



Wildlife Justice
Commission



EXECUTIVE SUMMARY

GIANT CLAM SHELLS, IVORY, AND ORGANISED CRIME: Analysis of a potential new nexus

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For millennia, giant clams have provided a source of subsistence meat for coastal communities across the Asia and Pacific regions. However, during the past 50 years, the sharp growth in commercial harvesting and illegal poaching of clams as a high-value luxury food, live clams for the international aquarium trade, and shells for the ornamental carving industry has driven the overexploitation and rapid decline of giant clam populations throughout much of their range.

In response to the surge in international commercial trade, all giant clam species are listed in Appendix II under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and are protected by national legislation in most range countries. The world's largest giant clam species *T. gigas* is the most threatened, with about half of its wild populations either severely decimated or locally extinct at some sites.¹

Despite these protections, large-scale poaching and illegal trade of giant clams continue to pose a serious threat, and a series of high-volume seizures of shells in the Philippines during the past three years suggests there could be a shift in the criminal dynamics behind this trade.

Analysis of satellite imagery in 2016 identified that more than 104 km² of coral reefs in the South China Sea had been destroyed as a direct result of giant clam poaching, equivalent to almost 20,000 football fields.² If this criminality is left unchecked, this widespread coral reef destruction could have a significant impact on the viability of fishing grounds in these

waters as well as broader impacts for biodiversity loss and ocean health.

Open-source research conducted by the Wildlife Justice Commission found that Philippine authorities made at least 14 seizures of giant clam shells since 2016, with all but one of these cases occurring since 2019. The seizures had a combined weight of 120,639 tonnes and a total estimated value of more than USD 85 million. Most of the cases involved shells that were being stockpiled at coastal locations in Palawan, the westernmost province of the Philippines, in open spaces with little or no concealment. Given the high-volume discoveries and the locations in question, Philippine authorities believe a larger organised crime group is behind the development of the stockpiles, which were intended to be smuggled out of the country by boat. Although so far, the only arrests made have been of local individuals implicated in several of the incidents.



Image 1 and Cover photo: Gongbei Customs seizes statue made from giant clam shells, June 2017. Credit: China Customs.

¹ <https://www.sciencedaily.com/releases/2017/12/171211120442.htm>

² http://www.gov.cn/zhengce/content/2016-12/30/content_5155017.htm



*Image 2: A dragon carved from a giant clam shell.
Credit: C. Larson.*

China is the primary suspected destination of the giant clam shell stockpiles, while Japan could be a potential secondary location of concern. However, no direct linkages have been identified yet from the Philippine seizures to either of these countries.

In China, giant clam shells are used in the carving industry to create an array of products such as statues, jewellery, and ornaments, which sell for high values



*Image 3: Men upload giant clam shells at a dock in Tanmen, Hainan province, China in April 2013.
Credit: Chen Xuelun/IC.*

on the Chinese market. Once carved, the translucent white shells are said to resemble ivory, and it has been reported that giant clams may have become a substitute material for elephant ivory,³ for which the global trade is strictly regulated and domestic trade within China has been banned since the end of 2017.⁴ Japan also has an active carving industry and market for giant clam shells, although little is known about it.

The Wildlife Justice Commission's research found that China was the only country other than the Philippines to have reported giant clam shell seizures in the period since 2016. It was identified that at least 46 seizures were made in China relating to the smuggling or illegal trade of giant clam shells. Only two of these cases related to large quantities of raw shells, while all other cases involved smaller, retail-level quantities of shells and shell crafts.

The reported seizures in China indicate a high rate of convergence of giant clam smuggling and trade alongside other wildlife species, with almost half of the seizures (22 cases) involving parts or products from multiple species. Of particular concern is that 17% of all cases involved carved clam shell products seized with carved elephant ivory and other types of ivory or ivory-like products, including mammoth ivory and narwhal ivory. This convergence could suggest that the same criminal groups are involved in the illegal trade of both commodity types in China. However, the most frequent convergence observed in the seizures was of giant clam shells with other marine products, particularly hawksbill turtle shell crafts,

³ <http://www.vliz.be/imisdocs/publications/340612.pdf>

⁴ http://www.gov.cn/zhengce/content/2016-12/30/content_5155017.htm

corals, seahorses, and other seashells. This could point to a potential convergence in the supply chain for marine products, such as source locations and/or smuggling routes.

While there are uncertainties about the true extent of the illegal retail market for giant clam shell crafts in China, the small volume of crafts evidenced in the seizures could potentially point to a speculative investment strategy around the raw shells.

Although the Philippines cases represent just one quarter of the total number of reported seizures, the weight of the associated contraband corresponds to 99% of all giant clam shells or carved shell products seized during this period. The Wildlife Justice Commission is concerned that the high volume of shells in the Philippine seizures could indicate the possible involvement of organised crime⁴, due to the level of logistics, organisation, and finance required to

coordinate the collection and transportation of such vast quantities of product. Furthermore, the low level of detection of significant quantities of contraband outside of the Philippines suggests that this trade is largely being conducted with impunity.

From this research, the Wildlife Justice Commission has identified a number of key intelligence gaps that should be further investigated to enable a full assessment of the threat posed by the giant clam shell trade. These include:

- **The movement** of the raw contraband along the smuggling chain remains almost completely undetected.
- **Despite suggestions** that China and Japan are the potential destinations for the shell stockpiles, no smuggling routes to either country have been identified.



Image 4: Part of the 80-tonne stockpile of giant clam shells seized in Palawan, the Philippines in March 2021. Credit: Philippine Coast Guard.

⁴ The United Nations Convention against Transnational Organised Crime (UNTOC) defines organised crime by the nature and motivation of the group that commits the act, rather than by the specific types of crime committed. The criteria are: a structured group of three or more persons; that exists for a period of time; and acts in concert with the aim of committing at least one serious crime; to obtain, directly or indirectly, a financial or other material benefit.

- **Many questions** remain unanswered about the modus operandi and current consolidation and processing locations.
- **There is almost no information** on the criminal drivers and enabling factors behind the stockpiling phenomenon.
- **The extent and nature** of the role of corruption in the illegal harvest and trade of giant clams is unknown.
- **The true extent and value** of the illegal retail market for giant clam shell products in China (and legal market in Japan) is unknown.

It is known that criminal networks are highly adaptive and can rapidly shift to new commodities or modus operandi in response to strengthened law enforcement efforts or new opportunities. Therefore, it is important that law enforcement authorities in the implicated countries conduct further investigations of this emerging trend to better understand the factors that are driving the surge in the illegal giant clam shell trade and its potential nexus with organised crime. To assist in this regard, the following key issues are

highlighted for consideration by the relevant authorities in China, the Philippines, and Japan:

- I More research** is required to address the intelligence gaps listed above and fully assess the level of threat in the giant clam shell trade, in order to implement an appropriate, targeted, and commensurate law enforcement response.
- II Physical and online markets** in China provide potential entry points for further investigation and engagement with the trading networks to gather intelligence.
- III Intelligence analysis** and special investigative techniques should be utilised to develop the intelligence picture and examine the potential role of organised crime.
- IV It is important** to assess the extent of the risk posed by the possible use of giant clam shells as a substitute for ivory, the effect that the sustained trade in ivory substitute materials could have in perpetuating demand for elephant ivory, and the ongoing threat this may pose to elephants in the long term.



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