

**STATEMENT OF THE NINETEENTH JOINT
MEETING OF THE UJNR AQUACULTURE PANEL
OCTOBER 29-30, 1990**

The nineteenth joint meeting of the UJNR aquaculture panel was held on 29 and 30 October, 1990 at the Ise City Plaza in Mie, Japan. A business meeting was held on the morning of 29 October, followed by a Symposium on 29 and 30 October. The topic of the Symposium was "Control of Diseases in Aquaculture." Seiji Sakaguchi, Japanese Panel Chairman, and Conrad Mahnken, U.S. Panel Chairman, opened the business meeting with welcoming addresses and opening greetings. The agendas for the business meeting and the symposium program are attached (Appendices I and II), as well as the lists of panel members, guests, and observers. A satellite symposium was held at the Hacchobori Chanter hotel in Hiroshima on 2 November, and was hosted by the Nansei National Fisheries Research Institute. The topic of the symposium was "Unfavorable Factors of the Aquaculture Environment in the Seto Inland Sea" (Appendix III).

I. Business Meeting

The business meeting was chaired by the U.S. and Japanese Panel Chairmen, Dr. Conrad Mahnken and Dr. Seiji Sakaguchi, respectively. They were assisted by Dr. James McVey (U.S. Vice Chairman), Dr. William Heard, and Dr. Walton Dickhoff (U.S. Panel), and by Dr. Keiji Hirose (Japanese Secretary General), Dr. Takeshi Hara (Japanese Vice Chair), Dr. Katsuhiko Wada, Dr. Masahiko Awaji, Dr. Kooichi Konishi, Dr. Shigehiko Urawa, Dr. Masayuki Noguchi, Dr. Hiromasa Matsunaga, Dr. Shigeru Kawamata, and Dr. Hiroshi Ogata. Elected as Rapporteurs were Dr. Walton Dickhoff and Dr. Katsuhiko Wada. The Symposium Moderators were noted (see Symposium Program) and approved with no objections.

The counter parts for the U.S. and Japanese Panels were named.

For the U.S. Panel, they were:

Chairman	Dr. Conrad Mahnken
Vice Chairman	Dr. James McVey
Cooperative Studies	Dr. Conrad Mahnken
Scientist Exchange	Dr. James McVey
Literature Exchange	Dr. Joan Mitchell
Publications	Mr. Ralph Svrjcek

For the Japanese Panel, they were:

Chairman	Dr. Seiji Sakaguchi
Vice Chairman	Dr. Takeshi Hara
Secretary General	Dr. Keiji Hirose
Vice General Secretary	Dr. Hiroshi Ogata
Cooperative Studies	Dr. Katsuhiko Wada
Scientist Exchange	Dr. Kooichi Konishi
Literature Exchange	Dr. Masahiko Awaji

The agendas for the business meeting and symposium were unanimously adopted. Lists of the names and addresses of Japanese and U.S. Panel members, and U.S. observers are attached (Appendices IV, V, and VI).

A. Scientist Exchange

The exchange of scientists under the auspices of the UJNR Aquaculture Panel continued during 1989-1990. Arrangements were made for the following exchanges:

Dr. Kiotaka Takahasi, Miyagi Prefectural Experimental Station to the Northwest Fisheries Research Center, National Marine Fisheries Service in Seattle and Manchester, Washington to view salmon farming research, July, 1990.

Dr. Kazunari Kuramoto, Habomai Fisheries Cooperative to the Northwest Fisheries Research Center, National Marine Fisheries Service in Manchester, Washington. October 1989.

Dr. Shigehiko Urawa, Hokkaido Salmon Hatchery to Northwest Fisheries Center, National Marine Fisheries Service in Seattle to study techniques for genetic stock identification of chum salmon. February to August, 1990.

Dr. Kunihiko Fukusho, National Research Institute of Aquaculture to the Northwest Fisheries Center, National Marine Fisheries Service, Seattle Washington; School of Fisheries, University of Washington, Seattle Washington; National Fisheries Research Center, U.S. Fish & Wildlife Service, Seattle Washington; United States Department of Agriculture, Washington D.C.; National Science Foundation, Washington D.C.; National Sea Grant Program, NOAA, Washington D.C.; Southwest Fisheries Center, National Marine Fisheries Service,

La Jolla, California; University of California, San Diego, California; and the Oceanic Institute, Oahu, Hawaii. Overview of investigations on biotechnology in aquaculture in United States. 26 March to 4 April, 1990.

Dr. Masaaki Shimamura, Research Division, Fisheries Agency to the Northwest Fisheries Research Center, National Marine Fisheries Service, Seattle Washington; School of Fisheries, University of Washington, Seattle Washington; National Fisheries Research Center, U.S. Fish & Wildlife Service, Seattle Washington; United States Department of Agriculture, Washington D.C.; National Science Foundation, Washington D.C.; National Sea Grant Program, NOAA, Washington D.C.; Southwest Fisheries Center, National Marine Fisheries Service, La Jolla, California; University of California, San Diego, California; and the Oceanic Institute, Oahu, Hawaii. Overview of investigations on biotechnology in aquaculture in United States. 26 March to 4 April, 1990.

Dr. Hiroyuki Sudo, Seikai National Fisheries Research Institute to: School of Fisheries, University of Washington, Seattle, Washington; Northwest Fisheries Research Center, National Marine Fisheries Service in Seattle and Manchester, Washington. Studies on accurate estimation of fish carrying capacity and investigation of a fish tagging system in the United States. October, 1989 to October, 1990.

Dr. Yasuo Inui, National Research Institute of Aquaculture to: Northwest Fisheries Center, National Marine Fisheries Service in Seattle and Manchester, Washington to exchange information on studies of hormonal control of early development of fish. Discuss program of the 19th UJNR Symposium. August 1990.

Drs. Conrad Mahnken, Lee Harrell, Gary Winans, and Walton Dickhoff, Northwest Fisheries Research Center, National Marine Fisheries Service, Seattle and Manchester, Washington, and Dr. Ingvar Huse, Institute of Marine Research, Austevoll Marine Aquaculture Station, Storebo, Norway to: Hokkaido and Miyagi Prefectures for overview of salmon hatcheries, coho salmon farming, aquaculture activities in Shizugawa. October, 1990.

B. Literature Exchange

Mr. Ben Drucker, U.S. panel member in charge of U.S. literature exchange has retired, and the panel wishes to thank him for his invaluable contribution to the literature exchange.

Dr. Heard reported that the U.S. Panel sent 132 publications on both fresh and salt water aquaculture to Japan. These publications covered a wide range of subjects, including reproduction, nutrition, diet preparation, genetics and disease, among others. Nine groups of cultured organisms were covered in these publications. Ten copies of the publications list were presented to the Japanese Panel members.

Dr. Awaji reported that 130 publications of the National Research Institutes of Fisheries Agency and Prefectural Fisheries Research Institutes will be sent by the Japanese Panel. Two copies of the publications list were submitted. Dr. Awaji will send 10 copies of the publications list and the 1989 English version of the Annual Report on the status of Japan's fisheries to Dr. Joan Mitchell, the new U.S. counterpart for literature exchange.

It was suggested by Dr. Heard that since the list of aquaculture-related publications is becoming large, it would be valuable to start compiling the publications list in a computer bibliographic file. Having such a computerized list would facilitate organizing the publications, and increase the usefulness of the list. For example, searches of the list could be made on microcomputers by researchers interested in specific topics in aquaculture. Dr. McVey mentioned that there was work underway in developing an aquaculture literature database for the U.S. Department of Agriculture. It was generally acknowledged that the U.S. Panel will investigate developing a computerized publications list.

C. Publications

Dr. Mahnken reported that during the 1989 meeting of the UJNR the Japanese requested additional copies of publications. The following were forwarded to the Japanese Panel Chairman Sakaguchi:

8th meeting	1979	10 copies
13th meeting	1984	45 copies
14th meeting	1985	40 copies
15th meeting	1986	95 copies

Regarding present efforts in publication of the UJNR meeting symposia, it was reported that the 1986 proceedings have been published; it is anticipated that the 1987 proceedings will be published in November, 1990; the 1988 proceedings have been sent to the publisher and are expected to be out in early 1991. For the 1989 proceedings, 75% of the papers have been edited and returned to authors. It is hoped that the 1989 proceedings will be published in late 1991 or early 1992.

Dr. Mahnken thanked Dr. Awaji for speeding the publication process, especially for getting manuscripts on computer disks, which is valuable in particular for the initial editing of the manuscripts. Since the publishing is done electronically, it is important to submit manuscripts on computer disk. Dr. Mahnken asks that the final copy of the manuscript also be submitted on computer disk; details on format and software specifications were supplied to the Japanese Panel, along with 20 copies of guidelines for publication of proceedings.

Dr. Hirose thanked the U.S. panel for the copies of past proceedings. He will discuss the details on computer disk formatting with his colleagues and respond later about this matter.

D. Cooperative Studies

The only on-going cooperative study is the "International Index of Marine Aquaculture Diseases," which is a synopsis of fish diseases in the Northern hemisphere. Dr. Carl Sinderman has been the U.S. coordinator of this project, and was responsible for appointing coordinators from Japan and Europe. This matter has been discussed previously, and it was agreed that the Japanese Panel was to present a candidate for the Japanese coordinator. The European coordinator previously selected was Dr. Emmy Egidius of Norway. Progress on this study was interrupted by the untimely death of Dr. Egidius. Recently, Dr. Sinderman has retired, and does not want to pursue work on the index. Dr. Mahnken recommended to drop the project from consideration. Furthermore, the U.S. Panel has no additional cooperative projects to propose.

Dr. Sakaguchi acknowledged the problems created by Dr. Egidius' death and the retirement of Dr. Sinderman. Since the information on diseases is available from various sources, it is anticipated that it will be compiled by someone else at some time. Therefore, Dr. Sakaguchi

agreed that the project should be dropped; no further cooperative projects were proposed.

E. Other Matters

Dr. Hirose handed out the Japanese proposal for the fourth UJNR five-year plan for Symposium topics. This consisted of the following:

21st (1992)	Recent advances in seaweed culture
22nd (1993)	Recent advances in marine finfish culture
23rd (1994)	Recent advances in freshwater finfish culture
24th (1995)	Recent advances in crustacean culture
25th (1996)	Recent advances in molluscan shellfish culture

Dr. Hirose acknowledged that there is not much seaweed culture in the U.S., but there could be greater U.S. interest in this area if phytoplankton and cell-fusion research is included under the seaweed culture category.

Dr. Mahnken mentioned that the U.S. would have difficulty finding researchers working in either seaweed or crustacean culture.

Dr. Dickhoff suggested for consideration some symposium topics addressing important and current issues in aquaculture. One symposium topic could be titled "Aquaculture, the Environment and Human Health." Under this title, some subjects to be covered would include:

1. The effects of drugs used in culture, e.g., antibiotics, hormones. What are the residual levels of these substances in fish, water, and sediment? Do they have any effects on organisms near the fish culture site? What drugs are approved for use in food fish? What information is needed for approval of other drugs? What procedures are required by government regulatory agencies?
2. What are the interactions between cultured fish and naturally occurring species in the environment? Are there genetic or disease interactions?
3. What are the policies and regulations of seafood inspection programs?

4. What is the effect of urban, industrial and agricultural pollution on sea farming? What factors are most important in self-pollution? Are there examples of human pollution contaminating fish culture, and measures taken to alleviate these problems (for example, depuration of fecal coliform bacteria from cultured oysters)?
5. Have there been any sustained introductions of transplanted species from commercial aquaculture activities?

Another topic could be "Aquaculture Engineering", particularly intensive and closed-system culture. Subjects covered under this heading could include:

1. Oxygenation in re-use systems.
2. The use of biological filters.
3. The use of sterilization of water by ozonation or irradiation.

Dr. Dickhoff said that these items could be rearranged or divided into smaller categories for symposium topics.

Dr. Sakaguchi stated that the Japanese Panel looked forward to discussing these topics and the next five-year plan. Furthermore, since the topics suggested by the Japanese Panel were very broad, the items suggested by Dr. Dickhoff could be easily incorporated.

Dr. Mahnken suggested that the adoption of the next five-year plan be delayed until next year. He then requested a modification of the current five-year plan, which will be in its fifth year in 1991. He proposed to change the 1991 topic from intensive culture to nutrition, which has not been covered by UJNR recently. The modification was accepted by the Japanese side.

Among other business, Dr. McVey mentioned that there is a National Aquaculture Information Center in the U.S. Department of Agriculture. He would like to compile a list of aquaculture research institutions in Japan and the U.S. This list would also include such new libraries as the U.S. National Agriculture Library. Dr. Sakaguchi agreed with the intent of this proposal since the Japanese would also like to know more about U.S. aquaculture research institutions. Dr. McVey requested that the following information be supplied to him: Institution Name, Address, Phone number, FAX number, and Laboratory Director.

Dr. Sakaguchi said that for the Japanese side this list would consist of the National Research Institutes of Aquaculture, Prefectural Research

Institutes, and Universities. It was agreed that it would be best to communicate with these institutes through the UJNR. It was agreed that this list be compiled within six months.

F. Plans for the next Joint Meeting in the United States

Dr. Mahnken suggested that if the subject of nutrition is agreeable for the 20th Joint Meeting of the UJNR Panel, then it would be best to hold the meeting in the Pacific Northwest. The site of the Symposium may be either Corvallis or Newport, Oregon, if this is agreeable to the researchers at Oregon State University. The field trip may visit aquaculture sites in the states of Oregon, California, Idaho and Washington.

Dr. Sakaguchi found this proposal agreeable to him, but it must be discussed with members of the Japanese Panel. He will make an official reply to Dr. Mahnken's suggestion at the earliest possible date.

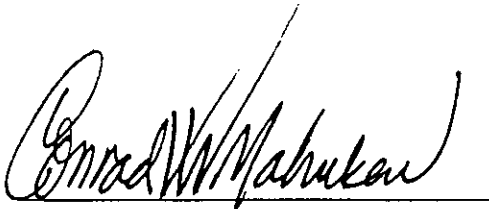
E.. Information for the Field Trip

Dr. Matsunaga outlined the satellite symposium entitled "Unfavorable Environmental Factors in Seto Inland Sea"(Appendix III) to be held in Hiroshima on 2 November, and described the field trip. The itinerary for the field trip is Appendix VII.

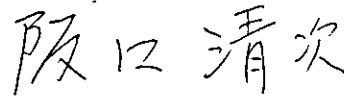
II. Symposium

The main symposium was held in conjunction with the meeting of the Japan Society for Fish Pathology (JSFP) at the Ise City Plaza. A total of 20 papers were presented at the main symposium.

The Japanese and U.S. Chairmen thanked all those who helped plan and organize the 1990 UJNR symposium and field trip.



U.S. Chairman



Japanese Chairman