

Policy Brief:

The 2nd Common Fisheries Resource Analysis on Little Tuna Stocks in the South China Sea

A product of the South China Sea Fisheries Science Working Group

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Summary

- The 2nd Common Fisheries Resource Analysis (CFRA 2) evaluates the status of Little Tuna in the South China Sea, drawing on the expertise of the South China Sea Fisheries Science Working Group (FSWG), comprising scientists from China, Indonesia, Malaysia, the Philippines, and Vietnam.
- Results reveal a north–south divide:
 - In the south, adults still appear in catches under moderate to heavy pressure, and lowering juvenile catch is key to sustainability.
 - In the north, adults and sub-adults are rare or absent, and later declines in juveniles indicate a local collapse.
- Because larvae and juveniles drift across jurisdictions, rebuilding stocks in northern areas is possible if the region reduces the number of juvenile fish being caught.
- Rebuilding Little Tuna stocks would enhance cooperation, strengthen livelihoods and improve food security.

Background

Little Tuna (*euthynnus affinis*, also known as kawakawa and mackerel tuna) is an important source of food and income for millions across the South China Sea. Its role as an affordable protein source makes it vital for food security and coastal livelihoods. UNCLOS lists Little Tuna as a highly migratory species, so coastal States have an obligation to cooperate on its conservation and sustainable use.¹

Adult Little Tuna live mainly on continental shelves, while eggs and larvae drift with currents, creating a shared “larval commons” that links neighbouring fisheries. In practice, when one area protects nurseries and reduces juvenile catch, it sustains the supply of young fish that later support catches in other jurisdictions.

Where and when the data were collected

CFRA 2 assembles data on Little Tuna from across sites throughout the South China Sea over multiple years. Country datasets span Vietnam (2011–2018), the Philippines (2014–2023), Malaysia (2017–2019), Indonesia (recent sampling), and China (2016–2021). Each country analysed its own data using a common methodology, producing comparable outputs without sharing raw datasets.

This is expressed through the **Spawning Potential Ratio (SPR)**, which estimates the proportion of natural breeding capacity remaining under current fishing pressure. Widely used reference points help interpret the results:

SPR \approx 0.50–0.60	SPR \approx 0.30–0.40	SPR \approx 0.20 or lower
supports rebuilding and economic performance	is consistent with sustainable yield	signals risk that too few spawners remain

Findings on the Status of Little Tuna Stocks

The FSWG’s analysis showed clear differences in the status of stocks between the northern and southern South China Sea. In the south, adult Little Tuna still appear in catches, but the level of juvenile catch needs to be lowered to keep stocks within sustainable limits. In the northern South China Sea, a time series shows adult and sub-adult size classes disappearing, followed by reduced juveniles. This pattern is consistent with a local collapse of adult Little Tuna in that area.

¹ Annex I of UNCLOS lists Little Tuna as a highly migratory species. Article 64 provides that “the coastal State and other States whose nationals fish in the region for the highly migratory species ... shall cooperate directly ... with a view to ensuring conservation and promoting the objective of optimum utilization of such species”.

Rebuilding Depleted Stocks:

Recommended Policy Responses

CFRA 2 points to two priorities: reduce juvenile catch so more young fish survive long enough to reproduce, and keep adult-selective fisheries productive. Because eggs and larvae drift between jurisdictions, measures in one area can help neighbouring areas rebuild. Measures relevant to all states include:

- **Selective | Phase out unselective methods to safeguard juvenile fish:** Shift fleets toward adult-selective gears and techniques, phase out unselective light-fall net fishing, and adjust where and when fleets operate to avoid juvenile-dominated periods and places. This reduces growth and recruitment overfishing, and protects spawning potential.
- **Stabilise | Stabilise catch and reduce excess capacity:** Stabilise supply-side factors by cutting subsidies and implementing phased, long-term reductions in overfishing to help rebuild adult stocks.
- **Share | Use shared indicators with adaptive harvest rules:** Track a small common set of signals across countries (SPR, median catch length, juvenile share, presence of large adults) and pre-agree seasonal and area-based adjustments when indicators move outside target bands.
- **Science | Regularise regional science cooperation:** Meet regularly to apply common methods, compare indicators, and publish CFRA updates, paired with simple concurrent guidance for domestic agencies.

South China Sea Fisheries Science Working Group

The FSWG is a science-led forum that builds an evidence base to sustainably manage shared fisheries resources in the South China Sea. It brings together government-affiliated scientists from China, Indonesia, Malaysia, the Philippines, and Vietnam.

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