

# Conveying the 400-year old, environmentally-friendly Himi set-net techniques to the world

The open seas surrounding Himi on the Toyama Bay, which is located in the middle of the Sea of Japan coast, are regarded as natural fish keeping pens. Here more than 300 varieties of fish species of seasonal migration, including sardines in the spring, tuna in the summer, and yellowtail in the winter, are caught. Yellowtail is customary for auspicious occasions, such as the gift of early winter season yellowtail for an engagement. The Himi brand fisheries industry is sustained by set-net fishing gear, of which there are 45 units, both large and small. The origins of the set-net fixed-type of gear featuring a compound design date back some 400 years. In those days, the nets were made of braided straw rope and hemp yarn, with bamboo used for the fishing buoys and floats.

The set-net is entirely different from the trawl net and purse seine, which actively target large catches of fish in a single cast. Set-net gear is used to passively wait for the fish to become entrapped in the net. The targeted fish are determined by the mesh size of the net, which makes it possible to select the size and species. Furthermore, schools of young fish swimming around

the gear, and a large number of shellfish attached to the nets and ropes use the nursery area for spawning. The fishermen at Himi can reach the fishing grounds in several minutes from the fishing port, which enables them to unload fish that are extremely fresh—and sometimes still alive—at the market. In addition, they also employ sophisticated techniques using icy water to maintain freshness, which is regarded to be the best in Japan.

In 2002, the World Set-net Summit was held in Himi. The Southeast Asian Fisheries Development Center (SEAFDEC) participated in the Summit, and requested the technical support of Himi City to introduce set-net techniques in Thailand. Upon receiving this request, a group led by Mr. Tadashi Hamaya, council member of the Himi Fishermen's Cooperative, visited Thailand to provide technical support. In response to the strong desire of the local Thai fishermen to transfer the set-net fisheries, a Grassroots Partnership Project was started by Himi City under the JICA Hokuriku Branch in 2005. Professor Takafumi Arimoto and his team from the Tokyo University of Marine Science and Technology also participated in the

project. The technical support team visits Thailand twice every year, and local Thai fishermen are invited to Himi for training. In addition, a special arrangement was proposed by Himi fishermen for collecting and donating the used nets and large fishing buoys.

In Thailand, the transfer of set-net technology was conducted in Rayong Province, a three-hour drive from Bangkok, with the cooperation of the Eastern Marine Fisheries Development Center (EMDEC) as the counterpart. This was the same place where 20 years ago, Mr. Aussanee Munprasit from SEAFDEC, a former trainee of the JICA training course, introduced the set-net technology on his own. Unfortunately he was unsuccessful in transferring the set-net technology at the time, but he took up the challenge again in 2003 and organized a group of fishermen to start set-net operations. However, the gear design was unsuitable and their daily management was inadequate. As they were struggling to deal with these problems, Himi City offered technical cooperation. Now, five years later, the local Thai fishermen are benefitting from the good records of daily fishing operation and marketing.



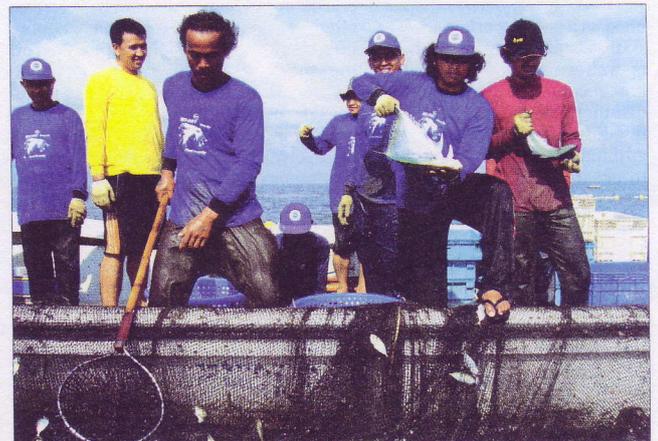
Japanese experts provide guidance on set-net fishing gear in Thailand. Tadashi Hamaya (front left) / Tokyo University of Marine Science and Technology Professor Takafumi Arimoto (center, wearing sunglasses)

The set-net technology transfer in Thailand was successfully completed. The daily catch amounts have increased, and have changed the distribution channel of fish in the region. The superior quality of freshness of the daily catch has led to overall additional value and a higher unit price of fish in the market. Set-net technology is planned to be introduced in South Sulawesi, Indonesia, through a JICA Grassroots Partnership Project in 2007. Mr. Hamaya and Prof. Arimoto

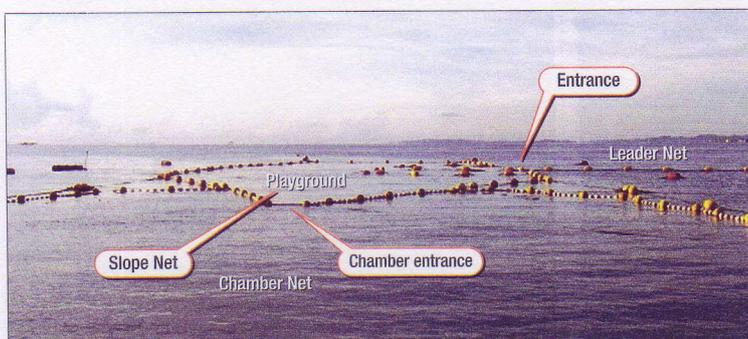
to are aiming for "Set-net of the community, by the community, and for the community," to establish "Community-based set-net," with the cooperation of local staff, including Mr. Muhammad Zaenal, a graduate of the Bone Fisheries High School in South Sulawesi who has completed the technical training on set-net in Japan, and Dr. M. Abduh Ibnu Hajar, a former student of Professor Arimoto at Tokyo University of Marine Science and Technology.



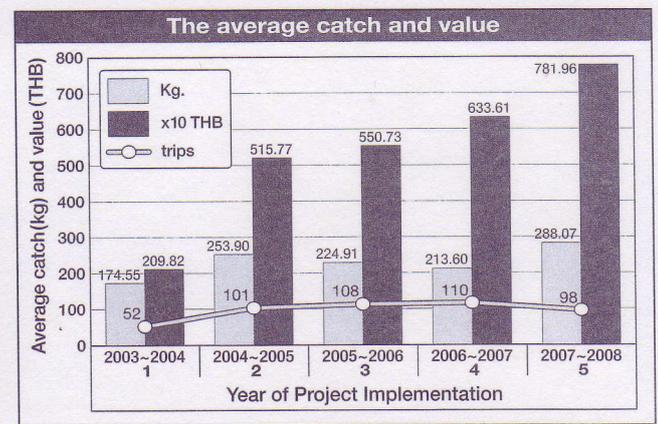
Fishing using set-net gear in Indonesia. The man with the blue cap is Mr. Zaenal.



Fishermen wearing T-shirts made by Thai volunteers with a drawing of set-net fishing gear. Mr. Ibnu is the second from the right.



Full view of set-net fishing gear in Bone, Indonesia.



(All photos and charts courtesy of Professor Arimoto)