

HUMBOLDT CURRENT LARGE MARINE ECOSYSTEM PROJECT

GEF-PNUD-HCLME- PIMS 4147 2011-2015

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EDITORIAL NOTE: THEMATIC REPORTS FINISHED

Both in Peru and Chile, the drafting process of the 5 thematic reports which form the basis of the Ecosystem Diagnostic Analysis (ADE) has been completed, which also provides the Causal Chain Analysis (CCA). The Terms of Reference that will identify the consultants to integrate these documents in a single report in both countries will be published soon in order to build the Transzonal Ecosystem Diagnostic Analysis (TEDA).

Anchovy protein project, PERU

On June 12, the presentation of results of the project "Development of formulas for making breads and biscuits enriched with fish protein from anchovy to reduce anemia in children aged 3-7 years in the south of Lima" took place at the headquarters of Lima of the United Nations. The project was funded by the Innovation Fund of Science and Technology (FINCYT), and carried out by a consortium of institutions led by AGROHIDRO. The project contains the following activities: fishermen training, implementation of a pilot plan for the production of Fish Protein Concentrate (CPP), development of formulas for breads and biscuits enriched with CPP, and sensory evaluation of breads and fortified biscuits with CPP, by a panel of 85 children in the Fe y Alegría school No. 65.

Peru has one of the highest rates of child malnutrition in Latin America, and yet is the largest producer of fish protein used in



the aquaculture industry. Through this successful experience the project seeks to call the attention of the food industry in order to promote an improved use of marine resources.

Workshop on Ecological Risk Assessment, CHILE

Between 7 and May 17 2013, 4 workshops on Ecological Risk Assessment organized by the GEF-UNDP-Humboldt and IFOP took place in Chile. The first workshop was held in IFOP's facilities in Valparaíso on 9 and 10 May, focused on anchovy fishery (*Engraulis ringens*), in the regions of northern Chile. One of the conclusions of the workshop was the need to promote a greater exchange of information regarding stock assessments and learning from the efforts made in each sector to promote

a sustainable fishery. The second workshop (of an experimental nature) was held in La Serena, focused on the active harvesting of macroalgae carried out in open access areas of Region IV on 13 and 14 May. The third workshop was held on 16 and 17 May in Valparaíso with a focus on the lobster fishery on Juan Fernández Archipelago. Source: CEDEPESCA.



The Methodology of Ecological Risk Assessment (ERA) allows a diagnostic analysis of ecosystem components from which there is not enough information to conduct a formal scientific study. It also facilitates the interaction of various sectors to evaluate the progress of marine resource management. ERA workshops, both in Chile and in Peru (conducted in October 2012) were led by Ernesto Godelman (CEDEPESCA).

ECOCEANICA presented a study on Marcona, PERÚ

As one of the activities under the Annual Operating Plan 2013, the Project commissioned the NGO ECOCEANICA to carry out an "Evaluation of perceptions, attitudes and practices of fishermen regarding protected areas and marine resources of the pilot site of Punta San Juan in Marcona". The region of San Juan de Marcona has a special significance as there is an important and successful experience regarding the practical demonstration that it is possible to achieve sustainable exploitation of coastal resources through co-management schemes including the monitoring and local regulation of fishing effort. Although this experience is not free from problems and pending challenges, it is so far the largest national effort in the marine coastal zone that integrates local communities with social and natural scientists to promote natural resource management. It is also important to recognize the initiative and leadership by COPMAR, an entity formed by 16 social fisherfolk organizations, who for 10 years have been promoting the responsible use of natural resources. All these aspects are included in the study, which will facilitate the process of

dialogue with the Government (Central, Regional and Local governments) to formalize the existence of the Management Areas for Benthic Resources Exploitation (AMERB).



One of the most important strategic actions to consolidate the achievements (Demonstrative Pilot Project-PPD, Plan for Management of Marine Resources Extraction) includes the reestablishment of the Advisory Commission of PPD that was disabled due to internal reform in the Ministry of Production.

Dialogue Workshops with communities, PERU

Together, the National Service of Protected Natural Areas (SERNANP) and the GEF-UNDP-Humboldt Project, a series of workshops have been conducted to develop a Vision for the development of the Master Plan for the National Reserve of the System of Guano Islands, Islets and Capes (RNSIIPG) during May and June. In this way, the process of identifying local stakeholders around concepts related to ecosystem-based management and its tools also began.



During the workshops, the identification of major problems were not the only target (with reference to Ecological Risk Assessment conducted by the GEF-UNDP-Humboldt in late 2012), but also a stakeholder cooperative agreement as in the case of Punta San Juan de Marcona, one of the most important sites and colonies for penguins and fur seals.

Three day workshops were conducted in Paracas, Marcona and Sechura. At each site, conservation targets of protected natural areas in the region were identified, and multisectoral committees at each site were elected as part of the management Master Plan design, and three institutions were appointed as technical advisors. Also the

progress of the GEF-UNDP Humboldt Project from the presentation of the concepts related to the Ecosystem Based Management (EBM) approach, by means of the identification of the most important issues related to four main themes: fishing, biodiversity, environmental quality and market incentive mechanisms. Indicators were identified and stakeholders suggested recommendations for the resolution of existing problems. During the last day of each workshop, meetings with local authorities were arranged, to discuss the prospects for future cooperation regarding multisectoral interventions to ensure the solution of the most significant problems.

International Women Congress, CHILE

Around hundred and fifty artisanal fisherwomen from all regions of Chile, including representatives from Easter Islands and Juan Fernandez Archipelago, and from 13 other countries in Latin America, Central America and the Caribbean gathered between 4 and 7 June in Valparaiso to participate in the International Congress of Women in Artisanal Fisheries 2013. The convocation called "Integrating Sustainable Development" conducted by the National Federation of Fishermen of Chile, CONAPACH, was held at the Hotel Diego de Almagro and was attended by exhibitors in areas of gender, fisheries and development, aquaculture and sustainability, among others. In addition, artisanal fisherfolk shared their experiences from Guatemala, El Salvador, Honduras, Nicaragua, Panama, Costa Rica, Argentina, Peru, Bolivia, Ecuador, Brazil, Kenya and Colombia. Source: IFOP



The Congress led to a reflection on how the fishing sector increases its contribution to the fight against poverty, food sovereignty and economic growth from the perspective of women in artisanal fisheries, encouraging individual and collective responsibility of families and fishing communities for their own development.

RV Cabo de Hornos begins active duty, CHILE

The Chilean Navy Research Vessel (RV) "Cabo de Hornos" begins its work program. Skipstekniks, a Norwegian company was responsible for the design of the ship that will serve primarily to develop research in oceanography, hydrography, acoustics and marine sciences in general.



This RV is now the most modern ship of its type in the Southeast Pacific, surpassing Abate Molina (Chile), and José Olaya (Peru). With the beginning of its operations, the ship overcomes a dramatic start in its service life, since the day it was launched; it was severely damaged by the tsunami that followed the massive earthquake that struck Chile on February 27, 2010. Now, more than three years after the tsunami, we celebrate its entry into active service.

One of its main features is that it is among the five quietest in the world, which significantly facilitates acoustic investigations on fish shoals. This RV is performing its first scientific survey during July 2013 (CIMAR-fiords). IFOP researchers will then embark from August 1 to August 31, to study the state of hoki and southern blue whiting in the area between Boca del Guafo and Chacao Channel. Source: IFOP

Workshop on Causal Chain Analysis (CCA), PERÚ

A Workshop on Causal Chain Analysis (TACC) under IWLEARN methodology was held in Lima from 21 to May 23, in order to identify the major environmental problems and socio-economic impact in the Peruvian sector of Humboldt Current Large Marine Ecosystem, determining the immediate causes, underlying causes, root causes and to propose solutions and management tools as a contribution to the governance of the coastal and marine zone.



As a conclusion of TACC, 15 groups of major problems have been identified, 11 sets of immediate causes, and 8 groups of underlying causes or roots. Possible solutions were also identified and management tools that will be included in the final analysis of the thematic reports.

Moving toward ecosystem based management (EBM) of the goods and services provided by the GEMCH, involves

generating a preliminary assessment to facilitate the identification of policy management tools and support for future application in Chile and in Peru. The Logical Framework of GEF-UNDP-HCLME Project foresees the design of an Ecosystem Diagnostic Analysis (ADE) covering five thematic areas that provide the basis for describing the current state of the ecosystem through their corresponding Thematic Reports (RT) both in Peru and Chile: productivity of the ecosystem, fisheries resources, ecosystem health, socioeconomics, and governance.

Training on whale events, ECUADOR

In Salinas, Ecuador, between days 27 and 28 of July, a "Training workshop on responding to events of large whale entanglement" was held. The marine mammal entanglement in stationary or drifting fishing gear is recognized as a cause of mortality associated with human activities, that are affecting various marine populations. It is estimated that each year, more than 300,000 whales and dolphins die entangled in fishing gear. A similar workshop is being developed in different parts of the world where this problem has been also identified.



The event was sponsored by the Southeast Pacific Permanent Commission (CPPS), International Whaling Commission (IWC) and the Government of Ecuador. The workshop also had the support of the World Society for the Protection of Animals (WSPA) and Ecuador International Conservation. WSPA is the only international organization with trained and full-time availability staff, which provides an immediate and comprehensive response for animals in disasters (earthquake in Haiti and the tsunami in Japan). Source: IFOP

The main objective of the workshop was to train the staff that responds to these incidents that usually happen to humpback whales, which was attended by a specialist from IFOP. Also representatives from Ecuador, Colombia, Panama and Peru attended. The main purpose is to disseminate the knowledge acquired to the various agents in the different countries that may be involved in routine activities with entanglements or strandings of whales. Another purpose is to implement networks of

sightings of these events, and then transmit this information to groups specialized in disentanglements for large whales. Source: FIFG

Course on digital echograms analysis, Peru

An advanced course on the use of digital echograms to extract indicators of marine ecosystem functioning was held between June 10 and 14. The event was organized by the Universidad Nacional Mayor de San Marcos. The objectives were: (1) disseminate multifrequency georeferenced digital echogram analysis techniques for acoustic detection of the location of the minimum oxygen zone, prey abundance, convergent processes of meso and submesoscale, also (2) establish operational bases for the use of ECHOPEN (free acoustic software application designed in cooperation with IRD, IFREMER, IMARPE and TASA) to marine institutes and fishing companies of the region as well as to promote cooperation, exchange of information and the identification of applied research issues, and (3) promote the use of such acoustic information, that is currently collected by fishing fleets in Peru and Chile, initiating effective cooperation that will lead to improvements in the management of the information currently available.



The course was attended by 25 researchers, including 7 from Chile, all of them represented scientific institutes (IMARPE, IFOP, INPESCA), universities (UDEG, UCV, San Marcos, UNFV) and fishing companies (TASA, AUSTRAL, DIAMANTE). The workshop-course was led by Dr. Jeremie Habasque (IRD) having as instructors to Gary Vargas (IRD-UNFV) and John Robles (IRD).

Marine ExpoFair, CHILE

The Ancud Base of IFOP is developing an educational activity with schools in the area, focused on students who attend 1st to 5th grade, and is intended for children to learn a little more about the marine environment.



Children, naturally curious, enjoy simple and logical explanations, which is a very pleasing challenge for professional researchers, accustomed to scientific and technical expressions that are often unavailable to the general public.

The exhibition features a sample of aquariums and molluscs, allowing students to learn about molluscan eating habits, lifestyle and reproduction. Those responsible for receiving these children are the researchers and workers in the base, that with care and dedication respond to the questions from the children, all this supported with lectures and interactive audiovisual material. This activity was very well received, especially by the educational institutions in the district and because of its success it will run for the entire month of July. Source: IFOP

Workshop on diagnosis of Chilean Jack Mackerel, Peru

The Peruvian National Fisheries Society (SNP), in collaboration with the INGO The Nature Conservancy (TNC), the Fishery Engineering section of the Peruvian School of Engineers (CIP), the School of Oceanography, Fisheries and Aquaculture of the Universidad Nacional Federico Villarreal (UNFV) and The Mackerel Project of European Union (EU), held from June 26 to July 2 the Fourth Workshop On Diagnosis of Chilean Jack Mackerel (*Trachurus murphyi*). There is a high priority expressed by the Scientific Working Group (SWG) of the South Pacific Regional Fisheries Management Organization (SPRFMO) for monitoring the whole area where Jack Mackerel is distributed, in order to improve our understanding on the fish regardless of the various hypotheses that exist on the population structure of this species. Also the SWG, which the SNP is a member, raised the need to determine the relationship between the area covered by the surveys and potential habitat of jack mackerel, and has also raised the need for the documentation of ongoing analysis in the most comprehensive and detailed form including the description of all methods used in this regard. In this sense, the workshop has allowed the updating a set of

indicators that will be useful for the management of the fishery, both nationally and at the SPRFMO level.



The workshop consisted of four working groups: Oceanography, Environment, Biology and Acoustics. Representatives of the co-sponsoring organizations, as well as research institutes and fishing companies participated. One of the main objectives was to analyze the relationship between the jack mackerel and changing environmental conditions, in order to strengthen the existing modeling patterns for use in research, monitoring and fisheries management.

IFOP signs agreements with UCSC y CEAZA, CHILE

IFOP and the Universidad Católica de la Santísima Concepción signed an agreement for cooperation in order to establish supportive relations between the two institutions and to promote collaboration and academic exchange, science and culture.



The recently signed agreements reaffirm the vision of IFOP as guarantor and technical entity in fisheries and aquaculture research applied to the sustainable use of aquatic resources. Also, partnerships between entities with common goals strengthen the process of consultation and management of natural resources, which is also the aim of the EBM approach promoted by the GEF-UNDP-Humboldt Project.

The new partnership will initially guide their efforts to develop joint efforts centered on the Aquaculture Biotechnology Laboratory for at least the next three years. On the other hand, IFOP signed an agreement with CEAZA (Center for Advanced Studies in Arid Zones) for the development of joint research programs. The agreement

enables the development and dissemination of research between the two institutions, for which an action plan will be drawn up especially on fisheries and aquaculture, but also in training, development and exchange of researchers. It is noteworthy that CEAZA is a consortium of regional scientific and technological research entities made up by the University of La Serena, Northern Catholic University, the Agricultural Research Institute and the Regional Government of Coquimbo.

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