

# Developing coordinated management of the sea cucumber sector in New Caledonia

Solène Devez, Ariella D'Andrea and Denis Labiau

## New Caledonia's sea cucumber sector

Twenty species of sea cucumber are harvested in New Caledonia, of which around ten are especially sought-after due to their market value, in particular the black teatfish (*Holothuria whitmaei*), white teatfish (*Holothuria fuscogilva*), sandfish (*Holothuria scabra*) and golden sandfish (*Holothuria lessoni*). Among these locally harvested sea cucumbers with high market value, the black teatfish and white teatfish were listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 2020<sup>1</sup>. In 2019, the catch volume for both CITES species combined was lower (41.2 tonnes by fresh weight) than for some other species such as leopardfish (*Bobadschia argus*), which alone accounted for a reported volume of 71.5 tonnes (see Figure 1). Nevertheless, these two species generated just over 50% of the sector's turnover in 2019 (Observatoire des pêches côtières de Nouvelle-Calédonie 2022).

In response to the two sea cucumber species' listing in CITES Appendix II in 2020, as well as the addition of two other significant species for New Caledonia in 2022 (*Thelenota ananas* and *Thelenota anax*)<sup>2</sup> public authorities

and private operators in the sea cucumber sector began working towards developing integrated management across the entire territory. This sustainable and integrated management of resources listed in Appendix II of CITES is a prerequisite to proving that trade in the resource does not harm the species. Before issuing an export permit for species listed in CITES Appendix II, the management authority of the exporting country must determine that the specimens were legally obtained (known as a legal acquisition finding, LAF). It must also seek the scientific authority's assurance that export will not be detrimental to the survival of the listed species (known as a non-detriment finding, NDF) (Nakamura et al. 2020).

The New Caledonian context is specific in that responsibility for management is spread across several levels. The provincial authorities in each province are in charge of regulating fishing, distributing and processing activities while the Government of New Caledonia is in charge of regulating exports. As a result, the sector's stakeholders deemed it a priority to establish a technical committee on sea cucumbers to structure, coordinate and effectively manage sea cucumber resources.

### SEA CUCUMBER CATCHES (FRESH WEIGHT IN TONNES) IN NEW CALEDONIA IN 2019.

The seven species for which less than 2 tonnes were caught are not represented on this graph.

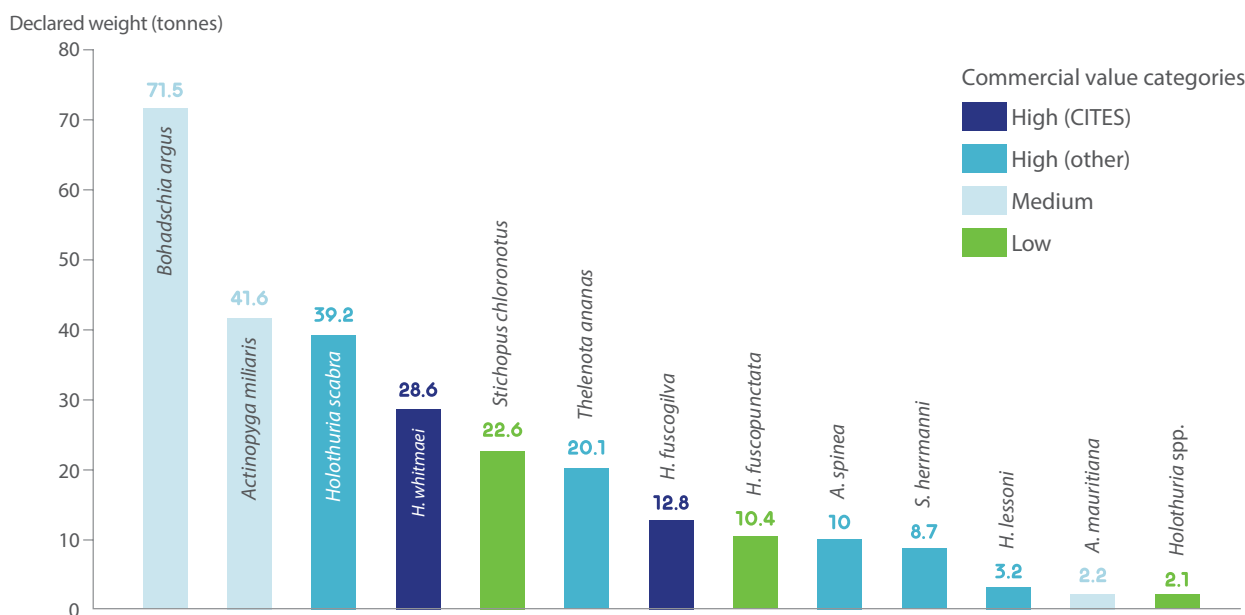


Figure 1. Sea cucumber catches by species in 2019 in New Caledonia (Source: Observatoire des pêches côtières de Nouvelle-Calédonie 2022)

<sup>1</sup> In the same year, a third species was listed in CITES Appendix II, but it does not concern the Pacific Ocean (*H. nobilis*).

<sup>2</sup> For the two species *Thelenota ananas* and *Thelenota anax*, as well as a third that does not concern the Pacific Ocean (*T. rubrilineata*), their inclusion in CITES Appendix II is due to enter into effect on 25 May 2024. New Caledonia's reported catches of *Thelenota ananas* amounted to 20.1 tonnes in 2019 (Observatoire des pêches côtières de Nouvelle-Calédonie, 2022).

## Authorities involved in managing the sea cucumber sector

### *The fisheries management role of provincial authorities*

In order to harvest sea cucumbers, commercial fishers must apply for a special licence (Article 341-2 of the Northern Province’s Environment Code) or a specific licence (Article 341-2 of the Southern Province’s Environment Code). In 2021, 178 fishers applied for a special or specific licence to harvest sea cucumbers, with 71% in the Northern Province and 29% in the Southern Province (Laplante et al. 2023). As the licensing authorities, the provinces are responsible for controlling fishing licences as well as ensuring compliance with minimum sizes (live and dry specimen length) and implementing temporary harvest bans. Distribution and processing also fall under provincial jurisdiction and although there is no cap on the number of distributors and processors, a special permit is required for transporting and marketing. This permit had already existed in the Northern Province since 2019 and was added to the Southern Province’s Environment Code in 2022 to harmonise the regulation of all activities under provincial jurisdiction.

The minimum sizes of live and dried sea cucumbers were also amended in 2021 to align them in the Northern and Southern Provinces. Disparities in the size of sea cucumber species persist between provinces, particularly for certain CITES species (see Table 1). Harmonising these sizes is essential for ensuring integrated management of provincial fisheries. Regulating and enforcing minimum sizes is one of the most important drivers, not just of sustainable fisheries but also of maximising economic benefits for fishers (Lee et al. 2018).

For the sustainable exploitation of sea cucumber species listed in CITES Annex II, the ultimate goal is to allocate

New Caledonia is made up of three provinces: the Northern, Southern and Loyalty Islands Provinces. They are responsible for managing coastal fisheries. The provinces’ regulatory jurisdiction over the management and conservation of biological and non-biological natural resources up to 12 nautical miles from the baseline stems from Article 46 of Organic Law No. 99-209 of 19 March 1999 relating to New Caledonia. The various environment codes of 2008, 2009 and 2016 respectively specify the provincial procedures for fisheries resource management.





quotas by geographical area throughout New Caledonia as a whole, and then determine quotas by province.

Thus, the provinces play a crucial role in sustainable management of sea cucumbers listed in CITES Appendix II, including by supporting the French Institute of Research for Development (IRD), which is the scientific authority locally designated to prepare NDFs and provide input to the fisheries management part of the NDF assessment.

### *The role of the Government of New Caledonia in managing sea cucumber exports*

In New Caledonia, exports fall under the jurisdiction of the Government of New Caledonia, and controls for the entire territory are conducted by governmental authorities in the Southern Province. The Animal Health, Food and Phytosanitary Inspection Service (SIVAP) is responsible for export controls and in particular for verifying both the legality of catches and compliance with quotas and tolerance thresholds for undersized specimens. As such, SIVAP was designated as the focal point for management of species

Table 1. Minimum sizes for four sea cucumber species listed in CITES Appendix II

Species	Minimum live length of animal in Northern Province	Minimum dry length of animal in Northern Province	Minimum live length of animal in Southern Province	Minimum dry length of animal in Southern Province	
<i>Holothuria whitmaei</i> Black teatfish	30 cm	14 cm	30 cm	16 cm	
<i>Holothuria fuscogilva</i> White teatfish	35 cm	16 cm	35 cm	16 cm	
<i>Thelenota ananas</i> * Prickly redfish	45 cm	14 cm	45 cm	14 cm	
<i>Thelenota anax</i> * Amberfish	N/A	N/A	55 cm	25 cm	

\*Entry into effect of this listing delayed until 25 May 2024.



Diver measuring a sea cucumber during a stock assessment. © Matthieu Juncker (SPC)

listed in CITES.<sup>3</sup> As the management authority, SIVAP prepares the LAF, examines any CITES export permit applications<sup>4</sup> and ensures compliance with existing regulations on CITES species.

The Government of New Caledonia selected IRD to be the scientific authority tasked with issuing findings as to whether exports would be detrimental to the conservation status of the resource based on available scientific evidence.<sup>5</sup> On the basis of these scientific findings, the IRD issues export quotas for CITES species in the NDF.

For the black teatfish and white teatfish included in Annex II, SIVAP is responsible for drafting the export part of the NDF assessment. Currently, the export market for all species across the entire territory is shared between two exporters. Implementing export quotas has helped trigger a process of structuring the sea cucumber sector by involving all actors in its management (Observatoire des pêches côtières de Nouvelle-Calédonie 2023).

### *Existing provincial advisory committees under current regulations*

Article 341-1 of the Northern Province's Environment Code established a committee to monitor sea cucumber

regulations (CSRH-PN). This committee, which was further defined by an order<sup>6</sup>, supports management of the sector in the Northern Province by issuing advice on any proposed amendments to sea cucumber fisheries regulations and may make management proposals. It is composed of provincial elected officials, provincial technical departments, commercial fishers from the Northern Province, processors and exporters, but also the fisheries departments of the Southern and Loyalty Islands Provinces, customs authorities, the gendarmerie and the Maritime Authority. By bringing administrative authorities and the sector's various stakeholders together, the committee's membership ensures integrated management of the sea cucumber sector in the Northern Province.

There is no equivalent body provided for in the Southern Province's Environment Code, but the Southern Province Environmental Protection Committee was set up to advise on resource management. It makes proposals on marine resource management provisions, including on sea cucumbers.

For this reason, with the introduction of export quotas and the PROTEGE project in 2020, a territory-wide technical committee on sea cucumbers was established to bring together more broadly all the actors in the sea cucumber sectors of the Northern, Southern and Loyalty Islands provinces.

<sup>3</sup> Resolution No. 147 of 11 August 2016 on implementation of the Washington Convention (CITES) in New Caledonia

<sup>4</sup> Order No 2019-1177/GNC of 30 April 2019 designating the competent administrative agency for examination of CITES permits and certificates in New Caledonia

<sup>5</sup> Order No 2019-1179/GNC of 30 April 2019 designating the CITES Scientific Authority for New Caledonia

<sup>6</sup> Order No. 2020-448/PN of 28 September 2020 establishing the Monitoring Committee for Sea Cucumber Regulations in the Northern Province

## A territory-wide technical committee on sea cucumbers for a co-management approach

The Technical Committee on Sea Cucumbers is an advisory body whose role is to coordinate the various stakeholders in the sea cucumber sector, combining its members' respective areas of expertise in order to make recommendations. This committee, established on 9 March 2023,<sup>7</sup> met four times during the year. The last meeting was on 29 November 2023.

Membership of the Technical Committee on Sea Cucumbers at its meeting of 06 April 2023 is listed here (Chambre d'agriculture et de la pêche de Nouvelle-Calédonie, CAP-NC 2023):

Administrative authorities	Professionals
1 representative of SIVAP	1 representative of the CAP-NC Fisheries section
1 representative of the Coral Sea Natural Park and Fisheries Department	1 representative of each of the two exporters
1 representative of the Southern Province	1 representative of commercial fishers in the Southern Province
1 representative of the Northern Province	1 representative of commercial fishers in the Northern Province
1 representative of commercial fishers in the Loyalty Islands Province	N/A

The Technical Committee on Sea Cucumbers relies on the Coastal Fisheries Observatory for data collection and identifying indicators for real-time monitoring. The committee has also retained a scientific expert, who works with the Southern Cross University of Australia, to advise on any proposals or amendments to quotas mentioned in NDFs and in annual NDF reports. Its members may invite any qualified individual to provide insight on targeted issues, such as scientists, elected officials, non-governmental organisations, experts, customs authorities, maritime police, the Government of France, Department of Economic Affairs, traditional leaders, and so on.

Thus, as well as coordinating actors in New Caledonia's sea cucumber sector, the Technical Committee on Sea Cucumbers serves to empower these various stakeholders. By its balanced distribution of the number of seats among all organisations, including commercial ones, in particular the export sector, the committee ensures that professionals are involved in managing the sector. This balanced distribution is one of the keys to structuring and empowering all stakeholders in the sector (Lee et al. 2020). The role of the Technical Committee on Sea Cucumbers is to:

*Ensure the coordination of the sea cucumber sector in New Caledonia by communicating and by supporting all actors in an optimal and concerted manner, taking account of the issues they face.*

The meeting of 6 April 2023 agreed that the Technical Committee on Sea Cucumbers would temporarily pursue the following tasks:

1. present projects and concerted opinions on the sector's management to elected officials and decision-making bodies;
2. discuss and submit a strategic management plan with those involved in sea cucumber management and follow up on this plan with managers; and
3. issue opinions and recommendations on sea cucumber management at the territory level.

In the future, the committee's operations and mandate may be reinforced by an official order.

The Technical Committee on Sea Cucumbers comes under the fisheries section of the Chamber of Agriculture and Fisheries (CAP-NC), which coordinates and manages it. The CAP-NC was selected to organise the committee in its capacity as a sectoral chamber with a territory-wide scope. The CAP-NC's role is to represent commercial fishers with regard to public authorities and to support them, while also coordinating projects for the development and structuring of the fishing sector. The Technical Committee on Sea Cucumbers plays a key role for CITES species by rigorously monitoring harvests and exports, and by preparing the assessment for each NDF in a coordinated and consultative manner.

## What future for New Caledonia's sea cucumbers?

For the sustainability of sea cucumber resources, there are many benefits to professionals and public authorities meeting and working together. These include:

- improving sea cucumber stock management in New Caledonia
- targeting catches according to species abundance and to their market value
- exporting quality products sourced through sustainable management
- developing mechanisms for inter-institutional cooperation

<sup>7</sup> The PROTEGE project helped to further promote the Technical Committee on Sea Cucumbers, in particular via the recruitment of a facilitator and the completion of a legal study on developing a favourable legal framework for sustainable sea cucumber management in New Caledonia.

- preventing regulatory gaps in the management of export fisheries, and
- providing a mechanism for participating in decision-making and a platform for discussion and exchange of information.

In the medium term, a multi-year management plan will instate sustainable sea cucumber management in New Caledonia and improve biological knowledge for the survival of a species seen by SPC member countries and territories as iconic<sup>8</sup> and providing many ecosystem services on which the health of our oceans depends.

## References

- Chambre d'agriculture et de la pêche de Nouvelle-Calédonie. 2023. La Calédonie Agricole N°193, Nouméa, Nouvelle-Calédonie. Octobre & Novembre 2023 : 52 p. <https://docs.google.com/gview?url=https://www.cap-nc.nc/wp-content/uploads/LCA193.pdf>
- Laplante J-F., Labiau D., Chavance P., Pierre A. 2023. Comité technique holothurie (CTH) de Nouvelle-Calédonie, 2023. Adecal Technopole, Nouméa, Nouvelle-Calédonie. 8 p. [https://www.technopole.nc/sites/default/files/adezal\\_holothurie\\_cth\\_livvable\\_14\\_vf.pdf](https://www.technopole.nc/sites/default/files/adezal_holothurie_cth_livvable_14_vf.pdf)
- Lee S., Govan H., Bertram I., Kinch J. 2020. A comparison of sea cucumber fishery management plans, and implications for governance in Pacific Island countries. SPC Fisheries Newsletter 161. Noumea, New Caledonia: Pacific Community. 34–39. <https://purl.org/spc/digilib/doc/ow5fp>
- Lee S., Govan H., Wolff M., Purcell S. 2018. Economic and other benefits of enforcing size limits in Melanesian sea cucumber fisheries. SPC Fisheries Newsletter 155:29–36. <https://purl.org/spc/digilib/doc/ocggg>
- Nakamura, J.N. and Kuemlangan, B. 2020. Implementing the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) through national fisheries legal frameworks: a study and a guide. Legal Guide No. 4. Rome, FAO. <https://doi.org/10.4060/cb1906en>
- Observatoire des pêches côtières de Nouvelle-Calédonie 2021. Rapport d'activité 2020. ADECAL Technopole, Nouméa, Nouvelle-Calédonie : 24 p. [https://www.technopole.nc/sites/default/files/opc\\_ra\\_2020\\_web\\_light\\_0.pdf](https://www.technopole.nc/sites/default/files/opc_ra_2020_web_light_0.pdf)
- Observatoire des pêches côtières de Nouvelle-Calédonie 2022. Rapport d'activité 2021. ADECAL Technopole, Nouméa, Nouvelle-Calédonie : 23 p. [https://www.technopole.nc/sites/default/files/opc\\_ra2021-web.pdf](https://www.technopole.nc/sites/default/files/opc_ra2021-web.pdf)
- Observatoire des pêches côtières de Nouvelle-Calédonie 2023. Rapport d'activité 2022. ADECAL Technopole, Nouméa, Nouvelle-Calédonie : 24 p. [https://www.technopole.nc/sites/default/files/opc\\_ra2023\\_web\\_0.pdf](https://www.technopole.nc/sites/default/files/opc_ra2023_web_0.pdf)

---

### For more information

*Solène Deveze*  
Legal Research Assistant  
(Coastal Fisheries and Aquaculture)  
[solened@spc.int](mailto:solened@spc.int)

*Ariella D'Andrea*  
Legal Adviser  
(Coastal Fisheries and Aquaculture)  
[ariellad@spc.int](mailto:ariellad@spc.int)

*Denis Labiau*  
Head of the Fisheries Section of the  
New Caledonia Chamber of Agriculture  
and Fisheries  
[dlabiau@cap-nc.nc](mailto:dlabiau@cap-nc.nc)

<sup>8</sup> SPC member countries and territories asked SPC's Fisheries, Aquaculture and Marine Ecosystems Division to "examine sea cucumber production as an iconic Pacific taxon that could be developed by the region" (Outcomes and actions report from the 6th SPC Regional Technical Meeting on Coastal Fisheries and Aquaculture, paragraph 24.b.ii).