



POLICY BRIEF:

THE 1ST COMMON FISHERIES RESOURCE ANALYSIS

September 2022

SUMMARY

The 1st Common Fisheries Resource Analysis (1st CFRA) is a landmark scientific collaboration to assess the status of key fish species in the South China Sea. Since 2019, scientists and officials from China, Indonesia, Malaysia, the Philippines and Vietnam have developed a shared evidence base that can guide the cooperative management of South China Sea fisheries resources. These fish stocks are a shared resource that millions of people rely on for their livelihoods and food security. However, no one country can manage this resource alone as fish regularly cross international boundaries.

This informal South China Sea Fisheries Working Group decided to focus on Skipjack Tuna – a transboundary stock – because the actions of one country impact the fisheries of other countries. Moreover, the United Nations Convention on the Law of the Sea (UNCLOS) designates Skipjack Tuna as a highly migratory species, imposing a special responsibility on coastal and fishing states to cooperatively manage stocks.

Under the 1st CFRA process, participants used existing government data or collected new data on the status of Skipjack Tuna in their own waters. Participants analysed their own data using an agreed methodology and then used their findings to develop a collective regional analysis. The 1st CFRA indicates that South China Sea Skipjack Tuna stocks are under pressure, but fishing is within sustainable limits. However, the fishing of juvenile Skipjack Tuna remains a risk that demands ongoing monitoring.

The South China Sea Fisheries Working Group's completion of 1st CFRA is an important step in regional cooperation to promote the joint management of shared fish stocks. It has delivered increased evidence to support domestic fisheries policymaking and developed norms and standards for regional cooperation. The initiative also demonstrates the value of regular collaboration between government-affiliated scientists. Institutionalising this type of collaboration in a regional organisation would help ensure the sustainability of South China Sea fisheries resources for future generations.

RATIONALE: THE NEED FOR COOPERATION

The South China Sea is strategically, economically and ecologically critical to the region and the world. Much international attention has been placed on the ongoing disputes in the South China Sea. However, there has been far less attention on the fisheries resources that provide 12% of the global wild catch and underpin food security and the livelihoods of tens of millions of people.¹

No one country can manage these fisheries resources alone. Eco-systems span international borders and fish regularly travel between jurisdictions, necessitating regional cooperation. However, this cooperation must be based on sound scientific evidence. Through practical scientific collaboration, regional governments can prevent a collapse in fish stocks and also build the confidence needed for the peaceful management of the overall dispute.

UNCLOS OBLIGATIONS AND POLITICAL COMMITMENTS TO COOPERATE

International law encourages regional states to cooperate to manage common fisheries resources. The South China Sea is a semi-enclosed sea, and UNCLOS calls on the coastal states of such seas to coordinate the management and conservation of living resources and to preserve the marine environment.² Coastal states also have a special responsibility to cooperate on the protection of highly migratory fish species such as Skipjack Tuna.³

Regional countries have already made numerous commitments to cooperatively manage the South China Sea. In 2002, ASEAN and China agreed on a Declaration on the Conduct of Parties in the South China Sea (DOC) which states that “Parties concerned may explore or undertake cooperative activities. These may include ... marine environmental protection [and] marine scientific research”. In 2017, ASEAN and China declared a Decade of Coastal and Marine Environmental Protection in the South China Sea which calls for “collective attention and action to protect the marine ecosystem” and emphasises “the need to promote responsible fishing practices.”

SOUTH CHINA SEA FISHERIES SCIENCE WORKING GROUP (FSWG)

Consistent with these legal and political commitments to cooperate, regional scientists and policymakers from China, Indonesia, Malaysia, the Philippines and Vietnam began a process of regular dialogue in 2018.⁴

In their first meeting in Beijing, participants began by discussing how to cooperatively manage South China Sea fisheries resources. In 2019, participants decided to collectively build a scientific consensus on the status of some of the key fish species in the South China Sea. Due to the ongoing political disputes in the South China Sea, and the resulting absence of a Regional Fisheries Management Organisation (RFMO), previous efforts to collectively assess the regional status of fish stocks have been limited.

The participants convened eight times between 2018 and 2022. Figure 1 below outlines the progress made in each of the meetings. The process benefited from a wide range of expertise. While scientists led the discussions on technical analysis, navigating the political complexities of the South China Sea required a multi-disciplinary approach. Particularly during the early stages of the dialogue, fisheries managers, diplomats, and national security officials helped craft the shared strategy. The Centre for Humanitarian Dialogue (HD) – an independent organisation with the mission to prevent, mitigate, and resolve armed conflict – served as the secretariat and facilitator of this process.

The 1st CFRA aims to build a scientifically sound consensus on which to base cooperative regional action to sustainably manage shared fisheries resources. In developing their approach to scientific cooperation, participants adhered to the following principles:

- Voluntary participation,
- Focus on issues relevant to policymakers across the region,
- Allowing all participating countries to contribute meaningfully and on an equal footing,
- Avoiding territorial disputes and other political sensitivities, and
- Not requiring the sharing of raw data or other sensitive information

| 1ST WORKSHOP BEIJING JUNE 2018 | 2ND WORKSHOP KL SEPT 2018 | 3RD WORKSHOP BEIJING APRIL 2019 | 4TH WORKSHOP MANILA OCT 2019 | 5TH WORKSHOP ONLINE JULY 2020 | 6TH WORKSHOP ONLINE NOVEMBER 2021 | 7TH WORKSHOP ONLINE MARCH 2022 | 8TH WORKSHOP MANILA SEPT 2022 |
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| Decided cooperative action was needed to protect common fish stocks in the South China Sea | Prioritized trans-boundary fish stocks that are economically valuable | Decided to undertake a CFRA and to build common evidence on the status of fish stocks on which to base cooperative action | Identified what information each country could contribute to the CFRA. Prioritized Skipjack Tuna as the focus species | Decided on a common methodology; Achieved consensus on key biological details of Skipjack on which to base the common analysis | Each country presented its analysis of skipjack stocks. Participants decided how to develop a unified analysis that could inform policy | Finalised the analysis of skipjack tuna and discussed policy implications | Publicly launched the results of the CFRA and discuss next steps. |

Figure 1 – A summary of the meetings that produced the 1st CFRA

CFRA METHODOLOGY

The 1st CFRA process assessed the status of Skipjack Tuna stocks around the South China Sea. Participating scientists and policymakers selected Skipjack Tuna because of its economically important, highly migratory, and transboundary nature. Skipjack Tuna is caught by fisherfolk around the region, and all the five participating countries had some level of data that they could contribute. As stated above, UNCLOS lists Skipjack Tuna as a highly migratory species and therefore coastal states have a particular responsibility to cooperate in its management.⁵

5. In addition to Annex I and Article 64, Article 118 of UNCLOS also provides that “States shall cooperate with each other in the conservation and management of living resources”.

1. Teh, L.S.L., Cashion, T., Alava Saltos, J.J., Cheung, WWL, Sumaila, UR (2019) Status, Trends, and the Future of Fisheries in the East and South China Seas. Fisheries Centre Research Reports 27(1): 101pp and Sumaila, U.R., Cheung, W.W.L., Teh, L.S.L., Bang, A.H.Y., Cashion, T., Zeng, Z., et al. (2021) Sink or Swim: The future of fisheries in the East and South China Seas. ADM Capital Foundation, Hong Kong.

2. Article 123 of UNCLOS provides that “States bordering an enclosed or semi-enclosed sea should cooperate ...To this end they shall endeavour (a) to coordinate the management, conservation, exploration and exploitation of the living resources of the sea; [and] (b) to coordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment”.

3. Annex I of UNCLOS lists Skipjack 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”. The CFRA has allowed the key coastal states to collaboratively develop a scientific evidence base that is essential to promoting conservation and reaching optimum utilisation of fisheries resources under International Law.

4. A list of participating institutions can be found in Annex A.

The fisheries scientists collectively decided on a common methodology they would all use for their data collection and analysis. After reviewing several alternatives, they agreed on the Length-Based Spawning Potential Ratio (LBSPR) methodology to analyse their data. This methodology uses the length of fish caught to determine whether the stock is being fished sustainably. LBSPR is a particularly useful assessment tool in data-limited fisheries.

The fisheries scientists from China, Indonesia, Malaysia, the Philippines and Vietnam first reviewed national data on Skipjack Tuna caught in the South China Sea that was being landed in their own ports. Figure 2 shows the approximate sampling locations of Skipjack Tuna. Some of this data was from existing government records while some scientists collected data specifically for the 1st CFRA.

Each country's scientists then analysed their data using the LBSPR methodology to assess the status of locally caught Skipjack Tuna. The scientists then merged their analysis for the 1st CFRA, producing a composite picture of Skipjack Tuna health in the South China Sea. The 1st CFRA process did not require governments to share raw data, but allowed scientists to combine expertise and analysis from across the South China Sea. International cooperation enabled the scientists to develop a much more rigorous understanding of stock status than any of the countries could have produced alone.

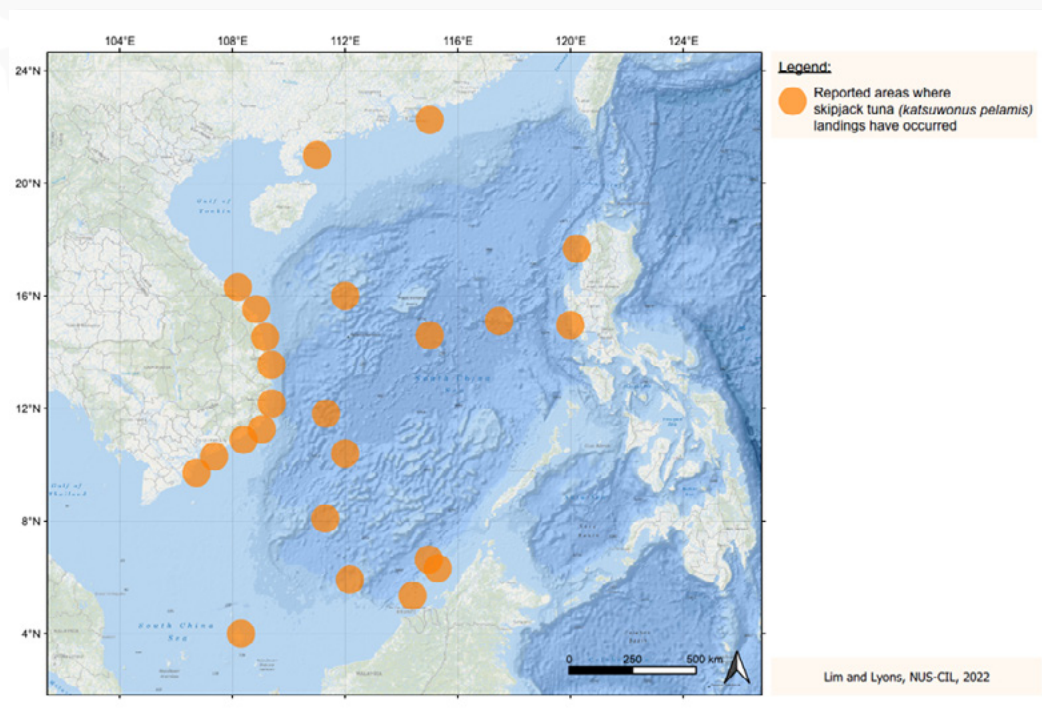


Figure 2 – Approximate catch locations of Skipjack Tuna samples analysed in the 1st CFRA

SCIENTIFIC CONCLUSIONS OF THE 1ST CFRA

The 1st CFRA concludes that the current fishing levels of adult Skipjack Tuna are probably sustainable in most parts of the South China Sea. However, there are also emerging risks. Throughout the South China Sea, there is increasing use of fishing equipment that can catch juvenile Skipjack Tuna. If left unmanaged, this could result in too many juveniles being caught before they can breed, which would result in a rapid decline of the population. The findings of this CFRA can already serve as a baseline so that countries can continue to collectively monitor the health of Skipjack Tuna stocks in the future. It can also inform future CFRAs.

ACHIEVEMENTS AND POLICY IMPLICATIONS OF THE 1ST CFRA

The 1st CFRA process demonstrates that despite the political sensitivities, countries around the region have been able to conduct practical scientific cooperation that supports the sustainable management of shared fish stocks. The process

- **Delivered better evidence to support domestic fisheries policymaking**

By allowing the regional fisheries ministries and research institutes to combine their analysis and expertise, policymakers were provided with better evidence on which to develop their fisheries management policies.

- **Developed norms and standards for future cooperation**

The participating scientists all used the same methodology (LBSPR) to assess the status of Skipjack Tuna landed in their ports. A cohort of regional scientists is now familiar with this methodology and can use it to collaboratively assess the status of other fish stocks.

- **Demonstrated the feasibility and value of regional collaboration**

The CFRA demonstrated that sustained cooperation between government-affiliated scientists can produce evidence that no single country can provide alone.

Based on these achievements, there is an opportunity to enhance regional cooperation by endorsing and supporting the South China Sea Fisheries Science Working Group. This working group provides a unique science-led approach that could continue building the scientific consensus needed for effective regional action.

NEXT STEPS

The South China Sea Fisheries Science Working Group's production of the 1st CFRA demonstrates that coastal countries can work together to jointly manage shared fish stocks in the South China Sea. Not only is it possible, it also provides genuine benefits to the region's ecosystem. Amidst rising tensions in the South China Sea, the 1st CFRA is an example of cooperation that can inspire current political negotiations, such as the ASEAN-China South China Sea Code of Conduct.

The CFRA represents an important first step, but it has only assessed the status of one species of fish. Participants in South China Sea Fisheries Working Group have expressed enthusiasm to continue this cooperation. There are many other transboundary species that would benefit from similar cooperative processes that harness skills and analysis from South China Sea coastal states. If the Fisheries Science Working Group continues to be supported by governments, it would make an important contribution to the sustainable management of the South China Sea's shared resources. This, in turn, would contribute to protecting the region's economy, ensuring the region's food security, and building the region's peace.

ANNEX A – CONTRIBUTORS

Throughout four years of the CFRA process, many officials, experts, and scientists have contributed to the 1st CFRA. The nature of their contributions varies greatly. Some assisted in conceiving the idea, others in building support within their governments, and still others in navigating the sensitive issues, collecting data, and summarising the results. Participants came from a range of backgrounds from both inside and outside of government. Individual and institutional contributors are named below to highlight their contributions to the 1st CFRA. This does not imply their endorsement of the scientific findings or recommendations.

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