elaborate the Bulletin of Climatic Alert (BAC), which is produced by the Permanent Commission for the South Pacific (CPPS). In addition, this product will be a contribution to Global Ocean Observing System (GOOS) through GOOS Regional Alliance for South Pacific (GRASP), and will be part of the data repository of CECOLDO and the information service in real time that will be available in their web site.

b) Commitment with Capacitation

DIMAR-CCCP participated in the curse “Young Scientist Data Management” offered by IODE Belgium bureau. As a result, two courses were offered in Tumaco, with 18 participants, to promote the development of scientific marine investigation in Colombia and socialize methodologies for oceanographic data management dispense by IODE.

c) Historic recuperation of metadata.

With the participation of the Escuela de Historia de la Universidad Industrial de Santander (UIS), started the project of archeology and historic information recovery of oceanographic data, collected in the Colombian Pacific during the period 1972-2004. The initiative will allow the historic reconstruction of CECOLDO and the characterization of metadata from marine profiles based on the standard of geographic metadata ISO-19115:2003, which is currently in the Colombian Marine Information Central (CENIMARC).

13. Argentina launched an initiative for capacity building and dissemination.

The Naval Hidrography Service of Argentina (NHS) launched on March 2007 the initiative “Agro Colegios”, as part of the permanent commitment with the current and next generations and to increase the visibility of the Argo Program, also, to promote environmental conscience and to reinforce the skills of people, institutions and organizations to use science to identify and solve problems.

This effort, designed especially to high schools, includes to provide data, information and software of data management to teachers and students to access, process and to analyze data collected by profilers buoys of Argo, allowing schools that participate to design, and develop their own science projects, giving invaluable material as a contribution to solve problems as climate variability, climatic change, among others. To clarify the established goals, the NHS facilitates guidance and support through its Oceanographic Department and the Argentine Centre of Oceanographic Data (CEADO).

The initiative includes the possibility to support profilers buoys of the Argo-Argentina Program. Several schools have adopted a buoy, they monitored it periodically as it is executing projects which includes the combined use of data of Argo profilers, superficial drifter buoys and satellite images.
14. **Activities from the National Centre of Oceanographic Data (CENDOC) in support of Marine Sciences in Venezuela**

The National Centre of Oceanographic Data (CENDOC) is the national service to generate, collect, store and disseminate oceanographic data in the country. According to international agreements, works in the Hydrography and Navigation Affairs (DHN) because they have a logistic and operative platform for that. CENDOC counts with a satisfactory historic data base of the Oceanographic Interest Area of Venezuela, including data of constant uptades from national and international institutions. Among their functions, CENDOC centralizes all the national oceanographic information; search out process, store and disseminate oceanographic data and carry out an updated inventory of the received and generated data; take in the data exchange between the national institutions with establishments from other countries. Count with CENDOC allows easy, quick, simple and guarantee data access which have previous quality control filters.

Right now CENDOC is working actively in programs of oceanographic data exchange following directions of IODE program through ODINCARSA. For this, there is necessary a variety of softwares as Ocean Data View, Ocean Sneaker, Data Thief, Arcinfo, SAGA and Oracle, among others.

DHN is developing a Caribbean Oceanographic Monitoring System and the Fachada Atlantica Venezolana, with the intention of installing a network of met-ocean buoys and make operational oceanography for the construction of time serials. A web site will be available very soon to access the information of the data base. For the consolidation of CENDOC is necessary the support and participation of all the institutions that executes marine investigations in the country, so they can help to build, with their experience and knowledge, the basis of oceanographic data of Venezuela.

15. **Cuba activities related to Data Management and Marine Information.**

- **January 2006** - Multiplier effect of the curse of Belgium in the Centre of Fishery Investigations.
- **July 5th 2006** - Participation in the II Workshop of Data Bases and Monitoring System with the conference: “Information management and oceanographic data base with Ocean Data View (ODV)
- **March 7th 2007** – Participation in the event Fishery 2007 as rapporteur with the work: Changes in Thermocline associated to process of water sinking during april 2005, in the southwestern of Cuba. His work was made as an application of the new technology learned during the curse, which permitted access to the region data, extracted form the World Ocean Data Base, and also its processing, analysis and comparison with data of recent works.
- **March 28th to 30th, 2007** – 1st Theoric-practice curse of: “Information Management and Oceanographic Data Bases with Ocean Data View (ODV)” held in the Oceanology Institute (IoD) of Cuba. This curse was the first approximation to subsequent replications we intend to make. (7 participants).
- **The curse Combined Modeling and Data Management has not been possible to repeat in Cuba, specially because infrastructure and System problems. It may be offer next year.**
- **Curse: “2nd Curse of Information Management and Oceanographic Data Bases with Ocean Data View (ODV)” in the conference classroom of the Enterprise GEOCUBA and the section of Marine Studies of the Hydrographic Service held in Cuba, september 24 to 28, 2007. This curse trained 10 assistants (Specialists from the department of Oceanography and the Data Centre of the institution and of CIP).**
- **Curse: “3rd Curse of Information Management and Oceanographic Data Bases with Ocean Data View (ODV)” in the conference classroom of the Fishery Investigation Centre (CIP) of the Fishery Ministry of Cuba (MIP) held in Cuba in october 8 to 19, 2007. This curse had 15 assistants (national training with specialist from all over the country).**

**Marine information Management**

Cuban libraries and marine information centres had reinforce alliances this year. It was celebrated a meeting in the Library of the Centre of Fishery Investigations in april where were taken important agreements for future works and which will be also our priorities. This meeting counted with delegates specialist from the Fishery
Investigation Centre, Marine Investigation Centre, Oceanology Institute, National Aquarium and Environment Agency of the Science, Technology and Environment Minister of Cuba.

Among the points is the repository of documents and its contribution to Ocean Docs where the Fishery Investigation Centre will begin with this work. Nowadays this centre has entered thesis projects and is working in other types of documents.


By: Guillermina Cosulich (Regional Coordinator; INIDEP, Argentina)

Keeping track of the professional, training and promotion activities of each Latin IAMSLIC member participating from September 2006 to September 2007, whether involved with OceanDocs Repository, ASFIS Information System, ODINCARSAs projects, or IAMSLIC itself, at local regional or international levels.

2007 January-September

ARGENTINA: March 30. At INIDEP, Mar del Plata, the institution librarians made an oral presentation to own scientists and city librarians – Open Access Repositories: an opportunity for the national marine scientific production–

OCEANDOCS: April Training of Trainers, at Ostend, Belgium, organized by ODINCARSA- COI http://www.odincarsa.org. Trainees of Latin America were Catalina López (Mexico), Gabriela Silvoni (Argentina) and Patricia Muñoz (Chile)

BRASIL: April 15-19. 12° Latin American Marine Science Congress in Florianopolis, http://www.colacmar.com the most important regional meeting for marine scientists held every 2 years. Guillermina Cosulich participated with an oral presentation in a panel on –Challenges to publish marine science educational books in Latin America–, and with a Stand in the Conventions Exhibition Hall, named as ‘Latin American Marine Libraries’. Scientists were contacted, a directory of Brazilian libraries was updated, and material was distributed.

CHILE: May. Formal meeting with an oral presentation -The OceanDocs Project. A digital repository for Latin America-, addressed to the Rector of the Pontificia Universidad Católica de Valparaiso, the Dean and authorities of the Marine Sciences School. By Patricia Muñoz, Coordinator OceanDocs South America.

CUBA: June 7th. Letter of Agreement signed in La Habana, on the Cuban Librarians Day, ensuring future common activities and commitments on Marine Information Management, among librarians of marine institutions at the Acuario Nacional de Cuba.

COLOMBIA: August 29-31, International Congress on Specialized Science and Technology Networks and Information Units, in Bogotá. Teresa Barriga (CICIMAR, IPN, Mx), participated with an oral presentation on –Digital Library on Marine Sciences and related subjects postgraduate Thesis: The case of the Reuben Lasker Library of CICIMAR-IPN. IAMSLIC and other marine resources were promoted at the Congress distributing posters and leaflets.

ASFA: October 3-7, in Mombasa, Kenya,. The IAMSLIC Latin American Regional Coordinator, Guillermina Cosulich was the only invited Latin American participant. http://www.fao.org/fi/website/FIRetrieveAction.do?dom=topic&fid=12300

ASFA: August 27-31, Latin Training Course, in Guayaquil, Ecuador, at the INP, National Fisheries Research Institute, Marco Montes (UNAM, México) was the trainer and participants were Victoria Plaza, Carmen Mosquera, Fátima Canales and Josefa Manrique (ESPOL, Ecuador); Emira Antonietti and Margarita Portal (IMARPE, Perú), Alicia Alvarez and
IV. OCEAN DATA SERVICES, PRODUCTS AND ONGOING PROJECTS

1. Regional cruises Data Base on line

With the support of the IODE Project Office the Regional Cruises Data Base from South Eastern Pacific was implemented on line. Data base is available on: http://w2.vliz.be/vmdcdata/cpps

This Data base is a coordinated effort between CPPS and Oceanographic institutions from Colombia, Ecuador, Peru and Chile.

2. IODE Project Office is hosting GRASP web site

With the support of IODE Project Office, the web site of the GOOS Regional Alliance for South Eastern Pacific is being hosted. GRASP web site will be available shortly on: http://www.goos-grasp.org/

V. LINKAGES WITH OTHER PROGRAMS AND NETWORKING

1. ODINCARSA involved in the SPIN CAM Project

During this year the proposal of the Project entitled: “South Eastern Pacific Data and Information network in support of Integrated Coastal Areas Management” was prepared. ODINCARSA was involved in the preparation of the document. This project has been submitted to the European Union and ODINCARSA is involved in the project. Approval of the project is pendent.

VI. Degree of implementation of ODINCARSA in you region and the faced problems

The Action Plan for ODINCARSA during its planning meeting in 2001 is indicated below. Accomplished objectives are marked in yellow. Partially accomplished are marked in green and pendent activities are in white.

1. INSTITUTIONAL

<table>
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<tr>
<th>ACTIVITY</th>
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<tr>
<td>Nomination of IODE National coordinators</td>
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<td>Advisory missions to assist with the establishment of data and information centres</td>
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<tr>
<td>Designation of NODC or DNA</td>
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<td>Establishing of national coordination groups</td>
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2. CAPACITY BUILDING - HUMAN RESOURCES

| First ODINCARSA data management training course |
| Second ODINCARSA data management training course |
| First ODINCARSA information management training course |
| IODE/GOOS ODINCARSA operational data management training course |

3. INFRAESTRUCTURE SUPPORT

| Equipment provision (Assessment) |
| Equipment provision |
| Software provision (Assessment) |
| Software provision |

4. PRODUCTS AND SERVICES DEVELOPMENT

| Development of ODINCARSA regional metadata catalogue |
| Development of ODINCARSA regional Directory of Marine Professionals and Institutions |
| Development of ODINCARSA regional GODAR project |
| Development of ODINCARSA regional Ocean database |
| Development of ODINCARSA regional Union Catalogue of Ocean Library Holdings (assessment and feasibility study) |
| Development of ODINCARSA regional Union Catalogue of Ocean Library Holdings |
| Development of ODINCARSA Regional Ocean Portal |

5. SUB-REGIONAL PROJECTS

| Drafting climatology for the Southeastern Pacific project |
| Demonstrational project on operational Oceanography |

6. LINKAGES WITH OTHER PROGRAMMES

| Linkage with IAMSLIC to establish ILL services |
| Linkage with other IOC programs |

Considering the original ODINCARSA Action Plan and the developed activities during these 6 years is concluded, that ODINCARSA activities in some components overpass the initial goals and generate direct impacts in NODCs and Information Centers at least in 7 countries from South America (Colombia, Ecuador, Peru, Chile, Argentina, Brazil and Venezuela, 5 from the Caribbean (Cuba, Mexico, Barbados, Trinidad and Tobago and Saint Lucia), which represents 12 from 19 original member countries or 63% of members.

The rest of Member countries had limited contact with the project and were inactive most of the time, which complicates the national implementation. In most of the cases there were no interest in
Training courses application and in few cases such as Haiti, applications were not made in accordance to the requirements especially related with the profile of candidate and Institution where the knowledge could be applied.

Although in some cases no nominations were received formally by IODE, 12 aforementioned countries have kept active contacts on data management and/or marine information management. One of the main problems for the network has been the change or rotation or personal in the NODCs and Marine Libraries, however this has been well managed intending to preserve continuity.

Another permanent problem has been the full dependence of IOC regular budget for ODINCARSA. We have had the support of Member countries for some activities, but it has not been enough for implementation of subregional projects.

XII. CONCLUSIONS

It is time to stop and make a reflection of further steps for ODINCARSA, review new expectations and needs of Active Member Countries which could be related with sub regional implementations such as Ocean Modeling, Subregional Ocean data bases or Atlases, Data assimilation for Operational Oceanography, Data products for ICAM, Biodiversity data bases, Marine environmental data bases, Ocean data applications for Disaster reduction and Climate change adaptation processes.

ODINCARSA has not been able to raise additional funds for implementation, therefore the future strategy to get financial resources would be based on concrete applications of ocean data and marine information for societal benefits with political relevance.

XIII. RECOMMENDATIONS

1) The next phase of ODINCARSA in Latin America should have two main outcomes:

   a) The consolidation of a regional network on Marine information that provides permanent and valuable services to a wide community and
   b) The provision of data and information services to the Ocean Forecast, Marine Environment Monitoring, Biodiversity, Operational Oceanography, Climate Change Adaptation (sea level increment and marine ecosystems alterations), Coastal Management Programs and Disaster Reduction in the regions.

2) To have a Review and Planning meeting for ODINCARSA.
3) To link ODINCARSA with SPIN-CAM at operational level.
4) To submit a Small project proposal complementary for SPIN-CAM for ODINCARSA.

XIV. WORK PLAN 2008-2009 AND BUDGET

The Work Plan 2008 and the estimated budget is included as Annex 1.
1) Project current situation summary

ODINCARSA Action Plan has been fairly accomplished in South America region. The network has become robust, consistent and this is reflected in the progress of each NODCs in ODINCARSA member countries. Data and Information services are in a permanent process of improvement. Liaison with GRAs and upcoming ICAM initiatives has been built and consolidated especially in Western South America in close coordination with other Governmental organizations. Along Latin America which includes some Caribbean Islands, Central America and South America, the achievements on marine information management has been conducted by the Latin American Group. This network has been able to provide new products and services that are continuously improving and increasing. The group is now working on the Latin America sub set of Ocean Docs Project and has fostered all the Marine Information in this sub region.

2) Specific Objectives (2008-2009)

2.1 To contribute with GRAs on the development of data and information products and services.
2.2 To contribute on the implementation of SPIN-CAM Project
2.3 To implement Ocean Docs Project
2.4 To implement subregional specific projects

3) Deliverables

- Development of a Regional Ocean Data Base by each subregion (Pacific and Atlantic).
- Development of the Information System component of the SPIN-CAM Project.
- E-repository Ocean Docs on line.
- Subregional projects implemented
- 15 IAMSLIC memberships for Caribbean and Latin America libraries
- 2 Digital ODINCARSA Newsletters in English and Spanish
- ODINCARSA web site updated.
## 4) PROPOSED BUDGET (2008)

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