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INCOFISH Progress Report for December 2006

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Coordinator's Report (by Rainer Froese)

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-- I participated in the 2006 Pew Fellows meeting in Punta Cana, Dominican Republic. As usual, this was a fountain of new ideas, new contacts, and follow-up on existing contacts. Several ideas for INCOFISH emerged and were forwarded to the respective WP leaders.

-- An NGO in South Africa is working on a Seafood Guide through SMS. Lotta is exploring whether this is something that FishBase/INCOFISH could offer on a global basis, based on our current Internet version, see <http://fishbase.sinica.edu.tw/tools/SeaFoodGuide/search.php>. Preliminary result indicate that an Internet version customized for small screens will be easier to implement. Sven Mohr is working on that.

-- We already have AquaMaps for 518 of 776 marine fish species with FAO catch data. Kathy is completing data for the remaining ones. We will then electronically match our maps against SeaAroundUs maps and check out all maps where the number of non-matching half-degree cells is, e.g., > 10%. I have also seen the second draft of a global fish species richness map across over 4,000 species. It already shows the expected features, but needs some more fiddling (better color grading) before I want to share it. After all, we want this to be correct AND beautiful.

-- The European agriculture ministers had their annual meeting about the setting and distributing of quotas for the dwindling European fish stocks. As usual, they ignored scientific advice, setting quotas far above of what stocks can sustain in their current state. I gave numerous interviews to German media (ZDF Magazin, NDR Welle Nord, NDR Logo Science Magazin, dpa (picked up in 59 newspapers), 1-hour live discussion on BRadio, HR1, MDR Info, taz, Süddeutsche, NDR Schleswig-Holstein TV, ddp, etc) about overfishing in Europe. By just repeating ICES statements in understandable wording and context I advanced to be called 'the sharpest critic of EU fisheries.'

-- We prepared a first outline for a follow-up proposal to INCOFISH. The call is out and a proposal has to be submitted by the 2nd of May 2007. We have hired Bernd Uberschär to manage the process of proposal development. This call is narrower and more Europe-centric than INCOFISH, so not all current INCOFISH members can be accommodated in the proposal.

-- I supported Hans Fricke in preparing a proposal to Deutsche Forschungs Gemeinschaft (DFG) for further exploration of the development of the Latimeria population (coelacanths, about 300 individuals) off the Comoros. I stressed the need for proper length measurements for population dynamics, which will be done with cameras with lasers. Also, we will analyze otoliths with modern isotope techniques available in Kiel. This will be fun.

-- As usual, I assisted Silvia in managing the overall project. Our main goal for the past few months was obtaining the second financial contribution from the EC, which was finally released in late December but did not arrive in Kiel until early January.

Project Support Team (by Silvia Opitz)

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Silvia

- Collated and distributed the progress report for November 06.
- Finalized 2<sup>nd</sup> semi-annual activity report and forwarded it to Francisca van Cauwenberghe, our previous scientific officer in Brussels.
- Participated in 2<sup>nd</sup> workshop of WP 9 at Charles Darwin Station in Galapagos.
- Finalized documentation process requested by the European Commission prior to transfer of 2<sup>nd</sup> pre-payment.
- Advised INCOFISH participants on project matters and in close contact with European Commission representatives.

Sven

- Setup of FishBase on our FreeBSD server.
- Development of a PDA interface for the Sea Food Guide.
- Uploaded files to the IncoFish site.
- Updated the IncoFish tables.
- Backup of server logs ( 2006 )
- Developing the ByCatch Utility
- Created web statistics

Cris

Is still on home leave in the Philippines and will be back at work on 22 January, 2007.

WP 1 Data, Tools and Outreach (November and December 2006, by Lotta Jarnmark)

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## **November**

### *Project development/Outreach:*

Attended and prepared documentation/notes on the Information Strategy Talk for FishBase 30000 species event. Summarized notes on the FishBase Services discussion. Met on how to pursue on the FishBase Service Webpage task (J.Glorioso).

Prepared 2<sup>nd</sup> Semiannual Activity Report. Conducted Information Strategy Talk for FishBase 30 000 species event with FishBase staff. Demonstrated the Fishsize buying guide to information manager Ascuzena of Conservation International (CI) for their Sulu Sulawesi project (C.Jarnmark).

### *IncoFish portal development:*

Developed a flash movie file on global warming for uploading on the INCOFISH website. The said flash file contains 9 photos and text/caption for each photo, a copy is saved locally at: file://\Fb\_server\fbdir\Team Members Directories\JGlorioso\INCOFISH PORTAL, filename is 'global\_warming.swf'. (J.Glorioso)

Entered 77 records to International Seafood guide (ISFG) (C.Jarnmark):

<http://www.incofish.org/Results/Foodadv.php>

Created upload folders and login for 10 WP pages (C.Elloran):

<http://www.incofish.org/Workpackages/WP1/WP1Login.php>

<http://www.incofish.org/Workpackages/Wp2/WP2Login.php> (Receiving datasets and search engine development).

<http://www.incofish.org/Workpackages/Wp3/WP3Login.php>

<http://www.incofish.org/Workpackages/Wp4/WP4Login.php>

<http://www.incofish.org/Workpackages/Wp5/WP5Login.php>

<http://www.incofish.org/Workpackages/WP6/WP6Login.php>  
<http://www.incofish.org/Workpackages/WP7/WP7Login.php>  
<http://www.incofish.org/Workpackages/WP8/WP8Login.php>  
<http://www.incofish.org/Workpackages/WP9/WP9Login.php>  
<http://www.incofish.org/Workpackages/WP10/WP10Login.php>

Uploaded video from launch of Coastal Transects Analysis Model at Conference in Bataan, Indonesia: <http://www.incofish.org/Workpackages/WP6/CTAMVideo.php>

Revised content and structure of WP pages (C.Jarnmark):

<http://www.incofish.org/Workpackages/WP2/WP2Downloads.php>  
<http://www.incofish.org/Workpackages/WP3/WP3Downloads.php>  
<http://www.incofish.org/Workpackages/WP4/WP4Downloads.php>  
<http://www.incofish.org/Workpackages/WP5/WP5Downloads.php>  
<http://www.incofish.org/Workpackages/WP6/WP6Downloads.php>  
<http://www.incofish.org/Workpackages/WP8/WP8Downloads.php>  
<http://www.incofish.org/Workpackages/WP9/WP9Downloads.php>  
<http://www.incofish.org/Workpackages/WP10/WP10Downloads.php>

Uploaded and revised related pages and files for WP 7 in conjunction with workshop WS7.2 (C.Jarnmark): <http://www.incofish.org/Workpackages/WP7/WP7Downloads.php>

Developed and implemented the FishSize buying guide in collaboration with Amanda of WP7 (C.Elloran and J.Rius): <http://www.incofish.org/Workpackages/WP7/Fishguide.php>

Implemented a bycatch table after and idea from Amanda of WP7 (C.Elloran and J.Rius):  
<http://www.incofish.org/Workpackages/WP7/ByCatch.php>

#### *Portal **Statistics:***

Unique visitors 1715, number of visits 3339, pages visited 12347, hits 46544, downloads 3.23 GB

## **December**

### *Project development/Outreach:*

Participated in workshop WS7.2 of WP7 in Lima, Peru. Prepared Workshop page with trip report (C.Jarnmark): <http://www.incofish.org/Workpackages/WP7/WS7.2.php>.

Assisted in translation of promotion and fact text for the Fishruler of Senegal (C.Jarnmark, D. Palomares, F. Busson).

Conducted a demonstration of the Fishsize buying guide for FishBase staff feedback (C.Jarnmark, C. Elloran).

Investigated possible cooperation on sms development for the International Seafood guide (ISFG) with Tony Seebregts, developer for SASSI project of WWF South Africa. Outcome is that international sms network are time-, resource- and effort demanding to develop, hence pursue of the idea to develop selected WAP pages will continue instead.

### *IncoFish portal **development:***

December Improvements on pages content and structure on all WP pages (40) (Lotta).

<http://www.incofish.org/Workpackages/WP1/WP1Downloads.php>

Finalized the uploading of WP4 models and Ecopath models as well as preparing and drawing 20 complete Ecopath flow diagrams (Lei).

Ecopath collection of models:

<http://www.incofish.org/WorkPackages/WP4/EcopathCollection.php>

WP4 models:

<http://www.incofish.org/WorkPackages/WP4/ModelsWP4.php>

CRIA: In the beginning of January openModeller Desktop version 1.0.3. was released, the software can be downloaded directly from:

[http://sourceforge.net/project/showfiles.php?group\\_id=101808&package\\_id=142057&release\\_id=475226](http://sourceforge.net/project/showfiles.php?group_id=101808&package_id=142057&release_id=475226)

Aquamaps wasn't included yet, as CRIA is waiting for WP3 evaluation.

openModeller Desktop application: Bug found in 1.0.3 is now fixed. Updated the website with the fixed version (1.0.4). This is available at (T. Sutton, R. De Giovanni):

[http://sourceforge.net/project/showfiles.php?group\\_id=101808](http://sourceforge.net/project/showfiles.php?group_id=101808)

*Portal statistics:*

Unique visitors 2,074, Number of visits 4,701, pages visited 21,838, hits 55,515, downloads 4.91 GB.

More on portal statistics at <http://filaman.ifm-geomar.de/awstats/awstats.pl?config=incofish.org>.

WP 2 Shifting Baselines (by David Starkey/John Nicholls)

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*Research*

*Research continues as in previous months with efforts being directed primarily at final data submissions, and the scientific/historical papers and related efforts that will accompany the data.*

RUC's two completed data submissions on the Limfjord Fisheries, 1859-79 and 1890-1925 are being formatted for inclusion in the WP2 dataset database. The collection and collation of data on 19th century oyster fisheries in the Limfjord is ongoing.

MEI's work on the Pärnu city customs books in the Estonian Historical Archives (1764-1782) is being prepared for submission and publication. The original manuscript has been translated from Estonian into English with proof reading carried out by Workpackage partners at UHULL. Henn Ojaveer participated in the WP7 workshop 2 meeting in Lima, Peru where he presented ways and ideas on possibilities of cooperation between WP 2 and WP7. He continued two manuscript writings (to be submitted to Fisheries Research in January 2007) titled:

Ojaveer, H., Awebro, K., Karlsdóttir, H.M., and MacKenzie B.R. Swedish Baltic Sea fisheries during c. 1870-1913: spatio-temporal dynamics of catch and fishing effort.

MacKenzie, B.R., Bager, M., Ojaveer, H., Awebro, K. Heino, U., Holm, P. and Must, A. Multi-decadal Scale Variability in the Eastern Baltic Cod Fishery 1550-1860 ? Evidence and Causes.

CDF's data and metadata for their second submission is progressing with cooperation from the Data Management team. The first dataset is under final review for inclusion in the WP2 database, and is being compiled for and is expected to be available with the initial roll-out of the WP2 online Toolset. Specific Data Security issues are being considered with the active cooperation of the WP1 and WP2 teams.

IMARPE, as reported before, has produced oral presentations and publications for the International Humboldt Conference (27 Nov-1 Dec), based on the time series compiled for WP 2.

From initial reports, the Conference was a resounding success for IMARPE and a full report will follow shortly.

IMARPE participated in the International Humboldt Conference regarding "The Humboldt Current System; Climate, ocean dynamics, ecosystem processes, and fisheries" from 27 November to 1 December 2006 in Lima, Peru. Michael Ballón presented a paper titled: "Trend in relative investment of energy in growth and/or reproduction by Peruvian hake from 1972-2004: an issue of length dependence." Claudia Wosnitza-Mendo presented a paper titled: "Changes in the distribution area of Peruvian hake: effect of fisheries." The papers are now being prepared for publication and are to be submitted to "Progress in Oceanography".

UNIABDN are continuing their update of their literature review and production of a report on the fisheries of the West Coast of Scotland. They are also continuing their efforts in gathering data for an upcoming paper on fisheries of the West Coast of Scotland.

UNAL's qualitative element of their study continues with a current emphasis on interviewing fishermen in the central and southern parts of the Caribbean coast. Work has been progressed in this regard and a full report will follow shortly.

#### *Data management*

The data management process is proceeding according to schedule. In cooperation with WP1, the online Toolset is being developed and should be available in beta phase by late February 2007. Datasets are being compiled into MySQL format to be employed directly by the WP1 development team.

As indicated in the MEI report, WP2 was represented at the WP7 Workshop in Lima, Peru, by Henn Ojaveer. He presented a report on WP2 activities, specifically including Data Management, and received very positive feedback. Following his report, closer cooperation between WP2 and WP7 has been initiated regarding the sharing of data series. A full report of the WP7 Workshop is available on the INCOFISH portal.

#### WP 3 Biodiversity Mapping (by Jonathan Ready)

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NRM - Processing seasonal datasets. Continued co-ordination of WP3 meeting linked with next AquaMaps meeting in La Paz, Mexico for March 2007. Testing and development of models and options in desktop AquaMaps. Helping obtain CSIRO survey data for validation analysis of models (confirming suitable species).

CDF - Continued obtaining occurrence and environmental data for smaller scale niche modelling.

CEFAS - liaising with CSIRO over fisheries trawl data for use in validating AquaMaps (obtaining data in correct format with absence data included).

DINARA - Delivered a report summarising all occurrence and environmental data collected and submitted to date.

KESCOM - Continued accumulation of occurrence data from fisheries and sea cucumber surveys.

## WP 4 Ecosystem Modelling (by Paco Arreguin-Sanchez)

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### *Deliverable 4.2*

Three models from Southern Brazil Bight (USP), Humboldt current (UNI Concepción) and Northern and Central Gulf of California (CICIMAR) were sent to WP1 to be uploaded at the Incofish portal.

The model of the Mexican Gulf of Mexico (CICIMAR) is almost ready and will be send within before mid January. The model for the Moray system (by UNIABDN) is expected to be completed but no date to be made available for uploading process has been defined.

### *Modelling process*

Partners continue working with models towards dynamic simulations. Models consistence is reviewed, as well as calibration of time series and forcing functions considered.

UNIPAD: Activity of LASA, in collaboration with colleagues of the dept. of Biology of the University of Padua, was focused on fine tuning the ECOPATH network for the Northern Adriatic Sea, and on the analysis of the results of the model, in terms of ecosystem structure and functioning. The aim was to draw preliminary conclusions on the structure and peculiar characters of the network for the Northern Adriatic Sea.

LASA has contracted M.Sc. Alberto Barausse, an Environmental Engineer with solid experience in trophic network modelling, in order to continue the research work in the context of INCOFISH, in particular for the extension of the network to the ecosim and ecospace models.

CRODT: In December 2006 B. Samb participated in the Humboldt Conference at Lima. Partner is preparing a one month (12 february 12 march) stay at Vancouver in order to work on the calibration of the Senegambian ecosystem model with senegalese fisheries times series.

CICIMAR: Continues with conclusion of the Gulf of Mexico model as part of deliverable 4.2.

A new model on La Paz Bay has been developed offering an excellent opportunity to apply experience gained in the project to advice government on the development of a potential new trawl-shrimp fishery using ecosystem modeling to prevent ecosystem impacts. Model will also be sent to WP1 to be uploaded on the Incofish portal.

### *Advances on Deliverables*

Deliverables D4.1 and D4.2 have been finalized (with the exception of the UNIABDN model mentioned above). The group is now focusing on Deliverables D4.3 and D4.4.

### *Papers submitted*

A manuscript about the community structure and network analysis in an exploited coastal marine area off central Chile is ready to be submitted to an ISI journal:

Giacaman J., S. Neira and H. Arancibia. Community structure and network analysis in an exploited coastal marine area off central Chile.

## WP 5 Marine Protected Areas (by Nick Polunin and Will Le Quesne)

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UNEW: Will Le Quesne was on paternity leave for early December.

Continued working on the generic diffusion dispersal model of the effects of MPAs.

Began preliminary preparations for the joint WP4-WP5 Ecospace workshop to be held in conjunction with the Incofish mid-term meeting in La Paz.

Commenced a review of movement and dispersal in marine organisms to provide a table of general movement values to aid development of the ecospace models where no specific data is available.

Worked on a paper lead by ECNU on trophic relationships in the East China Sea in conjunction with other Incofish partners.

NIES: Some spatial information about the ECS such as topographical characteristics, sediment, water temperature, salinity and primary production have been collected as preparation for the ECS Ecosim and Ecospace modeling, in cooperation with East China Normal University.

The paper manuscript entitled "STUDY ON FISHERY IMPACT BY TROPHIC STRUCTURE AND FLOWS ANALYSIS IN THE EAST CHINA SEA" had been prepared and submitted to an international journal, in cooperation with ECNU, CICIMAR and UNEW.

CICIMAR: Has been working on some spatial aspects of Campeche Bank, particularly on spatial aspects of the red grouper fishery. Some results have been obtained which must be reported as work developed jointly with WP4. Specific results on catchability distribution (a paper was submitted) are available and another paper on the distribution of red grouper with the type of bottoms is almost ready. In both cases the stock was split in juveniles, pre-adults and adults.

CEFAS: were not expected to contribute to WP5 this month.

#### WP 6 Coastal Transects (by Ratana Chuenpagdee)

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An expert judgment exercise was conducted in Mexico to obtain weighting for the importance of habitats and impacts of coastal activities on fishery productivity;

A report on 'Bottom-up, Global Estimates of Small-Scale Fisheries Catches', with co-authors Liguori, Palomares, and Pauly, is published as Fisheries Centre Research Report 14(8). (Also available for download at <http://www.fisheries.ubc.ca/publications/>)

#### WP 7 Simple Indicators for Sustainable Fisheries (by Amanda Stern-Pirlot)

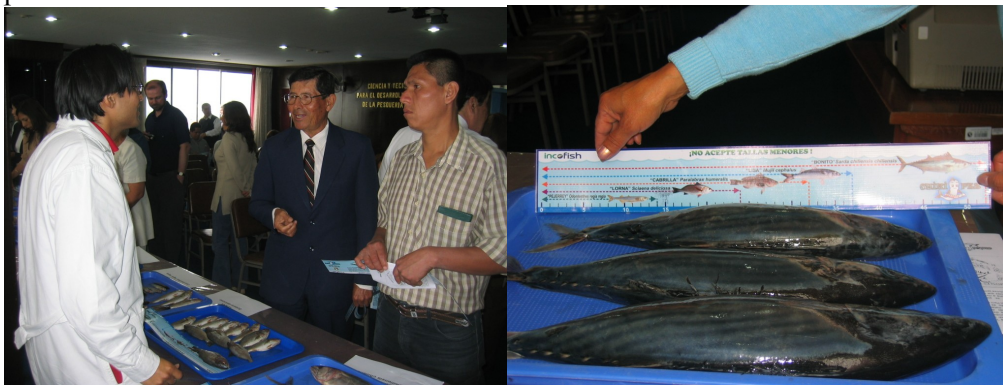
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Happy New Year from WP7!

WP 7 held it's second workshop in Lima, Peru at the beginning of December. This was a very fruitful meeting. The whole trip report can be downloaded from <http://www.incofish.org/Workpackages/WP7/WS7.2.php>. The highlight of the workshop was the release of the Peruvian Lima/Callao fish ruler, "Chickipez.." The following is an excerpt from the trip report about this event.

#### **Chickipez release and press conference**

A press conference and launch of the Peruvian fish ruler “Chickipez” occurred on Dec. 6, 2006. WP members visited the “Ventanias,” Lima’s largest fish market in the morning to pick up the species present on the ruler. They were brought to the conference room at IMARPE for the afternoon press conference with which those present could use their rulers to measure the fish and understand the problem. There were about 50 people present at the conference: Housewives, fishermen, representatives from the fisheries ministry, and representatives from the print and radio press. The rulers were enthusiastically received and several people involved in the fishing industry wanted to have their species represented on the next versions of the rulers. Notably the anchoveta fishermen, who are pushing for direct human consumption of anchoveta, and the new king crab fishermen, who want size limits put on the king crabs before others enter the very new fishery. There will be at least one article about the Chickipez in a weekly newspaper in Lima. Locals who were present were appreciative and surprised that a group of international scientists would come and help them with their fisheries because they perceive their own ministry as doing nothing for them. A follow up press release has been sent and IMARPE has compiled a list of press contacts for the future.



Birane Samb, WP 7 member from Senegal, has made significant progress on a Senegalese fish ruler and has formed a local partnership with WWF to help sponsor it.

All WP members are putting together indicator analyses of the status of some of their local fisheries using length-frequency data and our simple indicators. The outcomes of these will be compared with traditional stock assessments.

Sven continues to work on the bycatch database construction and web interface on behalf of WP7.

Contact has been made with Marine Stewardship Council, who is interested in a joint endeavor with WP7 and WP8 on the development of an MSC “pre-assessment” tool.

#### WP 8 Valuation of Coastal Ecosystem Products and Services (by Rashid Sumaila)

Sumaila attended the 1st meeting of a new global network for the study and monitoring of IUU fishing. This is an initiative of MRAG and the UBC Fisheries Centre. All WP members worked on various aspects of the project.

#### WP 9 Impacts of Ecotourism (October to December 2006 by Priscilla Cubero)

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During October and November 2006, **Charles Darwin Foundation (CDF)** finished data bases with preliminary data collected from July to September in live-a-board cruise ships, including biophysical, socio-economic and visitor satisfaction data. Analyses were also made revealing impacts associated with the tourism activities in the Galápagos. Further advances on the first scientific publication were also made.

From October 6<sup>th</sup> to 18<sup>th</sup> the representative of WP9 Incofish at CDF participated in the Workshop on Sustainable Tourism for Marine Protected Areas of the Tropical Eastern Pacific held in Gorgona National Natural Park, Colombia. The Second Workshop WP9 – Incofish – Impact of Ecotourism was organized to be held in Puerto Ayora, Santa Cruz, Galapagos, from December 10<sup>th</sup> to 15<sup>th</sup> 2006.

**Parques Nacionales Naturales de Colombia** and **Fundación Malpelo** continued the application and evaluation of the system of criteria and indicators through the participation in several tours. In addition, and in preparation for the Second Workshop WP9, information has been analyzed and every indicator has been evaluated basing on standard sheets that consider pertinence, feasibility, credibility, clarity, comparability and viability. Results suggest impacts associated to tourism activity as well as the benefits of using the indicators. This information will be presented at the Second Workshop on December to adjust the proposal of criteria and indicators.

A training workshop directed to administrators of protected areas was coordinated under the Pacific Marine Corridor (CMAR) framework, including the MPAs of Incofish Project as well as MPAs of Costa Rica and Panama. This allowed portraying WP9 at a wider level. Collaboration to the Second WP9 Workshop was made.

**The Institute of Applied Ecology (ECOLAP)**, coordinated with the Machalilla National Park (MNP) administration a presentation at the Workshop on Sustainable Tourism for Marine Protected Areas of the Tropical Eastern Pacific held in Colombia. Learning derived from this workshop is being shared with local actors in Machalilla, including municipality authorities, administrators, tour operators and park rangers.

Preliminary results of the first year of work at WP9 have been presented to the authorities of the Ministry of Environment and its Biodiversity department. A code of conduct for marine protected areas has been improved.

December 11<sup>th</sup> to 15<sup>th</sup>, the four AMPs met in the Galápagos Islands for the Second Workshop of WP9. Results on the application of indicators in the four AMPs were presented, according to an evaluation standard sheet. This served as a basis to create a new table of criteria and indicators to be used as the matrix for the four AMPs from now on.

A methodological sheet for the creation of monitoring protocols for the indicators included in the matrix was analyzed and applied in four of them as a practical exercise. The rest of the indicators were assigned in groups to the four MPAs for their complete development in protocols.

The definition of Ecotourism proposed in the First Workshop WP9 was reviewed and improved expecting that changes suggested will make it clearer and more appropriate for practical application. The new definition for Ecotourism in Marine Areas was:

*It is a tourism specialized on marine and coastal areas with a recreation principle based on interpretative and educational activities in their natural spaces that seeks visitor satisfaction through the observation of organisms and the interaction with landscapes basing on principles of adaptative management, precaution, environmental and socio-economical sustainability with an ecosystemic scope.*

Management tools such as VERP, VIM, LAC and ROS were analyzed and the most appropriate one for each MPA was defined. Galápagos, Malpelo and Machalilla considered VERP as the best tool supported by LAC and Gorgona chose only LAC as the best management alternative.

Finally, publications in preparation were analyzed including the first scientific paper derived from WP9 (*Contribution to the construction of a concept for management of tourism in marine ecosystems: review of the present scenario through study cases in four marine protected areas of*

