

#APRIGoesToSociety

FIELD STORY

FROM APRI ENUMERATORS



Our Story From Field.

This our news from the field reported directly by APRI enumerators at the blue swimming crab data collection in Indonesia



Utilization of NTS *Charybdis affinis* as an additive for feed or consumption ingredients

April 14, 2023. One of the genus of Portunidae that is very diverse or has a large number is the genus *Charybdis* De Haan 1833. Based on Wee & Ng (1995) *Charybdis* found in Peninsular Malaysia and Singapore recorded 19 species. In the Arabian Gulf, 17 species were recorded (Apel & Spiridonov, 1998), whereas based on Ng et al. (2008), recorded 63 species with 47 of them found in the Indo-West Pacific region.

Charybdis affinis is one of the most non-targeted species (NTS) found and is often caught in the nets of crab fishermen. *Charybdis affinis* is one of the types used by a small crab fisherman named Mr. Irwan JKT, who is located in Mesjid Lama Village, Kec. Talawi, Kab. Coal WPP 571, for supporting materials for the manufacture of duck and chicken feed. Processing is done individually, by boiling and then coarsely grinding and adding a little water and then mixing it into animal feed or what local people call it "Dedak".

Mixing *Charybdis affinis* and animal feed is not always done, or at most it is done 2 times a week. So far the practice carried out by Mr. Irwan JKT only knows that when animal feed is mixed with *Charybdis affinis* it makes livestock more voracious and fatter, but this has not been clinically tested. **(Nafisa Fairuz)**

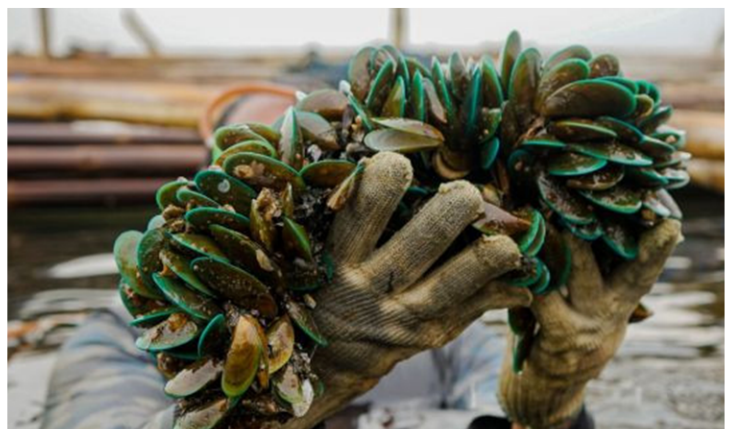
Benefits of Green Mussel Cultivation for East Coast Blue Swimming Crab Fishermen in Lampung Province

April 28, 2023. Blue swimming crab is one of the capture fisheries potentials in the East Coast of Lampung Province. The potential for crabs that are still good can be seen from the size of the crabs caught by fishermen. However, this potential is slightly disturbed, this is felt by fishermen where catches are starting to decrease.

The decrease in fishermen's catches was caused by natural factors and catching factors using PROHIBITED fishing gear. PROHIBITED fishing gear such as trawls, mini trawls (arad) and sondong. There is 1 type of trawl, namely articulated trawl which operates near the coast or shallow waters, thereby disrupting the life cycle of the crabs, especially crab seeds and small crabs that take shelter and look for food in shallow waters.

Cultivation of green mussels can be an effort to protect against small crab and small crab seeds. Small crab seeds and small crabs can take shelter and find food in green mussel cultivation. Because the trawl, mini trawl and sondong fishing gear cannot be operated close to green mussel cultivation. In addition, green mussel cultivation can become a side business for small crab fishing groups when the lean season arrives. Green mussels are a fishery commodity that is in great demand both in Lampung and other areas.

There needs to be socialization, guidance, training and assistance if you want to implement Bagan Stepping and green mussel cultivation as an alternative to the blue crab Nursery Ground. **(Andy Azis)**



Harpoisquilla harpax as NTS which is being loved by the people of Mertasinga Village, Gunung Jati District, Cirebon Regency

April 28, 2023. Starting from the beginning of April, the fishing community in Mertasinga Village, Gunung Jati District, Cirebon Regency caught Harpoisquilla harpax which they usually call cakrek shrimp or ronggeng shrimp.

“udang cekrek” is a marine catch commodity that has a high price. 10 inch sizes can reach IDR 190,000/head, 9.5 inch sizes cost IDR 115,000/head, 7 inch sizes cost IDR 35,000/head, 3-4 inch sizes cost IDR 3,000/head. Even the total sales of the cakrek shrimp alone can reach IDR 2,000,000. The “udang cekrek” that are under 3 inches in size are thrown back.

The cause of the high price of cakrek shrimp is because the demand for restaurants is so high and their availability is scarce at sea. At present there are already special collectors who collect cakrek shrimp, in contrast to before there were no cakrek shrimp collectors so it was easier for fishermen to collect cakrek shrimp. **(Meitha P.)**



Utilization of Blue Swimming Crab Lemi as Flavour of Crackers



April 25, 2023. Crab lemi/fat is a by-product of the crab processing process. Lemi can be found on the shell (carapace) of a ripe crab. Collecting lemi by crab peelers is usually done after the process of stripping the crab shells is complete. The fat attached to the inside of the crab shell is taken manually using a spoon and then collected to then be sold to crab lemi collectors. This lemi is often used as a mixture in the manufacture of crackers. The process of making crab crackers is very simple, including making the dough, boiling, slicing the dough, and drying it in the sun. The basic ingredients for making crab crackers are flour and tapioca flour as well as spices, and crab glue as a flavor enhancer. These crab crackers have a distinctive savory taste compared to fish or shrimp crackers, so they are in great demand by the wider community.

Product diversification from lemi is a source of additional income for fishing families. The production of crab crackers on a household scale has begun to be developed by one of the MSME product processing groups in Pejarakan Village, Danasari. Mrs. Siti Linawati as the head of the group along with the shooting members and in collaboration with the Maritime Affairs and Fisheries Service of Pemalang Regency began producing crab crackers since August 2022. The average daily production yield is 10-20 kg of crab crackers and they are marketed in the Pemalang Regency area and surrounding districts such as Pekalongan, Tegal, and Purbalingga. **(Nur Arofah)**



Utilization of Broken Crab Bubu, As a Mangrove Crab Trap by Fisherman in Pati

April 10, 2023. Folding trap fishing gear is a fishing gear that is operated passively in coastal waters to utilize crab resources. The operation of this folding trap is easy and passive, using bait, namely by waiting for the crab to get trapped. When trapped in the trap, the crab still lives and can move in the trap. This is what makes traps included as one of the environmentally friendly fishing gear.

The material used for the construction of crab traps is a frame made of galvanized iron with a diameter of 6 mm covered with plastic hose and a PE cover net with a mesh size of 1.5 inches. So that the material can be used within \pm 1 year.

In Keboromo Village, most of the small crab fishermen will replace their traps if the frame is damaged. One of APRI's assisted fishermen, Mr. Tomi, took advantage of this, so that the traps could be used again to catch mangrove crabs in small rivers. On April 10, 2023 he made repairs to 4 crab traps that were found on the riverbank after landing the crabs he had caught to collectors. **(Ervin S.)**

Monitoring of Crab Apartments and Hatchery Trials at Sea - Rembang

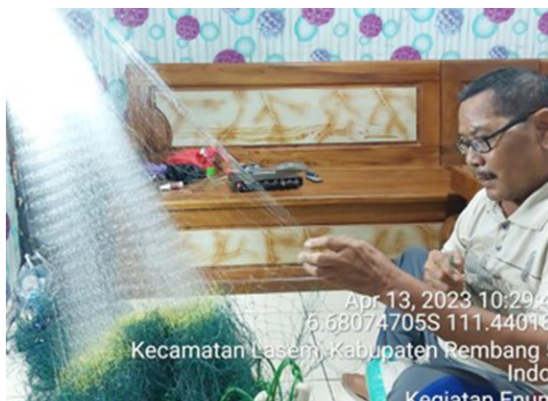
Apart from releasing the TKG III female crab apartments in the crab box so that the eggs can be released back to nature, there is another interesting side, namely the provision of nets with a length of 4 meters, a width of 2 meters and a depth of 2 meters on the middle side of the crab apartment. The purpose of installing nets is to do a hatching trial from crab eggs, or it can be continued with a trial for crab enlargement. Based on PermenKP no.16 of 2022, it was carried out for trials of hatching crab eggs in cages in crab apartments.

Fishermen began to actively fill the crab box with TKG III female crabs after D+2 of installing the crab apartments at sea. When filling the crab into the crab box, the fisherman documents it later to be reported to the APRI officer at the location (CO-Management). The GTK5 campaign continues, one way is by asking fishermen to release female crabs that lay eggs outside and below 10 cm into the available crab apartments and after the eggs are released from the brooders, they can be taken again to be sold.

On April 7, 2023 monitoring of the swimming crab apartments was carried out by CO-Management and fishermen from the management of KUB Samudra Jaya 5. In this monitoring activity, checking the condition of the cages was carried out, as well as seeing the condition of the crabs that had hatched. It can be seen that there are several crabs ranging from crablets to juveniles with a size of 3 – 5 cm. This crab was produced from brooders which were filled on March 12, 2023 with gray eggs. Monitoring activities will continue to be carried out every month to see the growth of blue swimming crabs in the cages.. **(Kamal M.)**



Prevent Ghost Fishing, Fisherman in Rembang Repair Fishing Gear - Trammel Net



April 13, 2023. The fishing gear used by fishermen to catch blue crabs are nets and traps. The majority of fishermen in Layur, Gedongmulyo, Lasem, Rembang, Central Java go to sea using fishing nets. The nets used in Layur are trammel nets or three-layer nets. Trammel nets are multi-species fishing gear so that the catches obtained are very diverse, such as fish, crustaceans, as well as squid and cuttlefish. Because it causes the net quickly damaged. The net is damaged quickly because when taking the catch, the net breaks when the biota caught is tightly entangled in the net which causes the net to be damaged and have holes. Therefore it is necessary to repair the nets regularly so that the nets remain good and can get a lot of results. On April 13, 2023, an interview was conducted with one of the fishermen, namely Pak Padji, he said that in a day he could repair one to two nets during holidays. **(Rasyid P)**

Utilization of Crab Shell Waste in Mengare - Gresik



April 14, 2023. Waste whose presence in certain places is unwanted in the environment because it has no economic value. Waste consists of substances or waste materials produced by industrial production processes whose presence can degrade the quality of the environment. Warehouse for boiling and stripping crabs or commonly called miniplant is one of the sources of producing crab shells with quite a lot of waste generation. Miniplant Pengare in Kramat Village, Bungah District, Gresik Regency, East Java WPP 712 is one of the stripping and boiling warehouses which produces crab shell waste every day. Small crab shell is one of the wastes that is considered less potential and has no economic value.

Besides being able to increase income for miniplants and collectors engaged in processing crab shell waste, processing of crab shell waste can also minimize environmental pollution. The results of processing fishery waste such as blue swimming crab have a fairly high nutritional value, especially calcium and phosphorus. The nutritional content contained in crab waste has the potential to be processed into a food additive. So far, the utilization of blue swimming crab waste is still limited to raw materials for the feed industry and the manufacture of chitin and chitosan. Efforts to utilize this waste are in the form of diversifying food products (raw materials for flavoring) and can be applied as natural additives in a product.

The reason for using crab shells besides minimizing environmental pollution can also be additional income. The owner of the Mengare miniplant, Robi, explained on Friday April 14 2023 that the leftover crab shells would be dried in the sun, then the results from the drying would be packed and sent to Surabaya or Madura, which would then be processed into raw materials for crackers and shrimp paste. **(Pahad M.)**



Group Meetings as Fisherman with APRI Co-Management

April 12, 2023. The Blue Crab Fishermen Group in Pagagan Village, known as the Blue Claw Berkah Group, is one of the groups that is very active in the Gathering activities. The Blue Capit Berkah Fishermen's Group has special members for crab fishermen, as many as 20 fishermen members chaired by Mr. Suparman who has been incorporated as a legal entity in 2020. The fishermen group was formed with the aim of the Prosperity of Rajungan Fishermen.

This group meeting is held every week to strengthen friendship between fishermen as well as holding joint dhikr and also holding social gatherings so that they can save in the group treasury to support blue swimming crab sustainability activities. **(Lailatul Q)**

Different Fishing Gear Produces Different Results by Fishermen in Pamekasan



April 11 - 19, 2023. Blue Swimming Crab (*Portunus pelagicus*) or known by the common name as blue swimming crab (BSC), belongs to the Crustacea phylum of the Portunidae family. This biota generally inhabits the bottom of the waters and is generally found in the tropics, especially in the Southeast and East Asia region or the eastern Indian Ocean and western Pacific Ocean. Blue swimming crab is a biota that includes economically important species in Southeast Asia. The distribution of blue swimming crab in the Indonesian territory includes in the coastal waters of Java, Sumatra, Kalimantan, Nusa Tenggara, Sulawesi and Papua.

Blue swimming crabs can be found in a variety of very diverse habitats, which are found starting from the intertidal zone to offshore waters with a depth of 50 m. This relates to the preference of habitat for each life cycle of the crab, starting from the habitat of the larvae, juveniles and adults. Blue crabs are generally found in large numbers in shallow waters with sandy substrates. crab likes sandy bottom substrate, sand bed, and muddy sand. Adult crabs migrate towards the open sea or to either side of the mouth of the estuary to spawn after the gonadal maturity process

Data collection in Pamekasan was carried out in two different fishing gears, namely traps and nets, this has been going on for more than a year, while I was an enumerator at APRI for about 3-4 years, which became odd for me, namely in the nets in the Candi area, polagan village, Galis district. Where the catch of crab fishermen is often dominated by males than females, maybe around 75% -25%. In my opinion, when viewed from a sustainable perspective in nature, it is even better if the males are often caught by fishermen, so the females focus more on the spawning period so that the crabs remain sustainable.



It is different in locations that use trap fishing gear which is in the Pagagan village area, Pademawu sub-district. the catch of crab fishermen is more balanced but more likely to mostly go to the females. What I'm still wondering about here is the difference above that affects it in terms of different fishing gear or other things such as habitat, environment or other factors. Local fishermen are also amazed. Here I am only telling about the condition of the fishermen in the field, maybe when viewed from a researcher's point of view the answers can be found. **(Farhan R.)**

Installation of Fishing Nets at Sea in Mandalle - South Sulawesi



April 4, 2023. The activity of installing crab nets at sea, enumerators went down directly with fishermen to see firsthand how to install nets, the number of nets installed was 150 pis where each stretch of the net was 50 pis so there were 3 stretches. each of these stretches is installed in a different place which is about 200-400 meters away so that the chances of getting crabs are greater. The crab nets are lowered starting from the buoy followed by ballast so that the net can go down to the seabed and at each end of the net at each stretch there is a buoy as a marker so it is easy to see when the net is lifted.

The size of the mesh used is 3.5 inches because the targeted crab catch is large, which is above 10 cm according to the applicable regulations. while the distance between the nets from the mainland ranges from 2 to 3 miles. The installation of the nets takes approximately three hours starting from departure, installation, and return to land or the pier. The time for immersing the nets in the sea ranges from 20-22 hours, starting from installation from 8-10 am and then being removed at 5 am. **(M. Wellis)**

Fishing Boats Supporting Blue Swimming Crab Needs in - Muna District



April 16, 2023. Fishing boat is a form of fishing transportation with an operational area in the waters. The fishermen category is all livelihood activities doing fishing. Tanjung Pinang Village, Kusambi District, West Muna Regency is a coastal area where most of the people are fishermen. Based on observations of crab data collection in the past 1 year, some fishermen from Tanjung Pinang Village were catching crabs. Crab fishing activities use vessels with the category of small vessels or < 5 GT. The swimming crab fishing boat in Tanjung Pinang Village was driven by 1 fisherman and placed neatly arranged fishing traps with loads of 200 – 350 units of traps. types of crab boats in Tanjung Pinang village, namely wooden boats and fiber boats.

Crab needs in miniplants are obtained from fishermen in small boats with a range of sizes ranging from 10 - 12 meters in length and 1 - 1.2 meters in width. The process of repairing small ships does not really require a large amount of money. repair of wooden fishermen's boats in Tanjung Pinang village, if the wood has begun to partially rot, then the fishermen's alternative is to wrap the boat using fiber. **(M. Cardin)**

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This Our Story

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