

January 1996

AUSTRALIAN FISHERIES RESEARCH PUBLICATIONS DATABASE

AN AUSTRALIAN INPUT CENTRE FOR THE *AQUATIC SCIENCES & FISHERIES ABSTRACTS* DATABASE

090
FRDC 92/1047

DENIS ABBOTT



DIVISION OF **FISHERIES**

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DENIS ABBOTT

Abbott, Denis, 1945 -

Australian fisheries research publications database: an Australian input centre for the Aquatic Sciences and Fisheries Abstracts Database.

ISBN 0 643 05791 9

1. Aquatic Sciences and Fisheries Information System.
2. Aquatic sciences and fisheries abstracts.
3. Aquatic sciences - Abstracts - Databases.
4. Fisheries - Abstracts - Databases.
5. Information storage and retrieval systems - Marine sciences.
 - I. CSIRO. Division of Fisheries.
 - II. Fisheries Research and Development Corporation (Australia)
 - III. Title.

551.46

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RECOMMENDATIONS

- That a permanent centre for inputting Australian material into *Aquatic Sciences & Fisheries Abstracts* be established.
- That FRDC fund the preparation of records as part of the contract for production of the *Australian Bibliography of Agriculture*.
- That the FISHNET group of libraries continue to monitor publications not on the *Australian Bibliography of Agriculture* list.
- That the CSIRO Division of Fisheries continue as the Australian partner on the ASFA Board.
- That the Librarian, CSIRO Marine Laboratories, coordinates Australian input.

BACKGROUND

Aquatic Sciences & Fisheries Abstracts is an international, cooperatively produced database sponsored by UN agencies, (principally FAO). It covers publications on the science, technology and management of marine and freshwater environments. It is aimed at a variety of users including scientists, administrators, aquaculturalists, technologists, people in the fishing and other marine industries and students and academics.

Aquatic Sciences & Fisheries Abstracts is produced in paper-copy, magnetic-tape for online services, and CD ROM discs. These are all published by Cambridge Scientific Abstracts in Bethesda, Maryland, on behalf of FAO. Indexing, abstracting and preparing records is done by a decentralised group of intergovernmental centres: FAO in Rome, the Intergovernmental Oceanographic Commission of UNESCO, the Office of Ocean Affairs and Law of the Sea of United Nations, and the UN Environment Programme. There are national input centres in: Canada, China, United Kingdom, France, Germany, Japan, Norway, Portugal, USSR and USA.

When this investigator compared Australian publications with the database in 1990, it was found that many titles were not indexed, some titles on the monitoring list had not been indexed for years, indexing of some titles was incomplete, and records were slow to appear in the database. Australian authored material published overseas is already adequately covered.

Essentially this FRDC proposal was to establish an Australian input centre to index and abstract documents published in Australia, and to provide those records for inclusion in *Aquatic Sciences & Fisheries Abstracts*.

Cambridge Scientific Abstracts also provides input to the database, partly because it monitors the journals it wants to cover for its other abstracting services, e.g. *Oceanic Abstracts*. Records for material published in Australia, were added to *Aquatic Sciences & Fisheries Abstracts* by either FAO or Cambridge Scientific Abstracts.

FAO is keen to see national input centres established to take care of their own country's publications. It was also clear before applying for this FRDC grant that unless the indexing and abstracting were done in Australia, the coverage of Australian publications would continue to be incomplete and slow.

Subscription to, or access to, *Aquatic Sciences & Fisheries Abstracts* in Australian libraries is widespread. It is the obvious first choice for information retrieval in marine and aquatic science but access to Australian literature was poor. Before an Australian input centre was established Australians could not easily access the literature and research results produced in their own country.

ASTECC, in *Casting the net*, reported that the Australian fishing industry was worth \$850 million per year in 1987-88, while the value of research into the fishing industry was \$25.8 million in 1984-85. To make the best use of our limited fish resources, we need to research the potential of new sources of fish and fish products, which means that the results of research must be distributed as widely as possible. In 1989 the Review Committee on Marine Industries, Science and Technology in Australia commented that: "The scientific communications infrastructure is weak" and "Capitalising on our information services will depend on the evolution of effective databases and organization, and on the packaging and marketing of commercial information".

OBJECTIVES

1. To set up an Australian Input Centre to the international cooperative Aquatic Sciences and Fisheries Information Service.
2. To produce a database of references to Australian publications on marine and freshwater fisheries and use the database as Australia's contribution to the international database *Aquatic Science & Fisheries Abstracts*.
3. To make this database available to users in Australia by offering services to meet the needs of different client groups.

MANAGEMENT OF THE AUSTRALIAN INPUT CENTRE

FAO contracts with one organisation from each country to provide input to *ASFA*. These national organisations do not necessarily undertake the work themselves, e.g. the Canadian Department of Fisheries and Oceans subcontracts the work to Huntsman Marine Laboratory in New Brunswick.

The CSIRO Division of Fisheries, as the recipient of the FRDC grant, entered into a contract with FAO as an *ASFA* partner for the trial year of operation. The indexing and abstracting work was subcontracted to the CSIRO Information Services Branch which, at the time the grant was made, was supporting and producing a range of scientific and technical databases and providing access to them on AUSTRALIS. One of these databases was *Australian Bibliography of Agriculture (ABOA)*, and many of the publications that needed to be indexed for *ASFA* were monitored and selectively indexed for *ABOA*.

FISHNET, a cooperative group of marine science libraries, assisted by monitoring Australian publications for appropriate material, then forwarding copies of source documents for indexing to CSIRO Information Services.

Denis Abbott, Librarian, CSIRO Marine Laboratories, was the coordinator for the Australian input centre.

ESTABLISHMENT AND OPERATION OF THE AUSTRALIAN INPUT CENTRE

The FRDC grant was initially made in August 1992, contingent on an assurance that funding was available after the grant had expired. This assurance was waived in January 1993 and the Board approved the funds requested for year one of the original three year application. The grant was to begin in May 1993 and to run for twelve months.

CSIRO Information Services Branch (ISB) kept to their part of the revised timetable in designing the database by June 1993. Although the initial response from FAO in Rome was prompt and enthusiastic, no progress was made between February and December, for we were unable to get either agreement to start or precise specifications for input. The contact person at FAO changed in September when David James was appointed Principal, Fishery Research. Quite fortuitously he had repatriation leave in December, having been appointed to FAO from CSIRO in Hobart and visited Information Services in Melbourne and the Marine Laboratories in Hobart. We were accepted as an *ASFA* partner.

At that time, Cambridge Scientific Abstracts was not accepting input in electronic form, but David James encouraged us to send a sample set of records to CSA in an attempt to force the pace of conversion to electronic input. A test file of records was ready in

February 1994 but because CSA would not send new input standards and record tags to prepare the file, it was not sent until the end of May. The first few records from the test batch were returned, in *ASF A* output format, in August. As recently as July 1995 there were still some difficulties between CSA and ISB with input specifications and it was not until October 1995 that input arrangements were fully operational.

Soon after taking up his position at FAO in 1993, David James offered Denis Abbott a short-term consultancy at FAO in Rome to assess the procedures for producing FAO's contribution for *ASF A*. This is not his area of expertise so Denis recommended the Database Unit at CSIRO Information Services. Tony Ermers spent three weeks in June 1994 on this consultancy and whilst the main purpose of his study was to advise FAO on ways of improving their procedures for producing *ASF A* input, it also gave him the opportunity to discuss matters relating to Australian input. As a result \$5000 was saved from the original FRDC grant of \$30,000, an amount that had been included to allow for technical discussions with FAO in Rome.

Tony Ermers found that the database system developed by ISB for the Australian *ASF A* input (modelled on that used for production of *ABOA* and CSIRO Index) was in advance of that which had been developed by the *ASF A* partners. A number of features that were taken for granted at ISB (online validation and copying from authority files) were noted for later incorporation in the FAO system. Agreement was also reached on the publications to be monitored by the Australian input centre and details on existing gaps in indexing were obtained.

The Australian Centre undertook to index all Australian publications, most of which were already monitored at ISB for *ABOA*. The remainder were sought from FISHNET members, and the Librarian at the Department of Primary Industry & Energy in turn sought publications from the librarians at the Australian Bureau of Resource Economics, the Bureau of Research Sciences and the Australian Geological Survey Organisation.

As indexing work progressed it was apparent that there are similarities in the record specifications for *ABOA* and *ASF A*. Steve Sunter of CSIRO Information Services made the following remarks after consulting George Levick who did the indexing under contract: "Much of the *ASF A* data structure is derived from the *ABOA* definitions. Many field definitions are similar, involving minor stylistic changes. Of particular significance are the common rules in recording the bibliographic structure of items, especially the "bibliographic levels." This similarity sets them apart from other bibliographic databases. *ABOA* abstract data is also eligible for *ASF A* (although *ABOA* does not require such data for abstract-only records). Thesauri used and subject indexing rules are significantly different." Having common abstracts between the two databases is a particular saving because abstracts are the major intellectual content of the records.

The third objective for this research grant referred to the possibility of providing

camera-ready copy of *ASFA* records to the magazine *Australian Fisheries*, for the editor to select records for a current awareness section in the magazine. Unfortunately, the magazine ceased publication with the June 1995 issue. The prospect of using the Australian input as a separate database would only be worth consideration after it had accumulated, over some years, to a reasonable size. Increased ownership of the CD ROM version and increased access to *ASFA* since the time of the grant application also reduces the need for a separate database.

RESULTS OF THE TRIAL YEAR OF OPERATION - 1995

During 1995 the input centre was in a position to not only stay abreast of all new relevant publications but to also enter items from the gaps listed by FAO. This process was aided by programs developed at ISB for the "semi-automatic" transfer of relevant records from the *ABOA*, CSIRO Index and SAGE databases.

ASFA RECORDS BY PUBLICATION YEAR

Records contributed by the Australian Input Centre during 1995.

1982	2
1984	1
1985	4
1986	3
1987	2
1988	2
1989	32
1990	39
1991	96
1992	197
1993	106
1994	395
1995	373

Total: 1,252

FUTURE OPERATION OF THE AUSTRALIAN INPUT CENTRE

The following factors need to be considered in planning for the future of an Australian centre:

- CSIRO will not be producing *ABOA* after 1995. A contract has been given to Infoscan, a commercial firm that already produces *Streamline*. The CSIRO collection that was used for *ABOA* will be dispersed. Infoscan will need to acquire the same material for *ABOA* indexing/abstracting. Given the similarities between

ABOA and *ASFA*, Infoscan should be contracted to incorporate the *ASFA* input with its production of *ABOA*. The number of Australian records prepared for *ASFA* each year is equivalent to one month of input to *ABOA*. Including *ASFA* records in *ABOA* is not an acceptable substitute for adding them to *ASFA*. The thesaurus and subject coding used for *ABOA* were developed for agricultural literature, so are not relevant to marine science. *ABOA* would exclude some *ASFA* material because of the subject matter and few *ASFA* users would have access to *ABOA*.

- FAO, having relinquished responsibility for indexing/abstracting Australian publications, will be unwilling to assume responsibility again. *ASFA* is a cooperatively produced database and FAO would prefer to allocate its scant resources to developing countries that have difficulty establishing input arrangements of their own. If an Australian Input Centre is not continued the coverage of Australian publications will be worse than before this trial.
- FAO has developed software for data entry that will simplify the procedure for entering the *ASFA* index strings. From the beginning of 1996, FAO has asked all *ASFA* partners to make every effort to produce *ASFA* input in machine-readable format using the ASFISIS/ODIN Data Entry Interface. CSIRO Information Services has been providing machine-readable input with the same software developed for *ABOA*, sending the input as a file transfer across Internet to Cambridge Scientific Abstracts. The availability of this new FAO interface should enable an easy transition from the CSIRO arrangements.
- Ownership of the CD ROM version of *ASFA* is now widespread. The libraries at state fisheries research laboratories, the Department of Primary Industries & Energy, Australian Institute of Marine Science, the Australian Maritime College, CSIRO Marine Laboratories, and universities teaching in aquaculture (such as Deakin and the University of Tasmania) all have subscriptions. The universities are now moving to client-server access across Internet, using the same interface as one of the CD ROM versions. Research workers, students and fisheries managers have ready access to *ASFA*. This database is their first choice for information retrieval in marine science.
- FRDC funding for R&D projects rose to \$13.5 million for the 1995-96 financial year (*R&D News* 3(3):1). One of FRDC's strategies to achieve its communications objective is to: "Promote R&D results to industry and resource managers" (*FRDC Research and Development Plan 1993-94 to 1997-98*). CSIRO Information Services' costs for 1995-96 were \$30 per record, so indexing/abstracting costs would be \$9,000 - \$12,000 for 300 - 400 records per annum. This is a small proportion of research expenditure: in 1992, \$38.47 million was spent on fisheries research and \$23.47 million on biological sciences (including ecology) (*Review of Marine Research Organisation Report, 1993*).

- FRDC, through its Executive Director, is currently represented on the *ABOA* database committee.

CONCLUSION

This trial operation of an Australian Input Centre has shown that Australian material can be indexed/abstracted with efficiency and relative economy. Arrangements, principally financial ones, are needed to continue *ASFA* input beyond 1995, for without an Australian Input Centre, the coverage of the results of Australian research will be worse than before this project began. The importance of having easy access to the results of Australian aquatic science generally, and fisheries and aquaculture particularly, continues to increase for industry and research. The annual cost of inputting 300 - 400 records per annum is a fraction of national expenditure on research in marine science, but unless Australian records are input to *ASFA*, the published results of this research will remain largely hidden.

Preparing records for Australian publications in association with production of the *Australian Bibliography of Agriculture* has been successful. Most of the Australian publications that would be monitored for *ASFA* are also on the *ABOA* list, and the record formats for the two databases are similar. Given the relatively small number of 400 Australian *ASFA* records per annum, coproduction with *ABOA* makes an Australian Input Centre a viable operation.

FRDC is the largest research funding body in fisheries science in Australia, the main subject area of Australian input to *ASFA*. FRDC has a commitment to publicising the results of the research it funds and it is represented on the *ABOA* database committee. It is appropriate, therefore, to ask that FRDC continue its financial support for Australian input to *ASFA*.

Given the long association with this project, and the contacts now established by the CSIRO Division of Fisheries, the Division should continue as the Australian *ASFA* partner, with the Marine Laboratories Librarian coordinating Australian input.

ACKNOWLEDGEMENTS

Dr Peter Young, Chief, CSIRO Division of Fisheries, for support and seeking cooperation from his colleagues in fisheries research institutes; Sue Harvey, who was in charge of the database production unit at CSIRO Information Services and jointly prepared the grant application; Tony Ermers who was in charge of the *ASFA* input project at CSIRO Information Services until the end of 1994 and who also undertook the FAO consultancy; Steve Sunter, who took charge of the project from Tony; and George Levick, who did the indexing/abstracting under contract from CSIRO. Thanks to the librarians in FISHNET for gathering in material and to FRDC for forbearance whilst we negotiated across the globe, seeking a start to the trial year.

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