



INDONESIA BLUE FOOD SPECIES GUIDE

[A Comprehensive Guide to Indonesia's Aquatic Food Species](#)

Freshwater Fish · Marine Fish · Shellfish & Invertebrates · Seaweed & Algae · Fish Roe

NUSA Indonesian Gastronomy Foundation — Pusaka Rasa / Blue Food Project

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72 Species across **5 Ecosystems**

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1. FRESHWATER INLAND BLUE FOODS

Rivers, Lakes, Swamps & Rice Paddies

Indonesia's freshwater systems – from the volcanic depths of Lake Toba to the swamp forests of West Sumatra – harbor a culinary wealth born from generations of ancestral wisdom. Pangasius, catfish, gourami, and swamp eels are transformed through patient techniques: slow-simmered in clay pots, smoked over wood, or roasted inside bamboo. The resulting flavors reflect an intimacy between communities and the water ecosystems that sustain them.

1. River Pangasius / Patin (*Pangasius hypophthalmus*)

Regions: South Sumatra (Palembang, Musi River), Kalimantan, Jambi

A large, scaleless river catfish with soft, fatty white flesh. Cooked as pindang patin (Palembang's iconic sour-spicy soup with fresh pineapple and lemongrass), gulai tempoyak (fermented durian curry), pepes (banana-leaf parcels), or simply fried. Pindang patin is the signature dish of South Sumatra.

2. Walking Catfish / Lele (*Clarias batrachus* / *Clarias gariepinus*)

Regions: All of Java, Sumatra, Kalimantan – massively farmed in ponds across Indonesia

A barbeled, scaleless catfish that is extremely easy to farm with fast harvesting cycles. Most commonly deep-fried with crispy coating as pecel lele (one of Indonesia's most popular street foods), grilled with spices, or smoked and cooked in a rich coconut gravy as mangut lele (Central Java). Lele goreng kremes is ubiquitous at roadside warung stalls nationwide.

3. Common Carp / Ikan Mas & Tilapia / Nila (*Cyprinus carpio* / *Oreochromis niloticus*)

Regions: Lake Toba (Samosir), Toraja, all of Java, Bali, West Sumatra

Common carp has large golden scales; tilapia has smaller, darker scales – both are extremely popular lake and pond fish. Carp is cooked as arsik (Batak slow-simmered dry curry with andaliman pepper), pepes ikan mas (Sundanese banana-leaf parcels), and pa'piong bale (Torajan bamboo-roasted fish with coconut and miana leaves). Tilapia is commonly grilled, fried, or prepared in sweet-sour sauce.

4. Pora-Pora Fish (*Neostethus lankesteri*)

Regions: Endemic to Lake Toba, North Sumatra

A tiny anchovy-sized fish endemic to Southeast Asia's largest volcanic lake, schooling in vast numbers. Typically deep-fried until crispy as a crunchy side dish, stir-fried with andaliman pepper and torch ginger, or prepared as na tinombur (pounded with raw aromatic Batak paste). A unique species tied to Toba Batak culinary identity.

5. Giant Gourami / Gurami (*Osphronemus goramy*)

Regions: West Java (Tasikmalaya, Kuningan), Central Java, East Java, Sumatra

A large, flat-bodied freshwater fish with thick, flavorful flesh and few bones – considered the premium freshwater fish in Indonesian cuisine. Deep-fried and doused with sweet-sour sauce (Sundanese classic), grilled with sweet soy glaze, wrapped in banana leaves as pepes, or cooked

in gulai. Gulai simauang from Payakumbuh enriches the curry with kluwek/pangi seeds that require days of pre-leaching.

6. Rasbora / Ikan Seluang (*Rasbora spp.*)

Regions: East Kalimantan (Melak, Kutai), South Kalimantan, South Sumatra

Finger-sized river fish that school in shallow, clear-flowing streams. Deep-fried until crispy, stir-fried with tempoyak (fermented durian), or roasted inside bamboo stalks (Dayak bamboo-cooking tradition). In the Blue Food document, seluang is marinated with turmeric, ginger, and lime, then roasted in bamboo.

7. Snakehead Fish / Ikan Gabus (*Channa striata*)

Regions: Jakarta (Betawi), Belitung, Kalimantan, Sumatra, Sulawesi – widespread in swamps, rice paddies, and rivers

A freshwater predator prized for its exceptionally high albumin content, traditionally prescribed for post-surgical wound healing. Cooked as gabus pucung (Betawi black nut stew), gangan umbut nanga (Belitung palm heart soup), lempah kuning (yellow sour broth), or processed into kerupuk/amplang crackers. The flesh is firm, slightly chewy, and deeply savory.

8. Giant Freshwater Prawn / Udang Galah (*Macrobrachium rosenbergii*)

Regions: Kalimantan, Bangka, Sumatra, West Java

The world's largest freshwater prawn, reaching up to 30 cm, inhabiting large, slow-flowing rivers. Cooked in bumbu tige (an ancient Bangka three-spice broth of salt, turmeric, and chili), grilled with honey glaze, in gulai, or sautéed in padang sauce. In the Blue Food document, it appears as Udang Satang Bumbu Tige from Menduk, Bangka.

9. Climbing Perch / Ikan Kapuyu (*Anabas testudineus*)

Regions: Bangka, Belitung, Kalimantan, Sumatra

A small, hardy fish famous for its ability to 'climb' and survive out of water for extended periods. Cooked as lempah kuning (Bangka's sour-spicy yellow broth with wild sour eggplant and shrimp paste), fried, or braised. In the Blue Food document, it features in Lempah Kuning Ikan Kapuyu from Toboali, Bangka.

10. Giant Snakehead / Ikan Toman (*Channa micropeltes*)

Regions: Pontianak (West Kalimantan), South Kalimantan, South Sumatra

A massive relative of the snakehead that can grow up to 1 meter and 20 kg – the apex predator of Kalimantan's rivers. Cooked in Malay-style asam pedas (sour-spicy broth with wild sour eggplant and bilimbi), fried, braised, or processed into amplang crackers. In the Blue Food document, it features in Ikan Toman Asam Pedas from Pontianak.

11. Bilih Fish (*Mystacoleucus padangensis*)

Regions: Endemic to Lake Singkarak, West Sumatra

A tiny, silvery finger-sized fish found only in one lake in the world – one of Indonesia's most unique endemic species. Schools in vast numbers. Most classically deep-fried until crispy (the iconic preparation), cooked in balado (chili paste), or slow-reduced into rendang ikan bilih. Due to its endemic status and declining population, bilih is a species requiring urgent conservation attention.

12. Swamp Eel / Belut / Baluik (*Monopterus albus*)

Regions: West Sumatra (Payakumbuh, Nagari Kinari), Java, Bali

A long, slippery, finless eel that lives in rice paddy mud and swamps. Cooked as rendang baluik with up to 60 species of wild-foraged leaves (Payakumbuh), rendang baluik buah pala (with nutmeg flesh), deep-fried until crispy (Javanese style), or as pecel belut (Malang). The Blue Food document features two extraordinary rendang baluik recipes from West Sumatra.

13. River Snail / Tengkujuh (*Filopaludina sumatrensis*)

Regions: Aceh, West Kalimantan (Bengkayang), Sumatra, Java

A medium-sized freshwater gastropod living on the bottom of calm rivers. In West Kalimantan, stuffed into bamboo trunks with pounded sweet potato leaves and sansang leaves, then slow-roasted over firewood (Daun Ubi Masuk Tengkujuh). In Aceh, it becomes part of Kuah Pliek U (fermented coconut paste stew). In Java, simply boiled and served with chili dipping sauce.

14. Rice Paddy Snail / Tutut / Keong Sawah (*Pila ampullacea*)

Regions: All of Java (West Java, East Java), Sumatra, South Sulawesi

A round-shelled freshwater snail abundant in rice paddies and marshes. Boiled and served with chili dipping sauce (simplest), cooked in balado (chili paste), skewered as sate tutut, prepared in keong curry, or stir-fried spicy (oseng tutut pedas). In East Java, tutut goreng bumbu is a hugely popular market snack. Very high in protein, iron, and calcium, and extremely cheap.

15. Silver Barb / Ikan Wader (*Barbodes binotatus* / *Puntius spp.*)

Regions: East Java (Kediri, Tulungagung, Pacitan), Central Java, Yogyakarta

A tiny river fish living in rocky, fast-flowing streams. Most classically deep-fried whole until entirely crispy – bones, head, and all – and eaten whole. Wader goreng with sambal and white rice is the quintessential rural Javanese comfort food. Also prepared as bothok wader (wrapped in banana leaf with grated coconut and spices, then steamed).

16. Indonesian Eel / Sidat (*Anguilla marmorata* / *Anguilla bicolor*)

Regions: Sulawesi (Lake Poso, Lake Tempe), West Java (Segara Anakan), Bali

A large, eel-shaped catadromous fish that migrates between ocean and freshwater, with extremely rich, fatty flesh high in DHA and EPA – significantly higher than most other fish. In Sulawesi, cooked as masapi in bamboo (Ituwu Masapi from Poso). In West Java, farmed and prepared unagi-style. Indonesian eel has exceptional nutritional value and growing aquaculture potential.

17. Hoven's Carp / Ikan Jelawat (*Leptobarbus hoeveni*)

Regions: Kalimantan (Kapuas, Mahakam, Barito rivers), Sumatra (Kampar, Indragiri rivers)

A large, streamlined, silvery river fish reaching up to 60 cm – considered the premium river fish of Kalimantan. The flesh is soft, white, and delicate. Best simply grilled with basic seasoning, cooked in gulai, or roasted in leaves. Wild jelawat is increasingly rare due to overfishing and river habitat degradation.

18. Snakeskin Gourami / Ikan Sepat (*Trichogaster pectoralis*)

Regions: South Kalimantan (Banjar), South Sumatra, Java

A small, flat fish inhabiting shallow marshes and rice paddies. Most famously processed into dried/salted fish – sun-dried until completely cured then deep-fried, eaten with sambal and fresh vegetables. Also stir-fried with chili or cooked with tempoyak (fermented durian) in Sumatra. Dried sepat goreng is an iconic Banjarese staple.

19. Giant Featherback / Ikan Belida (*Chitala lopis* / *Notopterus chitala*)

Regions: South Sumatra (Palembang, Musi River), Kalimantan, Jambi

A large, flat, knife-shaped river fish reaching up to 1 meter – nicknamed 'ghost fish' for its unique silhouette. Its flesh is the original base ingredient for pempek and kemplang crackers from Palembang. The flesh is scraped, pounded, and mixed with tapioca starch to form the pempek dough. Due to drastic population decline, belida is now a protected species and has largely been replaced by tenggiri (Spanish mackerel) in modern pempek production.

2. MARINE COASTAL BLUE FOODS

Ocean Finfish, Pelagics & Reef Species

The world's longest coastline has given rise to an extraordinary diversity of maritime culinary traditions. From tongkol pounded into cakes on Nias to tuna smoked and shredded in Ternate, every stretch of coast speaks its own dialect of flavor — shaped by waves, wind, and the wild aromatic leaves that grow at the ocean's edge.

1. Eastern Little Tuna / Tongkol (*Euthynnus affinis*)

Regions: All Indonesian waters — northern Java coast, Sulawesi, Maluku, NTT, Sumatra

A small-to-medium pelagic fish (1–5 kg) from the tuna family, the most affordable and widely available of its relatives. Dark, firm flesh with a strong flavor. Cooked as tongkol balado (Minang chili paste), shredded tongkol with basil, pindang tongkol (Javanese braised), or pounded into köfö-köfö (Nias square cakes wrapped in banana leaves and grilled). In the Blue Food document, tongkol is the base for Köfö-Köfö from South Nias.

2. Yellowfin Tuna / Tuna (*Thunnus albacares* (yellowfin); *Thunnus obesus* (bigeye))

Regions: Maluku, West Papua, North Sulawesi, Bali, NTT, Aceh — deep waters along Indonesia's eastern and southern coasts

A large, high-value pelagic fish reaching 80+ kg, with bright red, very firm flesh. Indonesia is one of the world's largest tuna producers. Prepared as sate tuna (Gorontalo), smoked and shredded for Ikan Rabe Rabe and Ikan Tumis Dubele (Ternate), sashimi, tuna steak, or smoked whole. The Blue Food document features several smoked tuna preparations from Ternate and grilled tuna skewers from Gorontalo.

3. Indian Mackerel / Ikan Kembung (*Rastrelliger kanagurta* (male mackerel); *Rastrelliger brachysoma* (female mackerel))

Regions: All coastal waters — Java, Sumatra, Kalimantan, Sulawesi, NTT

A small, plump pelagic fish at a very affordable price — often called 'the people's salmon' because its nutritional profile nearly matches salmon. Most commonly fried whole, cooked in balado, yellow spice paste, wrapped as pepes, or pounded into ikan dole (Buton). In the Blue Food document, kembung is pounded with grated coconut, dipped in egg wash, and shallow-fried as Ikan Dole from Keraton Buton.

4. Anchovy / Ikan Teri (*Stolephorus spp.*)

Regions: Medan (premium Medan teri), Aceh, Lombok, Madura, all Indonesian coasts

The smallest ocean fish consumed en masse, caught in enormous quantities with lift nets. Sold fresh or dried. Dried teri fried crispy is one of Indonesia's most iconic rice accompaniments; stir-fried with peanuts and chili (sambal teri); or batter-fried. Fresh teri is cooked in balado or tossed with tomatoes and bird's eye chilies as Ikan Balek Tomat from Bajawa, NTT (Blue Food document). Premium Medan teri is an export commodity.

5. Fermented Salted Mackerel / Ikan Peda (*Rastrelliger spp.* (salt-fermented mackerel))

Regions: Belitung, northern Java coast (Cirebon, Pekalongan, Rembang), Madura

Not a separate species but mackerel preserved through traditional salt fermentation – producing a pungent aroma and intensely savory umami flavor. Cooked as gangan peda (Belitung, with medang perawas leaves and young taro shoots), or simply fried and eaten with sambal and hot rice. Fried peda with terasi sambal is a classic Javanese coastal comfort food.

6. Stingray / Ikan Pari (*Dasyatis spp.* / *Himantura spp.*)

Regions: Belitung, Bangka, Kalimantan, northern Java coast, Aceh, Sulawesi

A flat, kite-shaped fish with thick, fibrous, chewy flesh. Extremely popular smoked (pari asap) then stir-fried or cooked in gulai. In the Blue Food document, it features as Tumis Kucai Halai Parik from Belitung – smoked stingray stir-fried with Chinese chives, tamarind, and Belitung shrimp paste. Also commonly grilled directly at seafood stalls (pari bakar). Its soft cartilage is eaten along with the flesh.

7. Skipjack Tuna / Cakalang (*Katsuwonus pelamis*)

Regions: North Sulawesi (Manado, Bitung), Maluku, Ternate, Gorontalo, Papua

A medium-sized pelagic fish (3–10 kg), a tuna relative with dark red, firm flesh. Most famously processed into cakalang fufu – smoked whole over wood fire until dry and shelf-stable for months. The fufu is then shredded and stir-fried into various dishes including Sayur Pusu (Tomohon, from the Blue Food document), rica-rica cakalang, or eaten directly with dabu-dabu sambal. Cakalang fufu is the culinary identity of the Minahasa people. In Japan, the same species becomes katsuobushi (bonito flakes) for dashi.

8. Spanish Mackerel / Tenggiri (*Scomberomorus commerson* (broad-barred); *Scomberomorus guttatus* (spotted))

Regions: Bangka Belitung, Palembang, northern Java coast, Kalimantan, Sulawesi

A torpedo-shaped pelagic fish with white, firm, sticky flesh – this adhesive quality makes it the ideal base for surimi products. The primary ingredient for pempek (Palembang), otak-otak, siomay, fish balls, and tenggiri crackers. Also grilled, curried, or skewered as satay. Tenggiri has replaced the increasingly rare belida (giant featherback) in modern pempek production.

9. Largehead Hairtail / Ikan Layur (*Trichiurus lepturus*)

Regions: Northern Java coast (Pelabuhan Ratu, Cilacap, Semarang), Sumatra, Sulawesi

An elongated, ribbon-shaped, flat, shimmering silver ocean fish – one of the most visually distinctive fish in any market. Soft, white flesh with few large bones. Most commonly batter-fried (layur goreng krispi), cooked in balado, braised (pindang), or prepared in yellow spice paste. Fried layur with green sambal is a hugely popular Javanese coastal home dish. Also dried into salted layur.

10. Fusilier / Ikan Ekor Kuning (*Caesio cuning*)

Regions: Thousand Islands (Jakarta), Karimunjawa, Anambas, Natuna, coral reef waters across Indonesia

A small-to-medium reef fish with a distinctive bright yellow tail and slender, silvery body. Soft, sweet flesh. Most often fried in yellow spice paste, grilled with sambal, or made into fish soup. Fried ekor kuning is a staple at seafood stalls in the Thousand Islands. As a coral reef dweller, this fish is also an indicator of reef ecosystem health.

11. Rabbitfish / Baronang (*Siganus spp.*)

Regions: South Sulawesi (Makassar, Pangkep), Maluku, NTT, Bali, Riau Islands

A flat, oval-bodied herbivorous reef fish with venomous dorsal spines (requires careful handling). White, soft, slightly sweet flesh. Extremely popular grilled (baronang bakar, iconic in Makassar), fried, or cooked in pallubasa. In Makassar, grilled baronang with rica sambal or dabu-dabu is an iconic coastal dish. Baronang is increasingly farmed in floating net cages.

12. Milkfish / Bandeng (*Chanos chanos*)

Regions: East Java (Sidoarjo, Gresik, Lamongan), Central Java, South Sulawesi, Bali, NTT

A streamlined, silvery coastal and brackish-water farmed fish — extremely popular but notorious for its many fine bones. Prepared as bandeng presto (Semarang's legendary innovation — pressure-cooked until all bones soften), deboned bandeng, smoked bandeng (Sidoarjo), pepes bandeng, or otak-otak bandeng. Bandeng presto is a culinary invention that solved the bone problem. Milkfish pond farming along Java's coast dates back centuries.

13. Grouper / Kerapu (*Epinephelus spp.*)

Regions: Riau Islands, Bali, Lombok, NTT, Sulawesi, Kalimantan, Raja Ampat

A large, stout-bodied reef predator with spotted patterns — a premium fish commanding very high market prices. White, thick, tender flesh with a very clean taste. Most often steamed (Hong Kong style), grilled with honey, served in oyster sauce, or as grouper head gulai. Live grouper is a major export commodity to Hong Kong and China. Indonesia is increasingly farming grouper in floating net cages.

14. Squid / Cumi-Cumi (*Loligo spp.* (common squid); *Sepioteuthis lessoniana* (bigfin reef squid))

Regions: All Indonesian waters — Java, Sulawesi, Kalimantan, NTT, Maluku

A soft-bodied mollusc with ten tentacles, a translucent whitish body, and a black ink sac. Extremely popular and commercially valuable. Prepared as batter-fried squid (most popular), grilled squid, stuffed squid, stir-fried black squid (cooked in its own ink), or squid in padang sauce. Squid ink is also used to color nasi hitam cumi (black squid rice). Dried squid is cured into snacks or cooking ingredients.

15. Cuttlefish / Sotong (*Sepia spp.*)

Regions: Bangka Belitung, Kalimantan, Sulawesi, Java, Aceh

A mollusc similar to squid but with a wider, thicker, shorter body and an internal hard shell (cuttlebone). Thicker and sweeter flesh than squid. Prepared as grilled sotong (Bangka Belitung specialty), stir-fried black sotong, batter-fried, or sotong gulai. In Bangka Belitung, charcoal-grilled sotong with simple seasoning is an iconic coastal street snack. Cuttlefish ink is

more abundant and concentrated than squid ink, increasingly used in modern pasta and risotto dishes.

3. SHELLFISH, BIVALVES & INVERTEBRATES

Marine & Estuarine Shellfish, Crustaceans & Echinoderms

Mangrove clams, river prawns, and coconut crabs are the hidden treasures of Indonesia's coastal and estuarine ecosystems. Hand-gathered from mangrove roots or river beds, they are prepared with striking simplicity yet profound meaning – becoming rendang, rujak, or gulai that connect people to the rhythms of tide and harvest season.

1. Blood Cockle / Kerang Darah (*Anadara granosa*)

Regions: Northern Java coast (Semarang, Surabaya), North Sumatra (Medan), Kalimantan, Sulawesi – muddy coasts and estuaries

A ridged-shelled cockle with reddish flesh and chewy texture – the 'bloody' appearance gives it its name. The most popular and affordable shellfish in Indonesia. Most classically steamed half-raw and served with seafood chili dipping sauce, also cooked in padang sauce, balado (chili paste), or stir-fried with garlic and chili. Steamed kerang darah with sweet soy chili sauce is the quintessential street-side seafood stall dish.

2. Asian Green Mussel / Kerang Hijau (*Perna viridis*)

Regions: Jakarta Bay, Cirebon, Semarang, Surabaya, Lampung – farmed on bamboo poles in shallow coastal waters

A green-to-black-shelled mussel with thick, yellowish-white flesh. One of Indonesia's most widely farmed shellfish due to fast growth and low cost. Prepared as sate kerang (Jakarta specialty), mussels in oyster sauce, stir-fried mussels, or steamed for soup and seafood noodle toppings. Sate kerang hijau along Ancol beach and Muara Karang is an iconic Jakarta street food.

3. Mud Clam / Kerang Kepah (*Polymesoda erosa*)

Regions: East Sumatra (Riau, Jambi), Kalimantan, Bangka Belitung – muddy mangrove and brackish water estuaries

A medium-sized clam with a thick shell bearing concentric ring patterns, living in mangrove mud and estuaries. Prepared as gulai kepah (Riau Malay yellow curry with turmeric leaves), pepes kepah, stir-fried kepah, or steamed with chili dipping sauce. Gulai kepah kuning is an intensely aromatic Malay coastal dish. Kepah is also often cooked in Malay-style asam pedas with pineapple and bilimbi.

4. Asiatic Hard Clam / Kerang Siam (*Meretrix meretrix*)

Regions: Northern Java coast, Sumatra, Kalimantan – shallow sandy and muddy waters

A small clam with a smooth, slightly flat shell ranging from white to purplish-brown. Small but sweet flesh. Steamed in spicy broth, stir-fried with garlic and chili, or cooked in clear ginger broth. Often used as an ingredient in seafood noodles and cap cay. Kerang siam in ginger broth is a simple dish believed to warm the body.

5. Asian Moon Scallop / Kerang Simping (*Amusium pleuronectes*)

Regions: Java Sea, Karimata Strait, Bangka Belitung, Riau Islands – sandy sea floors

A flat, round-shelled scallop with yellowish-white coloring. The adductor muscle meat is sweet, tender, and highly prized – a premium shellfish more common in mid-to-upper-range seafood restaurants. Prepared as grilled scallops with garlic butter, stir-fried in XO sauce, lemon butter scallops, or batter-fried. The shells are also used for decorative crafts in some coastal areas.

6. Chinese Venus Clam / Kerang Tahu (*Meretrix lusoria*)

Regions: Northern Java coast, North Sumatra, Sulawesi – shallow sandy waters

A medium-sized clam with a smooth, cream-to-brown shell that somewhat resembles a small piece of tofu in shape. Soft flesh with a fairly sweet taste. Rather uncommon in traditional markets, more often available at seafood restaurants. Prepared as stir-fried clams, clear clam soup, or cooked in oyster sauce. Its delicate flesh texture makes it best suited for light, broth-based preparations.

7. Rock Oyster / Tiram (*Crassostrea* spp. / *Saccostrea cucullata*)

Regions: Northern Java coast (Semarang, Cirebon), Lampung, Aceh, Sulawesi, Lombok – attached to rocks, mangrove roots, and dock pilings

A rough, wavy-shelled bivalve with soft, rich, slightly briny flesh. Can be eaten raw fresh (when extremely fresh and from clean waters), batter-fried (tiram goreng), scrambled with egg (Hokkien-style omelette), or baked with cheese. Oyster extract is also the base for oyster sauce used extensively across Asian cooking. Oysters contain among the highest zinc content of any food.

8. Javanese Corbicula / Remis (*Corbicula javanica*)

Regions: River mouths and brackish waters in Java, Sumatra, Kalimantan – often found alongside kepah clams

A very small clam (1–3 cm) with a thin, greenish-brown shell, living on muddy river bottoms and estuaries. The cheapest of all shellfish, often overlooked as 'lower-class food' despite being protein-rich. Prepared as stir-fried remis with chili, clear remis broth, or added to noodles and kwetiau as a natural flavor enhancer. The broth yields an intensely savory stock. In West Java, remis is even eaten raw as lalapan with sambal.

9. Giant Tiger Prawn / Udang Windu (*Penaeus monodon*)

Regions: Brackish-water ponds in East Java (Sidoarjo, Gresik), South Sulawesi, Lampung, Kalimantan

A large prawn (up to 25–30 cm) with a dark body marked by black cross-stripes. Very firm, sweet, chewy flesh – considered Indonesia's premium prawn. A major export commodity to Japan, the United States, and Europe. Prepared as honey-grilled prawns, udang windu in padang sauce, butter-fried prawns, or tempura. Tiger prawn farming once dominated Indonesia's fishery exports before the rise of vannamei.

10. Whiteleg Shrimp / Udang Vaname (*Litopenaeus vannamei*)

Regions: Ponds across all Indonesian coasts – Java, Sumatra, Kalimantan, Sulawesi, NTB

Indonesia's most massively farmed shrimp today, originally from the Eastern Pacific but perfectly adapted. Medium-sized (15–20 cm), translucent whitish body, chewy and sweet flesh. More

disease-resistant and faster-growing than tiger prawns, now dominating the industry. Prepared as batter-fried shrimp, shrimp balado, sweet-sour shrimp, shrimp in oyster sauce, or exported frozen. Nearly all shrimp at Indonesian supermarkets and restaurants today is vannamei.

11. Greasyback Shrimp / Udang Putih / Api-api (*Metapenaeus ensis*)

Regions: Muddy coasts across Java, Sumatra, Kalimantan, Sulawesi – caught with nets in shallow waters

A small-to-medium shrimp (8–15 cm) with a translucent whitish body, very common in traditional markets at affordable prices. Softer flesh than tiger prawns and vannamei. Batter-fried, stir-fried with petai (stink beans), cooked in sweet soy sauce, or used as filling in bakwan udang (shrimp fritters) and otak-otak. Fried udang putih with dipping sauce is a staple at warung tegal stalls.

12. Paste Shrimp / Udang Rebon (*Acetes spp.*)

Regions: All Indonesian coasts – Java, Sumatra, Kalimantan, Sulawesi

A very tiny shrimp (1–3 cm), translucent pinkish-red, caught en masse with fine nets. The primary raw material for terasi (shrimp paste) and ebi (dried ground shrimp) – two foundational seasoning pillars of Indonesian cuisine. When fresh, stir-fried or made into fritters. In the Blue Food document, dried rebon appears in Binde Biloti (Gorontalo) – young sweet corn pan-roasted with sun-dried rebon. Terasi made from rebon is one of the most important fermented seafood products in the Nusantara culinary tradition.

13. Mantis Shrimp / Udang Ronggeng (*Harpiosquilla raphidea*)

Regions: Bangka Belitung, northern Java coast (Cirebon, Indramayu), Kalimantan – shallow, muddy waters

Not a true shrimp but a stomatopod – a flat, elongated crustacean (15–30 cm) with mantis-like claws and a hard, segmented shell. Sweet, savory flesh with a texture reminiscent of lobster but softer. Best boiled or steamed then dipped in sambal, grilled, or stir-fried in salted egg yolk sauce. Grilled udang ronggeng with sweet soy-lime sambal is a highly sought-after coastal delicacy. Named 'ronggeng' (dancer) because its claw movements resemble a dancer's gestures.

14. Mud Crab / Kepiting Bakau (*Scylla serrata*)

Regions: Kalimantan (mangrove ponds), Sulawesi, Papua, Sumatra, Java – mangrove ecosystems and estuaries

A large crab (can exceed 1 kg) with a dark greenish-black shell, living among mangrove roots. Thick, naturally sweet flesh that is highly prized. Prepared as kepiting saus padang (the most iconic – Indonesia's most popular seafood restaurant dish), crab in oyster sauce, smoked crab (Kalimantan), black pepper crab, or steamed crab with matah sambal. The roe-laden female crab (kepiting bertelur) is considered the most luxurious part.

15. Blue Swimming Crab / Rajungan (*Portunus pelagicus*)

Regions: Cirebon, Demak, Rembang, Lampung, Kalimantan, Sulawesi – shallow, sandy waters

A smaller marine crab with a bluish-white shell, slender claws, and paddle-shaped rear legs for swimming. Fine, sweet, delicate flesh – exported as picked lump crab meat to the United States as its largest market. Domestically prepared as soto rajungan (Cirebon's legendary clear turmeric broth with crab), crab in oyster sauce, crab soup, or eaten steamed with sambal. Soto rajungan Cirebon is a legendary Javanese coastal dish.

16. Spiny Lobster / Lobster / Udang Karang (*Panulirus* spp. (*P. homarus*, *P. ornatus*, *P. versicolor*))

Regions: Southern Java reef waters (Pacitan, Gunung Kidul, Pangandaran), Lombok, NTT, Aceh, Papua

A large crustacean (can reach 2–5 kg) with a hard, spiny body and long antennae, living in reef crevices. Among the highest-value marine commodities in Indonesia. Prepared as grilled lobster with butter, lobster in oyster sauce, lobster thermidor, or simply boiled and served with lemon butter. Lobster seed (benur/puerulus) is highly demanded by Vietnam and China for grow-out – the seed trade became a major controversy between conservation and fisher livelihoods.

17. Dog Conch / Siput Gonggong (*Laevistrombus turritella*)

Regions: Riau Islands (Tanjung Pinang, Bintan), Thousand Islands, Banten, Bangka Belitung – shallow sandy seagrass beds

A medium-sized sea snail (5–8 cm) with an elongated, spiraling conical shell. Chewy, savory flesh. Prepared as sate gonggong (skewered and grilled – the signature dish of Tanjung Pinang), steamed with sambal, or boiled gonggong. The meat is picked from the shell and dipped in sweet soy chili sauce. Populations are declining due to overharvesting and seagrass bed degradation.

18. Trochus / Siput Lola (*Trochus niloticus*)

Regions: Maluku, Southeast Sulawesi, NTT, Papua – shallow coral waters of Eastern Indonesia

A large sea snail (6–12 cm) with a conical red-brown-white shell lined with nacre (mother-of-pearl) inside. Chewy, savory flesh with a strong marine taste. Prepared as grilled lola, steamed lola with sambal, or stir-fried with rica spices. The shell has high economic value for button-making and mother-of-pearl inlay crafts. Due to harvesting pressure, lola is now quota-regulated and beginning to be cultivated.

19. Tropical Abalone / Abalon (*Haliotis asinina*)

Regions: Bali (southern coast), Sulawesi, NTT, Papua – warm coral reef waters

A flat-bodied sea snail with a shimmering shell bearing small breathing holes along its edge. Very chewy, sweet flesh considered a luxury food across Asia. Prepared as grilled abalone, stir-fried abalone, abalone porridge, or abalone soup. Wild abalone populations are dwindling – once easily found along coastlines, now increasingly rare. Indonesia is developing abalone aquaculture, particularly in Bali, as a premium commodity.

20. Mangrove Snail / Siput Bakau (*Telescopium telescopium* / *Cerithidea* spp.)

Regions: Kalimantan (mangrove coasts), Sumatra, Java – mangrove ecosystems and muddy estuaries

A medium-sized snail with a dark, elongated conical shell, clinging to mangrove roots and trunks during high tide. Small but savory flesh. Boiled and served with chili dipping sauce, stir-fried with spices, or cooked in coconut milk. Boiled siput bakau is a cheap snack of coastal mangrove communities. Its presence is an indicator of mangrove ecosystem health – abundant mangrove snails signal healthy mangroves.

21. Sea Cucumber / Teripang / Timun Laut (*Holothuria scabra*, *Holothuria nobilis*, *Stichopus hermanni*)

Regions: Sulawesi (Wakatobi, Togean), Maluku, NTT, Papua, Thousand Islands – sandy sea floors and seagrass beds

A soft-bodied, elongated marine animal (resembling a cucumber) that moves slowly along the ocean floor. A very high-value export commodity to China – dried sea cucumber (béche-de-mer) can reach millions of rupiah per kilogram. Prepared as fried sea cucumber, sea cucumber soup, stir-fried with spices, sea cucumber crackers, or consumed dried. Traditionally also used as medicine – the broth is believed to accelerate wound healing and is given to postpartum women. Indonesia is among the world's largest sea cucumber producers.

22. Sea Urchin / Bulu Babi (*Diadema setosum*, *Tripneustes gratilla*)

Regions: Maluku, NTT (Kupang, Flores), Sulawesi, Bali, Wakatobi – shallow coral reef waters

A round, hard-bodied marine animal covered in long spines. The edible part is the gonads (reproductive organs) – yellow-to-orange tissue found inside the shell. The taste is remarkably unique – sweet, creamy, and intensely umami, often called 'the foie gras of the sea.' Eaten raw fresh directly from the shell (most traditional), as sashimi, or mixed with warm rice. In Maluku and NTT, sea urchins are eaten right at the shore as snacks during low tide. In fine dining, the gonads (uni) are a luxury ingredient for pasta and sushi. Overharvesting is already threatening populations in several locations.

4. SEAWEED, ALGAE & COASTAL PLANTS

Red, Green & Brown Seaweeds and Wild Coastal Vegetation

This category proves that blue food is not only about animal protein. Seaweed and coastal plants represent the most sustainable blue food on the planet – their cultivation absorbs CO₂, requires no feed, fertilizer, freshwater, or land, and actually improves water quality. From agar-agar that underpins an entire confectionery industry to sea grapes hailed as 'green caviar' in global markets, Indonesia's aquatic plant wealth is immense yet still vastly underexplored.

1. Gracilaria / Red Seaweed (*Gracilaria verrucosa*)

Regions: Farmed in South Sulawesi (Takalar, Jeneponto), East Java (Sidoarjo, Pasuruan), Nusa Tenggara, Lampung – cultivated in brackish-water ponds, often polyculture with milkfish

A soft-textured red seaweed with reddish-brown to dark purple branching fronds. The primary source of agar-agar in Indonesia – supplying over 90% of the country's agar raw material. Processed into agar-agar bars and powder (the foundation of Indonesia's jelly, pudding, and candy industry), es campur (mixed ice dessert), candied seaweed, or mixed into dried noodles for added nutrition and texture. Gracilaria also functions as a biofilter absorbing excess nutrients in pond waters, serving a dual role as both food commodity and environmental guardian.

2. Cottonii / Carrageenan Seaweed (*Kappaphycus alvarezii*)

Regions: Farmed in South Sulawesi (Takalar, Bantaeng), Southeast Sulawesi (Wakatobi), NTT, NTB (Lombok, Sumbawa), Maluku – cultivated in open sea using longline methods

A cylindrical, thickly branched seaweed ranging from green-brown to reddish-purple. Indonesia's largest cultivated seaweed commodity and primary source of carrageenan – Indonesia supplies over 90% of China's carrageenan raw material. Carrageenan is used as a thickener, stabilizer, and gelling agent in the food industry (ice cream, chocolate milk, canned fish), pharmaceuticals, and cosmetics. For direct consumption, prepared as es rumput laut (the refreshing iced seaweed drink with syrup and condensed milk – a hugely popular coastal snack across Indonesia), seaweed rujak, seaweed crackers, candied seaweed, or seaweed dodol (sticky cake).

3. Spinosum / Iota-Carrageenan Seaweed (*Eucheuma denticulatum*)

Regions: Farmed in South Sulawesi, NTT, NTB, Maluku – cultivated at sea, often alongside *Eucheuma cottonii*

A finely branched seaweed with small thorn-like protrusions, green-brown to reddish in color. Produces iota-carrageenan, which differs from cottonii's kappa-carrageenan – iota forms a softer, more elastic gel. For direct consumption, prepared as a component of crackers, vegetable dishes, or iced seaweed drinks. Its finer texture compared to cottonii makes it preferred for salads and candied preparations. Also dried and exported as industrial raw material.

4. Sea Grapes / Anggur Laut / Lawi-Lawi / Latoh (*Caulerpa lentillifera* and *Caulerpa racemosa*)

Regions: NTT (flagship commodity), South Sulawesi (known as lawi-lawi), NTB (known as latoh), Bali (known as bulung boni), Riau Islands, Maluku – grows naturally in seagrass beds and shallow waters, increasingly farmed in ponds

A green seaweed with small, round grape-like clusters attached to a stem – dubbed 'green caviar' for the soft popping sensation on the tongue and a fresh taste reminiscent of salmon eggs

without the fishy smell. Three species are now cultivated in Indonesia: *C. lentillifera*, *C. racemosa*, and *C. sertularioides*. Eaten raw as lalapan (fresh salad – the most authentic preparation), prepared as rujak bulung boni (Bali, with shallot and matah sambal), urap lawi-lawi (Makassar), or incorporated into modern poke bowls and salads. Sea grapes are now a rapidly rising export commodity – demand is surging in Japan, Korea, and Europe as a superfood. High in fiber, minerals, and antioxidants with very low fat content, making them a highly promising functional food.

5. Sargassum / Brown Seaweed (*Sargassum polycystum*, *S. duplicatum*, *S. filipendula*)

Regions: Distributed from Aceh to Papua – grows wild on coral reefs and sandy flats in shallow waters; abundant in Thousand Islands, Jepara, Nusa Penida (Bali), southern Java coast, Lombok, and South Sulawesi

A large, heavily branched brown seaweed with small air vesicles that keep it buoyant. Contains alginate (a gel-forming compound for food and pharmaceutical industries), fucoidan (a powerful antioxidant), and fucoxanthin (an anti-aging pigment). Direct food utilization in Indonesia remains very limited – historically used more for alginate industry, organic fertilizer, and pharmaceutical materials. However, recent research highlights its enormous potential as herbal drinks, seaweed flour, and functional food supplements. In some coastal communities in Jepara and NTT, Sargassum is beginning to be processed into seaweed chips and noodle blends. During rainy seasons, Sargassum often washes ashore in massive quantities like waste – yet it contains untapped nutritional and economic value.

6. Local Kelp / Kombu Lokal (*Undaria spp.* / local brown algae varieties)

Regions: Cooler waters of Eastern Indonesia – Maluku, NTT, and parts of Sulawesi

True Laminaria (*Laminaria japonica*), the foundation of Japanese dashi, does not naturally grow in Indonesia's tropical waters. However, some local brown algae species from the cooler waters of Eastern Indonesia are used by coastal communities as a natural flavor enhancer in soups and stews, imparting an umami taste similar to kombu. Prepared by drying and then simmering as a broth base, or added to soups and seafood vegetable dishes. The potential for developing a 'Nusantara kombu' from local brown algae remains wide open for exploration.

7. Sea Mustard / Sawi Laot (Possibly *Sesuvium portulacastrum* or other coastal succulent plants (no confirmed Latin name))

Regions: Aceh (Gampong Nusa, western and northern coasts) – grows wild in beach sand and supratidal zones

A thick-leaved, succulent coastal plant picked directly from the shore by Acehnese communities. Notably different from other seaweeds as sawi laot is not a marine alga but a terrestrial plant adapted to the saline coastal environment – making it uniquely positioned within blue food. In the Blue Food document, it is the primary ingredient in Nambai Sawi Laot from Gampong Nusa, Aceh – finely shredded raw and mixed with grated coconut, u lheu (toasted coconut paste), torch ginger flowers, and asam sunti into a fresh, aromatic coastal salad. This dish is entirely fireless (no cooking required) and represents a perfect example of sustainable coastal cuisine – the ingredient grows wild without cultivation, is harvested modestly, and requires no fuel for preparation.

5. FISH ROE / TELUR IKAN

Traditional Indonesian Fish Egg Preparations

The tradition of consuming fish roe is not exclusive to Japan (ikura, tobiko) or the Mediterranean (bottarga) – it has long been alive across the Indonesian archipelago. From woku-spiced tuna roe in Manado to pepes telur ikan mas in Sundanese kitchens, fish roe represents a nutrient-dense, zero-waste approach to seafood that honors the whole catch. This sub-category deserves recognition as a distinct pillar of Nusantara's blue food heritage.

1. Tuna / Skipjack Tuna Roe (*Thunnus spp. / Katsuwonus pelamis*)

Regions: North Sulawesi (Manado – widely available in traditional markets), Maluku, Ternate

A fairly large roe cluster, reddish-brown in color. The most celebrated preparation is telur ikan masak woku from Manado – stir-fried in aromatic woku seasoning (basil, turmeric leaves, pandan, lemongrass, kaffir lime leaves). Tuna roe is larger, richer, and more unctuous than skipjack roe. In Manado, skipjack roe is easily found at traditional markets and is a beloved home-cooked dish.

2. Red Snapper Roe (*Lutjanus spp.*)

Regions: Coastal markets across Indonesia – Java, Sulawesi, Kalimantan

A cluster of yellowish-brown roe with very fine individual eggs (about the size of ant eggs). Prepared as gulai telur ikan kakap (curried snapper roe), batter-fried, or wrapped in banana leaves as pepes. The texture becomes soft and creamy when cooked.

3. Spanish Mackerel Roe (*Scomberomorus spp.*)

Regions: Bangka Belitung, Palembang, northern Java coast

Similar in size and shape to snapper roe. Suitable for gulai, bumbu kuning (yellow spice paste), or lempah kuning (Bangka Belitung's signature sour-spicy yellow broth). Also delicious fried with an egg wash coating to keep the cluster intact.

4. Flathead Grey Mullet Roe (*Mugil cephalus*)

Regions: Coastal markets in Java, Sumatra, Kalimantan – estuaries and brackish waters

A compact, finger-sized solid roe sac, golden-orange in color. Most classically prepared as pepes telur ikan belanak – wrapped in banana leaf with spice paste and steamed or grilled. Dried and salted belanak roe is conceptually similar to Mediterranean bottarga. The dried version could be developed into an Indonesian artisan bottarga product.

5. Marine Catfish / Manyung Roe (*Arius thalassinus*)

Regions: Northern Java coast, Sumatra, Sulawesi – ocean waters; the fish itself is commonly salted (ikan jambal roti)

Distinctively large individual eggs, translucent yellowish-orange – uniquely large compared to most other fish roe. While the fish is typically salt-cured, the roe is cooked separately as gulai, pepes, or botok (Javanese steamed banana-leaf parcels with spiced coconut).

6. Common Carp Roe (*Cyprinus carpio*)

Regions: West Java (Sundanese heartland), Central Java, Lake Toba, all major freshwater fish markets

A broad, fairly wide yellow roe cluster. Extremely popular as pepes telur ikan mas (Sundanese banana-leaf parcels) – mixed with ground spice paste, chicken egg, basil, and spring onion, wrapped in banana leaf and steamed. Also simply stir-fried with shallots and salt. Pepes telur ikan mas is one of the most common Sundanese home dishes.

7. Pangasius / Patin Roe (*Pangasius hypophthalmus*)

Regions: South Sumatra (Palembang), Kalimantan, Jambi

A fairly large roe cluster due to the fish's large size. Fried with an egg wash coating to prevent it from falling apart, or prepared as gulai and pepes. The egg coating technique is essential – without it, patin roe tends to disintegrate during cooking.

8. Snakehead Fish / Gabus Roe (*Channa striata*)

Regions: South Kalimantan (Banjarmasin), Sumatra, Java – swamps and rice paddies

Slightly larger than red bean seeds. In Banjarmasin, a traditional dish called intalu iwak haruan uses gabus roe (haruan = gabus in Banjarese) cooked together with other fish innards in Banjarese spice paste. A uniquely regional delicacy specific to South Kalimantan.

9. Kissing Gourami / Biawan Roe (*Helostoma temminckii*)

Regions: West Kalimantan – freshwater ponds and rivers

A small roe cluster about the size of one finger segment. In West Kalimantan, it is prepared as sambal goreng telur ikan biawan – stir-fried roe in a chili-spice paste. A fairly rare regional specialty specific to the area.

This document was compiled from Pusaka Rasa Nusantara research and used as part of the Blue Food project by NUSA Indonesian Gastronomy Foundation. Species information draws from traditional culinary knowledge, regional food surveys, and field research across the Indonesian archipelago.