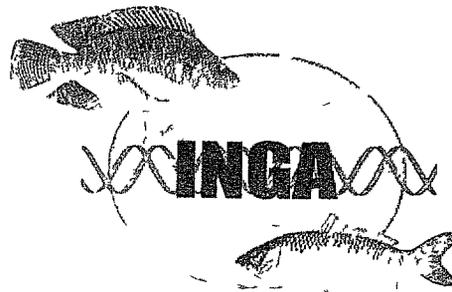


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Strengthening Partnerships
to Advance the Science
of Fish Breeding and Genetics
and Development of National
Fish Breeding Programs



INTERNATIONAL NETWORK ON GENETICS IN AQUACULTURE

Manila, Philippines
20-21 February 1997

PNACG

MANILA RESOLUTION

Strengthening Partnerships to Advance the Science of Fish Breeding and Genetics and Development of National Fish Breeding Programs

**Issued by
The INGA Planning Meeting
20-21 February 1997
Shangri-La's EDSA Plaza Hotel
Mandaluyong City, Philippines**

**Manila Resolution· Strengthening Partnerships
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1997

**Published by the International Center for Living Aquatic
Resources Management on behalf of the International
Network on Genetics in Aquaculture (INGA)**

Printed in Manila Philippines

**The INGA Planning Meeting 1997 Manila Resolution
Strengthening Partnerships to Advance the Science of Fish Breeding
and Genetics and Development of National Fish Breeding Programs
ICLARM Conf Proc 54 12 p**

ISBN 971-8709-01-0

ICLARM Contribution No 1384



About one billion people, mostly in developing countries depend on fish as their primary source of animal protein. While the demand has grown substantially over the last few decades, the supply has continued to rely on production from natural fisheries resources (inland and marine) which accounts for over 80% of the global fish production. Population growth projections suggest that an additional 19 million tonnes of aquatic products would be needed by the year 2000 and additional 100 million tonnes by the year 2025. In view of the limited possibility of increasing production from capture fisheries, emphasis needs to be put on increasing production through aquaculture. Tropical aquaculture species such as carps and tilapias which form the mainstay of small scale enterprises for many resource poor farmers in the developing world, possess the ability to convert natural feed sources into high quality protein. In the past there was no concerted effort towards application of scientific principles of genetics and husbandry to tropical aquaculture.

Recent studies in salmon, trout and Nile tilapia have clearly demonstrated the potential for achieving substantial gains in aquaculture production through application of quantitative genetics. Recognizing the diverse nature of species cultured and farming systems in tropical developing countries, ICLARM organized a round table conference in the Philippines in 1990 which was attended by leaders from national institutions in Asia and Africa and the international development agencies. The participants strongly felt the need for international scientific collaboration to enable the developing countries to enhance the productivity and profitability of aquaculture that would benefit the low income producers and consumers. As a first step in fulfilling this need, a meeting was organized by ICLARM in May 1992 in Manila, to discuss the establishment of international collaborative linkages in fish genetics research. The enthusiasm expressed by the participants in these meetings and the prospects for genetic improvement of fish as demonstrated by the GIFT (Genetic Improvement of Farmed Tilapias) project and subsequent field missions undertaken by ICLARM with funding from UNDP/ SEED, resulted in the formation of the International Network on Genetics in Aquaculture (INGA) in 1993, with 11 founding members: Bangladesh, China, Cote d'Ivoire, Egypt, Ghana, India, Indonesia, Malawi, Philippines, Thailand and Vietnam, with ICLARM as a Member Coordinator. Subsequently, Fiji and Malaysia joined the network in 1996.

Networking is a well tested and proven mechanism to foster international cooperation in seeking solutions to problems of common interest that cut across political boundaries. INGA aims to establish international collaborative linkages that could help catalyze the evolution of national fish breeding programs through networking.

The primary objectives of INGA are to (i) foster regional and international cooperation in aquaculture genetics research, (ii) assess needs and opportunities for application of genetics to aquaculture, strengthen the national research capacity for continued genetic enhancement of farmed fish, (iii) facilitate exchange of information, methods and materials, boost efficiency and stimulate thinking, (iv) contribute through collaborative research, to domestication of tropical finfish, (v) evaluate performance of promising lines of tilapias and carps, and (vi) assist in the development of strategies for national fish breeding programs. The network is jointly owned and jointly managed by the members through the Steering Committee comprising of one senior representative from each of the member countries and ICLARM.

In collaboration with the Bureau of Fisheries and Aquatic Resources (BFAR), Philippines, ICLARM organized a consultation meeting of the senior officials of INGA member countries during 20-21 February 1997 in Manila, to develop strategies for strengthening aquaculture genetics research and development of national fish breeding programs through networking. The participants discussed in detail the widening gap between supply and demand for fish, the declining catches from natural resources, the major role aquaculture has to play in meeting the future needs of increasing population, importance of genetics in increasing and sustaining aquaculture production, gains made so far in improving the productivity through selective breeding and the urgent need for conserving and utilizing the fish genetic resources. At the end of the meeting, the participants agreed unequivocally the need for concerted international efforts for advancing the science of fish breeding and genetics through networking. The resulting agreement called the Manila Resolution is in the following pages.

To Advance Science of Fish Breeding and Genetics

WHEREAS, fish is an important source of animal protein to people of member countries, increasing fishing pressure and degradation and loss of aquatic habitats are resulting in decrease in fish production from natural resources,

WHEREAS, member countries have a wealth of aquatic biodiversity that needs to be conserved and utilized in sustainable development,

WHEREAS, the member countries are making all out efforts for the food security and alleviation of malnutrition through increased availability of fish protein to low income rural and urban populations and improved economic returns to small holder farmers,

WHEREAS, the member countries, recognizing the need to increase fish production to meet the increasing gap between supply and demand for fish are taking a number of steps for conservation of aquatic resources and biodiversity and for their sustainable use in aquaculture, the member countries are aware that scientific application of quantitative genetics and husbandry can give aquaculture a new dimension, leading to increased production and incomes as has been demonstrated in the case of salmon, trout and Nile tilapia,

WHEREAS, the member countries recognize that variability in fish species, farming systems and production environment makes it imperative that genetic enhancement in aquaculture best be done through international cooperation and collaboration, networking is a well tested mechanism for seeking solutions to problems of common interest, networking consolidates the strengths of different national programs and international organizations,

WHEREAS, the Planning Meeting of INGA recognizes the importance of conservation of genetic resources and their sustainable use in aquaculture and the accomplishments of INGA to date

THEREFORE, we, the participants of the Planning Meeting of INGA hereby resolve to encourage the INGA member countries, donors and other institutions/organizations to give due emphasis for conservation and sustainable use of aquatic genetic resources and biodiversity by

organizing national aquaculture genetics networks and providing support for coordination of activities,

providing support to national genetics research programs,

strictly adhering to the germplasm transfer and quarantine protocols approved by the network members which conform to wider international standards and rigorously implementing the guidelines,

- sharing knowledge and methodologies,

sharing germplasm, with prior informed consent and on mutually agreed terms,

- providing technical and policy inputs to national and international efforts to maintain aquatic biodiversity and genetic resource conservation,

assisting in the implementation of the Convention on Biological Diversity (CBD),

providing support to INGA activities



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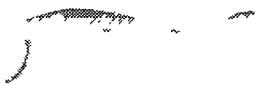
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International Center for Living Aquatic Resources Management

The International Center for Living Aquatic Resources Management (ICLARM) is an autonomous, nongovernmental, 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.

ICLARM is an operational organization, not a granting entity. Its program of work is aimed to resolve critical, technical and socioeconomic constraints to increased production, improved resource management and equitable distribution of benefits in economically developing countries. The Center's work focuses in tropical developing countries on three resource systems: inland aquatic (mainly ponds and rice floodwaters), coastal and coral reefs, in which research is carried out on their dynamics, on investigating alternative management schemes and on improving the productivity of key species. The work includes cooperative research with institutions in developing countries, and supporting activities in information and training. 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. The direction of ICLARM, under these policies, is the responsibility of the Director General.



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