

The Network of Tropical Aquaculture Scientists (NTAS): 1987-1996

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Background

Since the foundation of the Network of Tropical Aquaculture Scientists (NTAS) in July 1987, we (ICLARM staff) have been individually responsible for its coordination (R.S.V. Pullin) and secretariat (M.P. Bimbao) but were together in the compilation and editing of its newsletter (*Aquabyte*). In April 1996, these responsibilities were passed to Dr. Modadugu V. Gupta, ICLARM's International Relations Director, responsible for networks and of furthering collaboration with national institutions and scientists in the developing world. Dr. Gupta is an ICLARM senior aquaculturist with a long and distinguished career in research and development.

There have been three previous publications about the development of NTAS (Bimbao and Pullin 1990, 1993; Pullin and Bimbao 1993). An updated NTAS directory is in preparation (Pullin and Bimbao, in press). Here we summarize its overall history from 1987 to the present, highlighting what we regard as some of its successes and failures. The views expressed are our personal views.

The NTAS Track Record

Growth of Membership 1987-1996

NTAS membership has grown substantially. In 1987 there were 23 members from 11 countries, registering more as the years went by. In

1992, we sought the views of all members about the function and future directions of the NTAS through a questionnaire. Only those who confirmed their interest in continuing membership (around 73%) were retained. Hence, the membership dropped in 1993 (Fig. 1). Today, there are 625 members from 94 countries.

From 1987 to 1996, the developing countries have accounted for 71% of its members (Fig. 1), almost half (45%) come from Asia and the Pacific (Fig. 2). The countries with the greatest numbers of members are India (89), the Philippines (73) and Nigeria (46).

To facilitate information exchange among NTAS members, they are requested to specify at least three of their major and minor research interests. Table 1 groups the members' interests by broad categories and explains their content. This classification is somewhat artificial. There is, of course, a large scope for linkages among and within the categories, and their various descriptors can accommodate a wide range of activities. Moreover, some of the categories reflect ICLARM's programmatic structure up to 1995, as this has facilitated responses from ICLARM staff to NTAS members. Despite these limitations, however, the grouping shows clearly the current emphasis of

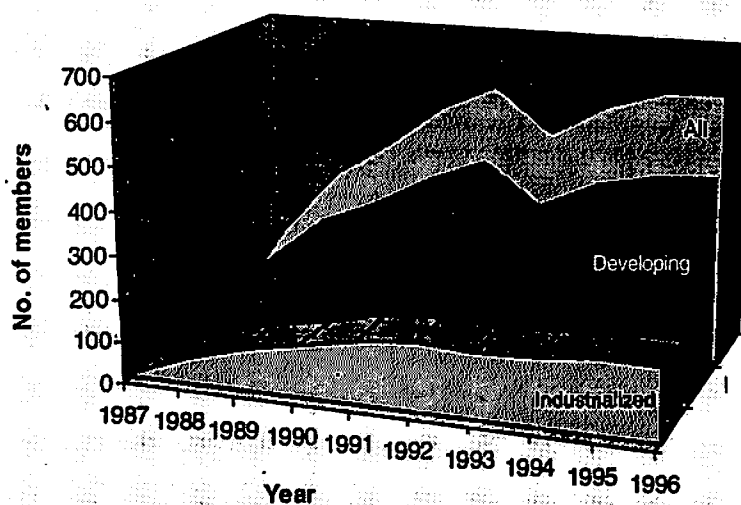


Fig. 1. Growth in NTAS members, by developing and industrialized countries, 1987-1996.

members. Almost half of the members work mainly in biology and ecology. Coastal and coral reef systems research and the social sciences are less well represented.

The NTAS Newsletter - Aquabyte

Aquabyte 1(1) was published in March 1988 and sent to 108 NTAS members from 38 countries. Its circulation grew from 1988 to 1991, when it was distributed as a stand-alone newsletter, to its incorporation in *Naga, the ICLARM Quarterly* in 1992 as the Aquaculture Section; through which it achieved distribution to a much wider readership than NTAS

members (Fig. 3). The current circulation of *Naga* is 5 047 copies.

An "African Section," in French and English, was started in *Aquabyte* 1(2) to encourage wider readership in francophone countries, especially in Africa. This was discontinued in 1992 with the realization that the selection of material for translation was not well founded. We had been selecting for translation only material that had originated from Africa and neglecting material from elsewhere: some of

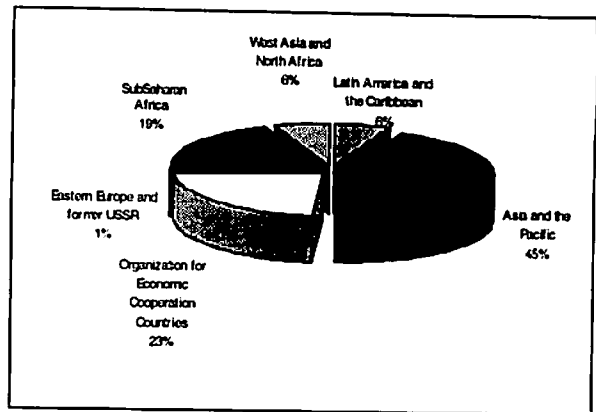


Fig. 2. Regional distribution of NTAS members, 1987-1996.

which undoubtedly contained important information for francophone readers. As ICLARM lacked the resources to produce a complete translation of *Aquabyte* into French, we suggested, together with ICLARM's translator Catherine Lhomme-Binudin, that the Center seek funds for a more systematic approach to the translation of its publications, including newsletters.

This has not yet materialized, but ICLARM, as a member of the Consultative Group on International Agricultural Research (CGIAR), is now better placed to address translation needs. The CGIAR could explore a system-wide approach to these, as they apply to all its member Centers. While the outcome of this is awaited, translation activities within the NTAS and ICLARM's other networks remain largely opportunistic and ad hoc. Apart from routine correspondence, it must be admitted that the NTAS has not yet succeeded in providing adequate services for its members in languages other than English.

What Worked and What Didn't

We are confident that the NTAS has been worth the efforts and resources that have been put into it. Our confidence is based on a huge volume of incoming mail: thanking for information received,

Table 1. Fields of research interest of NTAS members, 1996. Members were asked to list up to three major and three minor interests.

	Major		Minor	
	Count	%	Count	%
Biology and ecology ^a	831	50	722	49
Inland aquatic systems ^b	380	23	255	17
Methods and tools ^c	195	12	279	19
Coastal and coral reef systems ^d	161	9	98	6
Social science ^e	102	6	129	9

^a Includes behavior, biochemistry, bioenergetics, biotechnology, bivalves, biodiversity, broodstock, carps, catfishes, conservation, crustaceans, cryopreservation, detritus, diseases, DNA fingerprinting, ecology, ecophysiology, endocrinology, environmental impact, environmental studies, feed technology, finfish, fisheries enhancement, foodchains, genetic resources, genetics, giant clams, growth, habitat restoration, immunology, induced spawning, integrated pest management, limnology, meiofauna, microbiology, milkfish, nutrition, parasites, pathology, pesticides, physiology, phytoplankton, pollution, pond dynamics, population genetics, predators, quantitative genetics, reproductive biology, reproductive physiology, seaweeds, shrimps, species introduction, taxonomy, tilapias and zooplankton.

^b Includes farming systems research, freshwater aquaculture, freshwater prawns, integrated farming systems, plankton, reservoirs, rice-fish farming systems, river fisheries, seed production, site selection, waste-fed and wastewater (sewage) reuse.

^c Includes cage culture methods, computer methods, depuration, engineering, farming management, hatchery technology, modelling, pens, pond management, population dynamics, postharvest technology, probiotics, production systems, software, statistics, stock assessment, water quality and water systems.

^d Includes brackishwater aquaculture, coral reefs, lagoons, marine aquaculture and pearl culture.

^e Includes business development, curriculum development, development, economics, extension, fisheries management, information, marketing, policy, public health, resource economics, rural sociology, socioeconomics, trade and training.

for advice given, for editorial revision of papers, etc.

The NTAS has been supported entirely from ICLARM's core funds, apart from support received from France for translation of the short-lived "Africa Section" of *Aquabyte*. The NTAS has not yet found a donor or donors to fund it as a specific activity.

The main problems have been the slow trickle of materials submitted by NTAS members for *Aquabyte*, and the slow responses of some authors to editorial requests. We have also not always been as rapid as we should have been in handling materials for publication, but it has to be said that the compilation of sufficient materials for each issue of *Aquabyte*, in high quality and thoroughly edited and reviewed form, has been a constant struggle.

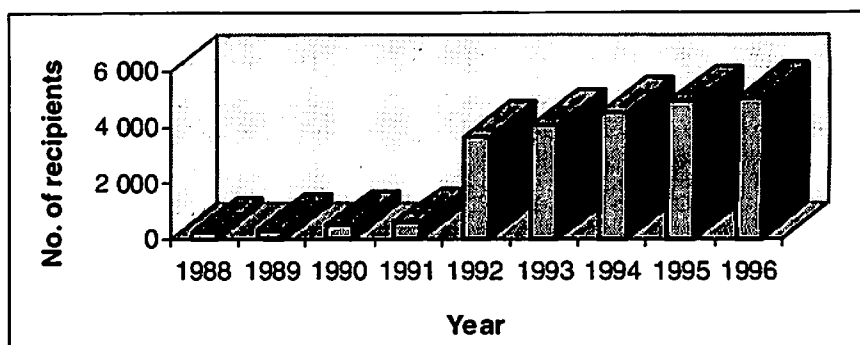


Fig. 3. Recipients of *Aquabyte* as a stand-alone newsletter (1988-1991) and as the *Aquaculture Section of Naga, the ICLARM Quarterly* (1992-1996). Prior to 1992, the recipients were all individual NTAS members and a limited number of institutions; thereafter the recipients included all NTAS members and all other Naga recipients - individuals and institutions.

A total of 107 articles have been submitted to *Aquabyte* and of these, 77 have been published. Of the 31 article submissions that were not ac-

cepted, 10 were restyled and published as news items or as letters. The main reasons for rejecting or restyling submissions were: more appropriate for a scientific journal (32%); needs major rework (29%); too few data for conclusive results (16%); insufficient interest for readers (13%); inappropriate style or content, such as proposals, announcements of research plans and institutional publicity (7%); and narrow or location-specific content and inadequate statistics (3%).

On average, we published three main articles in each *Aquabyte* issue; while usually having only another two or three for processing at the time. Given the size of the NTAS membership this has always been rather discouraging. We have made repeated attempts, through editorials, to encourage the submission of more material from members. ICLARM authors have sometimes had to fill the gap when insufficient material was to hand (Table 2). Screening and editing articles submitted to *Aquabyte* have been rewarding and time-consuming tasks.

In terms of editorial efforts, 41% of the article submissions

Table 2. Authorship (non-ICLARM vs. ICLARM) and extent of editing of articles published in *Aquabyte*, 1988-1996.

	No. of articles	% of total
Authorship		
Non-ICLARM	62	70
ICLARM	26	30
Extent of editing		
Light ^a	34	41
Moderate ^b	21	28
Moderate plus detailed correspondence	2	
Heavy ^c	23	31
Heavy plus detailed correspondence	3	

^a Very little editorial changes needed; taking only a few person-hours to progress from original MS to published version; correspondence with authors either not needed or very short.

^b Considerable editorial changes needed with questions to authors by substantial correspondence; taking from two to three person-days to progress from original MS to published version.

^c Very large editorial changes needed, sometimes with substantial rewriting of parts of the original MS; changes requiring substantial correspondence with authors, taking from four to six person-days to progress from original MS to published version.

needed light editing, 28%, moderate and 31% heavy (Table 2). We were sometimes worried that our editorial efforts would be perceived as too harsh and might even give offense. However, there was almost no evidence of this and many authors expressed their appreciation for our reviewing and

editorial work (Table 3).

Therefore, we are sure that the NTAS and *Aquabyte* have proved useful as vehicles for information exchange and for publications suited to such a newsletter. *Aquabyte* was never intended to be a place for articles that merit publication in the primary scien-

tific literature. Looking back at the contents of *Aquabyte*, the articles and news items have formed an interesting, though very mixed bag.

We remain disappointed that one of the NTAS' original objectives - the exchange among members of research methods and protocols, and

Table 3. NTAS members' comments on the editorial changes made for their article submissions in *Aquabyte*.

Country of author(s)	Comments
Bangladesh	<ul style="list-style-type: none"> • Thank you for your valuable comments and suggestions on the paper. • Thank you very much for your prompt action and the reviewed manuscript, I stick to your instructions but I made one little change.
Canada	<ul style="list-style-type: none"> • I read your edited version, as well as the translation, that you are very kind to do.
China	<ul style="list-style-type: none"> • I wish to express my appreciation to ICLARM for editing our MS. The edited version is acceptable to us.
India	<ul style="list-style-type: none"> • Thank you a lot for editing the paper nicely and I feel pleasure in accepting all the major editorial changes made/ suggested by you. • Thank you for a very critical editing of this contribution which has greatly enhanced its quality. • Thank you very much for accepting my article and also for editing and modifying the text. • The edited version is very nice after incorporating the explanations suitably the way you deem it fit. • The suggested editorial changes are acceptable.
Malaysia	<ul style="list-style-type: none"> • I appreciate your comments and would like to thank you for editing my MS.
Malawi	<ul style="list-style-type: none"> • I have checked the edited version and have found no error.
Myanmar	<ul style="list-style-type: none"> • Thank you very much because you have done quite a lot of work on my paper.
Netherlands	<ul style="list-style-type: none"> • I highly appreciate your edits on my paper. • It is very valuable for its completion and have it in a publishable form.
Nigeria	<ul style="list-style-type: none"> • I am delighted at the fine editorial job done on the paper. • I am grateful for the corrections and comments. • I sincerely thank you for all your efforts on our paper. I agree with the edited version.
Philippines	<ul style="list-style-type: none"> • I appreciate the trimmings you did and what's basically left are the essentials.
Sénégal	<ul style="list-style-type: none"> • Thanks for your corrections/comments. I really appreciate what you are doing for me.
Sri Lanka	<ul style="list-style-type: none"> • I appreciate very much the pains you have taken to edit my paper. I agree with the contents.
UK	<ul style="list-style-type: none"> • I am faxing a few comments on your fine editing job, all of which I followed. • Thanks for cleaning up the paper.
USA	<ul style="list-style-type: none"> • By and large, I have no problems with your editing efforts; what was eliminated was reasonable in light of available space. Thank you for your editorial efforts. • Thank you for your helpful inputs and suggestions to get this out. • Thank you very much indeed for editing my article. Your time is greatly appreciated. Please feel free to add your name to article. [This was not done.]
Vietnam	<ul style="list-style-type: none"> • All your ideas and suggestions on our paper are quite correct. Thank you for your detailed correction and your kind suggestions. • I am very happy to receive your letter on my paper.
Zimbabwe	<ul style="list-style-type: none"> • I have learned the latest edited version for accuracy and thoroughness and have very little corrections on typographical errors. Apart from these, the MS is fine.

Table 4. Subject categories of NTAS articles and new items published in *Aquabyte*, 1988-1996.

Subject category	Articles		News items	
	no.	% of total	no.	% of total
Research results	30	34	27	22
Development issues	25	28	13	11
Methods	22	25	6	5
General review, or commentary ^a	11	13	74	62

^aFor example, general information about institutions, projects training and information services.

practical hints on techniques, etc. — has not yet been achieved (Table 4). There have been fewer submissions of this nature to *Aquabyte* than we had hoped for, and we have almost no evidence that such help has been given informally among members. We do not understand why the sharing of such material, for which a newsletter like *Aquabyte* is well-suited, seems to have held little interest for NTAS members so far.

Conclusion

We wish the NTAS continued growth, strong support and a successful future. We are sure that it will go from strength to strength

under Dr. Gupta's leadership and we encourage the members to support him and each other by making the effort to communicate frequently and to share information and experiences. Establishing and working with the NTAS these past nine years have been a very rewarding experience for us and we wish to thank all members of the NTAS and our colleagues in ICLARM and around the world who have made our task so enjoyable.

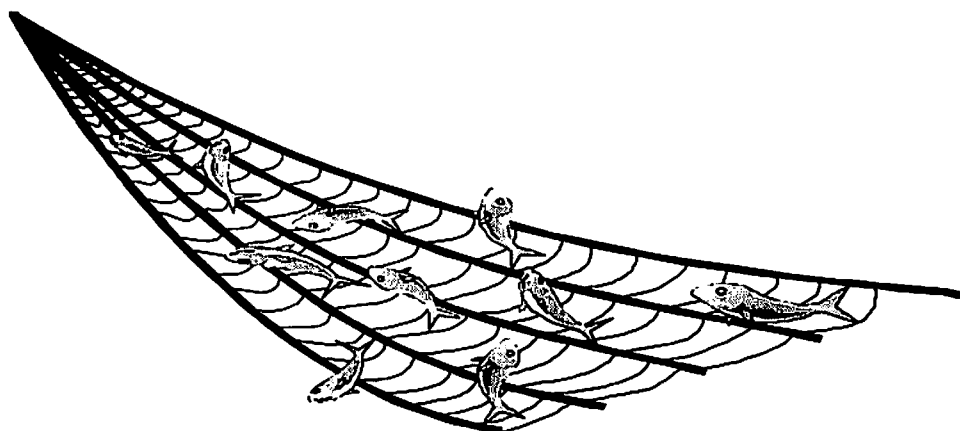
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M.P. BIMBAO is now Research Associate (Economist) with ICLARM's Integrated Agriculture-Aquaculture Systems Program and R.S.V. PULLIN is the Program Leader of ICLARM's Biodiversity and Genetic Resource Program.

ICLARM Contribution No. 1302.



Freshwater Prawn Farming in India

Freshwater prawn (*Macrobrachium rosenbergii*) farmers of Mettupalayam, a coastal town of Tamil Nadu state in India, are placing earthen hide-outs in the embankments of ponds, for the prawns to hide during their molting periods to avoid cannibalism and improve the survival. The number of hide-outs is dependent on the density of prawns stocked. In this particular case, about 500 earthen hide-outs were placed in a pond stocked with 40 000 seeds. The locally made cylindrical earthen hide-outs are about 45 cm in length and 23 cm in diameter. These hide-outs are the traditional types, but recently farmers also started using PVC pipes, old car and two-wheeler tires, etc. because of their low cost and easiness in handling.

Source: Dr. A. GOPALAKRISHNAN, JRD Tata Eco-technology Centre, M.S. Swaminathan Research Foundation, Third Cross Street, Institutional Area, Madras 600113, India.



Earthen hide-outs for prawns. Photo by A. Gopalakrishnan.

Shrimp Disease

Microbial fouling sometimes becomes a major limiting factor in the production of certain commercially important decapod crustaceans. One of the most important limiting factors in culturing shrimps is filamentous bacteria which cause "Filamentous bacteria disease." In a survey undertaken on cultured shrimps in Ghoffas area in Abadan, near the

coastline of the Persian Gulf, shrimps were observed to have been heavily infested with *Leucothrix mucor*. This microorganism exists on body surfaces, especially on the cuticular setae of the appendages including uropods, pleopods and pereopods. When infestation is heavy, filamentous bacteria may also be found in large quantities on the gills.

The infestation was observed on body surface in 17.5% and 33.4% of cases among *Penaeus indicus* and *P. monodon*, respectively, and while on gills it was in 3.7% and 6.3% of cases among *P. indicus* and *P. monodon*, respectively. This bacterium causes mortalities in all stages of shrimp under poor conditions. Thus, it is suggested that early diagnosis is essential to minimize infestation.

Source: Drs. B. TAMJIDI and F. DAVOODI, No. 56 3rd West Street, PO Box 61335/416, Kian-Pars Ahvas, Iran.



Leucothrix mucor filaments on top of a gill mastigobranchia of a *Penaeus monodon*. Photo by B. Tamjidi.