



# Food Heroes

You may be familiar with unagi, a delicacy that is highly valued in Japan. But did you know that unagi is also produced in Indonesia? The local name is "sidat". Nine of 18 species of "sidat" eel are found in Indonesian waters.

Stable market demand and flexible tending times attract communities to engage in eel cultivation. Mina Sidat Bersatu Cooperative in Cilacap and KUB Sidat Mandiri in Sukabumi are two community groups cultivating eel in Central Java and West Java respectively. These two groups are among groups receiving assistance from the IFish Project - a cooperation between FAO and the Ministry of Marine Affairs and Fisheries with the support of the Global Environment Facility.

In celebration of World Food Day, we invite you to get to learn more about the **#FoodHeroes** of eel cultivations.



## H. Engkan - KUB Sidat Mandiri

After Cilacap, the IFish Project will proceed to develop a demonstration site in Sukabumi. H. Engkan (pictured) the glass eel fishers and founder of KUB Sidat Mandiri is one of the beneficiaries.

H. Engkan's group and other community groups in Sukabumi will receive training on glass eel cultivation technology (top right photo) to elver (bottom left photo), as well as better management practices to increase the survival rate of eels.



## Ruddy - Mina Sidat Bersatu Cooperative

When he heard about the unagi demand from his friends in Japan, Ruddy remembered that he saw the species in his village. Sure enough, the eel in his village in Cilacap is the *Anguilla* species just like the Japanese unagi.

Because the wild eel texture is gamey and difficult to eat, Ruddy followed the advice to cultivate it instead. The process is not easy, endless trials and errors had to be made until he found a suitable formula. He then founded the Mina Sidat Bersatu Cooperative for local community interested in cultivating eel. The cooperative provides training on standardized cultivation method, eel feed, and processes eel harvests.

Cilacap became the first location for the IFish Project demo site for eel cultivation with Mina Sidat Bersatu Cooperative as the beneficiary. According to Ruddy, with the IFish Project on board, more people have joined the cooperative.

He hopes that the lessons learned during the mentoring process can be applied to other locations and provide benefits for those who are interested in cultivating eel.

## High Quality Unagi from Cilacap

The eels are catadromous species whose life shift between sea and freshwaters. They spawn in the deep sea then the larvae are carried by currents into the freshwater where they grow before returning to the sea.

There are nine types of eels that can be found in the waters Indonesia, one of which is *Anguilla bicolor bicolor* which can be found in Cilacap. With proper cultivation methods, Cilacap's eels are prized by the Japanese because of their quality and resemblance to Japanese unagi.

## Eel Harvest and Restocking

Members of Mina Sidat Bersatu Cooperative harvest eels from their ponds in Kaliwungu Village, Central Java. To guarantee sustainability of eel populations in Cilacap waters, The cooperative sets aside 2.5% of its harvest for restocking.

"To ensure long term prosperity, cultivation must be supported by efforts to maintain the sustainability of eels through restocking."

- Ruddy

The IFish project is committed to supporting this sustainable initiative through appropriate site assessments for restocking, eel tagging, feed and environmental acclimatization, a monitoring.



## Mina Sidat Bersatu Cooperative Surviving COVID-19 Without Compromising Quality

Unagi is synonymous with Japan. This catadromous fish even has special day(s) every summer, *Doyo no Ushi no Hi*. On that day the Japanese people enjoy a bowl of warm rice with grilled eel, which they believe improves vitality amidst the hot weather. This tradition has been going on for hundreds of years. But now the eels that are used no longer comes from Japan.

International Union for Conservation of Nature (IUCN) has categorized Japanese eel (*Anguilla japonica*) on the Red List of Threatened Species. Their passion for eel – about 70% of the world's eel consumption is in Japan – encourages them to seek new sources of supply from around the world, including Indonesia.

The taste and texture of *Anguilla bicolor* eel cultivated in Indonesia is favored by Japanese market. One of the sources is Mina Sidat Bersatu Cooperative from Cilacap Regency, Central Java, a community eel farmers assisted by FAO's IFish Project. Unfortunately, COVID-19 pandemic had hit their eel cultivation business.

"The first five months of the COVID-19 pandemic were the hardest, we had zero income. Eel supplies to restaurants and exports to Japan have all stopped," said Ruddy Sutomo, the pioneer of the Mina Sidat Bersatu Cooperative. Implementation of restrictions on mobility, has slowed down restaurant and hotel businesses.

This condition forced cooperative members to rack their brains, because operations in the eel cultivation ponds cannot stop. "Unlike other freshwater fish, good quality eels cannot sustain with moss and leaves. They have to be fed pellets so that the meat is soft and tastes good."

Ruddy's familiarity with eel cultivation began in 2009. "A friend of mine asked me if there was unagi in my area. The name was very foreign to me, but when the photo was shown it turned out to be eel, which was abundant in my village in Cilacap." Along with his success in cultivating eels, he initiated the formation of Mina Sidat Bersatu Cooperative. Currently, Ruddy, together with cooperative members and partners, manages six hectares of eel cultivation ponds.

### Working with FAO

IFish project—a joint project between FAO and Ministry of Marine Affairs and Fisheries with support from GEF—endorsed cultivation of eel in Mina Sidat Bersatu Cooperative by making it a pilot project location for community eel cultivation. IFish project built cooperation scheme between cooperative and eel cultivation company, to transfer technology and produce cultivation guides that can be used by other community groups.

"More and more people are willing to join Mina Sidat Bersatu Cooperative since we received assistance from FAO," said Ruddy.

The cooperative is also committed to allocating 2.5% of its harvest to be released, considering that until now eel seedlings cannot be bred in captivity. "We can't let Indonesian eel get into IUCN Red List. Once it happens, we can't cultivate it anymore," explained Ruddy.

To that end, IFish Project supports Mina Sidat Bersatu Cooperative's sustainable initiative by surveying suitable locations for release, tagging eels and building monitoring mechanism for released eels.

### Surviving the Pandemic Without Sacrificing Quality

With 65% of their orders came from Japan the closure of eel export due to COVID-19 pandemic has been a big blow for the cooperative. "We measure precisely how much feed is given. If too much feed is given, the size of the eel becomes too large and exceeds the market size accepted by Japan. Sure, adjustments are made, but quality must not be compromised."

Commitment to quality eventually pays off. Starting from August 2020 a Michelin Star-Japanese restaurant in Jakarta regularly orders eel from Mina Sidat Bersatu Cooperative. "Every month we send 800 - 1,200 kg of eel to the restaurant." Live eels can be seen in container inside the restaurant. Cooked with a dash of spice, it tastes much better than frozen eel products available in supermarkets. The skin of the eel is thin, the thick flesh is juicy and tender, and there is no scent of mud at all. Characteristics of premium quality eel, loved by the Japanese.

Ruddy and fellow members of Mina Sidat Bersatu Cooperative are still waiting for the reopening of export to Japan. "With regular orders from the restaurant, we could sustain our operations. We have also started to produce several derivative products, such as eel floss, meatballs and eel bone chips. However, our income is only 30% of what we had before the pandemic. Therefore we really hope we can start exporting to Japan soon," said Ruddy.