

# Clamming Down

The development of a tide embankment project in Saemangeum in South Korea has resulted in the loss of livelihood opportunities for shellfish fishers in the region

**S**aemangeum, which means new fertile soil, lies beyond the Gimje Plain in Mangyeong, Jeollabuk-do in South Korea, and is famous as a granary, and was named when the reclamation project was planned. The large-scale national reclamation project began in 1991 to develop 40,100 ha of land by constructing a 33-km tide embankment in a large area stretching from Gunsan, Gimje to Buan in Jeollabuk-do. The main goal was to find a solution for the paucity of agricultural land. Later on, however, the reclaimed land was used to site other industries related to manufacturing and tourism.

Spread over the west coast of the Korean Peninsula are wide tidal ranges formed by sediments washed down by slow streams of rivers. The tidelands provide a good and rich habitat. More than 80 per cent of the total area of tidelands in South Korea—248,940 ha—is concentrated along the west coast.

In the first half of the 20th century, to solve Japan's food problem and facilitate Japanese people's immigration, an expansion of farmland was necessary in the colonized Korean Peninsula. Thirty per cent of the total area of licensed reclamation in Korea had been concentrated in Jeollanam-do until 1945. In the latter half of the 20th century, from the end of the Korean War in 1953 through the 1980s, reclamation works continued under the pretext of an increase in production of food and an enlargement of farmland. From the 1990s on, reclamation works were expanded into a comprehensive multipurpose development project, including securing housing real estate. As a result, by 2008, more than 60 per cent of the total area of tideland had become reclaimed land, which means the area had more than tripled compared with the first half of the century. In Jeollabuk-do, thanks to the Saemangeum reclamation project, the area of reclaimed land is almost three times as large as that of tidelands.

## Rivers

At the estuary of the Mangyeong River and the Dongjin River, the Saemangeum tideland extends over a vast area. Until construction works of the tide embankment began, the area was rich in biodiversity. Fish and

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The Saemangeum project has been debated for over a decade by the government, the locals, environmental and conservation organizations, researchers and experts, and people who are engaged in religious occupations. Questions have been raised about the growth of the local economy, the destruction of the ecosystem of the tideland, and the importance of the economic value of marine products.

Meanwhile, the livelihood rights of the fishermen of the region have been ignored. Between 2006, when the tide embankment was closed, and 2014, the Saemangeum project has had several impacts on the development of fishing communities and gender roles within them.

This article is by **Sun-Ae II** ([iisune@miyazaki-mu.ac.jp](mailto:iisune@miyazaki-mu.ac.jp)), Professor of Anthropology at the Miyazaki University in Japan

shellfish caught in the tideland were the source of cash income for the fishermen, and their average annual fish catches were approximately 70,000 tonnes. However, by 1996, due to the reclamation works, the catches declined by approximately 35 per cent, compared to a decade ago. Until then, the fishermen had believed that shellfish would not decrease in number, however many were caught.

According to statistics from the Maritime Affairs and Fisheries Department, the catch of yellow croaker and swimming crab seems to have recovered since 2007, while the catch of shellfish, including the common orient clam and Chinese dosinia, has decreased. Jeollabuk-do used to top South Korea's catch of common orient clam, with their culture centered around Saemangeum in 1961.

The common orient clam in Jeollabuk-do accounted for approximately 70 per cent of the national average annual fish catch until 2007, but the percentage as of 2012 was as low as approximately 10 per cent. The fishermen used to spread shellfish juveniles in jointly-owned sea areas and collect clams together with other fishermen. But in Saemangeum, fishermen individually owned fixed areas of the sea in which the clams were cultured for a certain period of time authorized by a governmental agency.

Ranked in value only after abalones, the common orient clam had been presented to the royal families in the past. The prices varied with size and maturity. If they had grown for fewer than two years and their sizes were three to four cm, they were sold at US\$3 per kg for soup. Common orient clam of two to three years of age and six cm in size were sold at US\$6 per kg for *sashimi*. Clams of three years of age and over nine cm in size were sold at US\$12 per kg for boiling. Seven-cm-long common orient clam was regarded the most delicious. In autumn and winter, they were eaten raw, whereas in spring and summer they were boiled or served as soup.

The common orient clam is caught in the tideland by fishermen using a rake or a tool called *goere*. Rakes are used in shallows where the clams are small, but they are useful to scoop up many shellfish at one go. Dragging the *goere* is a manual process in which the fishermen walk backwards, sensing the shellfish hitting the *goere*. A two-hour catching trip would bring in about nine kg of clams on average. By using rakes, skilled fishermen could catch 70 kg of clams a day, and earn around US\$100. Those who used *goere* caught 60 kg clams to earn US\$150.

Common orient clams caught in winter were priced US\$14 per net (weighing 10 kg), but the price went down to US\$8 in summer. Those who were good at catching would catch 90-100 kg a day, but a decline in the number of tourists and buyers lowered the prices. In J Village, the number of people using rakes and *goere* was much greater than those operating boats. In addition to shellfish, the villagers fished fleshy prawn and white bait in spring, swimming crab in summer, krill for salted and fermented dishes in autumn, and redlip mullet in winter.

To fish swimming crabs, they used drift gill-nets (triple nets), operated for four to five hours a day by small-sized boats at the neap tide.

The daily catch by a pump dredger was almost the same amount as that by 30 fishermen using rake or *goere*. Screw boats, which were improved trawlers, caught anything, including shellfish and fish.

Local fishermen said, "Using boats, *goere* and rakes, we caught shellfish every day and night, and still the shellfish were abundant.

We could buy boats, give education to our children, and sustain our living. Saemangeum was really a golden sea, the sea of life for us, local people".

Although they abandoned fishing after they received money



SUN-AE II

The common orient clam is caught in the tideland by fishermen using a rake or a tool called *goere*

in compensation for fishing rights, young fishermen who had operated on boats could not find new jobs, so they restarted fishing on 2-4-tonne pump dredgers. Any act of fishing is illegal once compensation has been received. However, six people of J Village own eight 1-3-tonne boats and one 3-9-tonne boat and catch Japanese littleneck clam in shallow seas near the sluices, and also fish in deeper seas.

The catching season of grand jackknife clam is from winter to

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spring. When the tide goes out farthest, they walk while pushing a 15-20-cm eight-shaped tool called *seoge* deep into holes to catch the clams. As they are 14 cm long and three cm wide, grand jackknife clams are called bamboo clams due to their shapes. A man in his sixties in J Village caught an annual amount worth US\$6,840 on average for three years from 2003 to 2005, but his catch in 2006 plunged to US\$1,000.

In 2010, the price of one grand jackknife clam increased fivefold by the sharp decrease of fish catch. Both men and women caught common orient clams and only men caught duck clams. In J Village, common orient clams and grand jackknife clams are indispensable for wedding ceremonies, funerals, and religious services. No wedding ceremony can be held without serving grand jackknife clams. This local favorite is served as *sashimi* or boiled in firepots.

Since the fishing grounds for these clams were lost after the construction of the tide embankment, they began to be imported from China and North Korea, but they are not offered on ceremonial occasions. As the Mangyeong River was completely desalinated after the completion of the embankment, roach, carp and eel are now caught in larger quantities.

Adjacent to J Village is a plain of about 32 sq km reclaimed by Japan in 1925, in which are raised rice, wheat and potatoes as well as strawberries in greenhouses. The fishing port used to be so crowded with visitors that the nearby roads were congested every day. By September 2013, however, all of them had been removed and reclamation works went on in the wharf to construct a marine yacht harbour. J Village does not have a large area of farmland, and was the poorest village in Gimje City when marine products were cheap. After 1970, however, household incomes grew, as the number of nurseries of common orient clam increased and the export of clams flourished. Villagers engaged in agriculture also began to catch shellfish.

J Village was the largest in terms of scale of fishing activity. As of September 2013, 110 persons (52 males and 59 females) of 57 households resided in J Village. The number of households and the population had decreased by approximately 40 per cent compared with the year when the tide embankment was completed. There were no children under nine years of age.

### **Population decrease**

The population of teenagers accounted for three per cent of the total population of the village, and residents in their 40s and 50s had also decreased by eight to 10 per cent. However, the number of people in their 60s and 70s had grown by 10-20 per cent to account for approximately 60 per cent of the total population of the village, and most of their households were composed of two persons.

Most of the villagers in their 60s were fishermen, unemployed, or daily workers in farms. The villagers in their 70s were mostly engaged in agriculture, had no occupation or relied on public assistance. The villagers in their 50s were fishermen, self-employed and daily farm labourers. The majority of those in J Village who used to catch shellfish remain in the village. Some of them are now engaged in agriculture

and fisheries, while others are unemployed or subsist on public welfare (see figure).

Most of the men are engaged in agriculture and fisheries or are self-employed, whereas many women are daily workers on farms, or are employed in restaurants. Since they lost access to the sea that had brought them cash income in the past, J Villagers cannot lead a comfortable life anymore, either financially or socially. In 2014 they cancelled the annual lunar village festival in February since no one was willing to take up the responsibility.

In the absence of fishing grounds, more and more elderly people are killing time at senior citizens' community halls. Since they have almost no cash income, they are oversensitive and irritable, and constantly quarrel over trifling matters. With their husbands now, unemployed, even women in their 50s and 60s work in the agricultural farms by day. While fishing in the sea for four to five hours used to bring in about US\$200 a day on average, working in the fields, which is physically harder, fetches only about half that amount. So they work as a group to maintain each member's daily allowance of US\$ 600.

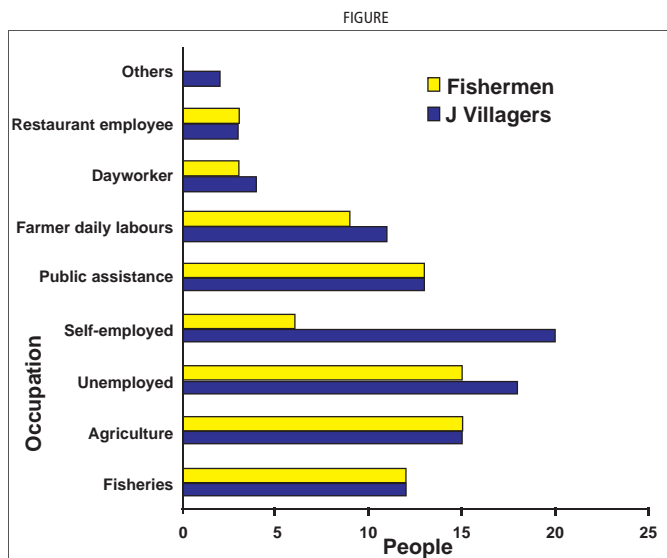
In the past, they could take days off during rains and storms, but working in the fields is not affected by the weather, so they cannot afford to rest. Women in their 70s made US\$100-200 a day when they caught shellfish, but working in the fields even for 10 hours brings them a mere US\$55. Although elderly people who have no income can receive special allowances amounting to US\$700-800 a month, those who stopped catching shellfish often suffered from cognitive impairment and had to move to nursing homes. As a result, there is an increasing number of empty houses, which account for more than 10 per cent of the total households. Failing to find new jobs, many of the several thousand fishermen who lost their fishing grounds continue to fish, knowing full well that they are considered illegal fishermen. The government, for its

part, has been tacitly ignoring such illegal fishing.

Looking for jobs, the young fishermen of Saemangeum migrated from the village, which resulted in the rapid ageing of the village. For those who were born in Saemangeum and had spent

decades there depending on the sea before they lost their fishing grounds due to the national project, changing jobs and learning new techniques are hard. It takes more than 10 years for anyone to master new skills. Fishermen and fisherwomen without agricultural land are absorbed in unskilled labour as day workers. Fishermen and fisherwomen who remain in the village are forced to be self-sufficient. Their sense of solidarity and belonging to the same community, promoted by mutual aid and relationships established over generations, has been shattered.

Thus, just as the tideland is disappearing to be part of the mainland, so the fishermen are getting exhausted and impoverished. The fishermen and fisherwomen, who constitute the minority and the weak in society, are made acutely aware of how helpless and hopeless they are. Ignoring these social wounds, the development project continues to make progress to target larger areas and expressways by 2020. Fishermen are now the social, political and cultural underdogs. Large-scale national development projects have deprived them of the foundation of their livelihoods.



#### For more



[www.flockingsomewhere.com/chasing-spoonies-in-south-korea-4-saemangeum-seawall/](http://www.flockingsomewhere.com/chasing-spoonies-in-south-korea-4-saemangeum-seawall/)

#### Chasing Spoonies in South Korea —Saemangeum Seawall

[www.researchgate.net/publication/264897102\\_The\\_Saemangeum\\_tidal\\_flat\\_Long-term\\_environmental\\_and\\_ecological\\_changes\\_in\\_marine\\_benthic\\_flora\\_and\\_fauna\\_in\\_relation\\_to\\_the\\_embankment](http://www.researchgate.net/publication/264897102_The_Saemangeum_tidal_flat_Long-term_environmental_and_ecological_changes_in_marine_benthic_flora_and_fauna_in_relation_to_the_embankment)

#### The Saemangeum Tidal Flat

[www.nytimes.com/2008/11/24/world/asia/24iht-reclaim.1.18097402.html?\\_r=0](http://www.nytimes.com/2008/11/24/world/asia/24iht-reclaim.1.18097402.html?_r=0)

#### Ecologists Voice Alarm over South Korean Reclamation Project

[earth.esa.int/web/earth-watching/home/-/article/saemangeum-dam-south-korea](http://earth.esa.int/web/earth-watching/home/-/article/saemangeum-dam-south-korea)  
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