Overview

OneFish is a Web based knowledge management system that draws together a broad cross section of stakeholders within the fisheries and aquatic research community. The primary aim of OneFish is to raise the profile of fisheries and aquatic research and reinforce its impact on responsible fisheries development.

OneFish represents a fundamental advance in devolved management information systems. It responds to long sought-after information, communication and networking needs of the many agencies currently actively engaged in the complex process of promoting more responsive fisheries and aquatic resources research and development. These include donors, NGOs, national aquatic research centres (NARS), international organisations such as FAO, universities, consultancies and many others. The design of OneFish has been demand-led in that it integrates into one interactive system many of the communication ideas and needs articulated by these organisations.

OneFish allows users to contribute information in electronic form to specific subject areas, and to search and retrieve information, files and other linkages across the whole OneFish domain. Institutions and special interest groups will be able to use OneFish to develop discussion groups and create virtual offices. Subject-specialist topic editors will assist in the administration of specialised topics by editing, adding and sometimes ranking the information submitted to them.

The software underlying OneFish is being developed by SIFAR and the FAO Fisheries Department in partnership with World Agriculture Information Centre (WAICENT). Since earlier this year, a series of prototypes have been undergoing intensive testing with the cooperation of a small group of fisheries specialists. Version1.0 of OneFish is due for public release in August 2000.

"A Yahoo!™ for fisheries"...

Many Internet users will already be familiar with directories or portals such as Yahoo!™ and Netscape™. Over the last few years, these have played a significant role in revolutionising the ways in which information is both managed and accessed on the Internet. In particular, "open content" directories such as Netscape’s Open Directory (www.dmoz.org) recognise the effectiveness of devolving information management to users. By making powerful Web infrastructure available to user communities, these are then able effectively to define and manage their own information needs. This massively successful strategy has provided more efficient access to relevant information from a burgeoning morass of online electronic data.

OneFish draws on the design philosophy of these large Internet directories inasmuch as it is a powerful, open and participatory information system. Nevertheless, in contrast to these, OneFish offers some unique innovations: First, the thematic focus of OneFish will contribute significantly to ensuring quality of content and relevance to user needs.

Second, OneFish introduces the concept of information stored as knowledge objects. These comprise any electronic media that can be uploaded and linked to specialised OneFish topics. Knowledge objects include books, documents, Web sites, maps, contacts, projects and any other relevant electronic media or multimedia. References to information that is not in electronic form can be added as can links to electronic information stored elsewhere.

Other features of OneFish

Media objects: OneFish allows issues, news and events to be submitted at any level, thus providing attractive, topic-specific “headline” pages.

Discussions, notes, and polls: Users searching on a specific topic will not only be able to locate quickly a diverse range of relevant information, but will also be able to submit free-text notes, and participate in discussions, debates and polls related to that topic.

Virtual offices: Any groups, associations network or other organisation can create virtual offices using OneFish. A virtual office is a customised topic tree tailored to the specific needs, activities and specialisation of a particular organisation. Virtual offices allow individuals and organisations to manage their knowledge (e.g. projects, contacts) and share it, sometimes selectively, with others with similar interests.

Management of OneFish

The management of OneFish is fully decentralised, devolving as much responsibility as possible to its participants. In order to effect this, OneFish deploys subject-specialist topic editors to assist in managing specific topics. Most of these will participate on a voluntary basis since they realise that they -and their colleagues in the research community- will reap far more than they sow.

Topic editors are responsible for the content and quality of their own particular topic areas, deleting any poor quality and obsolete material, and keeping only the best. They also generate and take part in debates and discussions, initiate polls on issues of current topical interest, and add relevant media objects as appropriate.

Topic editors are registered members of OneFish with a proven record of interest and ability in their respective fields (see "For more information").

The OneFish project employs a chief and an assistant editor to develop and manage the top-level topics, to oversee the creation of new subtopics and to meet general project management responsibilities.

Adding and editing information

OneFish provides clear “add forms” enabling users quickly to submit and/or edit knowledge objects relevant to their own specialised subject areas. Knowledge objects can easily be related to other relevant OneFish subtopics. Relationships can be defined both during, and subsequent to the “add” process.

Users may also propose new subtopics within which their knowledge objects may reside. Topic-related issues, news and calendar dates can be submitted at any level.

OneFish topic editors then assess the general quality, value and relevance of the knowledge objects or suggested topics submitted to them. They may accept or reject these, or refer them back to users either for clarification or further editing. Topic editors may also submit knowledge objects to other editors of related topics, and rank knowledge objects within...
their topic area and mark up topical material as "Editor's Choice" appearing on the oneFish home page (see Figure).

oneFish allows any organisation or individual to participate in discussions and polls, to add free text notes to knowledge objects and to create virtual offices within the oneFish domain. These can be open or restricted to group member access.

Viewing information

oneFish enables users to browse any knowledge objects in any specific field of interest. Knowledge objects can be accessed in several ways: by navigating down the pathways offered by worldviews and topic trees; through intuitive relational links; or through the powerful search facility.

Worldviews: are top-level topics perched at the crowns of respective topic trees. There are currently five worldviews including: Subject, Stakeholder, Geography, Ecosystem, and Species (Figure on next page shows expanded view of Subject: Poverty and livelihoods showing component subtopics and knowledge objects). Starting from a世界观, oneFish users can "drill down" a unique pathway to a particular topic of their choice. A useful short cut is offered through a "clickable" site map which also provides a useful overview of the system.

Relational links: can provide alternative pathways to information. Although knowledge objects typically reside under one specialised topic, as mentioned above, they can also be related to other relevant oneFish topics. For example, a document knowledge object on fish parasites may well be "at home" under the topic Product utilization>Product quality>Fish-borne parasites; however, it may also be of considerable value to those more concerned with topics on Product quality, Product safety or even Integrated aquaculture. Creating relational links to other relevant topics will ensure that knowledge objects also appear under those topics.

Search: In addition to these information pathways, a powerful search engine will facilitate simple and advanced searching and retrieval across the whole oneFish domain.

Participatory approach

While oneFish builds on the participatory design philosophy of Internet open content directories, the overall concept of oneFish is also a natural step forward in the development of aquatic information systems. For many years, various - often disparate - groups within the fisheries research community have been developing information systems, some on specialised subject areas; some for special formats or types of information. Generally, only limited access through various means is provided to these.

An example of one of the more successful and enduring of these information systems is the Aquatic Sciences and Fisheries Abstracts (ASFA) database. In common with other successful systems, this fosters input, collaboration and participation by those actually involved in research. Fisheries and aquatic bulletin boards and discussion lists represent another example of information-cum-communication services that are now very well used. Again, this is because they provide an avenue for those working within a specific thematic area to communicate, discuss and proffer their ideas and opinions and feel that they are influencing the debate.

The concept of oneFish builds on this participatory approach. oneFish does not compete with other Internet resources - it unifies them within a holistic fisheries portal, while simultaneously providing context for them within relevant subject areas. In this sense, oneFish's approach to compiling and linking diverse information types from disparate sources is innovative.

oneFish will become an inclusive and facilitating communications tool which, through raising the profile of fisheries research, will encourage participatory approaches to disseminating and sharing of information.

New FIPIS - Fisheries Projects Database

oneFish offers a new online Fisheries Project Information System (FIPIS) with several more dimensions to the original system operated from FAO. From the outset, oneFish will include over 5,500 project records imported from the old FIPIS. As far as possible given the paucity and antiquity of some of the data, these records have been cross-
referenced with specific oneFish topics. From now on, project information from several major fisheries donors, institutions and projects involved in fisheries research will be added. This will provide far greater visibility for ongoing research and development initiatives and for the agencies supporting, funding and implementing these. Moreover, by linking projects to specific oneFish topics and other knowledge objects, previously dreary project data becomes far more dynamic and potentially useful. oneFish will allow researchers and scientists on active projects to foster awareness of their work, more speedily disseminate interim results of research, including field notes, working papers and other data. It will also allow users to establish links between any project and any related information.

**Access by partners in developing countries**

Access to the world wide web by many of the poorer developing countries is currently very limited or non-existent. There are plans to provide regular CD ROM outputs from oneFish from early 2001, as well as the additional facility of selective dissemination by email. This will ensure even wider access in areas where the internet is not yet feasible.

Nevertheless, the explosion in global telecommunications fuelled particularly by private sector investment and lowering costs cannot be ignored and in many countries, local organisations and NGOs are using the web and email for effective communications.

oneFish provides a special topic on research proposals where members, in particular from developing country research systems, can propose, discuss and articulate project concepts which they feel are of relevance to local needs.

**oneFish as a community-builder**

In addition to its role as a dynamic information tool, it is expected that oneFish will encourage the emergence of topic-based virtual communities from groups and individuals who feel strongly about, or are particularly interested in, specific research issues. Examples of possible communities are: traditional freshwater capture fisheries; coastal aquaculture impacts; management of fish-borne parasites; river delta management.

Gathering links within and between in these groups around topics and issues can serve to facilitate the use of research-based knowledge for more general development objectives.

**Sponsors**

oneFish development is currently being sponsored by DFID (UK), Norway, IICEIDA, CIDA, IDRC, The World Bank, UNDP, and FAO.

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