



Pledges and statements of support for the Shanghai Declaration

The importance of aquaculture around the world is increasing day by day, and its growth pace is accelerating compared to fishing. Furthermore, the aquatic products, especially produced by aquaculture, will occupy a large amount of protein supply worldwide in the future. The dependence on aquaculture industry is expected to increase in the future as the transition to “culture fisheries” is rapidly progressing through development and application of new technologies beyond the natural limits. The world population is expected to reach 9 billion, and it is certain that the aquaculture industry will play a pivotal role in supplying human food and nutrients due to a decrease in cultivation area and production per unit area.

However, the environment of the aquaculture industry is changing due to the global climate change effects such as global warming and frequent natural disasters, so it is time for the industry to actively respond to these changes. It is also necessary to actively respond to global environmental crisis such as accumulation of greenhouse gases, sea surface temperature rise due to global warming, and environmental pollution caused by human activities.

NIFS, therefore, fully support the development of and cooperation in the aquaculture industry by opening a new era of the industry with advanced technologies for promoting sustainable aquaculture around the world.

To develop and promote aquaculture, three strategic actions will be established as follows:

- I. Supporting international cooperation on aquaculture research and technology transfer**
- II. Promoting research focused on sustainable aquaculture with advanced technology**
- III. Developing endangered species culture technology**

First, for joint cooperation and technical support in international aquaculture research, we intend to promote the development of the aquaculture industry in developing countries using Korea’s aquaculture technology. Many developing countries still rely on basic farming technology, and they require new aquaculture technologies. Thus, the NIFS will internationally cooperate on cutting-edge

aquaculture technology to support the development of aquaculture technology in developing countries.

Second, we will focus on research on sustainable aquaculture technology using advanced technology. In recent, our government has established a new national initiative developing advanced aquaculture technologies and promoting researches on the smart aquaculture system using 4th industrial revolution technologies to promote income-led growth and balanced development in fishing village with making clean sea and building abundant fishing ground.

Third, we will present the direction of the aquaculture industry that enables the biodiversity conservation by developing farming technology for endangered species. As the demand for aquatic products increases, some aquatic species caught in large quantities are decreasing in population or in danger of extinction due to the development of fishing technology. It will be to manage fisheries marine resources for species conservation as well as be possible to produce high value-added aquaculture products by developing and sharing the artificial seed production technology for endangered species.

These efforts are expected to strengthen competitiveness of aquaculture industry and contribute to stable food supply worldwide, responding to difficulties faced by the aquaculture industry, such as a decrease in fishing population, aging, expansion of market opening, and climate change. The demand for a sustainable aquaculture practices and efforts to actively respond to the demand can be directly connected to the future of the global aquaculture industry. The traditional aquaculture, which has been centered on labor and experience, will be advanced into a smart industry that combines knowledge and data with the Fourth Industrial Revolution. With advanced technology, the fisheries industry is expected to attract competent youth in developing countries, and be developed into the industry with high added value, playing an important role in resolving youth unemployment.

NIFS will strive to collaborate and cooperate with FAO and other Asia-Pacific region developing countries and their local communities with establishment of the above three strategic actions.

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