

Growing Blue

The 41st IAMSLIC Conference on 'Blue Growth: Motivating Innovations in Aquatic Information Management' stressed the need to select and organize information

Libraries face hard times now that organizations tend to cut their budgets and limit resources which, in the past, would cover the information sections. Can it all be found on the Internet, as some managers seem to think? There might be a growing need to select and organize information. These and other issues were discussed at an international conference organized by the International Association of Aquatic and Marine Science Libraries and Information Centres (IAMSLIC), together with its regional group from Europe, the European Association of Aquatic Sciences Libraries and

groups of IAMSLIC. Other groups of regional collaboration include the North American West Coast and Hawaii (CYAMUS), and the Atlantic and Gulf coasts of North and Central America (SAIL: Southeast Affiliates of IAMSLIC Libraries). Later on, a Latin American and an African regional group were formed.

Organizing international and regional conferences are only one of the initiatives related to international co-operation. Resource sharing amongst libraries has been another important focus of IAMSLIC. First of all, there is the 'IAMSLIC Z39.50 Distributed Library', which aims at facilitating resource sharing among participating libraries and brings together 68 different IAMSLIC lending libraries in 26 countries receiving borrowing requests from 96 IAMSLIC libraries in 43 countries.

Under the direction of IAMSLIC, the Aquatic Commons digital repository was developed. Aquatic Commons is a thematic repository and covers the natural, marine, estuarine, brackishwater and freshwater environments, including all aspects of the science, technology, management and conservation of these environments. Since 2007, the repository has been growing impressively in coverage and at present contains over 16,000 documents with more than 2 mn downloads.

Partnerships

IAMSLIC has partnership agreements with several international organizations, including the Intergovernmental Oceanographic Commission of UNESCO (IOC) and the Food and Agriculture Organization of the United Nations (FAO). It aims at strengthening co-operation with

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Information Centres (EURASLIC), and hosted by the Food and Agriculture Organization of the United Nations (FAO) at its headquarters in Rome, Italy, in September 2015.

The early days of IAMSLIC were in the 1970s, when a group of marine science librarians from the east coast of the United States and Canada met for the first time to discuss issues related to their profession and collaboration between their libraries. Other national groups were also active in European countries, when, in 1988, the Marine and Freshwater Librarians' Group from the United Kingdom invited professionals and organizations from mainland Europe to join their annual meeting. This was the kick-off meeting of EURASLIC, which soon became one of the first regional

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these organizations in the field of information management through providing training, promoting networking of librarians and other information managers, and assisting aquatic libraries to disseminate and provide access to relevant materials.

Under the Memorandum of Understanding between IAMSLIC and FAO, the IAMSLIC Conference of 2005 was held at FAO's headquarters in Rome, Italy. Ten years later, IAMSLIC and its regional group from Europe organized their joint conference, again in Rome. As the conference was hosted by FAO, the theme was related to the work of the organization: 'Blue Growth: Motivating Innovations in Aquatic Information Management'.

In short, Blue Growth is an FAO initiative to address sustainability in food from the oceans. The initiative addresses environmental and socioeconomic considerations related to four areas—capture fisheries, aquaculture, processing, and cultural importance. Blue Growth focuses on food security, poverty alleviation and the sustainable management of aquatic resources. As Arni Mathiesen, Assistant Director-General of FAO's Fisheries and Aquaculture Department, stated in his opening speech, librarians and other information specialists have a key role as knowledge facilitators in promoting Blue Growth.

Devin Bartley, keynote speaker from the FAO, highlighted, in his presentation, the complex information needs for fisheries to grow blue, including the necessity to pay more attention to freshwater ecosystems and inland fisheries.

A special session on Blue Growth and other FAO initiatives included several presentations by other invited speakers. Lahsen Ababouch, Director of the Fisheries Policy and Economics Division of the FAO's Fisheries and Aquaculture Department, and Marc Taconet, Chief of Fisheries Statistics and Information Branch, FAO-FI, provided an introductory presentation on the FAO Blue Growth Initiative (BGI) and information needs in support of it. In order to address increasingly complex information

needs and to deal with growing information generation, the Global Data Framework for Blue Growth has been proposed as FAO's response. A framework will connect existing sources of knowledge such as statistics, databases, websites and publications, and maintain linkages across information domains from the national to the global scale.

A key role for librarians in BGI is presented in three main components: (i) data sets Metadata which includes research on proper data sets citations, connection with established Metadata standards, promotion and generation of business Metadata for datasets; (ii) accessibility to grey literature, for example, through further development of the Aquatic Commons; and (iii) development of the semantic web, for example, by publishing thesaurus as Linked Open Data and through developing mappings among thesaurus.

A presentation by Suzuette Soomai from Dalhousie University, Canada, focused on the critical role of marine information use at the science-policy interface. According to the author, the major barriers in the information use are dispersed organizational structures, asynchronous national policy and science, and the situation where national decisionmakers are not pressured by managers to address complex issues, austerity measures as well as scientific uncertainty. The author's conclusion is that the global Blue Growth agenda can be advanced by FAO acting as a boundary organization and, secondly, by well-defined processes for producing information and decisionmaking at the national and regional fisheries management levels.

Management practices

Uwe Barg of FAO presented a project aimed at providing access to Codes of Practice (COP) and Better Management Practices (BMP) documents in aquaculture. Alessia Bardi from the Italian National Research Council (CNR) made a presentation on providing access, monitoring and contextualising

Open Access publications. SciRepo publishing model benefits were discussed and the iMarine Research Infrastructure was mentioned as an example which features part of the SciRepo social functionalities.

Besides the official programme, with excellent and often inspiring presentations, formal and informal networking was crucial for a conference that brought together over 70 participants from 33 countries. Though the majority came from Europe and North America, there was good participation from Africa, Asia, the Pacific and Latin America. Thanks to the collaboration with FAO's Fisheries and Aquaculture Department and FAO's projects, funding or partial funding was provided for a total of 15 participants, while the international co-operative information system, Aquatic Sciences and Fisheries Abstracts (ASFA), funded another four participants from Africa and Eastern Europe (Tunisia, Senegal, Estonia and Bulgaria). Furthermore, IAMSLIC itself has a solidarity fund with which they contribute to the expenses of several participants and sponsorship from scientific publishers also added to this fund.

Eight participants from Asian and Pacific aquatic libraries in Bangladesh, China, Fiji, India, Philippines and Vietnam attended the conference. A special section was dedicated to Asian libraries and information centres. Stephen Alayon, from the Southeast Asian Fisheries Development Center (SEAFDEC), based in the Philippines, presented a survey of the information resources and dissemination programs in Asia. Several institutions in Asia have initiated various programmes and services in organizing and disseminating aquatic and marine information and statistics. Alayon presented an initial inventory of information sources and networks, libraries and other information centres, institutional repositories and other information programmes.

Samuela Nakalevu from the Secretariat of the Pacific Community (SPC), based in Suva, Fiji, presented

a paper, prepared with other colleagues, on relevant digital repositories in Asia and the Pacific and the importance of the quality of the so-called metadata, which enable discovery, access and sharing of these digital collections available on the Internet.

Venugopalan of the International Collective in Support of Fishworkers (ICSF), India, spoke on '25 Years of Connecting with Fishing Communities for a Sustainable Future'. ICSF has substantially contributed to the empowerment of fishing communities. The presentation examined the information management activity of ICSF in its work to support the human rights of fishing communities and fishworkers worldwide. It described the ways that ICSF's various activities have raised awareness of the social components of fisheries and the marine environment among fishworker organizations, policymakers, multilateral agencies, research institutions, NGOs and others. Through intense interactive workshops, field visits, publications, films, and CD-ROMs, information management has moved to new platforms of immediate accessibility to all.

Through the worldwide web, ICSF created new ways of thinking about storage and distribution of information and access. Through the introduction of new e-reading services, it created new forms of negotiating and navigating. Through interactive training programmes and films, it promoted innovation in information/knowledge management as a creative process to respond coherently and effectively to the requirements of fishing communities.

Public opinion

Drawing on examples from the work of ICSF in different continents for over 25 years and experiences from different aquatic environments, the presentation looked at how ICSF has worked to create informed public opinion and enhanced visibility to empower fishing communities to improve their situations, despite their unequal access to technology, low

bandwidth, and the unequal levels of skills. The challenge is to make it easier for fishing communities and fishworker organizations to find tools that they can use and adapt to their own specific areas of work. Library networks like IAMSLIC can help by sharing costly information resources and multiplying channels of information and exchange to create better and more sustainable access to information for those to whom this is not easily available.

Daryl Superio, from SEAFDEC, presented a survey on the information-seeking behaviour of milkfish farmers and their awareness of the Philippines Code of Practice for Aquaculture. The study, among milkfish farmers in Dumangas and Leganes, Iloilo, Philippines, focused on their information needs; preferred medium in searching for information and preferred sources of information in relation to water discharge and sludge/effluent management; use of drugs, chemicals, potentially toxic pesticides and fertilizers; stock selection, stocking practices; feed use and management; and fish-health management as promulgated in the Philippines Code of Practice for Aquaculture.

Lyra Joyce N Pagulayan from the FishBase and Information and Research Group, Inc (FIN) made an inspiring presentation, prepared in co-authorship with Nicolas Bailly and Maria Lourdes Palomares (both from FishBase), on building an e-library for aquatic biodiversity services in the Philippines. The proposed FIN e-library will allow searching publications by geographic and administrative areas via a Geographic Information System (GIS) map interface which will facilitate visual retrieval of publications based on geographical locality and thus will increase awareness on aquatic biodiversity and, in particular, freshwater biodiversity not only for Philippine users but also for the international community.

Rizia Begum, Senior Librarian from the Bangladesh Fisheries Research Institute (BFRI), presented an overview of the users of fisheries

information in Bangladesh as well as of collections and services provided by the BFRI Library and Documentation Centre (FRILDOC). She stressed the importance of the Aquatic Commons Digital Repository for stakeholders in Bangladesh which, among many other valuable publications, provides full-text access to the *Bangladesh Journal of Fisheries Research*, published by BFRI.

Ningsheng Yang from the Chinese Academy of Fisheries Sciences (CAFS) presented a series of posters introducing information management at CAFS. Special attention was paid to brief descriptions of the information systems established such as the National Infrastructure of Fishery Germ Plasm Resources, the Information Network of Seafood Culture Industry, the Freshwater Fish Breeding Platform, Production Management Information System, Fishery Scientific Data Platform, Fishing Vessel ASF System, Inland Fishing Vessel Information Management System, Aquaculture Disease Diagnosis System and Aquaculture Product Safety Monitoring System.

A poster by Dang Thi Hai Yen from the Viet Nam Institute of Oceanography (VNIO) highlighted the role of FAO fisheries publications in support of the research activities. As was stated in the poster, between 1978 and 2014, FAO has supported 400 projects on sustainable agricultural development, food security and nutrition, forestry and fisheries in Vietnam.

The kick-off meeting was held to discuss the establishment of the IAMSLIC Regional Group in Asia. The participants agreed that awareness regarding IAMSLIC needs to be raised amongst librarians and information specialists before an Asian regional group may be established.

All the conference presentations are available at the Aquatic Commons Digital Repository at <http://aquaticcommons.org/>

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The International Association of Aquatic and Marine Science Libraries and Information Centers