

XD-AMM-231-A

May 14, 1982

9311090/17

152-15457

EVALUATION TEAM REPORT

ICLARM-Fisheries Development Project

(Project #931-1050)

Manila, Philippines

March 15-19, 1982

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## EXECUTIVE SUMMARY

Based on a unanimous conclusion

(a) that the international Center for Living Aquatic Resources Management (ICLARM) already has clearly established itself as an institution of considerable scientific and technical stature addressing the urgent research needs of developing countries in improving nutritional standards of the poorest segments of their populations through programs directed at rational utilization and management of living aquatic resources and,

(b) that ICLARM has proved its ability to attract support in the form of unrestricted and restricted core funding from other donors, the evaluation team strongly recommends that:

*1. AID provide funding to ICLARM for FY 1982 and 1983 (at the level of \$700,000 in approximately equal installments) and continued long-term core funding, initially for a ten-year period, beginning in FY 1984 at a level of not less than \$350,000 per year and adjusted annually for inflation starting in FY 1984;*

and in addition recommends that

*2. ICLARM take steps to shift its emphasis so that programs, organization and personnel reflect more closely the overall importance of capture fisheries in world, regional and national harvests of living aquatic resources;*

*3. ICLARM intensify its efforts in living aquatic resources activities outside of Southeast Asia.*

## I. INTRODUCTION

The International Center for Living Aquatic Resources Management (ICLARM) was established as an independent, non-profit, international scientific research center under the laws of the Philippines, in Manila, in January 1977. ICLARM was organized to conduct, stimulate and accelerate research on the development and management of living aquatic resources. Its main objective is to assist developing countries in meeting their nutritive, economic, and social needs.

For a number of years prior to 1977, many people involved with the international aspects of fisheries had been concerned about the lack of an organization which could carry out coordinated long-term research on global problems affecting the rational use of aquatic resources in the developing world. The Rockefeller Foundation recognized this lack and convened a series of meetings that led to the establishment of ICLARM in January 1975, initially as an operational program of the Rockefeller Foundation located in Honolulu, Hawaii, but later moved to Manila.

The interests of ICLARM are worldwide in scope; however, initially the Center's primary attention is being directed to Southeast Asia and the South Pacific. There are no physical facilities, other than rented offices in Manila. The staff is presently composed of 9 permanent and 5 fixed term professionals. ICLARM's present plan calls for up to 12 permanent professional staff, complemented by fixed term professionals to handle field projects as required.

AID became involved with ICLARM by virtue of an action memorandum approved on May 16, 1977 by Curtis Farrar, Assistant Administrator for Technical Assistance, AID. The memorandum proposed that AID provide financial support to ICLARM in the amount of \$1,500,000 over a five-year period, with an initial three-year approval and a grant of \$800,000, and the remaining \$700,000 to be allocated in the final two years.

The project was initiated in 1979 with AID approval of a three year grant of \$800,000 to ICLARM. The final installment (\$300,000) of this initial grant was received by ICLARM after a September, 1980, team evaluation in Manila which found significant and satisfactory progress on the part of ICLARM in achieving its original goals (a condition of the third year funding of the initial grant). The current AID approval and grant will terminate on July 31, 1982.

Continued funding after the initial three-year period was made contingent on an evaluation of the quality of the program implemented during the grant period and upon ICLARM obtaining other substantial donor support. This present team evaluation was conducted to provide AID and ICLARM with guidance on project direction and continuation. This Evaluation Team Report will form part of the basis for AID approval of any additional funding beyond the initial \$800,000.

## II. MECHANICS OF REVIEW

The project evaluation was held at ICLARM's offices in Manila, Philippines, from March 15-19, 1982, which coincided with the fifth anniversary of the establishment of ICLARM in Manila.

The scope of work which formed the basis for the evaluation was approved by J.S. Robins, Agency Director for Food and Agriculture, AID on January 29, 1982.

The members of the evaluation team were:

Dr. Frank Williams, Professor of Marine Science (Fisheries; Marine Affairs), Rosenstiel School of Marine and Atmospheric Science, University of Miami, Miami, Florida, -Chairman;

Dr. Dana Dalrymple, Agricultural Economist, S&T/AGR, AID/Washington;

Mr. Charles M. Larsen, Fisheries Projects Officer, USAID/Indonesia;

Dr. Randall Cummings, Anthropologist, AOD, USAID/Philippines

Other participants in the evaluation included:

Mr. Kenneth Osborn, Project Manager, S&T/AGR, AID/Washington;

Dr. James Johnston, Acting Director General and Chairman, Board of Trustees, ICLARM;

Dr. Richard Neal, Deputy Director General and Director, Aquaculture Program, ICLARM;

Mr. Philip Roedel, Special Assistant to the Director General, ICLARM;

Dr. Ian Smith, Senior Scientist and Director, Traditional Fisheries Program, ICLARM;

Dr. Conner Bailey, Senior Research Fellow, ICLARM;

Dr. Daniel Pauly, Associate Scientist, ICLARM;

Dr. John Munro, Senior Scientist and Director, Resource Development and Management Program, ICLARM;

Dr. James Kuo, Senior Scientist, ICLARM;

Dr. Kee Chai Chong, Research Fellow, ICLARM;

Mr. John Maclean, Chief Editor, ICLARM.

Mr. Angelito O. del Mundo, Director, Administrative Services, ICLARM.

The schedule indicated below was followed:

Monday, March 15	Field Trip to Santa Cruz fishing village.
Tuesday, March 16	
0830-1400	Meeting of evaluation team and AID Project Manager to develop strategy and terms of reference for the evaluation.
1400-1500	Meeting of evaluation team, AID Project Manager and ICLARM Acting Director General and Deputy Director General to discuss matters related to overall policy and direction of research and other activities at ICLARM.
1500-1600	Review of the Traditional Fisheries Program: -I. Smith -C. Bailey
1600-1700	Review of the Resource Development and Management Program: -D. Pauly -J. Munro
Wednesday, March 17	
0830-1400	Review of the Aquaculture Program: -R. Neal -J. Kuo -I. Smith -K.C. Chong
1400-1500	Review of the Information Service: -J. Maclean
1500-1600	Closed door deliberations of evaluation team with AID Project Manager sitting in as an observer.
1600-1700	Meeting of evaluation team, with AID Project Manager as observer, and Acting DG and DDG, ICLARM, for continued discussion of overall policy of ICLARM and matters arising from review of project activities.
Thursday, March 18	
0830-1700	Deliberations and preparation of report by the evaluation team.
Friday, March 19	
0830-1530	Completion of report by evaluation team. Presentation of Findings and Recommendations and draft of Report to AID Project Manager and to ICLARM.

### III. ICLARM FINANCIAL SUPPORT, ORGANIZATION AND BUDGET

#### 1. Sources of Financial Support

All financial support accepted by ICLARM is used for core programs. The organization has, so far, turned down a considerable number of opportunities from both the public and private sectors to work on special projects which it considers outside of its principal mandate, even though the additional income to ICLARM would have been welcome. In particular, ICLARM has tried to stay in the research mode (including training) and to avoid overinvolvement with the implementation of development programs.

Core funds are provided in four ways (see Table 1): unrestricted grants, restricted grants, other (earned) income, and counterpart contributions. In overall terms in 1980 and 1981, unrestricted grants (item 1) were by far the largest proportion, accounting for about 83.6% of the total. The Rockefeller Foundation provided about 63.4% of overall funding and AID about 20.3%. Restricted grants (item 2a) represented nearly 9.8%, other (earned) income (item 3) about 3.1%, and counterpart contributions (item 4) about 3.5%.

In 1982, the value of restricted grants to date (3/82) has increased substantially (item 2a), and the number and value may increase even more substantially by the end of the year (item 2b). The same appears to be true of counterpart contributions. If the restricted grants currently under negotiation fully materialize, the proportion of funding provided by unrestricted grants will drop, to as low as 54%. However, negotiations are underway with Australia (ADAB) for increased core funding in 1983 and the prospects presently appear promising.

Core programs, as suggested earlier, are carried out both at headquarters and in the field. In general, unrestricted grants are largely used to fund headquarters activities, although some are devoted to field operations (partially to match some restricted grants). Restricted grants are almost entirely used to fund field activities (except to the extent that overhead charges are devoted to headquarters activities) though some direct support of core programs, e.g., Information Service, may result from this in the future.

#### 2. Organization of ICLARM

The organizational structure of ICLARM is shown in Figure 1. Policy is set by the internationally-recruited Board of Trustees (not more than 15 members) and decisions are carried out by a 5-member Executive Committee of the Board. Implementation of policy is through the Director General and Deputy Director General who receive external professional advice from the Program Advisory Committee (not more than 20 members), an international group of scientists serving in their personal capacities.

Work in the four current program areas (Aquaculture; Traditional Fisheries; Resource Development and Management; Education and Training) is

Table 1. Sources of Core Funds, ICLARM.

Category	U.S. DOLLARS (percent) <sup>1</sup>		
	1980	1981	1982 <sup>8</sup>
<b>1. Unrestricted Grants</b>			
Rockefeller Foundation	750,000 (62.9)	812,000 (63.8)	850,000
USAID	250,000 (21.0)	250,000 (19.6)	283,000 <sup>2</sup>
Australian Development Assistance Bureau (ADAB)	--	--	22,000 <sup>3</sup>
<b>SUBTOTAL</b>	<b>1,000,000 (83.9)</b>	<b>1,062,000 (83.4)</b>	<b>1,155,000</b>
<b>2a. Restricted Grants</b>			
Australian Development Assistance Bureau (ADAB)	57,845	--	--
United Nations University	20,000	20,000	--
New Jersey Marine Science Consortium	10,000	6,000	23,842
Rockefeller Foundation	22,795	32,947	18,558
GTZ-Thailand Project	--	55,234 <sup>4</sup>	125,569 <sup>4,5</sup>
UNDP/FAO	--	15,292	48,804
Kuwait Institute for Scientific Research	--	--	113,666 <sup>5</sup>
<b>SUBTOTAL</b>	<b>110,640 (9.3)</b>	<b>129,473 (10.2)</b>	<b>330,439</b>
<b>2b. Restricted Grants Under Negotiation (3/82)</b>			
Asian Development Bank Seed Supply for Aquaculture	--	--	99,000 <sup>5</sup>
Australia (ADAB) Tropical Fisheries Management	--	--	113,333 <sup>5,6</sup>
Canada (IDRC) Social Science Research Network Fisheries Information Service	-- --	-- --	139,000 <sup>5</sup> 100,000 <sup>5</sup>
Germany (GTZ) - Detritus Conference	--	--	58,400
Rockefeller Foundation-Postdoctorate	--	--	25,000
<b>SUBTOTAL</b>	<b>--</b>	<b>--</b>	<b>534,733<sup>7</sup></b>
<b>3. Other (Earned) Income</b>			
Consultancy fees	5,552	15,224	NA
Publication sales	1,496	6,539	NA
Miscellaneous	26,107	21,444	NA
<b>SUBTOTAL</b>	<b>33,155 (2.8)</b>	<b>43,207 (3.4)</b>	<b>NA</b>
<b>Total Cash Income</b>	<b>1,143,795 (95.9)</b>	<b>1,234,680 (97.0)</b>	<b>1,485,839<sup>8</sup></b>
Including Grants Under Negotiation (Item 2b)			2,020,172 <sup>8</sup>

Table 1. Continued.

Category	U.S. DOLLARS (percent) <sup>1</sup>		
	1980	1981	1982 <sup>2</sup>
<b>4. Counterpart Contributions of Cooperating Institutions<sup>9</sup></b>			
Central Luzon State University	48,761	35,362	30,000
Philippine Council for Agriculture and Resources Research	--	2,850	--
Philippine Bureau of Fisheries & Aquatic Resources	--	--	7,120
Bureau of Agricultural Economics	--	--	5,600
Taiwan - CAPD	--	--	13,200
Indonesia - Marine Fisheries Research Institute	--	--	20,000
Thailand - Department of Fisheries	--	--	60,000
Israel - Hebrew University	--	--	3,750
SUBTOTAL	<u>48,761 (4.1)</u>	<u>38,212 (3.0)</u>	<u>139,670</u>
TOTAL ALL INCOME	<u>1,192,556 (100)</u>	<u>1,272,892 (100)</u>	<u>1,625,509<sup>8</sup></u>
INCLUDING GRANTS UNDER NEGOTIATIONS (Item 2b)			<u>2,159,842<sup>8</sup></u>

<sup>1</sup> Percent of all income.

<sup>2</sup> \$150,000 through August 1982; \$133,000 from August through December (projected).

<sup>3</sup> This figure was originally scheduled for receipt in 1981. ADAB is considering a substantially larger contribution for 1983.

<sup>4</sup> An overhead charge of 10 to 15% can be deducted from this figure and added to earned income.

<sup>5</sup> Pro-rated portion of projected multi-year grant.

<sup>6</sup> Early stage of negotiation.

<sup>7</sup> In addition, a multi-year project is in the early stages of negotiation with Indonesia (AARD) on aquaculture research.

<sup>8</sup> Excluding other income (item 3), as well as potential additional activities mentioned in footnotes 3 and 7 above.

<sup>9</sup> May be in kind or in cash. Varies by activity.

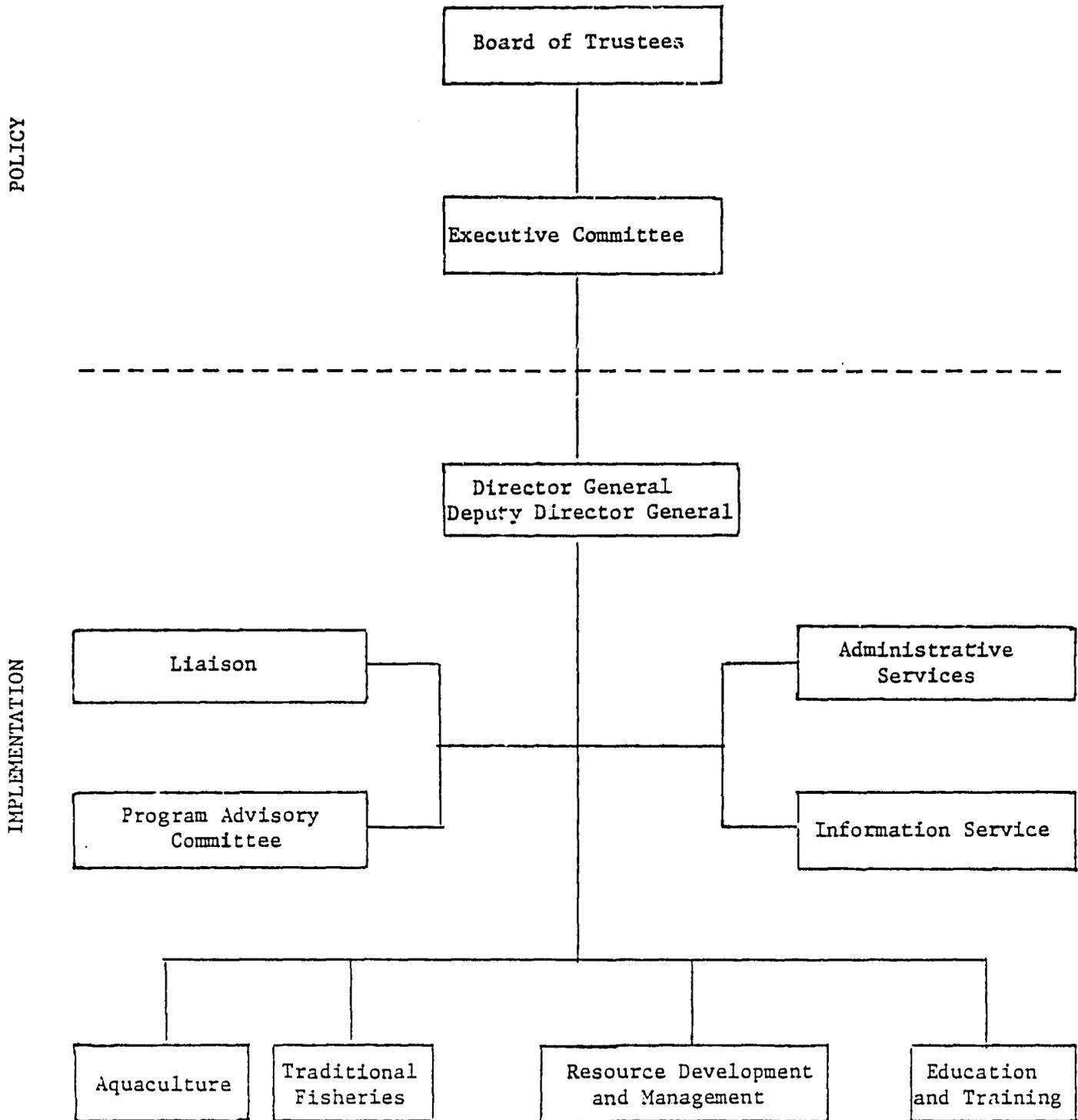
**Sources:**

1980, 1981. ICLARM Report, 1981, p. 112 (ADAB contribution shifted to 1982).

1982. Unpublished data provided by ICLARM, March 17, 1982.

Fig. 1

ICLARM ORGANIZATIONAL CHART



carried out by a small permanent scientific staff and other scientists on fixed-term appointments. Principal objectives of the Aquaculture Program are to carry out research to improve culture techniques and production of selected aquatic species coupled with socio-economics and marketing. The Traditional Fisheries and the Resource Development and Management Programs are principally concerned with research on capture fisheries, especially artisanal and small-scale fisheries, from the biological, socio-economic, development and management perspectives. On the advice of the previous project evaluation (September, 1980) the then Marine Affairs Program was incorporated into the Resource and Development Program. Training and education are elements of all ICLARM projects but direct Education and Training Program activities are limited at this time.

ICLARM operational programs are supported by an Administrative Services unit and by a well developed Information Service.

### 3. Budget

The allocation of financial resources between ICLARM administrative and main program areas in 1980, 1981, and 1982 (preliminary) is indicated in Table 2.\*

The four program areas accounted for roughly 55% of the total budget in 1980 and 1981. Aquaculture was the largest single program item, accounting for over 32%. Traditional fisheries and resource development and management - which together might be said to characterize capture fisheries - represented nearly 18%. Education and training accounted for only about 4%.

Preliminary data for 1982 suggest a drop in the proportion devoted to aquaculture (to 27%) and nearly a doubling in the proportion (18%) directed to resource development and management (in part due to the inclusion of the cost of a conference and to a new staff member). Inclusion of projects currently under negotiation would raise the traditional fisheries proportion (to 14%) in 1982. No funds are presently listed for education and training.

Among the non-program areas in 1980 and 1981, administration (which as may be seen in footnote 1 of Table 2 is rather broadly defined), accounted for slightly over 26%, information services about 15%, and capital investment about 4%. Information services would increase slightly in 1982.

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The totals differ from those reported in Table 1 due to shortfalls or overages in funding. The situation, of course, is particularly uncertain for 1982.

Table 2. ICLARM Budget

Category	U.S. DOLLARS (percent)			
	1980	'931	1982 (preliminary)	1982 <sup>4</sup> (preliminary)
Administration <sup>1</sup>	301,777 (27.1)	334,881 (25.6)	337,639 (25.6)	341,217 (18.4)
<b>Programs</b>				
Program advice and development <sup>2</sup>	41,642 (3.7)	69,712 (5.3)	30,000 (2.2)	30,000 (1.6)
Aquaculture	356,110 (32.0)	420,024 (32.2)	357,371 (27.1)	(539,371) (29.1)
Traditional fisheries	108,296 (9.7)	131,145 (10.1)	121,182 (9.2)	(260,182) (14.1)
Resource development and management	84,208 (7.6)	105,209 (8.1)	231,790 (17.6)	(345,123) (18.6)
Education and training	5,000 (0.4)	5,000 (0.4)	--	--
SUBTOTAL, Programs	595,256 (53.5)	731,089 (56.0)	740,343 (56.2)	(1,144,676) (61.8)
Information Services <sup>3</sup>	161,138 (14.5)	201,221 (15.4)	213,630 (16.2)	(310,052) (16.8)
Capital Investment	53,823 (4.9)	37,466 (2.9)	10,000 (0.7)	10,000 (0.5)
Other, Contingency	--	--	14,806 (1.1)	14,806 (0.8)
<b>TOTAL</b>	<u>1,111,994</u> (100)	<u>1,304,657</u> (100)	<u>1,316,418</u> (100)	<u>(1,250,751)</u> (100)

## Notes:

- <sup>1</sup> Includes Director General, Deputy Director General (50% of time), Board of Trustees, liaison and travel, administrative staff, and other operating costs (including rent).
- <sup>2</sup> Program Advisory Committee and Program Development Fund.
- <sup>3</sup> Includes editorial, typesetting unit, library unit, publications, travel, and other operating costs.
- <sup>4</sup> Dollar figures in parenthesis include pro-rated share of restricted grants under negotiation (Table 1, Item 2b).

#### IV. FINDINGS

##### 1. Program and Project Policy and Design

ICLARM, as an independent, international, non-governmental research organization, has been exceptionally successful in developing and focusing on multi-disciplinary approaches to the major problems of living aquatic resources currently facing developing nations. This achievement has been made at a relatively low cost and in a short period of time (5 years in Manila), given the many real difficulties faced by such a novel form of research organization (at least in the aquatic resources field). ICLARM's multidisciplinary approach to aquatic resources problems of a general nature in tropical areas, which includes a higher than usual socio-economic component, is a fundamental step towards establishing the scientific and technical bases on which development and management (current and future) can be based. So often in developing nations such development and management policy decisions have had to be made in a vacuum or based on inadequate data derived from inadequate and inappropriate methods.

In the above regard, it should be pointed out that concepts and methodology for research at the generic level in tropical living aquatic resources are basically non-existent. Hence, fundamental problems have to be formulated into conceptual hypotheses, which can be field tested and the methodology developed or adapted for this field testing in projects of a specific nature (e.g., San Miguel Bay study). It should be noted that most present concepts or methods related to living aquatic resources biology and management were developed for, and in, temperate regions and increasingly these are being shown to be inadequate for dealing with problems in the tropics.

ICLARM, for example, has been in the vanguard of those who have argued against "simple" technological solutions to the problem of poverty in traditional (artisanal) fishing communities. Through direct research and its links with other institutions, ICLARM has been able to create a wider appreciation not only of the biological constraints inherent in the open-access resources exploited by traditional fishermen, but of the biological and socio-economic problems involved. Thanks to the efforts of ICLARM and others, it has been increasingly realized that solutions must be sought within the broader context of rural development programs which aim in general at improving conditions in the entire rural area and, more specifically, at providing alternative and/or supplemental employment and income opportunities for traditional fishermen. The policy decision to be made is how deeply ICLARM should become involved in broad-based rural development activities without jeopardizing its overall objectives through dilution of research effort.

It might be argued that ICLARM's work in aquaculture is also an attempt to address the poverty problem of traditional fishermen. Close scrutiny, however, shows that although aquaculture activities will eventually probably increase incomes and food production they will not necessarily directly benefit the traditional fishermen per se to any

significant degree. The reason for this is that much of the aquaculture research and experimentation which is being undertaken by ICLARM is of the integrated agriculture-fish production type, and for the most part this implies that there is access to land for fishponds or paddy-fish fields. While small-holders or those who can rent land in the rural area can probably benefit from this type of research activity, those without such access are precluded from participation in these activities. Generally, traditional fishermen neither own nor have access to land for this type of aquaculture. For these reasons mariculture per se (including sea ranching) appears to be of vital importance to this poorest section of the population.

There is also a concern that under certain circumstances, and in some areas, fish production from aquaculture will be in competition with the catch of the traditional fisherman, driving down further their incomes. The possibility of this certainly warrants research on the topic.

The fact that ICLARM is an institution without the "bricks and mortar" facilities normally associated with a research organization, has necessitated the establishment of linkages and arrangement with a large number of groups\* (governmental; non-governmental; regional) in the developing nations. This in turn has determined that ICLARM programs are highly relevant and attuned to the needs of those nations. In some cases "seeding" of projects by ICLARM has been enough of a catalyst to ensure a national effort on a given topic.

## 2. Quality of Work

The quality of work of ICLARM can be assessed in several ways.

Firstly, from the presentations made by ICLARM staff to the present evaluation team, which covered all major projects (past, present, future); from the comments of the 1980 evaluation team; and from the 1981 general review by the Executive Committee of the Program Advisory Committee.

Secondly, from the numerous, well-produced, and varied series of in-house ICLARM publications (including the Newsletter), produced by the excellent Information Service Division, which document both general and specific project activities of the staff; in addition, from the publications of ICLARM staff in international journals of high standing. There is general agreement among researchers, as well as administrators, and development and training specialists, in both developing and developed nations, that ICLARM published work is innovative and of high quality, the scope broad and multi-disciplinary in nature, and directly addresses fundamental problems related to tropical aquatic resources. The value of ICLARM is also well evidenced by the demand for its publications.

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\* For list of co-operating institutions see pp. 7-10 of ICLARM Report for 1981 (Jay L. Maclean, ed., 1982; ICLARM, Manila, Philippines; 112 p.).

Thirdly, the level of invited ICLARM participation in meetings (conferences, symposia, workshops) at the national, regional and international level is an additional indication of ICLARM's value, as are the requests for ICLARM to organize or assist in organizing such meetings in developing countries. A similar indicator is the flow of visitors from developing countries to ICLARM for advice and requests for ICLARM staff to visit overseas.

In the opinion of the evaluation team, none of the above would have taken place, especially in such a short time, if the quality of ICLARM work had been other than excellent or if ICLARM was not meeting perceived developing country needs. Several ICLARM projects have already had direct and indirect impacts on developing country activities and policy and planning decisions in fisheries and aquaculture.

### 3. Organization

The evaluation team is of the opinion that serious consideration should be given by ICLARM to take steps to ensure a better balance between aquaculture and capture fisheries. This balance should more closely reflect the actual, and probable long-term level, of those two sectors in terms of world, regional and national harvests of living aquatic resources. Certainly such a policy decision will be of particular importance when ICLARM extends operations into other regions where the historical, cultural and socio-economic significance of aquaculture is very much less than in Southeast Asia.

ICLARM should also consider combining "Traditional Fisheries" and "Resource Development and Management" into a single operating program concerned with "Capture Fisheries." There seems to be no logical reason for continuing the separation since both units are working in capture fisheries in a multidisciplinary fashion and as personnel in any case retain the ability to be involved with other ICLARM groups as required. "Aquaculture" and "Capture Fisheries" would then be the two major operational research and technical programs of ICLARM. The area of freshwater fisheries - riverine (including flood-plains), lacustrine and reservoirs - is deserving of considerable future attention ICLARM in an expanded Capture Fisheries program.

The evaluation team considered the need of ICLARM for aquaculture facilities for long-term studies of genetics, reproduction and nutrition, which require strict experimental controls. Certainly such work is highly desirable, particularly in view of the rapid advances in biotechnology (genetic engineering). However, the unique feature of ICLARM as a research organization without 'bricks and mortar', with flexibility of purpose, response and geographic area of operations might be threatened by such a step, which would also involve heavy financing. The evaluation team shares the view of Program Advisory Committee in having serious reservations on this issue.

Direct efforts in the Education and Training Program have continued to be small, though of high quality, generally due to necessary priorities

(financial and personnel) to build up technical program areas. However, it should not be overlooked that aspects of education and training are integral elements of ICLARM research programs. ICLARM plans to show a clear intent to expand the Education and Training program in the future.

The evaluation team considered that ICLARM should play a leadership role, with other interested groups, in the establishment and operation (at least initially) of a fisheries forum in Southeast Asia to improve communication sensu lato among fisheries scientists, fishery managers and administrators, all sectors of the fishing industry (artisanal to large-scale commercial) and government officials. Membership in this independent, non-governmental forum should be on an individual basis. Efforts would need to be made to obtain substantial external funding support for the forum in its formative years to permit at least a biennial, and preferably an annual meeting, within the region. The 34-year old Gulf and Caribbean Fisheries Institute (GCFI), a private, non-profit organization administered by the University of Miami, is an example of such a regional forum.

#### 4. Management

The administrative and technical management by ICLARM, both of the overall program and of individual projects appears highly efficient and fiscally sound. Policy matters and program development appear to be competently handled by the Board of Trustees and the Program Advisory Committee, respectively.

The position of the Director General of ICLARM is currently vacant with a search underway by the Board. The evaluation team believes it is important that the field of interest and specialization of the Director General, be complementary to that of the current Deputy Director General, given that the other requirements for the post of Director General are met.

The ICLARM staff appears to be of high quality. Although the professional staff is small, it is an adequate minimum critical mass. The management of ICLARM has shown excellent judgement on professional staff recruitment and this should be expected to continue in the future. The evaluation team was particularly impressed with the overall morale, enthusiasm and general interaction of the ICLARM staff.

#### 5. Building a Donor Group

It has been suggested that a formal group of donors to ICLARM be organized. This group might serve somewhat the same purpose as the Consultative Group for International Agricultural Research (CGIAR), or perhaps, more appropriately, the group of ICIPIE donors (International Center for Insect Physiology and Ecology, Nairobi, Kenya). The latter group is hosted by the World Bank and meets once or twice a year, generally just before or after a CGIAR meeting. The main purpose of both groups is to encourage and coordinate funding.

While the CGIAR has worked well in the past, it is presently undergoing a period of financial stringency, principally because

appropriated government funds have failed to keep pace with growth and inflation. The funding situation for ICIPIE is even more desperate, admittedly in significant part due to overspending by ICIPIE. The shortage of multilateral funds for these purposes is the major constraint, and the existence of an organized group of donors does little to influence this basic situation.

At present, bilateral funds are viewed as relatively more plentiful than multilateral funds. ICLARM, because of its fairly high level of core field operations, may be in a relatively good position to develop bilaterally-funded, restricted core projects. Moreover, it is questionable whether a formal donors' group presently would be of major value in securing such financial support. On the other hand, additional unrestricted core funds will be needed and these are more likely to come from multilateral sources. The Rockefeller Foundation knows most of the funding agencies and institutions and can be, as it has been in the past, of considerable assistance in the search for additional donors.

The evaluation team therefore considers that organization of a formal donors' group is unnecessary at present. However, as ICLARM continues to develop a larger group of donors, and if, and when, the general funding climate improves, then it would probably be desirable to move in the direction of establishing the formal association of donors. The Rockefeller Foundation appropriately might be expected to play a critical role in establishing such a group. It might also investigate less formal ways of insuring and cementing donor support.\*

#### 6. Impact of ICLARM on Other AID Activities

Research results and advice offered by ICLARM have been extremely useful to specific AID projects, particularly within Southeast Asia; two examples are given below. In addition, the long-range implications of ICLARM's overall research objectives should not be underestimated in terms of policy and planning for future AID (and other donor) projects in living aquatic resources.

USAID/Manila is currently developing a Rainfed Resources Development Program, which has a coastal fisheries component aimed at benefiting traditional (municipal) fishermen. In November, 1981, USAID/Manila, with the assistance of ICLARM, conducted a 2-day Seminar-Workshop on Coastal Zone Management, which provided useful insights into the design of the fisheries component of this project.

USAID/Manila has two other projects (one on-going, the other due to start in FY 1983), which include traditional fishermen among the

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Since ICLARM has a rather varied and geographically dispersed set of donors, it may be both difficult and of questionable value to arrange periodic meetings. Some other system might be equally useful and much more efficient.

beneficiaries. Both of these programs focus on participatory development in sub-projects at the local level.

ICLARM's emphasis on non-technical solutions (i.e., solutions other than improved vessels and gear) has influenced the type of sub-projects selected and designed for the benefit of traditional fishing communities under the on-going project (the emphasis being on alternative employment opportunities and supplemental income). It is expected that the ICLARM approach to poverty in traditional fishing communities will be influential also in the design of sub-projects in the FY 1983 USAID/Manila project.

USAID/Jakarta is currently working with ICLARM in developing components of a fisheries research project aimed at increasing milkfish production within the country. ICLARM under USAID sponsorship in December 1980 and May 1981 provided technical assistance to the agency for Agricultural Research and Development (AARD) for this purpose. Under guidance from the International Agricultural Development Service (IADS) ICLARM is continuing work on development of this project for increasing milkfish production in Indonesia.

#### IV. RECOMMENDATIONS

1. The evaluation team strongly recommends:
  - a) *continued unrestricted core funding support of ICLARM by AID at a level of \$700,000 for FY 1982 and 1983 in approximately equal installments;*
  - b) *continued unrestricted core funding support for ICLARM by AID on a long-term basis, initially for a ten year period beginning in FY 1984 at a level of not less than \$350,000 per year and adjusted annually for inflation starting FY 1984; if funding permits, a higher level of support is recommended but it should not exceed 25% of core funding.*
  
2. The evaluation team recommends:
  - a) *that ICLARM give greater program emphasis to capture fisheries, reflecting more closely the important contribution capture fisheries make to world, regional and national harvests of living aquatic resources;*
  - b) *that ICLARM consider combining the Traditional Fisheries and Resource Development and Management programs into a single Capture Fisheries program;*
  - c) *that the appointment of the next Director General of ICLARM should also reflect a balance of the areas of interest and specialization of the senior administration of ICLARM (i.e., the Director General and the Deputy Director General), and the overall activities of the organization.*
  
3. The evaluation team recommends:

*that ICLARM intensify its efforts in living aquatic resources activities in other tropical regions, i.e., Africa, the Caribbean, Central and South America, as well as elsewhere in Asia.*



mcc p.o. box 1501, makati, metro manila, philippines

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4 February 1982

Dr. J.S. Robins  
Agency Director for Food and Agriculture  
Bureau for Science and Technology  
Agency for International Development  
U.S. International Development Cooperation Agency  
Washington, D.C. 20523  
U. S. A.

Dear Dr. Robins:

This is in response to your letter of 15 January, 1982. We appreciate your interest in and support for ICLARM and will be pleased for an opportunity to meet with an AID review team.

We have enclosed a set of lists and other information in response to your request for these materials in advance of the planned review. These reflect activities of ICLARM since September, 1980, the date of AID's last review of ICLARM.

Please find enclosed the following items:

1. List of completed and current projects.
2. List of publications.
3. List of fellows, associates and consultants (as part of staff list).
4. List of conferences, workshops, etc. sponsored or conducted by ICLARM and ones attended by ICLARM staff, (4a), and List of papers presented at these conferences and seminars (4b).
5. Institutional linkages, agreements and cooperative ventures.
6. List of status of donors, including budgetary information.
7. Summary of the output of the information service.

Your request for a quantitative measure (as possible) of beneficiaries and benefits is difficult to address. Our primary output is our research and quantification of research benefits is a notoriously elusive objective. I also realize an answer to this question is important to AID so I have listed below a set of facts that collectively describe selected benefits resulting from ICLARM's activities since September, 1980. If we can add to these in any way please let me know.

- (1) Publications are our most important means of communicating research results with other researchers and with the extension and training agencies with whom we interact.

international center for living aquatic resources management

The list in Item 2. (enclosed) can be summarized as follows. Since September, 1980 13 major ICLARM publications have been issued in addition to our newsletters, and an additional 15 scientific papers have been published in outside journals, conference proceedings and other technical publications. Requests for scientific reprints are numerous. Sales of ICLARM publications to date have averaged about 150 per issue in addition to our free distribution of 325 copies. Newsletter distribution is 2,300 (quarterly). International recognition of our publications is indicated in the letters enclosed as item 8. and by the fact that ICLARM has been invited to exhibit its publications with the CGIAR publications group traveling to China for this purpose in May, 1982.

One of our scientists, Dr. Pauly, has gone to the trouble of tabulating his requests for scientific reprints in a manner that may be of interest to you. He has received 473 requests for reprints from 63 countries since joining ICLARM. About one-fourth of the requests come directly from developing countries and many of the rest come from institutions involved in training developing country scientists or from scientists who consult or work in these countries.

- (2) Participation in workshops and conferences is a second way our "product" is delivered to the users. Our participation is outlined in Items 4a. and 4b. (enclosed). Interest is always strong in the workshops and more requests for participation are received than can be accommodated for every workshop we hold (see item 9).

In addition to the conferences attended by our scientific staff, each scientist turns down invitations to several conferences each year (an indication that their contributions are good and that their "product" is in demand).

- (3) Another indirect means of quantifying benefits generated by ICLARM is the requests for assistance, compliments on the newsletter, compliments on our publications (examples noted earlier) and compliments on ICLARM's general contributions. Although we don't have a count or complete record of these letters, additional examples are attached (item 10).
- (4) A steady flow of researchers, development workers and consultants visits ICLARM headquarters. These are both from developed and developing countries. Key foreign visitors are noted in our newsletter (112 in 1981) but this represents only about half the total. Large amounts of information are passed along to these individuals and to the groups they

the numbers of these visitors is increasing steadily. Large numbers of students, researchers and consultants also use our library (164 from 25 institutions during the 12 months prior to August, 1981).

- (5) Direct interaction with developing country researchers and administrators at meetings, workshops and in private consultations both in Manila and in other countries provides an additional opportunity to deliver ICLARM's product. I know no way to quantify this but it is an important means of communication, especially since ICLARM is an independent organization without political connections.
- (6) A special aspect of the staff interaction with developing country researchers and administrators is our advisory services. These activities are spelled out in an enclosure (item 11) and as can be seen they arise from specific requests for assistance - usually paid for by the agency making the request.
- (7) Several ICLARM projects have had especially significant impact. One of these is the San Miguel Bay project. This model study of the municipal fishermen's situation may well be a turning point in several aspects of the legal, social and economic status of traditional fishermen in the Philippines. The recent USAID Workshop in Manila on Coastal Zone Management (copy of report enclosed as item 12) is a good example of the impact of this study.
- (8) A second activity with major impact is the integrated farming research conducted at Central Luzon State University. With assistance from project personnel the International Institute for Rural Reconstruction has adopted the refined animal-fish production systems as a part of their extension package. Strong interest exists in publications from this work and farmers and commercial interests in the Philippines are implementing results of the studies. In addition, the INIREB group in Mexico has requested permission to translate and distribute ICLARM integrated farming publications.
- (9) The ADB-ICLARM Workshop on Alternative Energy Sources in Fisheries and Aquaculture is a third activity with apparent broad impact (see enclosed Newsletter, item 13). Articles regarding this Workshop have already been pirated in both French and Italian, and demand for the forthcoming proceedings is strong based on numbers of requests received.

- (10) The ICLARM-ADAB Workshop on the Theory and Management of Tropical Multispecies Stocks held in Cronulla, Australia is a fourth example of an activity with major international impact. We believe this workshop was a significant stepping stone in clarifying and coordinating research on stock assessment methodology.

Other activities with important impact could also be discussed (e.g. Dr. Chong's milkfish economics research which led to an 18-month FAO-funded study, training of scientists, educational activities, or Dr. Smith's Research Framework for Traditional Fisheries) but this letter is already too long. The review team must judge our other contributions on the basis of their review and the description of activities by ICLARM scientists.

We will be happy to supply other information as requested. Our draft annual report for 1981 will be completed soon and will be distributed at the review.

Sincerely,

RICHARD A. NEAL  
Deputy Director General &  
Director, Aquaculture Program

cc: Mr. Kenneth Osborn, AID Wash.  
Dr. James Johnston, RF

enclosures: A/S

RAN/mrq