

Program

The 45th Scientific Symposium of UJNR Aquaculture Panel

Potential of aquaculture to mitigate impacts of environmental change

Date:

October 16	13 : 30-17 : 30	Oral Session, Poster Session
October 17	9 : 00-16 : 00	Oral Session during lunch break

Venue:

International Conference Center Hiroshima, 1-5 Nakajima-cho, Naka-ku, Hiroshima-shi, Hiroshima, 730-0811, Japan

Aim of the Symposium

Environmental change impacts fisheries and aquaculture in many ways. Nutrient pollution is driving eutrophication and dead zones; ocean acidification is changing water chemistry, and climate change is already influencing our food supply, fresh water availability, weather and way of life. Aquaculture will be impacted by, and can also impact, these environmental changes over various time and spatial scales. Aquaculture of finfish, shellfish and seaweed have different threats, benefits and opportunities related to environmental change. Understanding the global and regional trend of climate change, effects of environmental change on ecosystem and aquaculture, technical improvement of aquaculture, and aquaculture industrial adaptation to climate change are all research priorities of the National Ocean and Atmospheric Administration (NOAA), the United States Department of Agriculture (USDA) and the Japan Fisheries Research and Education Agency (FRA). The primary focus of this symposium will be on the potential of aquaculture to mitigate impacts of environmental change, such as sequestering carbon, bio-extraction of nutrients and CO₂, and ocean acidification. We hope to exchange ideas and discussion which will be beneficial in exploring science and technology that will enable aquaculture to sustain in a changing environment and be used to mitigate the anthropogenic impacts on environment. We also hope the exchanged ideas will be developed into our collaborative research efforts to resolve key issues and assist strengthening of aquaculture industry in the United States and Japan.

Monday, October 16, 2017

Registration: 13 : 00-13 : 30

Opening Session

Welcome Remarks

Fuminari Ito (Japan Panel Chair, Executive Director, Headquarters, FRA)
..... 13 : 00-13 : 40

Aim of the Symposium

Takuro Shibuno (Director, National Research Institute of Aquaculture, FRA)
..... 13 : 40-13 : 50

Session I. Keynote Presentation and Introduction of NOAA grants

(Moderators: Paul Olin and Junya Higano)

1. New direction of management policies in the Seto Inland Sea, Japan in the changing environment

Osamu Matsuda (Professor Emeritus, Hiroshima University) 13 : 50-14 : 30

Break 14 : 30-14 : 50

2. Marine aquaculture's role in providing nutritional security in a changing environment

Mike Rust (US Panel Chair, NOAA Fisheries Office of Aquaculture) ... 14 : 50-15 : 30

3. An overview of NOAA grants on aquaculture and the environment

Shiyu Rachel Wang (Knauss Fellow, NOAA Headquarters, Office of Aquaculture)
..... 15 : 30-15 : 55

Session II. Environmental Change

(Moderators: Takuro Shibuno and Mathew Poach)

4. Oligotrophication and its measures in the Seto Inland Sea, Japan

Katsuyuki Abo (National Research Institute of Fisheries and Environment of Inland Sea, FRA) 15 : 55-16 : 20

5. Assessment and future prediction of climate shift impacts on the macroalgal ecosystem and cultivation in the Seto Inland Sea

Jeffrey Silverstein (USDA Agricultural Research Service) 16 : 20-16 : 45

Poster Session

Poster presentation 16 : 45-17 : 30

Tuesday, October 17, 2017

Session III. Environmental Remediation

(Moderators: Natsuki Hasegawa and Darien Mizuta)

6. Coastal management using oyster-seagrass interactions for sustainable aquaculture, fisheries and environment
Masakazu Hori (National Research Institute of Fisheries and Environment of Inland Sea, FRA) 9 : 00- 9 : 25
7. Marine sediment conservation using benthic organisms
Katsutoshi Ito (National Research Institute of Fisheries and Environment of Inland Sea, FRA) 9 : 25- 9 : 50
- Break 9 : 50-10 : 10

Session IV. Biological Response to Environmental Change

(Moderators: Satoshi Watanabe and Brett Dumbauld)

8. Coastal acidification amplifiers along the US East coast: concerns for shellfish production
Matt Poach (NOAA, Northeast Fisheries Science Center) 10 : 10-10 : 35
9. Growth variation in long blades kelp *Saccharina longissima* in eastern Hokkaido, Japan
Natsuki Hasegawa (National Research Institute of Aquaculture, FRA)
..... 10 : 35-11 : 00
10. Harmful algal blooms and shellfish aquaculture in a changing environment
Leila Basti (Tokyo University of Marine Science and Technology) 11 : 00-11 : 25
- Lunch Break 11 : 25-13 : 00

Session V. Ecosystem Approach to Aquaculture Part 1

(Moderators: Masakazu Hori and Cheng Sheng Lee)

11. Ecosystem approach to marine aquaculture
Kay McGraw (NOAA, Office of Habitat Conservation) 13 : 00-13 : 25
12. Spatial Planning for Shellfish Aquaculture and Seagrasses in US West Coast Estuaries: Considerations for Adapting to an Uncertain Climate
Brett Dumbauld (U.S. Department of Agriculture, Agricultural Research Service)
..... 13 : 25-13 : 50
13. Offshore mussel aquaculture: strategies for farming in the changing environment of NE Atlantic EEZ
Darien Mizuta (NOAA, Northeast Fisheries Science Center) 13 : 50-14 : 15

Session VI. Ecosystem Approach to Aquaculture Part 2

(Moderators: Katsuyuki Abo and Kay McGraw)

14. Nutrient environment in Gokasho Bay, effects of fish aquaculture on inorganic nutrient levels

Satoshi Watanabe (National Research Institute of Aquaculture, FRA)

..... 14 : 15-14 : 40

15. Challenges and opportunities of IMTA in Hawaii and beyond

Cheng Sheng Lee (Director, Center for Tropical and Subtropical Aquaculture, U.S. Department of Agriculture)

14 : 40-15 : 05

Break 15 : 05-15 : 25

Open Discussion: Development of collaborative research projects ... 15 : 25-15 : 50

(Moderators: Fuminari Ito and Mike Rust)

Science Symposium Closing 15 : 50-16 : 00

Mike Rust (US Panel Chair, NOAA Fisheries Office of Aquaculture)