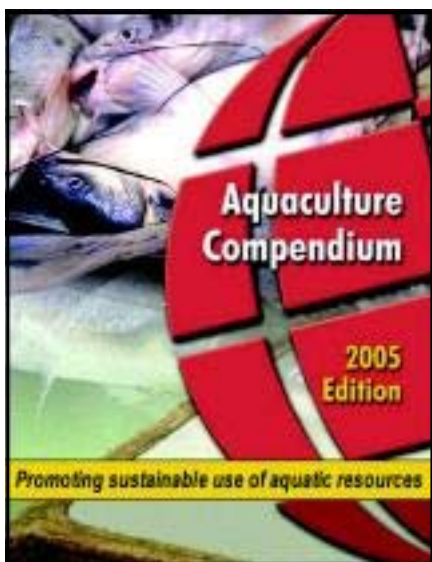


Development of the Aquaculture Compendium: a global knowledge base

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A global project to build the Aquaculture Compendium (AC) is underway. The project involves an international partnership of organisations, with coordination provided by CAB International (CABI), a non-profit international organisation with expertise in knowledge management in the applied biological sciences.



Whether involved in production, supply, development, or education and training, the Compendium seeks to address a common problem in science and technology, that much information exists on a subject, but it is often hard to find what is relevant; we are drowning in information but starved for knowledge. Improved access to knowledge will help realise the full potential of aquaculture.

The concept is to compile in one place the peer-reviewed knowledge of the world's aquaculture experts and deliver it to users through CABI's innovative Compendium Technology.

The Compendium Technology uses:

- multidimensional relational databases, adjacent to:
 - text, images, maps, statistical resources
 - expert systems, taxonomies, glossaries
 - bibliographic databases, libraries, user-notepad, and other resources

all connected in a dynamic way. It offers the user maximum opportunity to make links, whether planned or spontaneous, between the components of the Compendium, and between the Compendium and external knowledge resources in whatever form. The Compendium Technology presents the user with extensive, authoritative, interconnected, illustrated knowledge in a way that invites innovative thinking, planning and decision-making. The technology has already been successfully applied to other disciplines (Animal Health and Production; Crop Protection; Forestry) and can be viewed at: www.cabicompendium.org

The Idea:

The idea for an Aquaculture Compendium originated in early 2001. Exposure of the concept to a number of people at the Institute of Aquaculture sparked off a vibrant dialogue that identified aquaculture as an appropriate new field for application of the now well-established Compendium Technology. That dialogue spread rapidly to the Institute's colleagues at the Asian Institute of Technology (AIT) in Thailand, and has since extended to many people and institutions involved in aquaculture around the globe. Interest is high because of the promise of the Compendium system to provide the appropriate knowledge management needed for the complex, but relatively underdeveloped, subject that is aquaculture.

The need for such a resource was determined from:

- An international workshop of experts in 2001
- A workshop held at AIT in 2002
- A User Needs Survey in 2001-2
- Prof. Peter Edward's Department for International Development (DFID)-funded study on information needs for rural aquaculture
- Feedback from the World Aquaculture Society Congress in Beijing in 2002
- Dialogue, coordinated by CABI, with numerous organisations involved in aquaculture, in the USA, Canada, Latin America, Europe, Asia, Australasia and Africa.

This culminated in an Inception Workshop of international experts held at AIT in October 2002. Some 30 participants from 25 aquaculture institutions worldwide attended, including James Muir, David Little and Anton Immink

representing the Institute of Aquaculture and the DFID Aquaculture and Fish Genetics Research Programme (AFGRP).

The Project:

The development of the Aquaculture Compendium, planned to last 27 months, was formally initiated in January 2003. Project activities involve: designing, building, and testing the Aquaculture Compendium; disseminating the Aquaculture Compendium on the Internet and on CD-ROM; training users of the Aquaculture Compendium; and setting up mechanisms aiming to ensure the sustainability of the Aquaculture Compendium through the market.

The project will cost \$2 million with development costs co-financed by members of a Development Consortium, drawn from the public and private sectors, each of which will make a financial contribution and will share in the oversight of the project. They will also share the benefit of utilising the end result. Previous Compendia projects have been funded to the tune of \$9 million by more than 60 international partners from the public and private sectors, including development-assistance.

Consortium members and partners who have helped us develop the Aquaculture Compendium so far include (in alphabetical order):

- Asian Institute of Technology (AIT)
- Australian Government Department of Agriculture, Fisheries and Forestry (DAFF)
- Australian Centre for International Agricultural Research (ACIAR)
- Department for International Development (DFID), UK
- Institute of Aquaculture - University of Stirling
- Network of Aquaculture Centres in Asia-Pacific (NACA)
- New Zealand Agency for International Development (NZAID)
- United States Department of Agriculture: Animal and Plant Health Inspection Service (USDA-APHIS)
- World Aquaculture Society (WAS)

Many more institutions are interested in participating in the project and this list will grow as the project proceeds.

Content and Functionality

Material in the Compendium will be derived from many respected providers of aquaculture information, including

organisations and individuals; established sources of information will be presented alongside newly commissioned material.

Geographic coverage will be worldwide, although there will be specific projects in Bangladesh and Vietnam to document local practice through case studies. Aquaculture production and health, inland freshwater, brackish water culture and mariculture will all be covered, as will aquaculture in the broader context. There will be extensive user-friendly linkages between all components of the Compendium. The main Compendium components will be:

- Datasheets (with text authored by experts and verified by a team of international authorities, links, maps, pictures, statistics, bibliographic references, networking information, etc.) on: cultured species; aquatic health (pathogens/diseases/disease systems/pests) ecosystems; production systems; and key topics
- Case studies documenting local practice and major issues in aquaculture
- Library documents including teaching and extension materials
- Multilingual glossary
- Statistics.

The Compendium will include knowledge management tools for: searches; softlinking; diagnostics; decision support; teaching and education; economic modelling and customised outputs for printing. Communications features will include a notepad facility and up-front links with existing networks.

The first edition of the AC will be published in 2005. It will be disseminated worldwide and updated regularly. The model of 'sustainability through the market', whereby the costs of updating are recovered through sales of the product, has proved successful for CABI's Compendia, and will be applied to the Aquaculture Compendium. Dissemination to much of the developing world will be by sponsored delivery of copies by project Consortium members and partners. Uptake and initial impacts of the Aquaculture Compendium will be monitored through an assessment within the year after project end. Ultimately, it is envisaged that project outputs will significantly contribute to improving the sustainable livelihoods of people dependent on aquatic resources.

Local knowledge bases as part of a global project: documenting local practice using case studies in Bangladesh and Vietnam

One of the early driving forces behind the Compendium was a desire to use the technology in a development context. As part of the global project, two important pilot projects are underway in an effort to ensure that the AC captures local knowledge and is highly relevant in Bangladesh and Vietnam.

The main aim of these pilot projects is to:

- Identify existing information produced by individuals and institutions active in the two countries that fits with end-user information needs
- Identify gaps in the known knowledge base and fill them using material generated by local experts
- Assess the suitability of the material that has been collected and modify it in response to feedback from end users
- Assess the usability of the Compendium format in the development context
- Disseminate project outcomes in the Aquaculture Compendium
- Inform on content and structure of the Compendium as a whole

We are ensuring that those who need to access information will be involved in the production and dissemination of materials. To this end, we are using authors that are existing contributors to the aquaculture knowledge and information systems in Bangladesh and Vietnam, and we plan to modify or supplement the information presented in the Aquaculture Compendium in the light of comments from field-testing. The outputs of the project activities will generate case materials of known utility and standardised structure. Emphasis is being placed on collating materials considered of practical use to our target audience. For the knowledge base to reach the end users, there will be a need to make the information accessible in terms of content (relevant to the local user) and language (in simple English, with non-specialist summaries, and in Vietnamese and Bangla, in a form easily understood to the users).

The project in Bangladesh is already well underway. Two workshops have been held in Dhaka, in August and November 2003, where 30 participants from 21 different organizations active in the field planned the nature of their contributions. Materials will be compiled early in 2004.



Funded in-part by DFID AFGRP, Anton Immink of the Institute of Aquaculture, working with Peter Edwards of CABI and Chris Morrice of SUFER Bangladesh are acting as facilitators in the process. It is expected that around a hundred short case studies with associated extension materials and project outputs will be incorporated into the Compendium from Bangladesh alone.

A similar process is being coordinated in Vietnam by Amara Yakupitiyage of AIT, where the first workshop will be held in January, 2004.

If successful we plan to roll out this sort of project in other countries for future editions of the AC.

For further information about the project please contact Julia Brunt, Programme Manager, Compendium Programme, CAB International, UK.
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If you would like to contribute material to the Compendium, become a partner or help us to secure funding for the project we would particularly welcome hearing from you.

