

Publishing At I C L A R M



Information and Training Program
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PUBLISHING AT ICLARM

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This document is a guide for ICLARM staff on the procedures for preparing articles, paper or electronic, for the ICLARM series, external publications, workshop/conference papers and news releases.

Foreword

ICLARM has given a high priority to its published outputs, seeking to ensure their scientific quality, relevance and power to communicate clearly. Until recent years, most of these outputs have been on paper in various forms but lately several items of computer software have also been produced. With the advent of a greater range of information technologies (Internet, CD-ROMs, videos), we now require more flexible guidelines than ever before to guide and promote the creation and dissemination of the results of our work. This guide to "Publishing at ICLARM" answers that need. It provides guidance, establishes simple procedures and makes constructive suggestions about how to prepare your work for a smooth passage through the official system. In the spirit of encouraging and facilitating ICLARM outputs while maintaining and enhancing their quality, it is an easy-to-read and friendly exposé of the system. I am sure its use will result in ICLARM products of even better utility to our clients and stakeholders throughout the developing and developed world.

Meryl J. Williams
Director General

Introduction

Publication of the results of scientific research is essential. Without publication, the research may as well not have been done, since either no one will know about it or no one will be able to duplicate the work.

WHO SHOULD PUBLISH

ICLARM professional research and technical staff, internationally or nationally recruited, have an obligation to take part in publishing the results of their work. Implicitly or explicitly, these staff are judged on their publishing performance as one of the major criteria for advancement in the Center.

Following are guidelines on authorship and editorship of ICLARM contributions, referring to the names which appear in the citations (or bibliographic strips) of published documents.

For technical documents, including all journal and ICLARM technical series articles:

Authors

- ◆ Authors are those (within or outside ICLARM) who contribute significant (i.e., essential to the paper) technical input to a paper (or software).
- ◆ The senior author is the one who writes the [bulk of the] paper; the senior author of a software product is the programmer.
- ◆ "...those, and only those, who actively contributed to the overall design and execution of the experiments... Colleagues or supervisors should neither ask to have their names on manuscripts nor allow their names to be put on manuscripts reporting research that they themselves have not been intimately involved with. An author of a paper should be defined as one who takes intellectual responsibility for the research results being reported" (from *Robert A. Day. 1979. How to Write and Publish a Scientific Paper. ISI Press, Philadelphia, Pa., USA*).
- ◆ Not considered as authors are: (i) those persons contributing "non-scientific" assistance in typing, drawing, proofreading and other editing; (ii) persons included for their stature/position only, either within or outside ICLARM.

Editors

- ◆ Editors are those with sufficient technical expertise to act as peers in: (i) assessing whether a paper is to be published or rejected; and (ii) making technical corrections and other technical improvements to the paper.
- ◆ Senior editors select/reject papers and undertake the major share of the work.
- ◆ Other editors are those who edit papers as assigned by the senior editors, who *must* also be technically qualified peers of the document authors.
- ◆ Not considered as editors are: those providing all nontechnical editing; persons included only for their stature/position, within or outside ICLARM; and technical persons who, *whether designated as editors or not*, do not contribute significantly to the technical editing process. [Note the difference here in authoring and editing - a person who conceives an idea on which a paper is built would be an author, usually the senior one if he/she writes the major part of the paper; a person who conceives a theme for a book of authored chapters or a conference need not be an editor of the book/proceedings. A senior staff member may not delegate the editing work and expect to be named an editor in the proceedings].

For other documents, such as *Naga*, *Newsbriefs*, external magazines, newsletters, public awareness materials, including video, audio work and software:

- ◆ Authorship/editorship of these items may be from nontechnical as well as technical persons, within or outside ICLARM, depending on their expertise and contribution to the item.

Acknowledgements

- ◆ Persons thanked in the acknowledgement section of a paper or other product should have made some *special* nontechnical contribution or a technical contribution not significant enough for authorship/editorship. This implies, in the case of nontechnical contributions, an effort beyond the call of duty.

However, remember to include all those who have made such contributions. Failure, inadvertent or not, can quickly turn colleagues into foes.

The duties of ICLARM staff in the preparation of papers and other products include their typing, design, layout, proofreading and other nontechnical editing. As a rule, these should not be acknowledged in the product.

WHAT TO PUBLISH

The objective of publishing is to ensure that ICLARM's research results reach as wide an audience as possible, particularly in tropical developing countries.

Note:

All articles, conference papers, posters, essays and news releases require clearance before release or submission to a journal, etc., because they represent formal statements from ICLARM (see Chapter 2 - Procedures). The only exceptions are: Abstracts sent off for a coming workshop or conference. However, they must have been cleared by your Program Leader.

The "basic unit" of publishing at ICLARM is the **Technical Report**. All projects should report their detailed results in one or more Technical Reports. It is important that as much raw data as possible be included in these reports to enable later use of the information. Data may also be issued separately on diskette, with full documentation in the Report. An Appendix should describe files and include price and address and an invitation to readers to avail of the data files. For further rationale, see Annex IV - *Data-rich books*.

Project leaders are obliged to provide an annual summary of their project's progress for publication in the **Annual Report**.

At some stage, it may become desirable to review the subject area of a project, or synthesize its findings in a broader disciplinary or multidisciplinary essay. Proposals of this nature should be discussed with the Program Leader and if acceptable will be published after peer review in the **Studies and Reviews** series.

Similar opportunities may arise to produce and publish an exhaustive **Bibliography** or develop **Education Series** items for project clientele.

Publishing and dissemination of **Software** is a demanding area which should not be entered into lightly, since ICLARM software must be fully documented, tested and maintained for external use. Each software product is a long-term commitment by ICLARM.

As a rule of thumb, each professional staff member involved in a research project should strive to produce as author or co-author, at least one **refereed journal article** per year, in addition to preparation of any project Technical Report. At present, the average production rate of primary literature across the CGIAR system is about 0.6 articles/year or one every 20 months per Internationally Recruited Scientist. ICLARM's production rate is right on this average at present, but should be improved to give the Center's work greater scientific impact.

One or more **journal articles** may be prepared from a **Technical Report**. Whereas a **Technical Report** should contain the mechanics of a project, i.e., extensive methodology and results sections, a **journal article** should focus on the literature background to the work and the interpretation of (part of) the results in the light of the previous work.

Invitations to conferences/workshops are usually accompanied by the need to prepare a paper—usually a progress report on a project. ICLARM also organizes conferences and workshops, the output from which is published in the **Conference Proceedings** series.

Increasingly, international electronic (e-mail) conferences, known as listservers or **REMs** (remote electronic meetings), are being held. In some there are opportunities to include substantive articles. REMs have already been used to signal new scientific findings. **Electronic journals** are also available, although there is no authoritative aquatic electronic literature available yet.

Researchers also should consider **magazine** (especially *Naga*) and **newsletter** articles to popularize the results of their research and reach a wider lay audience than does the scientific literature.

Finally, staff in all ICLARM's Programs may propose or draft news releases about the Center. Such public awareness items are important in keeping donors and interested public abreast of the Center and the progress of its activities.

ETHICS

Authors need to be aware that it is unethical to use other persons' or your own previously published results, data or words without proper acknowledgement of the source (see *Naga*, July 1988, p. 6 and *Science* Vol. 26[11 November 1994]:959). The act of doing so, plagiarism, will reflect badly on your scientific career. See p. 32 for use of quoted material.

A research article submitted to a journal for consideration may not be sent to another journal (or sent to two or more journals at the same time) while it is still under review by the first journal.

Research results should not be split up into the smallest possible units in order to generate more journal articles. This becomes transparent in and detrimental to the author's CV. Worse is later to attempt to publish a synthesis of the small units as a new contribution. The authors of such salami science usually become well known and disreputable to their peers. Occasionally, it is severe enough to become public. See *Aquaculture* 113:171 (1993) for an example.

Results of research undertaken before joining ICLARM are not normally considered to be ICLARM Contributions, and papers about the previous research do not need clearance. The author's address in the paper should be that of the previous affiliation with a footnote giving ICLARM as the present address.

Exceptions occur when the researcher has to undertake analyses and write the paper on ICLARM time. Then a contribution number and ICLARM address can be given. However, the previous affiliation should also be recognized in an Acknowledgement Section and by including contribution or other record number from that institution.

Finally, it makes sense to ask peers within ICLARM to comment on your article before submitting it for final clearance through your Program Leader. In this way you may receive useful advice or additional material as well as keeping others in the team informed.

TIMING, BUDGETING

Resources, both time and funds, are needed to produce Technical Reports and other documents during and at the conclusion of a project. Planning is needed during the project development stage to allow sufficient time, at least two to three months, to prepare the outputs. The planning could include provision for taking video footage of project progress and special events, as well as photography of infrastructure and personnel.

Funding may be required not only for publishing and distribution, but also for contract editing or translations. For

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example, in Conference Proceedings, there are often long delays between the event and publication due to ICLARM's stringent peer review and editorial requirements. The process can be sped up in various ways: arrange for an ICLARM editor or contractual editor to attend the event and pre-edit papers with the participants; have a contract editor to edit the whole proceedings. If the proceedings require translation, the translator should attend the meeting and pre-edit papers.

ICLARM has no core funds for publishing documents in the technical series. Project staff must make budgetary allowances for Technical Reports and other ICLARM technical publications, and for page charges and reprint charges from journals, etc. Publications staff will help to assess these costs.

Technical Reports
Journal Articles
Conference Proceedings
Books
Reference Materials
Publications Staff

Procedures

AGREE ON CONTENT, AUTHORSHIP

Contents and authorship of a proposed document should be discussed with a supervisor while the document is still in the idea stage. Practical considerations, such as how much data can be included realistically in a Technical Report, should a data diskette be provided in the publication, etc., can be worked out at this time. Publications staff can help in these decisions.

REVIEW YOUR MANUSCRIPT

Here are suggested guidelines for review of your manuscript:

- ◆ Relevance and significance of the research
- ◆ Originality of the research
- ◆ Suitability and adequacy of the research methodology/approach/ technique
- ◆ Soundness and pertinence of the discussion and analysis
- ◆ Organization of the written material
- ◆ Correctness of scientific (species) and common names
- ◆ Relevance/appropriateness of graphics/illustrations (are they better summarized in text?)
- ◆ Is the title appropriate/fit for the work?
- ◆ Is the abstract appropriate? What about its length?

When the above list is observed, you can now prepare your manuscript for clearance.

READ THE STYLE GUIDE

Each journal, magazine/electronic mail conference, etc., has its own requirements for submission of articles. For most journals, the guide consists of a page or two of "instructions to authors" at the end of each journal issue. For ICLARM publications, the style guide is found on p. 15.

Failure to follow the instructions in style guides causes manuscripts to receive hostile attention from editors, leading to rejection or delays in publication. This is not a trivial matter.

Note that such instructions usually include special requirements for tables and figures as well as bibliographic and text style.

TYPE USING MICROSOFT WORD FOR WINDOWS

Documents should be typed using Microsoft Word for Windows, the ICLARM standard word processing program, but see p. 26, on Preparation of tables. Use of other programs may result in loss of special symbols or formats, and cause inconvenience to editorial staff processing the document as well as to authors. **Manuscripts should always be typed double spaced.**

ARRANGE PEER REVIEWS

Studies and Reviews and Conference Proceedings papers require external peer review; it is not required in other series, but is always a useful measure.

Peer reviewers should be recognized researchers in the subject matter of the manuscript. Some may not be willing; others may require a fee, which is acceptable if modest (and if your project has a reasonable publication budget).

External peer reviews will be arranged by the Leader of the Information and Training Program upon nomination of reviewers by the authors or their supervisors.

When submitting manuscripts in the ICLARM Studies and Reviews and Conference Proceedings series for clearance (p. 8), reviewers' comments and responses where applicable should be attached.

SUBMIT FIGURES

Figures, if electronic, should be in one of the following software programs: Corel Draw, Quattro Pro, Harvard Graphics, Microsoft Excel, or Windows Paintbrush. Draft hand-drawn figures are acceptable at the internal editing stage whether for ICLARM or external publication. The Publications Unit draftspersons will prepare final copies for you. Submit drafts to the Managing Editor accompanied by (a) full instructions on style, including the editorial guidelines of the proposed journal/magazine where applicable; and (b) a deadline for the work, bearing in mind the possible need for alterations. In view of the continuous high workload of the drafting section, figures for drafting should only be submitted when they are final. See p. 26 for more guidelines in preparing figures.

ARRANGE FOR IN-HOUSE EDITING

The Publications staff provide (limited) technical editing as well as style editing and copyediting of all manuscripts. Since

capacity is limited, manuscripts should be submitted well ahead of any deadlines.

If you need major assistance to bring an article into shape, ask the Managing Editor as soon as the article is typed up. Otherwise, style and copyediting will be done automatically, when the article is submitted for clearance.

Contract editing can also be arranged by the Publications Unit based on industry rates. However, author(s)/editors must ensure that the manuscript(s) is/are complete, i.e., abstracts written, required translations done, graphics/illustrations and photos/slides submitted, and tables are complete. This is to avoid delay and additional costs in the editorial process.

Provide diskette *and* hardcopy versions of the manuscript. Turnaround time is usually one to four weeks, depending on length and staff workload.

TRANSLATIONS

Publications staff will arrange translations of articles, news releases, etc., as required. There is no set ICLARM policy on translations. In view of the costs and time required, consideration to this aspect should be given early in the planning stage.

CLEARANCE STEPS

All work done at ICLARM must be cleared through the Center before external or internal submission. As much as possible all authors/editors should have thoroughly checked the manuscript before submitting this for final clearance.

Obtain a publications clearance form from the Managing Editor (sample in Annex I) and fill up the required data. The form, attached to your manuscript, requires the signatures of your Program Leader, Information and Training Program Leader, and Director General -- in that order. Any or all of them may ask you to revise or amend parts of your submission, in the spirit of making each manuscript the best that ICLARM can produce.

A Contribution Number will be assigned to your manuscript after it has been cleared. Ideally, your manuscript should have also been accepted for publication before asking for a number. **Without a Contribution Number, your document will not be recognized as belonging to ICLARM.**

CONTRIBUTION SERIES

The Publications Unit continually compiles and binds into volumes all work that has been assigned a contribution number, called the Contribution Series. To ensure that the Contribution Series is complete, all manuscripts intended for publication should also be submitted to the Publications Unit for file until such time that the author(s) or editor(s) can replace the manuscripts with *four* copies/reprints of the published document. The bound volumes will be later distributed to the: a) Director General's Office; b) Collection of

the Program Leader, Information and Training Program; and c) Library (two sets).

At the same time, the Contribution Series compiles all bibliographic information about the manuscript, to be entered in a contributions database being maintained at Publication.

Author(s) or editors should therefore ensure that the ICLARM Contribution Number appears in the published item (whether in in-house or external publications); and that the clearance form is properly filled up.

PUBLICATIONS COMMITTEE

There is an ICLARM Publications Committee whose function is to advise management on all aspects of publishing at ICLARM. Membership consists of the Program Leader for Information and Training and two persons drawn from the scientific staff on a rotation basis.

The Committee was set up to advise ICLARM management on all aspects of publication. It does not examine individual papers or reports. The Committee operates at a policy level and, e.g., advises on the types and nature of publications the Center should produce, in a proactive manner.

ICLARM Reports
Education
Proceedings
ICLARM
and
ICLARM

Series Title
of
primary

The ICLARM Publication Series

BACKGROUND

The Articles of Incorporation of ICLARM in the Philippines in 1977 contained a Statement of Purpose, or objectives of the Center, one of which was:

*To publish and disseminate research findings
and recommendations of the Center.*

ICLARM decided to publish a number of different series to reflect different aspects of the Center's work and to reach different audiences. The reasons for in-house publishing are many, primarily:

- ◆ ICLARM can disseminate its material widely without copyright or other restriction;
- ◆ there are no existing similar series in which the Center's work can be regularly or reliably published;
- ◆ through exchange, the Center's library has been able to maintain large holdings of serials and monographs.

The Technical Series are intended for ICLARM staff authorship only. Authors from other organizations can only contribute to ICLARM's technical series:

- ◆ as co-authors;
- ◆ in conference papers in proceedings edited by ICLARM staff;
- ◆ in commissioned reviews, bibliographies and translations.

SERIES TITLES

The ICLARM publication series includes:

- ◆ **Technical series:** Studies and Reviews, Conference Proceedings, Technical Reports, Bibliographies, Translations, Education, Software
- ◆ **General series:** *Naga, the ICLARM Quarterly*, ICLARM Reports, *Newsbriefs, Newsplash*

In addition, there are occasional brochures, booklets, posters and directories that fall outside the series but which nevertheless require proper clearance.

STANDARDS

Each publication series has a set of standards relating to both content and format. Briefly, these are:

- ◆ **Acronym/logo:** Common to all series is the use of the ICLARM acronym, in color or black and white. The official ICLARM colors are blue (70% magenta and 99 % cyan) and green (99% cyan and 40% yellow).
- ◆ **Dimensions, style:** All series use American paper sizes. Dimensions vary in some series, as do type fonts and size, and number of columns. A summary is given below.

Title	Dimensions (inches)	Font (and point size)	Format (column width)
Studies and Reviews	8.5 x 11	New Century SchBk (10)	Two columns, justified right
Conference Proceedings	7 x 10	NCSB or France (10)	Two columns, justified right
Technical Reports	8.5 x 11	Helvetica (11)	One column, ragged right
Bibliographies	8.5 x 11	Helvetica	
Translations	8.5 x 11	Helvetica	
Education	Various	Various	Various
Software (manual)	8.5 x 11	Helvetica or New Times Roman	Various
Annual Reports	7 x 10	Bangkok (10) or New Times Roman	One column, ragged right
<i>Naga</i>	8.5 x 11	Various	Two and three columns, justified
<i>Newsbriefs</i>	8.5 x 11	New Times Roman (10)	Two and three columns, justified
<i>Newsplash</i>	8.5 x 11	Various	Various

SPECIFICATIONS AND CONTENT

1. ICLARM Studies and Reviews

Content: In-depth, often lengthy dissertations on topics of international interest with broad scope and broad implications; synthesize and interpret information, some of which is new; present new insights into existing problems; critically review a prior body of knowledge. Generally suitable for review in the international primary literature.

Refereeing: Require at least two external peer reviews.

Distribution: Worldwide. Limited free distribution to Fisheries Departments in developing countries and selected institutions; also review and exchange copies. Apart from author(s) copies, remainder are sold.

Print run: 1 000 -2 000

2. ICLARM Conference Proceedings

Content: Collected documents emanating from conferences and workshops; synthesize and interpret information, some of which may be new; present new insights into existing problems; critically review a prior body of knowledge. Generally suitable for review in the international primary literature.

Refereeing: Require at least two external reviews per paper (unless in summary or abstract form)

Distribution: Worldwide. Limited free distribution to Fisheries Departments in developing countries and selected institutions; also review and exchange copies. Apart from author(s) copies, remainder are sold.

Print run: 1 000 - 2 000

3. ICLARM Technical Reports

Content: Scientific and technical information which may add to a prior body of knowledge, but because of narrow scope, level of data analysis, and/or degree of interpretation of data, not usually of worldwide interest but often highly important locally or regionally. Usually inventory and classify data and predict development possibilities. Include feasibility studies, consultants' studies and project-related reports.

Refereeing: Internally peer reviewed

Distribution: Regional, worldwide on request. Limited free distribution to Fisheries Departments in developing countries and selected institutions; also review and exchange copies. Apart from author(s) copies, remainder are sold.

print run: 500 - 1 000

4. ICLARM Bibliographies

Content: Exhaustive compilations of references on specific subjects of interest to ICLARM programs. Subject matter of interest in tropical, developing countries. May be "published" in diskette form.

Refereeing: None

Distribution: Worldwide. Limited free distribution to Fisheries Departments and selected institutions; also review and exchange copies. Apart from author(s) copies, remainder are sold.

Print run: 500 - 1 000

5. ICLARM Translations

Content: Articles for translation are of subjects related to ICLARM's programs. Usually short, specific articles. Translations may be from or into English; subject matter of interest in tropical, developing countries.

Refereeing: None

Distribution: Worldwide on request. Sold for minimal price. Not included in exchange agreements.

Print run: Photocopied on demand

6. ICLARM Education Series

Content: Interpretive, popular versions of scientific findings related to ICLARM's research, for general audiences. May be booklets, comics, posters, videos, etc.

Refereeing: Internally reviewed, but external audiences should be asked for their reactions.

Distribution: Worldwide. Limited free distribution to Fisheries Departments and selected institutions. Remainder sold.

Print run: 1 000 - 2 000

7. ICLARM Software Series

Content: Software developed at ICLARM; fully documented, with manual. Topics range from methodological to encyclopedia.

Refereeing: Require extensive internal review and external review by "pilot" users.

Distribution: Initially free to pilot users. Later versions sold to cover costs only. Not included in exchange agreements.

8. ICLARM Reports

Content: Annual summaries of project activities of ICLARM's programs. Contain information on Board and staff activities and publications, staffing and organizational funding.

Distribution: Worldwide. Limited free distribution to Fisheries Departments and selected institutions. Available to individuals free on request by surface mail.

9. Operational Plan

Content: General overview of the Center's planned activities for the year, including a detailed list of research projects, their progress during the previous year, and their expected outputs.

Refereeing: Internally reviewed

Distribution: Worldwide, Free on request

Print run: 1 000

10. Naga, the ICLARM Quarterly

Content: **General Section:** Summaries of research results or research issues written in less technical prose for a broad audience including nonspecialists, managers, development agencies, NGOs, etc. Content should have international significance or usefulness. **Technical Section (NTAS, NTFS, AFSSRN):** Short technical papers which may be very specific, by and for specialists in the respective fields. Usually authorship is from the members of the respective networks.

Refereeing: Internally reviewed

Distribution: Worldwide. Free by surface mail; annual subscription required for airmail delivery.

Print run: 5 200

Reprints: By author's request at cost.

11. Newsbriefs

Content: Informal news medium about Center events and activities.

Distribution: Free to selected institutions, persons and press.

Print run: 1 000 - 1 200

12. Newsplash

Content: Informal news about Center events and activities.

Distribution: ICLARM staff, including Board of Trustees.

Print run: 250

Style Guide for ICLARM Publications

INTRODUCTION

This guide has been prepared by the Publications Unit of the Information and Training Program to assist authors in writing manuscripts for publication in the ICLARM series. The guidelines offered are designed to speed the editing process, facilitate layout work, and ultimately to enable efficient dissemination, storage and retrieval of scientific and technical information.

The style rules outlined in the following pages have been derived from various authorities, while some have been established by common usage. The major reference materials for matters of style are listed below and may be found in the ICLARM library.

- ◆ The latest editions of the Council of Biology Editors' (CBE) *Scientific Style and Format* and the University of Chicago Press' *The Chicago Manual of Style* are used for conventions of style.
- ◆ *Webster's International Dictionary* (latest edition), unabridged, is the standard for spelling. However, for word division, we are generally at the mercy of software such as Pagemaker.
- ◆ The *Aquatic Sciences and Fisheries Information System (ASFIS) List of Serials* and the *American National Standard for Bibliographic References* are used as guidelines for bibliographic entries.

For units and special nomenclature, use:

- ◆ R.R. Sokal and F.J. Rohlf. (latest edition). *Biometry*. Freeman and Co., San Francisco.
- ◆ (Latest edition). *Biological Nomenclature*. Institute of Biology, London.

PREPARATION OF COPY

The following instructions may be modified in the near future when we begin to adopt electronic publishing guidelines.

- ◆ Type the manuscript using Microsoft Word software. This is the ICLARM standard word processing software. Use of other programs always causes problems in formatting later in PageMaker.
- ◆ Print the manuscript on 21.5 x 28 cm (8.5 x 11") paper with at least 2.5 cm (1") margins all around.

- ◆ Use regular tabulation for tables; do not use the table menu in Microsoft Word.
- ◆ Double space the manuscript throughout, including references, table legends and figure captions. This allows everyone involved in the publication process to function efficiently; editors and authors have space for handwritten notes; keyboarders and proofreaders can see all marks easily.
- ◆ Leave a triple space before all first level headings (see *Headings* section below).
- ◆ Collate the manuscript parts as follows:
 1. Title page, including author's name and institution from which the work is being submitted
 2. Foreword or preface; epigraph
 3. Abstract, do not cite references here
 4. Text
 5. References (ensure correct and complete bibliographic information)
 6. Tables (with numbers and captions, legends, etc.)
 7. Figures (with figure numbers and captions, author's name, title of paper)
 8. Photos or slides (if any)
 9. Footnotes (if any)
 10. Annexes (Appendices). Start each one on a new page; designate with Roman numbers and description, e.g., Annex I, etc.
 11. List of Acronyms or Glossary. If many acronyms or special terms requiring definition are used in the text, list them in alphabetical order.
 12. Acknowledgements
- ◆ Number the pages consecutively and type the author's name at the head of each sheet. If a page becomes misplaced, the author's name on the sheet will help identify it.
- ◆ In the case of Conference Proceedings, the above steps are needed for each paper (followed by discussion pages where applicable).
- ◆ Most ICLARM publications include a table of contents, which consists of individual paper titles only for Conference Proceedings, but chapter titles as well as first level headings in Studies and Reviews and Technical Reports.
- ◆ A list of Tables and/or Figures may be useful if there are a large number of them. List number, title and page number on a separate page. Include only essential items especially if captions are overly long.
- ◆ Language: Technical writing is characterized by a tone of objectivity and exclusion of personal pronouns (I, we, our) produces a style consistent with this tone. The use of the third person in the passive voice places emphasis on subject matter rather than on people working with the subject matter. However, the rule is not hard and fast. Some journals prefer personal pronouns. They are becoming more common in the literature. Discretion is needed.

- ◆ Avoid sexist language by replacing the word, or by rephrasing or rewriting, e.g.,

Man's search for knowledge

Humankind's search for knowledge (replacement)

The search for knowledge (rephrasing)

People have continually sought knowledge (rewriting)

Some sexist words and replacements:

chairman	chair, chairperson
fisherman	fisher
foreman	supervisor
his, her	his or her
man, mankind	people, humanity
manpower	personnel, workers

EDITORIAL MATTERS

Titles

- ◆ The title should describe as specifically and precisely as possible the content of the paper. Current awareness services may signal your paper's existence to potential users by title only, and if the title does not convey the paper's essence, the information may not reach its target audience.
- ◆ Avoid titles beginning with superfluous words such as "Notes on the ..." or "Further studies on ...".
- ◆ For geographic locations included in title, specify the country involved, e.g., "Pig-Duck-Fish-Azolla Integration in La Union, Philippines".

Abstract

- ◆ Include an abstract with all manuscripts. It is an essential part of all scientific and technical papers and should state concisely in 250 words (1 page) or less, what was done, found and concluded.
- ◆ The abstract serves two functions. Besides containing a summary of the major results and conclusions, it is the main instrument for information retrieval by indexers, abstracting services and computerized information retrieval systems. If information in ICLARM publications is to be widely disseminated and easily retrieved, then accuracy of information in the abstract is essential. A sample abstract appears in Annex II.
- ◆ The two parts of the abstract are presented in the following order: (1) the bibliographic strip which presents a complete citation of the work as it would appear in a list of references; including authors, title of article, series title (correctly abbreviated), report number and number of pages; and (2) summary of major results and conclusions.
- ◆ Abstracts should not include references.

Headings

The choice of headings is guided by the content of the document and differs even within series. There is no set format for the structure of the text in any series. However, authors should strive to use the major headings required by most journals, i.e., Introduction, Methods and Materials, Results and Discussion.

- ◆ Where there are several levels of headings, each one should be distinguished from the other.

First level	Second level
CENTERED, ALL CAPITAL LETTERS, BOLD	<i>Flush Left, Capital and Lower Case, Bold, Italics</i>
Third level	Fourth level
FLUSH LEFT, ALL CAPITAL LETTERS, 8 PTS.	Flush left, downstyle, medium, 10 pts.
Fifth level	
<i>Indented (run-in), downstyle, italics</i>	

Units of Measure

- ◆ The International System of Units (SI) for measurements and weights is recommended because of its worldwide acceptance by scientists. The following "Base Units" are the most commonly used.

Quantity	Unit	Abbreviation	Derived units
length	meter	m	km; mm
mass	kilogram	kg	g; mg; also t (tonne)
electric current	ampere	A	
temperature	kelvin	K	
amount of substance	mole	mol	
luminous intensity	candela	cd	
frequency	hertz	Hz	
force	newton	N	
pressure	pascal (=N,m ⁻²)	Pa	
energy	joule (kJ)	J	
time	second	sec	
	minute	min	[spell out all other units of time: hour, day, month, year]

- ◆ Note: °C is used instead of the Kelvin unit in most journals, including ICLARM publications.

- ◆ Avoid adding an "s" to the end of standard abbreviations, and do not use periods. Abbreviations for metric units should conform to the precise, internationally accepted standard.

Examples:

10 km · hour⁻¹ (not 10 kms/hour or 10 kph)

20 g · ml⁻¹ (not 20 gms/ml)

30 cm tall (not 30 cms. tall)

- ◆ For ICLARM publications, the following styles are observed:

Nontechnical Publications
(e.g., *Naga*/Annual Report)

Technical Publications

Examples:

10 km/hour

20 g/ml

300 t/ha

200 g/m²

Examples:

10 km · hour⁻¹

20 g · ml⁻¹

300 t · ha⁻¹

200 g · m⁻²

- ◆ Spell out all units of measure when they appear without a number.

Examples:

The yield of tilapia was measured in tonnes per hectare (not t/ha).

Kilograms per haul was used as a standard of comparison (not kg/haul).

- ◆ Some other units in common use, some of which use a period, are:

a.m. - morning

CPS - cycles per
second

GT - gross tons

ha - hectare

hp - horsepower

kw - kilowatt

N - number

pH - acidity

p.m. - afternoon

SD - standard deviation

SE - standard error

t - metric ton or tonne

bar - 100 k · Pa

- ◆ Where local units of measure are used, they should be explained in metric equivalents in the first instance, e.g., 1 rai = 1 600 m²; 1 cavan = 44 kg.
- ◆ Include a conversion of foreign currencies to US\$1 as of the current year of publication.

Species Names

- ◆ Use *FishBase* to check all fish species names. This will ensure consistency and up-to-date usage.

Abbreviations

- ◆ Define acronyms or unfamiliar abbreviations the first time used and indicate abbreviation in parentheses, e.g., Asian Development Bank (ADB), Southeast Asian Fisheries Development Center (SEAFDEC). Do not give any acronym in parentheses if it is not used subsequently in the paper.
- ◆ Define in a footnote to a table or figure or in the figure or table legend itself any abbreviations, symbols or acronyms which are not in common usage.
- ◆ When a significant number of abbreviations are used in a manuscript, they should be listed as a separate section under the heading "List of Acronyms".
- ◆ Periods after capital letters which are abbreviations for names of countries, organizations, institutions, ministries, etc. should be omitted, e.g., USA, SEAFDEC. Treat these abbreviations as singular nouns.
- ◆ Abbreviate names of standard units of measure when they follow a number except for hour, day, month, year.

Examples: 3 000 t · ha⁻¹ mg · l⁻¹ 10 km · hour⁻¹ 25%

Numerals

- ◆ Numerals smaller than 10 should not be spelled out when accompanied by a standard unit of measure:

3 hours 5 kg 3% \$5

- ◆ However, spell out numerals smaller than 10 when used with other than standard units of measure as noted above:

eight fish three rivers seven species

- ◆ Numerals from 10 and larger should never be spelled out unless they are used to begin a sentence.
- ◆ In a series containing some numbers of 10 or more and some less than 10, use numerals for all:

The body fat content of 3 carp, 2 snakehead and 12 tilapias was measured after 180 days.

- ◆ Avoid beginning a sentence with a numeral. Spell out the numeral or reword the sentence.

Examples:

The year 1993 has been a progressive year.

Thirty-five fishers joined the cooperative last month. (or "A total of 35 fishers joined the cooperative last month.")

- ◆ In writing compound number adjectives, spell out either the shorter or the first number.

Examples:

sixty 12-inch bolts 10 eight-cylinder engines

- ◆ The recommended style for writing numbers of more than four digits is to use a space (not comma) after every three digits to the left or right of a decimal point.

Examples:

1 000 kg 0.159 63 mm

- ◆ Place a zero before the decimal point in writing numbers with no integer.

Examples:

0.932 0.006

- ◆ Spell out fractions standing alone, but with technical units, use figures.

Examples:

three-fourths of the staff members
 3½ g 5¼ m

- ◆ Equations should be numbered consecutively.
- ◆ Subscripts, superscripts and symbols should be properly distinguished.
- ◆ Dates should be written as "day month year":

Examples:

5 September 1983
 6 July-10 August 1983
 18-23 December 1983

Compound Words

- ◆ In general, joining words by hyphens to make compound words is discouraged. The trend is away from hyphens and to join words (permanent closed compounds) or leave them open (open compounds).
- ◆ Open compound words are combinations of words so closely associated that they constitute a single concept but are spelled as separate words.

Examples:

stool pigeon sex ratio coral reef

When used as adjectives, well established or permanent combinations do not need hyphenation. Thus:

coral reef fish sodium chloride solution

- ◆ Solid compound words are a combination of two elements, originally separate words but now spelled as one word.

Examples:

seawater	saltwater	typesetting
policymaker	decisionmaking	freshwater
parttime		

- ◆ Hyphenated compounds, combinations of words joined by one or more hyphens, are customary in some instances.

Examples:

two-thirds	fifty-five	mother-in-law
one-half	kilowatt-hour	

- ◆ Temporary compounds are often used in ICLARM manuscripts, for example:

small scale	stock assessment	yield per recruit
gill net	length frequency	

When used as adjectives, they are joined by a hyphen to indicate that the noun following refers to both words. Thus:

small-scale fisheries	deep-sea fishing
yield-per-recruit assessment	short-necked clam
gill-net design	thiamine-deficient diet
catch-per-effort relationships	vitamin-dependent enzyme
length-frequency data	growth-promoting experiments
high-priced commodity	

- ◆ Word-forming prefixes generally form closed compounds:

bi	-	bivalent	inter	-	interrelated
bio	-	biophysical	macro	-	macroeconomics
socio	-	socioeconomic	mini	-	miniskirt
co	-	coauthor	multi	-	multidisciplinary

- ◆ There are, however, many rules and exceptions. The unabridged Webster's International Dictionary is the authority for ICLARM publications.

References

- ◆ References should be cited in the main text or body of the article or paper. There is no need to cite them in the abstract. However, author must ensure that the reference cited in the text is found in the reference list and vice versa.

◆ References consist of the following elements:

1. Journal article
 - author (individual or corporate)
 - date of publication
 - title of paper
 - abbreviated title of journal in which published, volume
 - number and pagination
2. Technical report
 - author
 - date of publication
 - title
 - series and pagination
 - publisher and city
3. Book
 - author
 - date of publication
 - title
 - publisher and city
4. Book chapter
 - author
 - date of publication
 - title of chapter
 - pages of chapter
 - editors of whole publication
 - title of whole publication
 - publisher and place of publication

If any of these elements are omitted, the reference is incomplete and may prove difficult or impossible to retrieve, thereby impeding flow of information.

- ◆ Capitalize first word in title, proper noun, and genus names only. All other words should be in lower case.
- ◆ Capitalize names of special committees

Examples:

Report of the Expert Committee on Tropical Skipjack

Report of the First Session of the IPFC Working Party of Experts on Central and Western Pacific Skipjack

- ◆ Capitalize names of special meetings. (Spell out, do not abbreviate words)

Examples:

Proceedings of the World Scientific Meeting on the Biology of Tunas and Related Species

The following bibliographic citations are examples of most of the references authors will need to use and illustrate the punctuation,

capitalization and abbreviations recommended by the *Aquatic Sciences and Fisheries Information System (ASFIS)*. If it is not found in ASFIS, the *American National Standard for Bibliographic References* is used.

1. Book:

Bardach, J.E., J.H. Ryther and W.O. McLarney, Editors. 1972. *Aquaculture: the farming and husbandry of freshwater and marine organisms*. Wiley Interscience, New York.

Longhurst, A. and D. Pauly. 1987. *Ecology of tropical oceans*. Academic Press, San Diego.

2. Chapter or part of a book or published conference proceedings:

Hepher, B. 1978. *Ecological aspects of warmwater fishpond management*, p. 441-468. *In* S.D. Gerking (ed.) *Ecology of freshwater fish production*. John Wiley & Sons, New York.

Christensen, V. and D. Pauly. 1993. *On steady-state modeling of ecosystems*, p. 14-19. *In* V. Christensen and D. Pauly (eds.) *Trophic models of aquatic ecosystems*. ICLARM Conf. Proc. 26, 390 p.

Tan, B.Y. and K.T. Siow. 1989. *The aquarium fish trade and industry in Singapore*, p. 23-26. *In* F.M. Yusoff and K.T. Siow (eds.) *Proceedings of the International Forum on Aquarium Fish Industry*. Malaysian Fisheries Society, Johore Bahru, Malaysia.

3. Journal article:

Marr, J.C. 1973. *Management and development of fisheries in the Indian Ocean*. *J. Fish. Res. Board Can.* 30:2320-2321.

(Generally, leave out the issue number in the volume, unless each issue starts at p. 1, e.g., *Naga*)

Hillman, S. 1994. *Environment on trial*. *Naga*, ICLARM Q. 17(1):8-10.

4. Translation:

Usui, A. 1974. *Eel culture*. Fishing News (Books) Ltd., Surrey, England. Ichiro Hayashi, translator.

5. Technical reports:

Jianne, A., Compiler. 1975. *Bibliography of fish and fisheries with special reference to shrimps and prawns*. II IC Occas. Pap. 1974/3, 136 p. FAO, Bangkok.

Sobur, A.S., M.J. Chambers, R. Chambers, J. Dampolii, S. Hadi and A.J. Hanson. 1977. *Remote sensing applications in the Southeast Sumatra coastal environment*. PSPSL/Research Report/002, 30 p. Bogor Agricultural University, Bogor, Indonesia.

SCS. 1978. Report of the Workshop on Management of Resources of the Sunda Shelf, Malacca Strait and Related Areas, 7-9 December 1977. SCS/GEN/78/18, 13 p. South China Sea Fisheries Development and Coordinating Programme, Manila.

6. Newspaper article:

Unsigned article

Anon. 1978. Rules on fisheries joint ventures studied further. Manila Bulletin, 30 December 1978:21.

Signed article

Movido, R.S. 1978. Go all-out to boost poor fishers' lives. Manila Bulletin, 31 December 1978:24.

7. Dissertations (Ph.D.) and Theses (M.S., M.A., etc.)

Smith, I.R. 1978. An economic analysis of the structure and performance of the milkfish (*Chanos chanos* Forsskal) fry industry in the Philippines. University of Hawaii, Honolulu, Hawaii. 300 p. Ph.D. dissertation.

Vandemaele, K.H. 1978. Tank culture of *Tilapia (Sarotherodon) aureus* with aeration and filtration. Auburn University, Auburn, Alabama. 100 p. M.S. thesis.

8. Paper presented at a meeting (not always a valid reference as it is not a publication):

Christy, F.T., Jr. 1977. Necessary adjustments in fishery development-enforcement problems in Southeast Asia. Paper presented at the 11th Annual Conference of the Law of the Sea Institute, 22-24 November 1977, Honolulu, Hawaii.

9. Papers still in press or in preparation (date of publication is omitted):

Rashidi, B.B.A. A synoptic review of the biology and culture of *Tilapia rendalli* Boulenger (1896). FAO Fish. Synop. Ser. (In press)

◆ References in the text. The following examples are indicative. Note punctuation carefully:

Date in parentheses:

"From the data of Smith (1978)"

Reference in parentheses:

"A theory formulated for Southeast Asia (Christy 1977)"

Chronology has precedence over alphabet:

"of certain fishery facts (Pongase 1982; Maclean 1983)"

Semicolon between different authors:

"in tropical waters (Pauly and Ingles 1981; Munro 1982)..."

Cite two authors at most; if more, use et al.:

"little understood (Sokur et al. 1977; Bardach 1982)..."

For references with the same author, different dates, do not repeat author's name: (Munro 1966, 1967)

◆ Do not italicize 'et al'.

Tables

- ◆ Prepare your tables using the regular "Tab" keys in Microsoft Word, and never use the Table Menu. The Table Menu is not compatible with PageMaker and using that menu ruins the encoded data during layout.
- ◆ Type each table on a separate sheet and number with Arabic numerals.
- ◆ Include a complete, informative table caption so that reference to the text is unnecessary to identify information in the table.
- ◆ Use horizontal lines above and below headings, but seldom elsewhere. Minimize vertical lines; use extra spaces instead. Columns of data should be properly spaced.
- ◆ Superscript letters or symbols should be used to indicate footnotes in tables. Numerals used as superscripts could be misconstrued as part of the numerical data in the table.
- ◆ Where each table is first referred to, write in margin "Table ___ near here."
- ◆ Avoid tables with many columns and few rows which must be typed lengthwise on the paper. Try turning columns into rows and vice versa to save space. Also avoid very long tables which must be folded out. Try breaking up a very large table into several small tables. If all fails make it an appendix or, in the case of a Technical Report, put in a diskette to accompany the report.
- ◆ Capitalize only the first word and proper nouns in legends.
- ◆ In text, references of the type "Table 14 shows ..." or worse, "Table 14 proves ..." are best avoided. Tables show or prove nothing: authors do, with the aid of the statistics or other information included in tables. Even worse, perhaps, are references of the type "Table 14 is a list of ...," when this is obvious from a glance at the body or title of the table. References to tables, like discussions of them, should do more than simply describe the table or repeat the facts presented in it. If actual discussion is not necessary, then a single cross-reference may suffice: "See Table 14."

Figures

- ◆ Line drawings submitted should be originals, drawn in black ink on heavy white paper, bristol board, or tracing paper. If mailed to ICLARM, they should be sent flat or rolled, never folded. Computer graphics, if necessary, must be of high quality, preferably on a laser printer.
- ◆ In most cases, ICLARM artists will make final drawings from your drafts. Ensure that sufficient written instructions are provided to avoid the need for making several versions to satisfy your needs.
- ◆ Figures should be proportioned to fit one or more column width depending on the series in which the document is to be published.
- ◆ Figure legends must enable readers to identify the content of the figure without reference to the text.
- ◆ Provide clear labels and scales on all figures.
- ◆ Maps should show the north indicator and indication of latitude and longitude, and should locate sites mentioned in the text.

- ◆ Letters and numbers should be no smaller than 1 mm when reduced, to remain easily legible.
- ◆ Line drawings are best prepared 30-50% larger than their printed size. Keep this reduction and desired column width in mind when asking the drafts person to prepare your figures.
- ◆ If the illustration is taken from a copyrighted source, permission to publish must be sought from *both* author and publisher, and proper acknowledgement to the latter must be made in the figure legend. The publisher will usually stipulate the form in which the credit line should appear.
- ◆ Aim for clean lines and simplicity in line drawings. As a general rule, only four or fewer curves or lines should be included in a figure. Figures should not be overcrowded with details.
- ◆ Check the figures to ensure that they are numbered consecutively as they are cited in the article and that each figure is cited at least once in the text.
- ◆ In text, when referring to figures, avoid also styles of "Fig. 1 shows..." or "Fig. 1 proves...", as explained in "Tables" above.

Photographs

- ◆ Black and white photographs should be on glossy or matte paper and have good contrast. Good quality color prints are acceptable for black and white reproduction, but are inferior for color reproduction.
- ◆ Color slides are best for color reproduction.
- ◆ The author's name and figure number should be lightly written in wax pencil or soft tip marker or be typed on a strip of paper and fastened to the back of the print. Do not use paper clips which may dent or damage the print.
- ◆ Scale bars on photomicrographs are essential. Magnification factors should be avoided, because they require recalculation when the micrograph is reduced. An excellent publication on scientific illustration is the booklet by Arly Allen, *Steps Toward Better Scientific Illustration* (33 p., published by Allen Press, Lawrence, Kansas, 1977.) available in the ICLARM library.
- ◆ Do not staple or use metal paper clips when attaching and sending photographs. If possible, enclose them in cardboard to avoid being damaged while in transit.

Footnotes

- ◆ Keep footnotes to a minimum, for they are difficult to read and difficult to layout. Footnotes should be reserved for institutions' contribution numbers, an author's present address if he/she moved after the article was written, or material not easily incorporated into the text.
- ◆ Literature should not be cited in footnotes.
- ◆ Indicate footnotes with symbols, letters or numbers in the text and type double spaced on a separate sheet or sheets.
- ◆ Footnotes to tables must be typed flush left, beginning with the superscript reference mark used. These should be placed immediately *below* the table and *not* at the bottom of the page.

Quoted Material

- ◆ Sentences and even phrases copied from published material should be placed within quotation marks followed by the source citation.
- ◆ Care should be taken when copying quoted material to ensure that it is not altered, even where errors are apparent. If there is the possibility that the error may confuse readers, write (sic) after the erring word or phrase.
- ◆ Phrases or sentences quoted should be within quotation marks followed by the source citation.
- ◆ Quoted material of more than six lines should be centered on the page, single-spaced without quotation marks.

INDEXING

In Conference Proceedings and Studies and Reviews, indexes are a very useful tool not only to assist the reader but also to check for inconsistencies and errors in the text. Indexes commonly used in ICLARM publications are: author, subject, species and geographic.

FINAL CHECKLIST

Manuscript(s) should be submitted in double-spaced clean copy ready for copyediting. Layout of the publication can proceed only when all technical and copyediting are done, and when the figures and tables as well as captions are supplied. As much as possible, all photo requirements, with appropriate photo captions and acknowledgements, should be in, especially for the cover design and also for the inside pages.

For Conference Proceedings, if necessary, welcoming/opening addresses should be supplied/ submitted.

Before submitting a manuscript, check the items in the following list to be sure the manuscript is complete.

1. Text pages of the final draft are numbered consecutively, beginning with the title page.
2. Each figure and table is numbered consecutively according to its order of citation in the text. Each figure and table is cited at least once in the text, and each text citation is to the appropriate figure or table. Figures need not be the final artwork but at least a rough sketch should have been made available, together with the proper figure/captions, complete with translation, if required.
3. Marginal notes are added to indicate the point where each table or figure is first cited in the text.
4. Each reference cited in the text, tables and figure legends is also listed in the bibliographic section.
5. All references listed in the bibliographic section are cited at least once in the text, tables or figure legends.
6. Accuracy of all references in the bibliographic section, as retyped in the final draft, is confirmed by comparison with the *original* article or book or with a previous draft that has been carefully checked against the original source.

Please note that manuscripts will only be accepted by the Publications Unit for processing if ALL of these items are complete.

7. Each footnote sign or number in text or tables has a corresponding footnote.
8. The final draft has been carefully read at least twice, once against the pages from which it was typed.
9. Letters granting permission to publish copyrighted material have all been received from author and publisher, and are ready to be submitted with the manuscript.
10. An ICLARM Contribution No. is cited on the title page.
11. Check whether you need to cite or acknowledge the donor(s) (whether out of contract requirements or courtesy) and collaborators who are not authors.

Once everything is checked and submitted, avoid making further changes. These will slow down production and can cause a chain reaction: changed sentences may alter page length, which in turn affects pagination, layout of all pages following the change and size and placement of tables and figures. Changes once the manuscript has gone to press can cause additional problems (and expense). The processes involved are described in Annex V.

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External Media

Note that all documents, electronic or on paper, for external publication need official clearance (see Clearance Steps, p. 8).

JOURNALS

The most important considerations in preparing articles for a refereed journal are:

- ◆ **Choice of journal.** ICLARM's core research is international. Thus, an international journal is usually the best outlet. There are instances when regional or national journals may be more appropriate, to ensure that the information reaches the group for which it is intended. For persuasive arguments on local publication of national project results see *Naga*, April 1994, p. 9.
- ◆ **Style.** Your submission must conform to journal requirements as published in each issue in their guide to authors. Do not assume the editors will like your way of citing references or your section headings. Each journal has its own, different, rules. Failure to follow them will result in delays or in borderline cases, even rejection. Journals are beginning to accept and even prefer your manuscript on disk (see *Going electronic* below).
- ◆ **Page charges/reprint charges.** Some journals charge authors a fee per printed page. A few give limited free reprints, but charge for any substantial quantity. In both cases, the charges are not insignificant and authors need to check their project budgets before agreeing to these expenditures.
- ◆ **Going electronic.** Journals accepting manuscripts on disk presently include those in the Butterworth-Heinemann group (e.g., *Food Policy*, *Marine Policy*), *Journal of Fish Biology*, *Marine Pollution*, and Elsevier journals (e.g., *Aquaculture*, *Bioresource Technology*, *Ecological Economics*, *Ocean and Coastal Management*). In *Aquaculture*, "the preferred medium of submission is on disk." Remember to follow their instructions to authors.

ELECTRONIC CONFERENCES

E-mail conferences are becoming recognized as a cheap, efficient alternative to international meetings. Papers prepared for such conferences should be cleared before "mailing" by submitting hard copies.

PUBLISHING ON THE WEB

ICLARM has a "home page" on the World Wide Web. The contents are flexible and in future will include ICLARM Contributions in the form of electronic versions of existing publications and material specially prepared for the Web site. Suggestions for the latter are welcome. Significant material would receive ICLARM Contribution status.

Such Contributions could develop "lives of their own" as they become accessible through other Web sites that refer to them. In all cases the normal clearance procedure is required.

It is advisable to seek help from Information or programming staff on how to make best use of the indexing and retrieval functions that are the hallmarks of good electronic publishing.

MAGAZINES, NEWSLETTERS

Many semitechnical or popular magazines and newsletters solicit articles in their field of interest. They constitute an ideal medium for broadcasting research results to a select audience. Staff are encouraged to write such articles. Good photographs to illustrate your message are a great selling point. The Publications staff will be willing to help you polish up the text and make graphs, etc., look more interesting.

PRESS RELEASES, NEWS ITEMS

News items are constantly sought by the Publications Division for use in various public awareness activities. A cleared item may appear in ICLARM's internal *Newsplash* as well as in *Newsbriefs* and/or *Naga*. From these, some are selected to become press releases and are sent to over 100 newspapers and magazines worldwide. Recently, these are also inputted in the *News* page of ICLARM's homepage in the Internet.

The final form and wording of press releases is done by Publications staff or on contract to a journalist, etc. Press releases and other news items are normally distributed by the Information and Training Program.

Copyright

ON ICLARM PUBLICATIONS

As a general principle, ICLARM does *not* place copyright restriction on its products. Although *Naga* articles tend to be copied without prior notification, our experience has been that permission is always sought from us for the re-use of materials from journal articles and our technical series. In joint publications, copyright might be held/requested by the other publisher(s), e.g., FAO, IDRC. We simply comply.

Software is a special case. ICLARM software should be copyrighted both to protect our investment (from commercial vendors) and to keep track of users for updating and measuring impact.

Note that copyright belongs to ICLARM. The Personnel Policy Manuals for Nationally and Internationally Recruited Scientists say this:

All intellectual rights, including title, copyright, royalties, and patent rights accruing from a staff member's work at ICLARM are vested in the Center and must be treated in a manner consistent with any agreements ICLARM has entered into concerning the work. Staff members who believe that aspects of their work should be copyrighted or patented in order to protect the Center's interests should discuss this with the Director General.

Journals generally require a **copyright waiver** before they will publish a scientist's article. Since ICLARM is the owner of copyright for ICLARM staff papers, individual authors should not sign the copyright waiver. This should be signed by the Leader of the Information and Training Program as the "authorized representative".

Copyright law is still evolving, particularly in the Philippines. The above guidelines may change as the law crystallizes.

Information on obtaining copyright is available from Publications Staff.

USE OF COPY- RIGHTED MATERIAL

ICLARM authors should seek approval for the use of copyrighted materials in their ICLARM or external manuscripts, to ensure that ICLARM does not transgress copyright laws. Requests

should be made to both the (senior) author and publisher of the document, although normally only one of them holds the copyright.

A generalized request letter to an editor or author is shown in Annex III.

Read carefully the copyright notices on software, databases, etc. Their accompanying manuals are the best source. Some information on use of copyrighted material, paper or electronic, can be found in the following books, available in the ICLARM Library:

Heller, J.S. and S.K. Wiant. 1984. *Copyright handbook*. Bothman and Co., Littleton, Colorado.

Manger, J.J. 1995. *The World-Wide Web, Mosaic and more*. McGraw Hill, London.

A Note on Presentations

Most presentations are made at conferences and workshops where authors generally make the mistake of using visual aids copied from their paper. The result is a series of boring, overcrowded slides/overheads. The subject matter of a visual presentation, unlike in the conference or workshop paper itself, must be simple and brief to enable it to be quickly absorbed by the audience.

Here are some useful guides for improving visual presentations, whether for overheads, slides or posters.

- ◆ Make sure the content has been cleared before committing Publications Staff to preparation of material.
- ◆ Use plain, bold lettering, lower case.
- ◆ Only 15-20 words per slide/overhead, or 25-30 data elements.
- ◆ No more than 9 lines per slide/overhead.
- ◆ One slide/overhead should take not more than 15-20 seconds to describe/interpret/digest.
- ◆ Thus, figures should be simple, tables brief. Better to use two simple figures/tables than a single complex one.
- ◆ Word (text) slides/overheads should only be about 1/3 of the total. Remember, a picture tells a thousand words.

Think of posters as a set of overheads. Brief descriptions are quite sufficient to inform viewers. The more words you include, the less likely they are to become interested. Make photographs large; graphs simple and colorful; text brief and in a large simple (nonserif) font; 30 point bold type or larger.

For most poster displays, brevity as described above can allow you to present the material as a set of standard 8½" x 11 sheets, easy to carry to the presentation site.

The Publications Unit can prepare the artwork for slides, overheads, or posters for presentation in meetings. A slidemaking machine is available to print artwork from a computer file onto ektachrome slide films. As well, the Unit can help coordinate with commercial graphic service bureaus for your digital imaging and printing needs, especially on big formats.

USE OF C
RIGHTS

ANNEX I

ICLARM PUBLICATION CLEARANCE		
Title :	<table border="1"><tr><td>Contrib. No.</td></tr></table>	Contrib. No.
Contrib. No.		
Year of publication/presentation:		
Author(s) Editor(s) :		
For submission to/presentation at :		
Budget item :		
Comments :		
_____	_____	
Signature	Date	
1. Internal Reviewers (if any) _____	_____	
2. Program Leader _____	_____	
3. J.L. Maclean _____	_____	
4. M.J. Williams _____	_____	
Please return to the Publications Unit		

ANNEX II

[Sample Abstract]

Panayotou, T., S. Wattanutchariya, S. Isvilanonda and R. Tokrisna. 1982.
The economics of catfish farming in central Thailand. ICLARM
Tech. Rep. 4, 60 p.

A recall survey of 41 catfish farms in the Central Plain of Thailand during 1979 was undertaken to ascertain why production has been falling since 1974, despite high and rising market prices for catfish. The survey results showed that many catfish farmers have switched to the culture of other species or to the cultivation of rice and other crops; some even left the area to take other occupations. The main reasons given in the interviews were high fish mortality due to disease and escalating feed (trashfish) prices. Yet, some of the farms that stayed in business made considerable profit, due to superior managerial ability of the owners, access to low-cost credit and diversification of farming to spread risk.

A Cobb-Douglas production function was employed to explain variation in output observed from farm to farm. Eighty per cent of the variation in output could be explained by the following explanatory variables (inputs): stocking rate, feeding rates of trashfish and broken rice, fuel for pumping water, medication of fish, size of farm, and experience of the operator. Profits could be increased by reducing the average catfish stocking rates and quantity of trashfish used as feed, and by increasing the use of broken rice and fuel for the purpose of changing pond water.

ANNEX III

[Sample Request Letter for Use of Copyrighted Material]

The Editor/Author

Dear Editor/Author,

I hereby request permission to reprint material from the publication entitled:

(full bibliographic reference here)

as follows: (cite figures, table numbers, text proposals and page numbers)
The material will be used in:

(cite proposed ICLARM series/journal title)

ICLARM is a nongovernment, nonprofit, autonomous international research center working to improve the nutrition and well being of the poor users of aquatic resources in developing countries.

Thank you.

Conforme:

Yours faithfully,

Reproducibility of results, a basic tenet of the scientific method extolled in principle by every practicing scientist (Merton 1973), is in reality, and especially in biology, subtly subverted by the mode in which results are presented (Collins 1985). Subversion may come about by editorial preference for short papers, the general disregard of careful description (Gould 1989), and the preference for quick tests of fashionable hypotheses (Janzen 1986). This problem is particularly acute in those disciplines that have a historical component and where published results are based on unique computer programs.

In this article, the problem is addressed from the perspective of fishery science, a strongly historical discipline, however much its practitioners would like to reduce it to time- and locale-invariant principles. The historic dimension of fishery science is illustrated by the common use of narratives, historians' main tool for presenting their material (see, for example, contributions in Cushing 1982 and Glantz and Thompson 1981).

S. J. Gould (1989) demonstrated rather convincingly that phylogeny is contingent—strongly structured by the consequences of chance events. It is thus not surprising that the evolution of exploited fish stocks and of the societal complexes that crystallize around fisheries should be contingent as well—hence the justification for narratives as a major form for the description and understanding of the evolution of fisheries.

I believe there are two interrelated approaches that can be used to overcome the problem posed by contingency and the simultaneous requirement for reproducibility. One is to emphasize the comparative method, which Mayr (1982) suggested was the most appropriate for evolutionary bi-

ology, an idea forcefully argued for fishery science as well by Bakun (1985). The other approach is to ensure that narratives and the analyses supporting them can be reproduced (that is, duplicated) not only in principle, but also in practice, by making the relevant data available.

Making data (as opposed to bibliographic references) available to a wide range of users is difficult, and established traditions of data exchanges are lacking in most disciplines. The glorious exception is oceanography, whose practitioners were convinced in the last century by Commodore M. F. Maury, US Navy, of the mutual advantages of shared data sets.

The most important international and widely available fisheries data set is the volumes-of-catch statistics published annually by the Food and Agriculture Organization of the United Nations. They are invaluable for studies of global or regional trends but too aggregated for the analysis of any specific fishery or stock. For those more specific analyses, I propose the concept of data-rich books, a variant of the format currently used to present fisheries and other biological narratives in monographic form.

Data-rich books consist of the standard elements of monographs, with the following added:

- As many tables as possible with detailed headings and footnotes, documenting as much of the data used in the analyses as possible. The tables should be in addition to graphs showing trends and interactions, which tables cannot do well.
- Short articles (as many as necessary), written by the technicians, junior scientists, or others who compiled the datasets used elsewhere in the book. These articles should describe, via reference to standard texts if appropriate, the method(s) used to collect the data in question. ✎

- An appendix describing the entire set of data compiled by the authors of the short articles and the approach used for assembling these data into computer files.

- An address from which to order the data files described in the appendix, a price (covering handling and mailing costs, but not much more), and an explicit invitation to use the data for further analyses, as long as the authors are cited and acknowledged.

Two recent books on an international study of the Peruvian upwelling ecosystem (Pauly et al. 1989, Pauly and Tsukayama 1987) document the concept of data-rich books. The book, edited by Pauly and Tsukayama (1987), though lavishly illustrated, includes 88 pages of tables; therefore, 25% of the book consists of data that others can use directly.

Numerous scientists followed up on our invitation to use these data; for example, the time series of anchoveta recruitment (Table 1) was used by Restrepo and Hoenig (1988) to test one of their recruitment models and by Cury and Roy (1989). The latter's use of this series, in a comparative study of the relationship between upwelling intensity and clupeoid (herringlike fish) recruitment, won them a major scientific prize.

The second of these books, by Pauly et al., includes a similar number of tables and, like the first book, a number of articles by participants in the research. It also includes an appendix with details on the contents and potential use of the 15-diskette data set documenting the two books (Palomares et al. 1989; see Table 1).

With these publications, we have taken care that the authors of time series of data can get credit for their work (via citation of their articles) and ensured that others can test the replicability of our analysis. Thus, we enable future authors to go beyond

by Daniel Pauly

Source: *BioScience* 43:167-168 (1993).

Table 1. Monthly time series on the Peruvian upwelling system, covering the years 1953 to mid-1980s (adapted from Palomares et al. 1989).

Parameter groups	Remarks
Temperature-related	
Sea surface temperature	Twelve localities and/or sources
Thermocline depth	For three areas off Peruvian coast
Wind-related	
Wind velocity and turbulence (wind ³)	Five series, including Laker events
Upwelling intensity, Rossby radius	Four series (two coastal, three oceanic)
Offshore transport	One series, adjusted for depth of mixed layer
Meteorological variables	
Southern oscillation index	One series
Solar radiation, cloud cover	One series each
Nutrients and primary production	
Nitrate concentration and flux	Eleven inshore and offshore series, various models
Primary production	Five series from nitrate flux and various models
Biology of Anchoveta (<i>Engraulis ringens</i>)	
Losses to predation	Nine series, one for each of various predators (mammals, birds, and fish), based on species-specific predation models
Biomass and recruitment	Two series, estimated by virtual population analysis calibrated through acoustic surveys
Spawning stock	Derived from biomass and a temperature/size-dependent maturation model
Fishery catches	One series by length group
Natural and fishing mortality	Two series, estimated via virtual population analysis
Miscellaneous features of individual Anchoveta	Stomach contents, visceral fat, and maturation stage of ~10 ⁴ specimens, with sampling locations and sea surface temperature
Maps of egg distribution	89 maps, from March 1964 to October 1985
Biology of other system components	
Biomass of zooplankton	One series each for three areas of the Peruvian coast for the years 1964–1985
Biomass and catches of bonito	One series each
Numbers and biomass of cormorants	One series each, based on analysis of more than 10,000 distribution maps
Numbers and biomass of boobies	Same as for cormorant
Numbers and biomass of pelicans	Same as for cormorant
Population and food consumption of sea lion	One series each, based on calibrated population and energetics model
Population and food consumption of fur seal	Same as for sea lion
Biomass of predatory fish in distribution area of Anchoveta	One series each for mackerel, horse mackerel, and hake

these results, as Cury and Roy (1989) did and as Jacqueline McGlade illustrated when she showed at the World Fisheries Congress of May 1992 in Athens, Greece, that these data can be used to demonstrate the existence, in the Peruvian upwelling system, of a two-state strange attractor.

Several other data-rich books, notably on multivariate analyses of fish culture experiments and on trophic modeling of ecosystems, were in press at ICLARM in late 1992. We would be delighted to discuss these products and/or the concept behind them with interested colleagues.

Acknowledgment

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Most authors seeking publication of their manuscripts are not aware of the tedious production and printing processes that a publication has to undergo, so that they unconsciously but continuously change their minds regarding their manuscripts, even up to the blueprint stage, at times even after a publication has been printed. The result of this is unnecessary delay, additional costs, and harassed nerves. Having a basic background of the printing processes may help avoid these.

Layout

Having done with editorial processes, the manuscript undergoes layouting which is the stage where the manuscript is given a format and design before it goes to the contract printer. This is also called the "camera-ready copy" preparation. The Publications Unit performs this function in accordance with the set standards for ICLARM publications (see Table, p. 11), using desktop software PageMaker (latest version).

During layout, the number of pages and trim size of the publication are determined. It takes into consideration covers, colors, front matter (preliminary pages, i.e., title page, copyright or colophon page, table of contents, foreword or preface) and back matter (indices, annexes, glossaries, etc.). The final output must be a publication whose total number of pages must be divisible by eight or four, as will be explained below. The text is fitted into the page including the required tables, figures and/or photos. This is not a simple task. For example, a huge table that requires to be alongside the text where it is mentioned on a small space could take a whole day of trial and error layout until a solution is found. Here the author or editor will understand why it is essential to submit all figures, tables and photographs before layout is started, and why it is best to avoid significant changes in the text as possible after the layout is done. As the total number of pages must be divisible by eight or four, adding or taking out one page is a big headache to the layout artist, especially when the layout is almost complete.

The layout (galley) is how the printed product will look like. It is here where the design is reflected, and where the editor or layout artist can decide on the colors, if any, of the page. Here the editor or layout artist may approve or suggest other ways to present an idea. Following is a sample page of a manuscript in its pre- and layout stages.

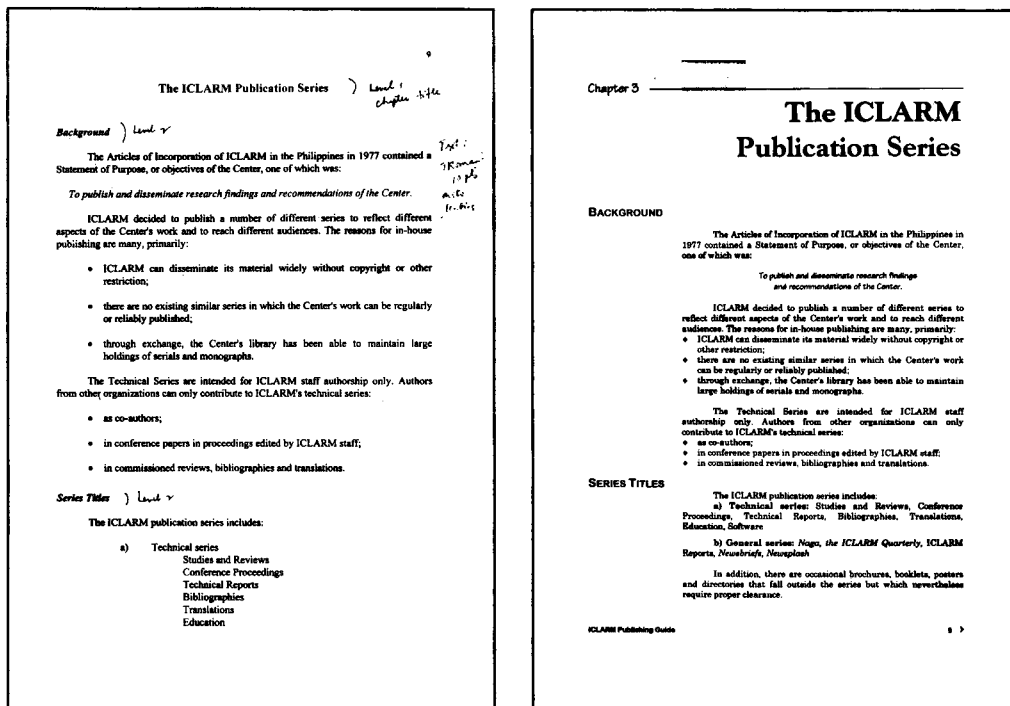


Fig. 1

*Left: Manuscript page with editor's marks and specifications for layout.
Right: Corrected and formatted page.*

Camera-ready Copy Preparation

Ideally, the final layout is where and when the editors and authors should put down their pens. After the copy is checked for missing tables or figures, correct scales for photos and illustrations, footnotes, annexes, and/or page numbers, etc., the copy is now ready for press work. At ICLARM, the printing process is contracted out to commercial printers.

When a publication is sent to the press, it is understood that there will be no more changes. The press, once it accepts the "camera-ready copy", takes over the production process based on the specified instructions in the contract.

Kinds of Printing

There are different kinds of printing processes: letterpress, multilith and offset.

Letterpress: The letterpress does not use a camera-ready material but has a special machine that forms the text, called linotype, which melts lead to form text. This is used for short manuscripts or small items to be printed, as linotyping takes longer and repeats the process of setting all text even for minor corrections. Also, this does not pass through the negative stage; rather, the set lead is pressed directly onto ink, as paper is passed through manually.

Multilith: This process works like the offset process (see discussion below), but uses a paper plate rather than the metal lithographic plate. However, it can print only for one color, and can not reproduce photographs. Thus it is good only for a small number of copies to be reproduced, since the paper plate does not last long for a large number of copies.

Offset Process: The most commonly used process, and which is often used by ICLARM, is the **offset printing**. It is the fastest, most cost-effective and has the best quality for reproduction of all images and colors. Below are the steps undertaken for offset printing:

- ◆ **Camera Works:** In the offset process, the camera-ready pages are photographed to produce offset negatives. Photos and figures are reduced, enlarged or cropped. The negatives are then stripped into their proper position, including the photos and figures, and the pages are arranged into groups of eight or four, with each group called a **flat**. Two 'related' flats, i.e., front and back, compose a **signature**. A signature may comprise 8, 16, 24 or more commonly, 32 pages. The pages are so arranged that when the sheet is folded in half again and again until only one page is showing, all the pages fall into proper sequence (see Fig. 2).

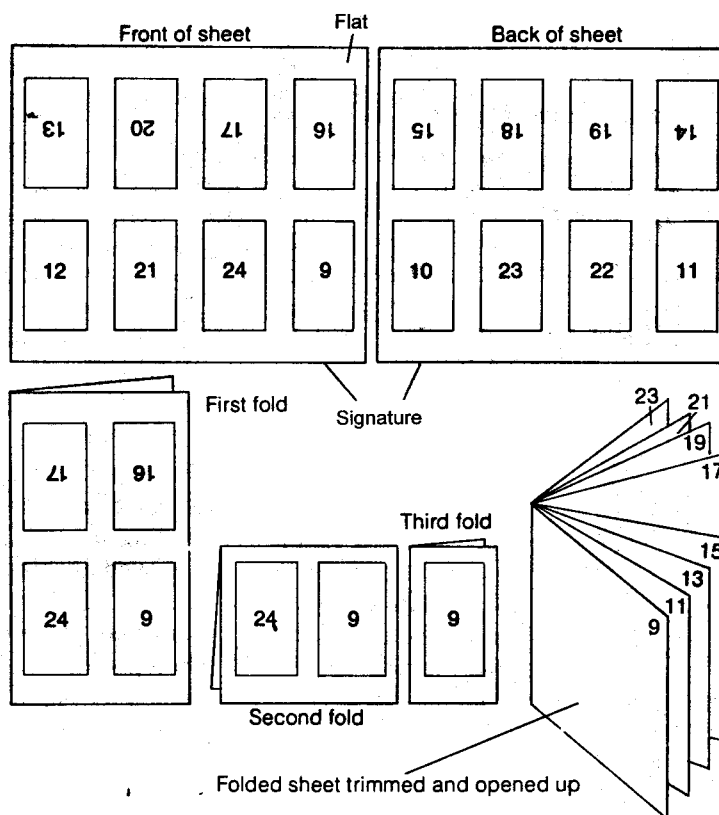


Fig. 2
The positions of pages in a stripped flat in a signature. When folded, the pages are now in order. (Figure courtesy of Chicago Manual of Style, used with permission.)

- ◆ **The Blueprint:** The printer finally makes a blueprint of the flats. Blueprints are temporary prints made from the negatives printed on a special paper. They do not show the quality of image to be attained in the final printing, but is an effective way to check the

accuracy of the text and the placement of figures and photographs. Dirt, ink, scratches, and misplaced opaque or tape on the page appear as dark spots and can be pointed out in the blueprint. For technical publications, authors may be asked to check the blues to confirm placement of complex illustrations or photographs.

New corrections at this stage are best avoided, otherwise, it would mean relayouting, rephotographing, restripping, and blueprinting again. These are very expensive processes and usually the press would charge anew for such additional processes. When corrections are inevitable and are made by the author, he/she will have to be charged for additional costs.

- ◆ **Flat reading:** After the blueprint has been approved, the flats are cleaned and adjustments made, with the blueprint as basis. ICLARM usually undergoes an additional stage of checking, called **flatreading**, in place of a second blueprint and if the corrections are minimal. The editor in charge of the publication usually visits the press to "read" the flats, that is, the stripped negatives are placed over a light table and ensures that the corrections in the blueprint have been implemented correctly. Misplaced photos are fixed, more dirt is scanned and deleted, until the editor is fully satisfied and gives the go signal for printing.
- ◆ **Printing:** In offset printing, the corrected negatives in flats are exposed to light using a special platemaking equipment. The text or images are transferred into a pliable metal **plate**. The plate is then wrapped around and securely fastened to a plate cylinder in the offset printing machine. It then undergoes the more technical aspects of offset printing, but the rationale here is that the text is transferred onto the paper, as the paper is continually passed under the machine. The *Chicago Manual of Style* provides a more detailed discussion of the offset process.
- ◆ **Colored printing:** Process printing is a method of printing from three or more plates, each inked with a different color, to get a printed image resembling a color photograph or painting. As in the illusory effect achieved in black and white printing, process printing gives an illusion of continuous tone in natural colors. Today's technology provides a **four-color printing** process, by which a colored photograph or original material is scanned electronically and the colors separated into its four basic colors: red, blue, yellow and black. The flats are printed by colors and the colors superimpose each other until the illusion of the actual image is achieved.

The electronic scanner usually sends a progressive proof (color print proof) for approval. Clarity, correctness of colors and correct size are reflected in the progressive proofs. Also, bad registrations (overlying of flats) of colors can be checked, and the scanner may

repeat the process until it achieves the desired quality. The proof is also the printer's guide in the printing of the colors.

Unless the errors (blurry images out of clear originals, or bad registrations, wrong colors) are the scanner's, repeating the color separation process is a very expensive measure on the part of the publisher.

It is more economical for the publisher and it saves more time for the printer to remember to place all colored pages in a single signature for a publication that requires color photographs or illustrations. Scattering colored illustrations throughout the publication means added printing time and expenses.

- ◆ **Folding, Collating and Binding:** After printing, the printed page is now ready for folding and collating. The press usually uses a folding machine for this step. The folded and gathered sheets are sewn together, called **smythe-sewing**. Smythe-sewing means signatures are sewn together through the folds and to each other.

For a publication with few number of pages, i.e., around 70 pages, as in a magazine, sewing may be done by **saddle wiring** or **saddle stitching**, that is, the pages are stapled together two or three times from the outside to the inside of the fold.

Regardless of binding used, all gathered signatures undergo **trimming** to open up folded pages.

- ◆ **Covers:** ICLARM uses various materials as covers for its publications. *Naga, the ICLARM Quarterly* is self-covered, meaning the material for the cover is the same as the inside text. Covers may also be of paper boards of varying thicknesses, depending on budget and quality desired.

Paperback covers may undergo varnishing, a special coat that can seal and protect the colors of the printed cover. Cloth-bound books sometimes come with a book jacket, a cover for a cover, usually printed in two to four colors to attract attention.

ICLARM The International Center for Living
Aquatic Resources Management

The International Center for Living Aquatic Resources Management (ICLARM) is an autonomous, nongovernment, nonprofit, international scientific and technical center which has been organized to conduct, stimulate and accelerate research on all aspects of fisheries and other living aquatic resources.

The Center was incorporated in Manila in March 1977. It became a member of the Consultative Group on International Agricultural Research (CGIAR) in May 1992. The programs of ICLARM are supported by a number of private foundations and governments.

Policies are set by a Board of Trustees with members drawn from the international community. Direction of ICLARM, under the policies set by the Board, is the responsibility of the Director General.

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