

THE PHILIPPINE OFFICE

The International Center for Living Aquatic Resources Management (ICLARM) also known as The WorldFish Center **has** a Philippine Office operating within the International Rice Research Institute (IRRI) Compound, Khush Hall, College, Los Baños, Laguna, Philippines, located 63 kilometers



southeast of Manila via the South Luzon Expressway. The office has a full view of the picturesque and legendary Mount Makiling and neighbor to the University of the Philippines (UP) and other international research centers within IRRI such as the International Network for Improvement of Banana and Plantains (INIBAP), the International Service for the Acquisition of Agro-Biotech Applications (ISAAA) and the World Agro Forestry Center (ICRAF). After the ICLARM Head Quarters was moved to Penang, Malaysia, the Philippines Office was established in January 2000, to house remaining projects, mainly FishBase, ReefBase, TrawlBase and the Coastal Training Management Program (CMTP).

The Office hosts at least 35 collaborators, being supervised at present by an Officer-In-Charge, Dr. Nicolas Bailly. Dr. Bailly used to work at the Muséum National d'Histoire Naturelle in Paris, France from 1992–2005 on Biodiversity Information Systems (BIS) mainly on fishes, and has been in collaboration with FishBase since 1996. He participated in the creation of the FishBase Consortium (FBC) in 2000 and was FBC Chair in 2004-2005. BIS constitutes part of the scientific sound basis for projects on natural resource management (exploitation and conservation) and aquaculture, in association with their related socio-economics information systems: **FishBase** on all fishes of



the world, and **SeaLifeBase**, on non-fish marine organisms excluding for now protozoa, bacteria, and viruses. FishBase is recognized for years as the premium and still only successful BIS in the world. SeaLifeBase is expected to be raised to that level too. We also participate since the beginning in 1994 with Species 2000 to the elaboration of the **Catalogue of Life**, which is the list of all species on Earth.

Other projects implemented/coordinated at present are: **“Sea ranching and restocking sandfish (*Holothuria scabra*) in Asia-Pacific”**; **“The Calamian Tagbanwa Ancestral Domain (Coron Is., Palawan, Philippines): Evaluation of traditional fishing practices towards biodiversity conservation and sustainability”**; and **“Enhancing Marine Protected Areas (MPAs) Management Effectiveness in the Calamianes Islands MPA Network, Palawan Province, Philippines”** under East and Southeast Asia portfolio.



The Philippine Office has an extension of the center's Corporate Services Division (CSD) composed of three people, who provides efficient and timely full administrative support to Philippines-based projects, but also to visiting headquarters and collaborators. One librarian and one computer technician support research activities.



The office maintains a Library specializing in fisheries and aquaculture. It has a broad collection of The WorldFish Center in-house publications, FishBase, SealifeBase, Milkfish, and ReefBase references, journals, and a Filipiniana section for the collection of Philippine publications. To date, library holdings include: 1566 books and reprints, FishBase Collection - 41630 reprints and books, Journals - 101 classes of journals (volume per journal not included), ReefBase References - Alphabetically arranged from A-Z, Fish Trade References, Filipiniana Collection, 30 Maps, 117 CD's, Training

Manuals

The library is open to students, researchers and visitors from Monday to Friday, 8:00 am to 5:00 pm.



CURRENT PROJECTS

1. [FishBase](#)

FishBase is an online internationally recognized premier Biodiversity Information System on all fishes of the world (www.fishbase.org). It is a relational database with information to cater through a simple but diversified website to different professionals such as research scientists, fisheries managers, zoologists and many more, with over one million visitors per month. FishBase contains all valid fish species known to science, with 200-400 new ones added every year. It's qualitative and quantitative pool of information, and credibility as a resource has been recognized by different types of users. These recognitions include the ISI Current Web Content Award from Thomson Corporation, StudyWeb® Academic Excellence Award of PLATO Learning, Inc., and Award of Excellence: Study Sphere. In 2004, the team won the CGIAR Outstanding Scientific Support award..



FishBase Team

FishBase was developed at The WorldFish Center in collaboration with the Food and Agriculture Organization of the United Nations (FAO) and many other partners, with financial support from various donors, mainly from the European Commission (EC). Since 2000, FishBase is piloted by a consortium of nine research institutions namely: The WorldFish Center, FAO, IFM-GEOMAR (Das Leibniz-Institut für Meereswissenschaften an der Universität Kiel), Fisheries Centre - University

of British Columbia, Muséum National d'Histoire Naturelle, Royal Museum for Central Africa, Tervuren, Swedish Museum of Natural History, Aristotle University of Thessaloniki, and the Chinese Academy of Fishery Sciences.

The highly committed FishBase team is composed of biologists and informatics programmers. More than 50 publications, posters, presentations and delivered capacity building events have been produced.

2. [SeaLifeBase](#)



SeaLifeBase is an online *Biodiversity Information System* (BIS) on non-fish marine organisms of the world. The project is a joined activity of the *Sea Around Us Project* (Fisheries Centre, University of British Columbia, Vancouver, Canada) and The WorldFish Center (Los Baños, Philippines). Initiated in October 2005 funded by the Oak Foundation (Geneva, Switzerland), providing access to standardized data on maximum size, distribution, depth range and ecology for non-fish marine organisms, i.e., from tetrapods to invertebrate groups. It follows the pattern after the highly successful information system, FishBase.

As of September 2008, SeaLifeBase contains >81,554 valid scientific names and >15,434 synonyms; >24,054 common names for >8,684 species; >30,789 species assigned to a geographic area, >28,839 species assigned to FAO areas and >27,717 species assigned to countries; >9,787 species with depth ranges; 33,609 species with ecology and >21,690 species with ecosystem information; >5,906 with maximum lengths; and >2,795 species with >10,454 other biological information records including growth, length-weight, reproduction, predator/prey, food items, diet and abundance.

The ~16,000 species of marine fishes are covered by FishBase (www.fishbase.org); ~3,000 coral species covered by Hexacorallians of the World (www.hercules.kgs.edu/hexacoral/anemone2/index.cfm); and >20,000 species of seaweeds, sea grasses and other marine plants covered by AlgaeBase (www.algaebase.org). These databases are accessible through SeaLifeBase via deep-linking. Bacteria and viruses are, for the time being, not covered by SeaLifeBase.

Data are extracted from published sources, collaborators who contributed data and collaborators who check and verified data encoded.

More details can be found in their website:

<http://www.sealifebase.org>



3. The Species 2000 & ITIS Catalogue of Life



The Catalogue of Life (CoL) aims at listing all 1.75 million known species on Earth by their scientific names and major synonyms by 2011. Set up as an international programme in June 2001, it is co-managed by Species 2000 based in the University of Reading, UK and ITIS (Integrated Taxonomic Information System) based in the Smithsonian Institution, Washington, D.C., USA, with the help of a team composed by taxonomy and biodiversity informatics specialists. The complete list being achieved by bringing together an array of global species databases (GSD) covering each of the major groups of organisms.

The Catalogue of Life is being compiled every year in the Office since the beginning with sectors provided by 53 taxonomic databases (including FishBase) from all around the world. Many of these contain taxonomic data and opinions from extensive networks of specialists, so that the complete work contains contributions from more than 3,000 taxonomist specialists. The Catalogue is published as two products: the Annual Checklist, a fixed edition published each year on a CD-ROM which is distributed free of charge with an identical copy on the website, and the Dynamic Checklist, a virtual catalogue operated on the internet and available both for users and as an electronic web-service. The 2009 version will contain 1.1 million species and 2.3 million names including synonyms and common names.



The Catalogue of Life is currently being used by the Global Biodiversity Information Facility (GBIF) and the Encyclopedia of Life (EoL) as the taxonomic backbone of their web portals.

4. Sea Ranching and Restocking Sandfish (*Holothuria scabra*) in Asia-Pacific

The project conducts field and hatchery research to improve the management of the sandfish resource by poor coastal communities to increase their livelihood opportunities. Specifically, this project will test whether livelihoods can be diversified through 'sea ranching' sandfish, evaluate the effect of restocking breeding populations of sandfish on subsequent recruitment to local populations, as a means of fast-tracking stock replenishment, use sea ranching and restocking to improve fisheries management and value-adding of aquatic resources, and build capacity of local partners to culture and stock sandfish successfully. The project started in June 2007 and will end on May 2011.



Specific activities and expected outputs, and other details on the project can be found in: <http://www.fishbase.ph/sandfish/index.htm>.

Project partners include: Australian Centre for International Agricultural Research (ACIAR), Department of Agriculture - Bureau of Fisheries and Aquatic Research (DA-BFAR), University of the Philippines - Marine Science Institute (UP-MSI), UP Mindanao (UPMin), UP Visayas (UPV), National Integrated Fisheries Technology Development Center (NIFTDC), BFAR-National Fisheries Research and Development Institute

(NFRDI), Southeast Asian Fisheries Devt. Center, Aquaculture Department (SEAFDEC-AQD), James Cook University (JCU), Department of Agriculture, Fisheries and Forestry (DAFF) - Australian Government, Tasmanian Seafoods P/L (TSF), Secretariat of the Pacific Community (SPC).

5. Enhancing Marine Protected Areas (MPAs) Management Effectiveness in the Calamianes Islands MPA Network, Palawan Province, Philippines

Despite the many potential benefits of MPAs to coastal management programs, the majority of MPAs do not meet their intended management objectives. In order to improve the management of these MPAs, the project titled “Enhancing the Management Effectiveness of Marine Protected Areas (MPAs) in the Calamianes Islands MPA Network, Palawan Province, Philippines” was launched in January 2008. The main objective of this project is to assess the management effectiveness of a network of MPAs in the Calamianes Islands, Northern Palawan, Philippines. This is a collaborative project among the following Institutions: The WorldFish Center, Fisheries Improved for Sustainable Harvest Project, Palawan State University and Palawan Council for Sustainable Development. This project is funded by the US National Oceanic and Atmospheric Administration – International Coral Reef Conservation program, the Global Environment Facility, and the United Nations Environment Program.



As part of this initiative, a suite of biophysical, socioeconomic and governance variables ('indicators') that influence the performance of MPAs were proposed. These indicators were developed by the IUCN-WCPA and the WWF aimed at improving the management of MPAs. The selected indicators, through a series of stakeholder and expert consultations, were tested and/or measured at three selected MPAs in the municipalities of Busuanga, Coron and Culion. The various stakeholders, therefore, are being convened in a workshop to validate the initial survey results. Such results will hopefully guide the MPA managers, local government units, researchers and other partner organizations in assessing the effectiveness of these MPAs.

6. The Calamian Tagbanwa Ancestral Domain (Coron Is., Palawan, Philippines): Evaluation of traditional fishing practices towards biodiversity conservation and sustainability

Under the theme of the IUCN - The World Conservation Union, “Contribution of cultural and spiritual values of the indigenous people on protected area objectives” the research fellowship project was initiated in 2006-07. Coron Island is located at the northern part of Palawan province southwest of the Philippines is an example of a community conserved area (CCA) managed by the Calamian Tagbanwa indigenous people. The traditional fishing practices in the ancestral domain are being carried out in the context of sacred and restricted areas like fish sanctuaries, observance of customary laws and the role of elders in implementing traditional laws as a means of discipline. The



research aimed to examine the effects of cultural and spiritual beliefs and fishing practices in relation to species exploitation and conservation. Specifically, the project described the fishing activity and resource use pattern of the Calamian Tagbanwa and identified the culturally important species with respect to their spiritual beliefs and economic significance. This research fellowship was done under the mentorship of Gonzalo Oviedo, Senior Policy Adviser of IUCN – The World Conservation Union and financially supported by the Alcoa Foundation Conservation and Sustainability Fellowship Program.

FUTURE PLANS: OPPORTUNITIES AND CHALLENGES

The Philippine Office is at a challenging turn of its nearly one decade history.

The most significant events during the last two years were the integration of a new generation of database encoders for aquatic biodiversity (SeaLifeBase), the finalization of the MilkFish project ending - hopefully temporarily - the involvement of WorldFish in freshwater aquaculture in the Philippines, the arrival of three staff moving from Penang diversifying the domain of expertise of the office (Small Scale Fisheries, sea ranching, MPAs, BDO, ...), the arrival of a new director for the East and South East Asia portfolio.

The Philippine Office will have to face three main challenges:

- To maintain the Biodiversity Information Systems at high level in collaboration with the eight other members of the FishBase Consortium: FishBase and SeaLifeBase. This means increasing data quantity and quality, keep updated the informatics technology, develop new analytical tools, modernize the web interface that will be also used for DVD dissemination (next version planned for 2010). Efforts must be done to propose more fishery management-oriented interfaces, and to make use of the mobile phone for information and knowledge dissemination in coastal communities. There is a funding challenge to maintain these systems over years, because no long-term business plan has ever been put in place in the world to insure the survival of Biodiversity Information Systems. Despite its constant success on the web, FishBase is no exception: the durability of the information system is put in question at the end of each short-term funded project. Integrating FishBase, SeaLifeBase, and ReefBase in many other projects within WorldFish remains a challenge in itself, although we acknowledge and appreciate the few exceptions.
- To develop new approaches of Small Scale Fisheries management using information and knowledge management systems that integrate not only biodiversity information, but also legal and socio-economic information. The future solutions investigated and proposed must combine all the components of the Socio-Ecological Systems; the GIS methodology might be a good integrative platform to be explored at local level. Projects must be developed to establish a socio-economic group in the Office.
- To reinsert completely WorldFish in the efforts of the Philippine government for seafood security and aquatic resources management. The move of HQ to Malaysia, associated with the change of the center's name and the installation of the office outside Manila, had a clear impact on our involvement in fisheries and aquaculture projects in the Philippines. Started with Madan Dey in 2006, the campaign for renewed collaborations has been intensified with Maripaz Perez ESEA directorship in 2008. Taking into account the Philippine priorities, and the

results of the ADB-funded project to set up a strategy for pro-poor aquaculture, projects must be developed to establish a new aquaculture group in the office.

Already our collaboration in the IncoFish project has led to a renewed exposure of WorldFish in the media with BFAR, the Bureau of Fisheries and Aquatic Resources, about increasing the prevention of juvenile fish catch below their size at first maturity. This exposure, the excellent recognition of FishBase/SeaLifeBase, and the quality of the Philippine staff constitute a strong basis for meeting successfully the 3 challenges in the coming years.