

## **UJNR Aquaculture Panel      35<sup>th</sup> Scientific Symposium**

November 13<sup>th</sup>-14<sup>th</sup>, 2006

National Research Institute of Aquaculture,  
Fisheries Research Agency, Mie 516-0193, Japan

### **Building Sustainable Food Supplies through Aquaculture, Wild Stock Enhancement, and Habitat Management**

#### Aim of the symposium:

The role of aquaculture in stabilizing food supplies has been globally important, while production based on capture fisheries has become depressed due to the decline of wild resources and over fishing. Since the sustainable use of resources in the exclusive economic zone (EEZ) was made an obligation by the United Nations Convention on the Law of the Sea, aquaculture technology R&D aimed to maintain sustainable production while preserving coastal environments and ecosystems have become the common issues to the US and Japan.

The UJNR Aquaculture Panel has discussed various science and technologies as follows: 1) algae and filter feeders aquaculture, 2) crustacean aquaculture and pathology, 3) ecosystems and carrying capacity of aquaculture grounds, and 4) finfish aquaculture in accordance with the 6th 5-years Plan (2002-2006). During the last year of the plan, how to achieve sustainable fisheries production and food supplies through aquaculture and stock enhancement will be explored among aquaculture scientists as well as socio-economists and member of governmental sectors, while summarizing discussions covering previously developed aquaculture technologies.

In the present symposium, the following issues will be discussed in order to promote the future sustainability of the fisheries community and fisheries industry by means of aquaculture and stock enhancement.

1. Aquaculture technologies harmonized with coastal ecosystems to realize sustainable production
2. Environmental conservation and mitigation technologies for sustainable use of aquaculture grounds
3. Conservation of biodiversities and ecosystems for sustainable of aquatic resources
4. Sociological and economic measures for sustainable development and use of coastal resources

## **Program**

Monday, November 13<sup>th</sup>, 2006      Registration    12:30-14:30

**NRIA tour for guests**    13:00-14:30

**Opening remarks** (Yasuji Sakai, Japan Panel Chair)    14:30-14:40

**Aim of the symposium** (Kazumasa Ikuta)    14:40-14:45

**Keynote presentation** (Moderator: Kunihiro Fukusho & Conrad Mahnken)    14:45-15:30

An Overview of the US/Japan UJNR Aquaculture Panel, Past Present and Future

James P. McVey

**Break**    15:30-15:50

### **Session I. Aquaculture technologies harmonized with coastal ecosystems to realize sustainable production** (Moderators: Cheng-Sheng Lee & Takao Yoshimatsu)

1. Recent Progress in Closed Recirculation Seed Production System for Environmental Preservation in Japan    15:50-16:15  
Yoshihisa Yamamoto
2. Utilization of Waste *Porphyra* Products as Eco-friendly Feed Ingredients    16:15-16:40  
Tsuyoshi Sugita
3. The Relationship between Growth of Cultured Red Sea Bream (*Pagrus major*) and Method of Farming    16:40-17:05  
Takashi Ueda
4. Manila Clam and Pacific Oyster Culture in Isahaya Bay – For the Sustainable Production in Stressful Environment -    17:05-17:30  
Junya Higano

Tuesday, November 14<sup>th</sup>, 2006

Registration 8:30-9:30

**Keynote presentation** (Moderators: Charles E. Helsley & Satoru Toda) 9:30-10:15

Recent Attempt towards Environmental Restoration of Enclosed Coastal Seas: Ago Bay  
Restoration Project Based on the New Concept of “*Sato Umi*”  
Osamu Matsuda

**Break** 10:15-10:35

**Session II. Environmental conservation and mitigation technologies for sustainable use of  
aquaculture grounds** (Moderators: Thomas A. Flagg & Hisashi Yokoyama)

1. The Role of Aquaculture in Integrated Coastal Management 10:35-11:00  
Charles E. Helsley
2. New Technology for Developing Biologically Productive Shallow Area in Ago Bay  
11:00-11:25  
Hideki Kokubu
3. Stable Isotope Analyses of the Trophic Structure of Macrobenthos on an Artificial Tidal Flat  
Developed using Sediments Dredged from Pearl-oyster Farms in Ago Bay 11:25-11:50  
Yuka Ishihi

**Announcements** 11:50-12:00

**Lunch** 12:00-13:00

**Session III. Conservation of biodiversities and ecosystems for sustainable use of aquatic  
resources** (Moderators: William Fairgrieve & Hiroyuki Sudo)

1. Introduced Species and Aquaculture 13:00-13:25  
Cheng-Sheng Lee
2. Countermeasures against Alien Fish (Largemouth Bass and Bluegill) in Lake Biwa  
13:25-13:50  
Atsuhiko Ide
3. Conservation Aquaculture Approaches for Hatchery Reform 13:50-14:15  
Thomas A. Flagg

4. Environmental Standards for Marine Aquaculture in the United States; Minimizing Negative Interactions of Escaped Farm Fish and Natural Populations 14:15-14:40  
Conrad Mahnken

**Break** 14:40-15:00

**Session IV. Sociological and economic measures for sustainable development and use of coastal resources** (Moderators: Kazumasa Ikuta & James J. Sullivan)

1. Accounting for Economic Risk and Uncertainty in Offshore Aquaculture: A Case Study of Korean Rock Bream Production 15:00-15:25  
Douglas Lipton
2. Economic Evaluation of Various Roles and Functions of Propagation and Aquaculture 15:25-15:50  
Yasuji Tamaki
3. Risk and Risk Management for Feed and Seed for Carnivorous Marine Fish Aquaculture 15:50-16:15  
Michael B. Rust
4. Ecological Risk Assessment of Marine Fish Aquaculture in the Coastal Zone 16:15-16:40  
William Fairgrieve
5. The Measures for Sustainable Marine Aquaculture in Japan 16:40-17:05  
Ikuo Takeda

**General discussion** (Moderators: Panel members) 17:05-17:30

**Closing remarks** (Robert Iwamoto, U.S.A. Panel Chair) 17:30-17:40

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