HEALTH & SCIENCE

THE GLOBAL CHAIN THAT PRODUCES YOUR FISH



GRIMSBY, ENGLAND, United Kingdom: This file photo shows boxes of fresh fish which have been sold at VILLENEUVE-LA-GARENNE, HAUTS-DE-SEINE, France: This file photo shows fish pictured in the fresh fish auction are dispatched from the Auction Hall of Grimsby Fish Market in Grimsby, northern England, on section of an hypermarket store of French retail giant Carrefour, in Villeneuve-la-garenne, near Paris. January 9, 2017. — AFP photos



PARIS: That smoked salmon you bought for the New Year's festivities has a story to tell. The salmon may have been raised in Scotland-but it probably began life as roe in Norway. Harvested at a coastal farm, the fish may have been sent to Poland to be smoked. It may even have travelled halfway around the world to China to be sliced. It eventually arrived, wrapped in that tempting package, in your supermarket. Globalization has changed the world in many ways, but fish farming is one of the starkest examples of its benefits and hidden costs. The nexus of the world fish-farming trade is China-the biggest exporter of fish products, the biggest producer of farmed fish and a major importer as well.

With battalions of lost-cost workers, linked to markets by a network of ocean-going refrigerated ships, China is the go-to place for laborintensive fish processing. In just a few clicks on Alibaba, the Chinese online trading hub, you can buy three tons of Norwegian filleted mackerel shipped from the port city of Qingdao for delivery within 45 days. "There is a significant amount of bulk frozen fish sent to China just for filleting," said a source from an association of importers in an EU country. "The temperature of the fish is brought up to enable the filleting but the fish are not completely defrosted." The practice has helped transform the Chinese coastal provinces of Liaoning and Shandong into global centers for fish processing.

But globalized fish farming leaves a mighty carbon footprint and has other impacts, many of which are unseen for the consumer. Don Staniford, an activist and director of the Global Alliance Against Industrial Aquaculture, called the fish industry's production and transportation chain "madness".

Environmental cost

"The iconic image of Scottish salmon-a wild salmon leaping out of the river-has gone. The Scottish salmon farming industry is dominated, 60-70 percent, by Norwegian companies," he said. The biggest such company, Marine Harvest, is the world's largest producer of Atlantic salmon, some 420,000 tonnes in 2015. Scottish salmon farms import eggs from Norway, the fish food from Chile and then send the fish to Poland-"because it's cheaper"-for smoking, said Staniford. "Consumers don't realize that cheap supermarket salmon comes with a huge social and environment cost," he added.

One such problem is that integrated markets, with the free flow of fish and fish products across borders, may spread disease and new bugs. Antibiotic-resistant diseases or parasites such as sea lice require bulk slaugh-

ter on giant fish farms, pushing up prices. Chile, the world's second-largest producer behind Norway, suffered the ravages of an algae bloom in early 2016, resulting in high mortality, reducing its expected production by 30 percent.

Despite such setbacks, the economic potential remains enormous. According to Allied Market Research, the global aquaculture market will be worth \$242-billion (228 billion euros) in 2022, compared to \$169-billion in 2015. The Organization for Economic Cooperation and Development (OECD) and World Bank go further and say that by 2030 two-thirds of the seafood on people's plates will come from aquaculture farms.

Employment mirrors changes

The tipping point may have come in 2014. Only 81.5 million tons of fish were netted at sea-down from a historic peak of 86.4 million tons, according to the UN's Food and Agriculture Organization (FAO). For the first time, more farmed fish were consumed than wild fish. On a broader employment level, fishing and aquaculture account for an estimated 56.6 million jobs across the globe. But a breakdown of the numbers again underlines change. Those involved in catching fish has fallen from 83 percent in 1990 to 67 percent in 2014 — with the corresponding numbers in aquaculture almost doubling.

The evolution of the industry has also been driven by overfishing, with fewer wild fish now being caught, leading to a concentration of large multinational fisheries. "We are seeing a new phenomenon of deals that have consolidated the sector in Europe and the world," said Francois Chartier, an economic specialist at Greenpeace. — AFP

PROTECT COMMON LAND: INDIAN CLASSICAL SINGER MAKES UNUSUAL APPEAL

MUMBAI: A popular Indian classical singer stars in a new music video appealing for the protection of common land in Chennai city, amid an increasingly bitter fight over the use of communal lands for industry and development. 'Chennai Poromboke Paadal', or Chennai common land song, sung by Carnatic music vocalist T.M. Krishna, is about the destruction of Ennore creek in the southern Indian city. While the world "poromboke" in Tamil originally meant community land, including water sources and grazing land, it has come to be used as a pejorative term for both people and places. "Poromboke is in the margins, and people who are dependent on them are also relegated to the margins," said environmental activist Nityanand Jayaraman, who drew attention to the destruction of the creek, which activists say is being polluted by thermal power stations and a port.

"These lands are important to communities dependent on them, and are of great importance to the environment. But the word itself is now a dirty word, and it's reflected in our devaluing of common lands," he told the Thomson Reuters Foundation. Common lands, including government forest areas, make up more than a third of India's total land area, according to the last survey in 1998. Common lands provide food, water, fodder and livelihood to rural communities, and also help maintain ecological balance.

As demand for land rises in India to boost growth, common lands are being taken over for industrial and development projects, including mines, power plants and colleges. "The takeover of common lands is arguably larger in scale than

the takeover of private lands, affects far more people, and is often more brutal," said Shankar Gopalakrishnan at rights group Campaign for Survival and Dignity. While several laws have been introduced to protect the land rights of farmers and indigenous communities, the laws are diluted and poorly implemented, activists say. The Ennore creek, a network of rivulets and mangroves, is the pathway for two rivers draining into the Bay of Bengal. In the music video, a group of musicians wearing pollution masks sit at the edge of the creek, with Krishna singing the colloquial Tamil song in classic Carnatic style, as smokestacks and transmission towers gradually appear in the background. "Poromboke is not for you, poromboke is not for me; it is for the community, it is for the earth," he sings.

Poromboke is in your care; poromboke is in my care. It is our common responsibility towards nature, towards the earth." A panel set up to study the effects of the damage to Ennore creek last April recommended penalties on polluting industries, as well as a moratorium on their expansion. It also blamed government agencies including the pollution control board and coastal management authority for turning a blind eye to the

In response, government officials said the industries were asked to dredge the creek ahead of the monsoon rains, and monitor the dumping of fly ash and earth. The music video, which has been viewed more than 55,000 times on YouTube since its weekend launch, may help spur more action, said Jayaraman, who tapped his friends for money to make the video. — Reuters

ARMED WITH APPS AND CROPS, WOMEN LEAD BATTLE TO SAVE SENEGAL'S SHRINKING FARMLAND

'Since time immemorial, we only know this place'

NDIAEL, Senegal: The women of Thiamene, a tiny straw hut village in northern Senegal, used to scrape together a living by collecting wild baobab fruit and selling milk from their cows. But their earnings have plummeted since an Italian-Senegalese agribusiness, Senhuile, took over the surrounding land five years ago, blocking their paths to the local market and river, and spraying pesticides that make their herds scatter, they say. "Life here is precarious, especially for women," said 42-year-old Fatimata Sow in the village square, gazing at the vast landscape of arid ground dotted with the stumps of trees.

While the men in her community do largerscale agricultural work or have jobs in the nearby town, it is women who tend to the gardens and raise the animals that keep families fed. "The unhappiness and suffering we have lived from the impact of Senhuile is hard to express," said Sow. Vittoria Graziani, a spokeswoman for Senhuile's majority shareholder Tampieri Group, told the Thomson Reuters Foundation in December the local population had signed agreements with the company - which villagers deny - and that Senhuile was open to hearing their concerns.

Female-led work is vital to rural communities like Sow's, yet women are often the first to suffer from large land deals and disputes, which are common across West Africa where statute law clashes with tribal customs, activists say. Now, women in Senegal are fighting back, from young coders designing a mobile app to help women buy land to civil society groups rallying female villagers to stand up to multinationals. "Before, it was unthinkable for women to be part of the decisionmaking regarding land at both local and national levels, said Solange Bandiaky-Badji, Africa director at the U.S.-based Rights and Resources Initiative (RRI). "Now, women are organizing for change," she added.

Fighting back

In Senegal, the law dictates that virtually all land belongs to the state, though occupants can purchase ownership and registration documents. In practice, especially in rural areas, customary law reigns and communities dictate who uses land. While women in Senegal make up half of the agricultural work force, only one in 20 owns land, United Nations data shows. Across much of sub-Saharan Africa, tradition dictates that women are not allowed to inherit land, and can only access it through their fathers or husbands. Even then, the plots they are granted are often the least productive. While women can apply for land ownership, only group applications are accepted and very few of the requests are granted, said the Prospective Agricultural and Rural Initiative. But Boury Tounkara, a young female coder in the northern city of Saint Louis, is developing an app

along with three colleagues to fight gender discrimination in land buying. One feature will allow women to start the buying process without identifying themselves, reducing the potential for bias.

"We hear about these problems all the time," said Tounkara, who visited communities near the wetland reserve of Ndiael, where Thiamene is located, to ask women what would help them. "We always see men creating apps so we thought, why not us?" Female lawyers are also working with civil society to help women understand their land rights and gain legal recognition. While the gender gap in land rights is not enshrined in statute law, it is deeply engrained in society, they say. "It is not just a problem for women," said Yande Ndiaye of the Association of Senegalese Women Lawyers (AJS). "It is a question of sustainable development and food security."

Changing landscape

In 2012, the Senegalese government leased 20,000 hectares of land to industrial vegetable grower Senhuile in Ndiael, which is home to 37 villages, including Thiamene. The vast area, with no roads or infrastructure, was one of the last places in northern Senegal where traditional pastoralists could allow their herds to roam freely. While Graziani said Senhuile has provided jobs and infrastructure to local people, villagers say the company has brought them nothing but harm. — Reuters



Kuwait 📤 Times 248 33 199

