

A large sea turtle is shown swimming in clear blue water. The turtle is positioned in the center-right of the frame, moving towards the left. Its head is lowered, and its front flippers are extended. The background shows a rocky seabed with some green algae or coral. Sunlight rays are visible in the upper right corner, creating a bright, hazy effect. The overall scene is serene and natural.

WILDAID

**SEA TURTLES:
AN UNCERTAIN FUTURE**

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ABOUT WILDAID

WildAid's mission is to end the illegal wildlife trade in our lifetimes. We envision a world where people no longer buy wildlife products such as shark fin, elephant ivory and rhino horn. With an unrivaled portfolio of celebrity ambassadors and global network of media partners, WildAid leverages nearly US \$200 million in annual pro bono media with a simple but powerful message, "When the Buying Stops, the Killing Can Too."

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EXECUTIVE SUMMARY

Around the world, sea turtles are revered for their beauty and celebrated as one of Earth's oldest creatures: The seven species in existence today have been around for over 100 million years. Yet, now, due to a multitude of human-based threats, all sea turtles are at risk of extinction. Illegally killed for their eggs, meat and shells, sea turtles face direct pressures and overexploitation from poachers in Asia, Africa and the Caribbean. The products are commonly consumed for their protein value, rich aesthetic, and alleged health benefits. Even when not targeted directly, accidental capture and entanglement in fishing gear results in drownings. Rapid human development of coastlines around the globe has resulted in the reduction or disappearance of suitable nesting sites and feeding habitats. Exponential increases in garbage and

plastic waste circulating in the oceans pose critical new threats to marine species. Sea turtles are also highly susceptible to the effects of climate change: as sea levels rise, the availability of nesting beaches declines. Meanwhile, rising temperatures result in a disproportionate ratio of females born, threatening the gender balance of many populations.

International trade in all seven species is banned. The five species found in China are offered further protection through their listing as National Level II Protected Wildlife. Despite these regulations, illegal trade continues. In late 2017, WildAid commissioned Intage to conduct a survey of 1,500 residents of Beijing, Shanghai, Guangzhou, Beihai and Sanya to gain a clearer picture of sea turtle consumption and better understand overall awareness

and attitudes toward the trade in their products. Some 62 percent of respondents know that the tortoise-patterned items fashioned into jewelry, arts and crafts and marketed throughout China are made from sea turtles. Seventeen percent of respondents had purchased sea turtle products and 22 percent are considering making a purchase in the future. The majority of these consumers and intend-ers have or would buy sea turtle products for their aesthetic beauty, with 79 percent of respondents in each category purchasing bracelets, jewelry and decorative crafts. Nearly half of consumers bought the products as souvenirs, with 69 percent of purchases taking place at domestic souvenir shops, the majority upon recommendation by their tour group guide. Of the 78 percent surveyed who aren't considering consuming sea turtle products in the future, 69 percent said their decision is based on wanting to protect sea turtles and more than half cite the cruel and brutal process for making the products as a reason. More than 80 percent of all respondents believe that at least some sea turtle species are endangered, with over 60 percent agreeing that poaching is common and a serious problem.

The survey findings suggest there is ample room to improve the public level of awareness of the illegality of the sea turtle trade, particularly in the tourism sector, while building on the knowledge that the species' are endangered and require urgent action to ensure their populations survive. With 95 percent of respondents supporting greater national protection for those species native to China's waters, it's clear that the will to save these ancient creatures is there.





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I. OVERVIEW

There are a total of seven species of sea turtles in the world, with five distributed globally and two that are regional to the Gulf of Mexico and Oceania. The five globally-distributed species are found in China, and are listed as national level-II protected wildlife.

TABLE I. OVERVIEW OF SEA TURTLE SPECIES AND THEIR RELEVANT PROTECTION STATUS.

SPECIES OVERVIEW	FAMILY	DERMOCHELYIDAE		CHELONIIDAE	
	SPECIES	Dermochelys coriacea	Eretmochelys imbricata	Chelonia mydas	
	NAME	Leatherback Turtle	Hawksbill Turtle	Green Turtle	
	NAME IN CHINESE	棱皮龟	玳瑁	绿蠓龟/绿海龟	
DISTRIBUTION	GLOBAL DISTRIBUTION	Global: tropical and temperate waters; widest range among all species	Global: tropical and sub-tropical waters	Global: tropical and temperate waters	
	DISTRIBUTION IN CHINA	East China Sea, South China Sea	All along the coast	All along the coast	
	POPULATION ESTIMATE	~34-35k nesting females	~20-23k nesting females	~85-90k nesting females	
PHYSICAL ATTRIBUTES	UNIQUE CHARACTERISTIC	Leather-like shell	Narrow pointed beak, unique shells	Green colored fat and cartilage	
	ADULT WEIGHT	600-1500 lbs	90-150 lbs	150-400 lbs	
	ADULT LENGTH	55-63 inches	30-35 inches	31-47 inches	
	DIET ^a	Jellyfish and other soft-bodied animals	Sponges, algae	Seagrass, algae	
THREATS & PROTECTION	MAIN THREATS	Bycatch and pollution	Harvest of shell	Harvest of eggs and meat	
	CITES	Appendix I			
	IUCN	VU ^b	CR ^c	EN ^d	
	CHINA'S PROTECTION LEVEL	National Level-II			



- a. <http://libguides.coastalpines.edu/turtles/species>
- b. <http://www.iucnredlist.org/details/6494/0>
- c. <http://www.iucnredlist.org/details/8005/0>
- d. <http://www.iucnredlist.org/details/4615/0>
- e. <http://www.iucnredlist.org/details/3897/0>
- f. <http://www.iucnredlist.org/details/11534/0>
- g. <http://www.iucnredlist.org/details/11533/0>
- h. <http://www.iucnredlist.org/details/14363/0>

	<i>Caretta caretta</i>	<i>Lepidochelys olivacea</i>	<i>Lepidochelys kempii</i>	<i>Natator depressus</i>
	Loggerhead Turtle	Olive Ridley/ Pacific Ridley	Kemp's/ Atlantic Ridley	Flatback Turtle
	赤蠵龟/蠵龟	太平洋丽龟	肯氏丽龟	平背龟
	Global: tropical and temperate waters	Global: tropical and sub-tropical waters	Mostly in Gulf of Mexico	Only around Australia and Papua New Guinea
	Yellow Sea, East China Sea	South China Sea	N/A	N/A
	~40-50k nesting females	~800k nesting females	~7-9k nesting females	~20k nesting females
	Large heads, powerful jaws	Olive colored shell	Powerful jaws, triangular head	Flat body
	175-400 lbs	75-110 lbs	~100 lbs	~200 lbs
	33-48 inches	24-28 inches	24-28 inches	~40 inches
	Shellfish	Algae, crabs, shrimps, fish, lobsters, etc.	Crabs, fish, jellyfish, mollusks	Sea cucumber, jellyfish, etc.
	Loss of nesting habitat	Harvest of eggs and meat	Harvest of eggs and meat	
	VU ^e	VU ^f	CR ^g	DD ^h
			N/A	N/A



II. THREATS

HABITAT DESTRUCTION

The rapid development of coastlines around the globe due to industrialization, urbanization, and tourism has reduced available nesting beaches for sea turtles. First, shrinkage of natural beaches directly reduces the available space for sea turtles to nest and lay eggs. Second, shoreline armoring and other artificial structures may reduce nesting area in some remaining natural beaches and restrict female turtles from choosing the optimal place to lay nests.¹ In addition, increased level of human activities and light pollution from coastal development can also discourage female turtles from nesting on beaches. This issue is more critical for sea turtles compared with other species facing the same issue because some sea turtles, especially hawksbills, have a habit of returning to the same locations where they were born to lay their own eggs after decades of maturation.²

In addition to the destruction of nesting habitat, the destruction of viable feeding environments also poses a major threat to the sustainability of sea turtle populations globally. As several species of sea turtles rely on coral reefs and sea grass beds as their feeding habitat, the increasing threats to these marine ecosystems caused by human activities and climate change will undoubtedly reduce the availability of their food sources.

CLIMATE CHANGE

Climate change and the general rise in average temperature will negatively impact the sustainability of sea turtle populations globally in two ways. First, the expected rise in sea levels due to global warming will further reduce the already decreasing stretches of available nesting beaches for sea turtles. Second, rising temperature will distort the gender balance of newly hatched sea turtles and negatively impact reproductive capability in the long run. Sea turtles share the same temperature based sex determination characteristic as other reptiles. The temperature of an egg's incubation environment determines the hatched turtle's gender, with eggs in colder parts of the nest turning into males and those in warmer parts of the nest turning into females.³ Therefore, a rise in overall average temperatures can potentially generate more females going forward and disrupt the gender balance needed for healthy reproduction.

- 1 <https://conserveturtles.org/information-sea-turtles-threats-coastal-armoring/>
- 2 http://www.fpir.noaa.gov/Library/PRD/Sea%20Turtles/Hawksbills/2016_hawksbill_brochure.pdf
- 3 <https://conserveturtles.org/information-sea-turtles-threats-climate-change/>
- 4 Schuyler, Q, Wilcox, C, Townsend, K, *et al.* (2015). Risk analysis reveals global hotspots for marine debris ingestion by sea turtles. *Global Change Biology*, DOI:10.1111/gcb.13078
- 5 https://www.washingtonpost.com/news/speaking-of-science/wp/2015/09/15/more-than-half-the-worlds-sea-turtles-have-eaten-plastic-new-study-claims/?utm_term=.f524bc9aa338
- 6 <https://www.pressreader.com/thailand/the-nation/20100725/281539402239468>
- 7 <https://www.worldwildlife.org/threats/bycatch>
- 8 http://wwf.panda.org/what_we_do/endangered_species/marine_turtles/

POLLUTION OF MARINE ENVIRONMENT

The increase in the amount of garbage circulating in the ocean also poses a critical threat to the health and survival of sea turtles. Some species, especially the olive ridley turtles, eat jellyfish as a typical food source, and therefore frequently confuse plastic waste in the ocean as jellyfish. A 2015 study led by a scientist at the University of Queensland estimates that more than half of the world's sea turtles have eaten plastic in the ocean.⁴

Turtles can be injured or killed by blockage or piercing of intestines caused by the ingested plastic, absorption of toxins if ingested, or by the falsified feeling of fullness after ingesting plastic.⁵ Even if a turtle is not directly killed by the plastic debris, toxins from plastic may accumulate in its body and negatively impact its health and reproductive capabilities. The rise in the level of absorbed toxins from plastic ingestion and other sources of ocean pollution may help explain the recent cases of toxicity from consumption of turtle meat observed in communities that traditionally consumed turtle meat without similar issues.⁶

In addition to plastic waste in the ocean, sea turtles are vulnerable to pollution on nesting beaches, which become obstacles to nesting female turtles as well as hatched juvenile turtles. Oil pollution and other direct pollution to sea water including chemical and agricultural runoff also impact the health of sea turtles.

BYCATCH

Capture on fishing hooks and entanglement in gill nets poses another critical threat for sea turtles, especially as the rise in global demand for seafood drives more fishing operations globally. The use of unselective fishing methodologies including long lines, trawling, and gillnets increase the risks of bycatch for sea turtles. J hooks attached to long lines cause serious injury or death if accidentally swallowed by turtles. Trawling and gillnets in waters with sea turtles can often lead to bycatch or entanglement, since the net's mesh is always not large enough for turtles to escape.⁷ If entangled by functioning or discarded fishing nets, sea turtles may drown as they are unable to reach the surface of the water to breathe.⁸ Due to their larger size, loggerhead, green, olive ridley and leatherback turtles are especially vulnerable to bycatch.



USE BY HUMANS

Sea turtles are exploited by humans around the world for various purposes. Meat from green and leatherback turtles and eggs from loggerhead and olive ridley turtles are widely consumed as important sources of protein and nutrition by coastal fishing communities in Southeast Asia, South Asia, Africa, and the Caribbean. Carapace (the upper part of the shell) or whole bodies of hawksbill turtles are used as raw materials for crafts and souvenirs. While some use and consumption behaviors are driven by economic factors such as the lack of other affordable choices of protein, others are driven by long-existing traditional customs and beliefs.

SHELLS

Shells are widely used to make ornaments as well as tools in China, Japan, Southeast Asia, and the Caribbean. Most commonly seen products include:

- **Whole taxidermies** are popular for home decorations in China. Taxidermies demanded and traded are mostly that of hawksbill turtles, which are preferred for their distinctive look, beautiful shells, and appropriate size for home usage. Taxidermies made of green turtles are also seen in the market, although these are much less preferred than hawksbills.

- **Jewelry and small ornaments** made from hawksbill turtle shells are popular in all regions that use hawksbill shells. Among all jewelry types, bracelets are most commonly seen as their size and shape fully present the sought-after color patterns of the hawksbill shell.
- **Small tools with decorative elements** such as combs, glasses frames and hand fans are also widely found. In addition, hawksbill turtle shells are widely used to make the plectra for playing Guzheng, a popular traditional Chinese musical instrument.

EGG CONSUMPTION

Poaching and consumption of sea turtle eggs as an important source of protein and nutrition is common in many coastal communities in Southeast Asia, around the Indian Ocean, and throughout the Caribbean. In the Caribbean, turtle eggs are commonly found in markets and local cuisine. In Asia and Africa, poaching of eggs is an especially serious issue in Malaysian and Indonesian Borneo, Papua New Guinea, and Kenya.⁹ While most egg poaching and consumption happen locally, the strong demand for turtle eggs in the states of Sabah, Sarawak, and Terengganu in Malaysia has generated a thriving sea turtle egg smuggling trade from Philippines and Indonesian Borneo to Malaysian Borneo. Despite a national ban on the sale of all turtle products, turtle eggs

can still be found in the traditional wet markets in the three Malaysian states with strong traditions of egg consumption. Large scale poaching of eggs from nesting beaches, especially for supplying cross-border trade, is especially detrimental for the reproduction and overall sustainability of local turtle populations, especially since sea turtles have a relatively low hatching and survival rate.

MEAT CONSUMPTION

Similar to their eggs, sea turtle meat is commonly consumed by coastal communities as a protein source. Green turtles are widely consumed in Indonesia, with a reported killing of as high as 27,000 turtles in 1999. However, the recent sharp decline in turtle populations has curbed consumption in places such as Bali, once a hotspot for consumption and trade of green turtle meat. Poaching for meat is also common in Papua New Guinea and Bangladesh, while anecdotes of consumption are recorded in Thailand, Myanmar, Maldives, and Sri Lanka. In other parts of Asia, such as China and Philippines, the turtles eaten are usually the product of bycatch rather than active, large-scale poaching. In Africa, poaching of turtles for meat is common along the coast of East Africa, and around the islands of Comoros and Mayotte. Poaching

for meat is rampant in Madagascar, with an estimated 10,000 – 16,000 turtles caught annually. Cases of lethal poisoning from the consumption of turtle meat have been reported in Thailand, Madagascar, and several countries in the Southern Pacific. However, despite the increased risk of consuming sea turtle meat, the practice continues today in many communities.

In addition to its role as a protein source, some communities consume turtle meat along with turtle oil, blood, and testicles, for their alleged medicinal purposes. For example, Traditional Chinese Medicine recognizes medicinal value in turtle meat, eggs, liver, gallbladder, blood, shell, and feet.¹⁰

DRIVERS FOR CONSUMPTION

Despite geographic separation, some common trends emerge across countries that consume turtle products. For example, several regions that use turtle parts for their medicinal effects commonly believe that consuming turtle parts can help cure asthma and improve male virility. The following table summarizes some representative drivers across regions that consume sea turtle products.



Turtle eggs for sale in Malaysia © Andrew N. Gagg

¹⁰ https://books.google.com.hk/books?id=vtmgNNScswC&pg=PA141&lpg=PA141&dq=%E6%B5%B7%E9%BE%9F%E6%B6%A6%E8%82%BA&source=bl&ots=OMKUY4ZaDj&sig=Ev-vgeQhrq49zU8Hjc8aQ5yZpcE&hl=en&sa=X&redir_esc=y#v=onepage&q=%E6%B5%B7%E9%BE%9F%E6%B6%A6%E8%82%BA&f=false

TABLE 2. REASONS FOR CONSUMPTION (NON-EXHAUSTIVE)¹¹

TRADITIONS
<ul style="list-style-type: none"> • China and Vietnam: taxidermies as a symbol of status and fortune • Papua New Guinea: turtle shells are traditionally used as the main material for girl's earlobes and for other tools
MEDICINAL VALUE
<ul style="list-style-type: none"> • China and Vietnam: used in traditional medicine; in China, various turtle parts are believed to soothe asthma and improve male virility • Kenya: turtle oil used to treat asthma, impotence, infertility, etc. • Northern Madagascar and Maldives: turtle blood and testicles believed to have medicinal values • Maldives: turtle fat believed to be aphrodisiac • Terengganu, Malaysia: turtle eggs believed to cure asthma and improve male virility
RELIGIOUS REASONS
<ul style="list-style-type: none"> • Myanmar: live turtles are offered to spirits by some coastal communities • Bali, Indonesia: live turtles sacrificed in Balinese Hindu ceremonies
ECONOMIC
<ul style="list-style-type: none"> • Lack of alternative sources of protein • Tourism driving the demand for local souvenirs, which include sea turtle products

TRADE

The impact of exploitation of sea turtles for use by humans becomes multiplied when incentivized by cross-border trade. Despite the global ban on trade of sea turtles, trade in various sea turtle products still occurs throughout the world. While trade in eggs occurs more as a regional phenomenon, trade in products made from hawksbill shells occurs in much large-scale and geographic span across the Caribbean and throughout Southeast and East Asia.

Many around the Caribbean have traditionally consumed sea turtles in various forms, including eggs, meat, and in arts and crafts. The increase in tourism, especially those from the US, Canada, and Europe, has further driven the demand for souvenirs made from hawksbills, especially in Cuba, Costa Rica, Nicaragua, and Grenada. Although a major trade tie has not been established between the Caribbean and China - the new top market for hawksbills in East Asia - the fact that there had been a sizeable trade in hawksbills between the Caribbean and Japan in the past and the attractive profit opportunity between the two regions still make this situation quite possible in the future if regulations and law enforcement are not strict enough.

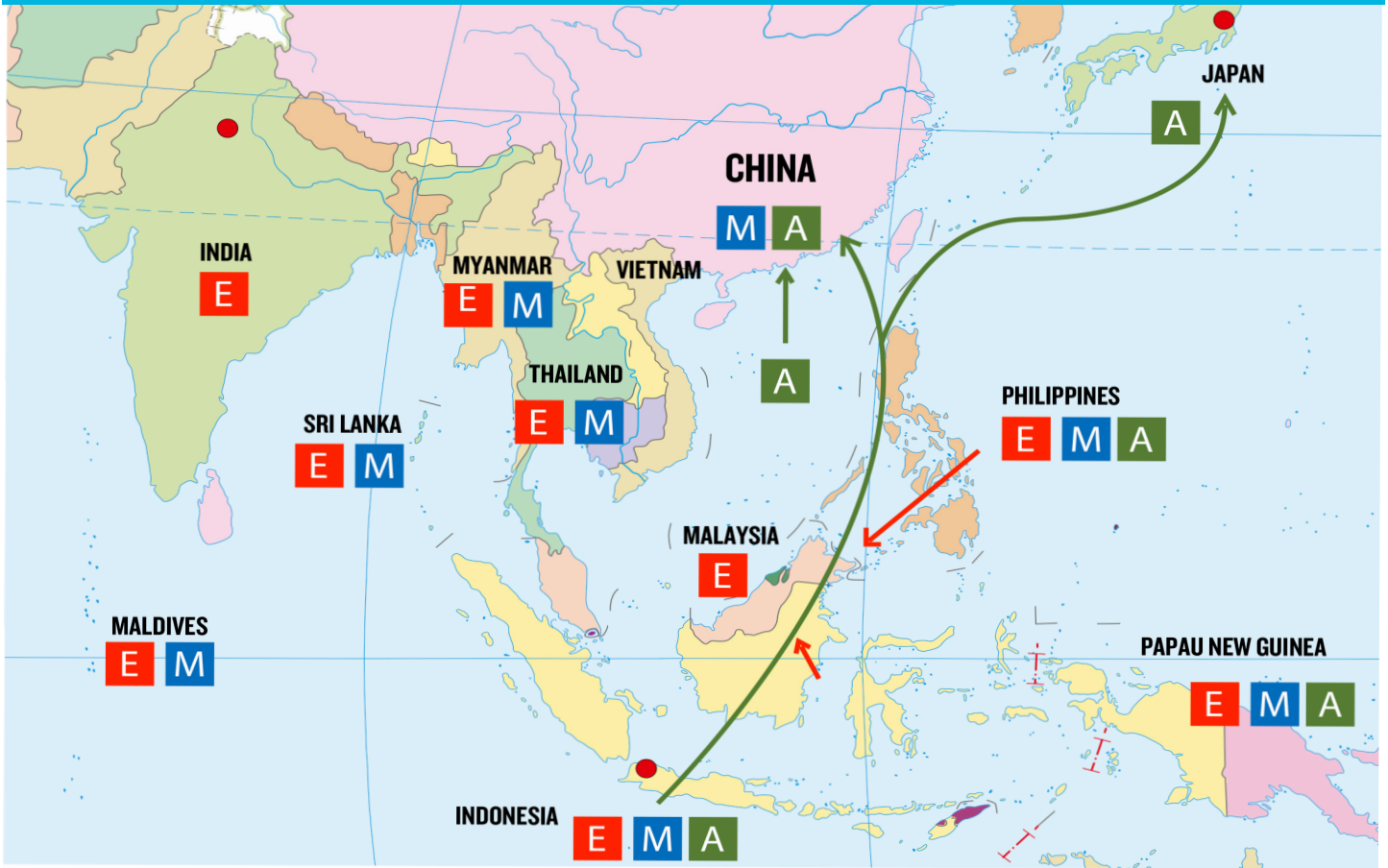
Traditionally, Japan had also been a hotspot for the sea turtle trade given its once thriving traditional bekko (hawksbill arts and crafts) industry. In the 1970s, Japan imported as much as 40 tons of hawksbill shells annually. Even after accepting CITES in 1980, Japan implemented a transitory period during which its imports of hawksbill products remained high at about 30 tons each year. Only after July 1994 did the country fully ban the import of new hawksbill products. However, there is still room for improvement for law enforcement against the trade of hawksbill products. Even today, Japan remains as one of the sources for smuggling of hawksbill taxidermies and products into China.

While the Caribbean and Japan were hotspots for the trade in the past, the combination of traditional appreciation for sea turtle products and the growing consumption power and rapid economic growth has pushed China to become a major driver for global demand in sea turtle products and the new center for the trade in Asia.



¹¹ IOSEA

OVERVIEW OF USE AND TRADE OF TURTLE PRODUCTS IN EAST ASIA, SOUTHEAST ASIA, AND SOUTH ASIA



E SEA TURTLE EGGS **M** SEA TURTLE MEAT **A** SEA TURTLE ARTS AND CRAFT PRODUCTS
→ TRADE IN SEA TURTLE EGGS → TRADE IN SEA TURTLE ARTS AND CRAFT PRODUCTS



III. CHINA'S CURRENT SITUATION: THREATS, DEMAND AND TRADE

DEMAND FOR SEA TURTLE PRODUCTS

China has a long history of consuming sea turtles both as a food source and as a highly prized material for jewelry and tools. A late 2017 survey commissioned by WildAid and Intage China of 1,500 residents of Beijing, Shanghai, Guangzhou, Beihai and Sanya found that 17 percent of respondents have purchased sea turtle products and 22 percent would consider doing so in the future.¹² Bracelets, other jewelry and decorative crafts accounted for 79 percent of items purchased. As a food, the reptiles are consumed for their protein value and for their alleged health benefits. Traditional Chinese Medicine books list all parts of a sea turtle, including blood, gallbladders, eggs, and liver, to have medicinal properties from curing asthma to improving male virility.

Products made from hawksbill turtles are especially popular for several reasons. Like consumers in other parts of the world, Chinese consumers value hawksbill shells for their unique and beautiful patterns, and vendors often brand hawksbill a “natural

gemstone.” In addition, for whole taxidermies that are hung at home as decorations and as items that bring fortune and luck to the family, the hawksbills are preferred not only for their unique patterns and colors but also for their suitable size, as they are much smaller than green turtles. Sixty-one percent of consumers identified in WildAid’s survey bought sea turtle products for their aesthetic beauty, 40 percent to show prestige and 39 percent because the products benefit Fengshui and help guard homes and ward off evil spirits.¹³ Chinese folk legends refer to hawksbills as one of the four celestial guardian animals and as a symbol of longevity. Therefore, according to the resulting traditional beliefs, hawksbill taxidermy is seen as one of the top ten items for warding off evil spirits in homes.

TRADE IN CHINA

As China’s near- shore sea turtle population has long become depleted, market demand for hawksbill and other sea turtle products has driven Chinese fishermen toward the sea turtle-rich waters of Southeast Asia, especially the Coral Triangle around the Philippines, Malaysia, and Indonesia, to source them. Several major smuggling networks have been established linking this region to China. Most of this illegal trade occurs on the South China Sea and through China’s border with Vietnam, while smaller channels including individuals and tourists carrying products from various parts of the world also contribute to the source of sea turtle products in China.

Despite increased efforts by governments in the countries involved to combat this trafficking, the highly lucrative profit opportunity between the low price of poached live turtles in Southeast Asian

A late 2017 survey of 1500 residents found:



¹² Data from December 2017 survey commissioned by WildAid and conducted by Intage China.

¹³ Data from December 2017 survey commissioned by WildAid and conducted by Intage China.



countries and the high price of finished hawksbill products on the Chinese market continue to provide strong incentives for fishermen and traders from both China and the relevant Southeast Asian countries to engage in the illegal trade. For example, the price for one hawksbill turtle in the black market in the Philippines and Vietnam is approximately 70 USD, but a well-made hawksbill taxidermy can sell for 1000-2000 USD in China (data from 2016 and 2017).

ILLEGAL TRADE ON THE SOUTH CHINA SEA

As a crossroad for shipping and fishing activities from nearby countries, the vast open waters of the South China Sea have become a haven for the illegal trade of sea turtles. Fishermen from Hainan, predominantly those from Tanmen fishing town of Qionghai City on the east coast of the island, engage in underground trade with Filipino and Vietnamese fishing boats on the open seas. As an area of contestation and sensitivity, there is no unified law enforcement presence in the waters, and the large amount of fishing activity and lack of a feasible border check mechanism means that it is much easier for fishing boats engaged in the illegal trade to avoid inspection. Because of this, there has not been any major report of interception of traded turtles from returning fishing boats by the Chinese authorities in recent years,

although the major cases of confiscation of hawksbill products have happened on land in Tanmen.

On the Filipino side, the remote southwestern island of Balabac has become a center for the gathering and distribution of poached turtles. Poaching and selling hawksbill turtles provide additional income for impoverished local fishing communities. Both the profit opportunity as well as the average low income of Filipino fishermen have incentivized Filipino fishermen to engage in this illegal trade. For example, in an extreme case from 2014, a fishing boat from Hainan simply exchanged its stock of rice, cooking oil, beer, and cookies for 24 live sea turtles.¹⁴ In addition to the Filipino poachers, several cases have also shown that Vietnamese poachers are also active in these waters. They either engage in direct trades with the Hainanese poachers just like their Filipino counterparts, or smuggle the turtles into China over the land border, using Vietnam as an intermediary.

Sea turtles purchased or bartered from Filipino or Vietnamese fishermen at sea are then transported back to Qionghai City's Tanmen Town (潭门镇), the most important fishing port on Hainan's east coast, which is also the most important center for the production and trade of hawksbill products in China.

14 <http://www.cwca.org.cn/news/tidings/ff808081471ed293014994f44159198b.html>

TABLE 3. SMUGGLING CASES ON THE SOUTH CHINA SEA.

The Philippines is the single most important source of sea turtles, comprised mostly of hawksbills.

TIME	LOCATION	INCIDENT	CONTENT INVOLVED
October 2013	Near Palawan Island, Philippines	Filipino authorities arrest 13 Vietnamese sea turtle poachers ^a	300 sea turtles ^b
May 2014	South China Sea	Filipino authorities prosecute nine Chinese fishermen on Hainan Qionghai fishing boat #09063 for poaching activities	500+ sea turtles ^c
October 2014	Hainan Qionghai Fishing Boat # 03168	2 Hainan fishermen exchanged their rice, oil, beer, and cookies onboard for 24 sea turtles with Filipino fishermen	24 sea turtles ^d
December 2014	Balabac Island, Philippines	Filipino navy discovered hidden and buried turtles awaiting shipment to black market trade	7 live and 140 chemically treated hawksbill turtles ^e
January 2015	Papua, Indonesia	Indonesian police seize items from Vietnamese shark poaching boat and sinks the boat	50 hawksbills ^f
April 2016	Bali, Indonesia	Bali police sets free turtles that might have been smuggled to China	31 live turtles ^g
March 2016	Seas near Pratas Islands	Taiwan authorities seize items, including corals and sea turtles, from Hainan Qionghai fishing boat #05055	3 green turtles ^h
July 2016	Southern Palawan Island, Philippines	100+ dead hawksbills found on an abandoned motor boat. The turtles were supposed to be headed to Vietnam	100+ dead hawksbills ⁱ
January 2017	Balabac Island, Philippines	Filipino authorities found and seized turtles from local fishing boat	15 green turtles ^j
July 2017	Palawan Island, Philippines	Filipino police arrest two local poachers, suspecting that they would sell their poached turtles to Chinese fishermen	70 dead hawksbill turtles ^k

a. <http://www.sbs.com.au/news/article/2013/10/21/vietnamese-arrested-over-turtle-poaching>

b. <http://globalbalita.com/2013/10/23/vietnamese-poachers-caught-with-300-turtles-in-philippines/>

c. <http://www.dailymail.co.uk/wires/ap/article-2626194/Philippines-charges-Chinese-caught-disputed-sea.html>

d. <http://www.cwca.org.cn/news/tidings/ff808081471ed293014994f44159198b.html>

e. <http://globalnation.inquirer.net/115207/7-live-140-chemically-preserved-hawksbill-turtles-found-in-palawan>

f. <http://birdsheadseascape.com/conservation-science/indonesian-government-sinks-vietnamese-shark-poaching-boat-creates-new-dive-site-2/>

g. <http://www.dailymail.co.uk/news/article-3539362/Bali-police-release-wild-31-sea-turtles-captured-gang-poachers.html>

h. <https://www.cga.gov.tw/GipOpen/wSite/ct?xItem=101894&ctNode=9079&mp=9997>

i. <http://news.abs-cbn.com/news/07/28/16/look-100-dead-hawksbill-sea-turtles-in-palawan>

j. <http://news.abs-cbn.com/news/01/11/17/15-dead-sea-turtles-seized-from-fishermen-in-palawan>

k. <http://www.dailymail.co.uk/wires/afp/article-4674788/Philippine-police-arrest-rare-sea-turtle-poachers.html>



Sea Turtle Confiscation ©RBG Ventures Superstock/Alamy Stock



MAIN TRADE ROUTES INTO CHINA

The blue arrows denote the sourcing of sea turtles from the Coral Triangle and the smuggling of dead sea turtles, mostly untreated or lightly treated hawksbills, through illegal trade on the South China Sea to Hainan, where further treatment and processing into finished products occur. The red arrows denote the sourcing of sea turtles from the Coral Triangle, the treatment and processing in Vietnam, and the smuggling of finished or half-finished products from Vietnam to China via the land border at Fangchenggang to Beihai in Guangxi. Hainan and Beihai are themselves important markets for the sale of sea turtle products, but the products are also distributed to other cities in China.

VIETNAM TO CHINA

In addition to the South China Sea, Vietnam is another major trade route for smuggling sea turtle products into China, a similar phenomenon to the smuggling of many other wildlife products into China. Whole taxidermies, parts, shells, and finished products of hawksbill turtles are frequently smuggled across the border between the Guangxi Autonomous Region and Vietnam, especially across the border under the jurisdiction of the city of Fangchenggang (防城港), where a narrow river separating the two countries and the large amount of boats docked nearby for fishing and cross-border transportation facilitate smuggling of all kinds of goods. This trade route mainly supplies the market for hawksbill products in Beihai, Guangxi. From 2013 to 2017, there have been at least seven reported cases of smuggling across the border, with a total of 199 taxidermies and 153 live sea turtles, most of which are hawksbills (summarized in table 4). The most recent major case of smuggling through this route happened in July 2017, with 38 whole hawksbill taxidermies being intercepted by the Chinese customs at Fangchenggang.

The actual volume of sea turtles traded between Vietnam and China is likely significantly larger than the known amount intercepted by the Chinese border customs. The vast sea turtle warehouse discovered near Nha Trang, Vietnam in 2014, for example, stored as many as 7000 dead sea turtles, and had long

operated under the knowledge and protection of local authorities.¹⁵ The seizure of these turtles is undoubtedly the largest single seizure of marine turtles in recent history globally and implies the robustness of the supply and demand in the trade. A report by National Geographic in 2016 indicates that the top trader suspected to be involved in the warehouse and its associated illegal trade of turtles had not been arrested, indicating a lack of law enforcement follow-through on this issue.

Vietnamese poachers engaged in smuggling source their supply of sea turtles both from their own poaching activities in the South China Sea and in the Coral Triangle, and, just like in the case of Chinese fishermen from Hainan, from trading with Filipino fishermen on the South Sea. The content of the recent cases of hawksbill smuggling from Vietnam to China indicates a thriving hawksbill product treatment and manufacturing industry in Vietnam. Whereas the items traded on the South China Sea are predominantly untreated or lightly treated sea turtles, items smuggled from Vietnam include a high proportion of finished products, especially whole taxidermies ready for sale to the end customers. Therefore, Vietnam not only serves as an important intermediary stop for the trade route of sea turtles from their natural source to China, but also plays a significant role in the production of finished hawksbill products bound for the Chinese market.

TABLE 4. MAJOR INTERCEPTED SMUGGLING CASES ON THE SINO-VIETNAMESE BORDER AT GUANGXI (NON-EXHAUSTIVE)

TIME	LOCATION	ITEMS FOUND
April 2013	Fangchenggang, Guangxi	24 hawksbill taxidermies ^a
May 2013	Fangchenggang, Guangxi	9 hawksbill taxidermies ^b
September 2013	Fangchenggang, Guangxi	17 hawksbill taxidermies ^c
November 2014	Outskirts of Nha Trang, Vietnam	7000 dead sea turtles, weighing about 10 tons, found in a hidden warehouse discovered after 3 years of undercover investigation ^d
September 2016	Fangchenggang, Guangxi	153 live young hawksbills ^e
November 2016	Pingxiang (Fangchenggang), Guangxi	109 hawksbills ^f
June 2017	Fangchenggang, Guangxi	2 hawksbill taxidermies, mixed with shark skins ^g
July 2017	Charles de Gaulle Airport, Paris (Freight flight bound to Vietnam from Cuba)	Half a ton of hawksbill shells ^h
July 2017	Fangchenggang, Guangxi	38 hawksbill taxidermies ⁱ

a. <http://scitech.people.com.cn/n/2013/0412/c1007-21109341.html>

b. http://mil.cnr.cn/gmws/bfjc/201305/t20130524_512661930.html

c. <http://www.customs.gov.cn/publish/portal0/tab65602/info623025.htm>

d. <http://news.nationalgeographic.com/2016/07/wildlife-trafficking-sea-turtles-raid-vietnam/>

e. <http://www.chinanews.com/sh/2016/09-20/8009239.shtml>

f. http://www.legaldaily.com.cn/index/content/2016-11/24/content_6890753.htm?node=30348

g. <http://wap.china.com/act/toutiao/13000654/20170629/30867245.html>

h. <https://www.rt.com/news/396753-smuggled-tortoiseshell-intercepted-france/>

i. http://news.xinhuanet.com/2017-07/29/c_1121399559.htm

¹⁵ <https://endangeredwildlifetrust.wordpress.com/2016/02/15/prosecuting-vietnams-infamous-marine-turtle-kingpin/>



DOMESTIC PROCESSING, TRANSPORT, AND SALE OF SEA TURTLE PRODUCTS

Besides finished hawksbill products smuggled into China from Vietnam, brought back by Chinese tourists, and mailed in from places such as Japan, most of the finished products selling on the market are manufactured within China. The domestic processing and production industry is concentrated in Tanmen, Hainan, where raw material for sea turtle products are easily sourced from illegal trade on the South China Sea. The local government has heavily supported the processing and manufacturing of souvenirs and crafts from materials including coral and giant clams starting in 2013, making it a pillar for the local economy. Workshops and shops making and selling these products often incorporate sea turtle products as well. The sea turtle processing industry in Tanmen, Hainan, took a major hit earlier this year due to the crackdown on giant clam products, which are often processed and manufactured together with hawksbills. This may lead to more hidden underground processing or a shift to sourcing a much

higher proportion of products from Vietnam.

The hotspots for the sale of sea turtle products include Tanmen itself and the tourist destination cities of Sanya and Haikou in Hainan, which are supplied by products from Tanmen, and Beihai in Guangxi, which source its sea turtle products mostly from Vietnam. A CCTV special report on the hawksbill retail scene in Tanmen in June 2015 revealed that there was a thriving market for whole hawksbill taxidermies and smaller products on the town's arts and crafts shopping street, with taxidermies selling for 8,000 – 19,000 RMB per piece depending on size.¹⁶ However, this active retail scene is reported to have been impacted by the new ban and crackdown on the sale of giant clams. In Sanya, as the most popular tourist destination in Hainan, the selling of hawksbill products occurs in tourist souvenir shops, such as those along the Jiefang Road Pedestrian Shopping Street, as well as seafood restaurants. There have been multiple cases of confiscated hawksbill products at Sanya Airport from tourists returning to other parts of China. The most recent case happened in June 2017, where security check agents confiscated an entire hawksbill taxidermy in a passenger's luggage.¹⁷ The pattern is similar in Haikou and Beihai, where shops selling sea turtle products are concentrated in the walking streets frequented by tourists. A Traffic investigation and collaboration effort with Beihai police in May of 2017 identified and confiscated 2.66kg of hawksbill products and two hawksbill taxidermies.¹⁸ Tourist purchase has been encouraged in the past by travel providers, who list hawksbill products as recommended souvenirs or even “must buys” for tourists visiting Hainan or Guangxi. Even major mainstream providers such as Ctrip and Beijing China International Travel Services (CITS) have included such recommendations in their online guides.¹⁹ Group tour packages that depend on shopping for profits have also included hawksbill souvenir shops in Sanya as stops in their itineraries.²⁰

A 2017 survey of five Chinese cities found 69% of sea turtle consumers had purchased their items at domestic souvenir shops, with another 21% purchasing the products while traveling abroad.²¹ More than half of buyers received recommendations from tour group guides to buy sea turtle products and 35% cited learning about the items through online travel guides.

Beyond Hainan and Guangxi, sea turtle products are also distributed and sold to major cities across China, appearing mostly in antique and jewelry shops. Hawksbill bracelets were also spotted in a major jewelry vendor in the famous Beijing Pearl Market (红桥

16 <http://art.people.com.cn/n/2015/0624/c206244-27198339.html>

17 <http://news.carnoc.com/list/406/406441.html>

18 <http://gd.qq.com/a/20170509/004572.htm>

19 http://www.zglxw.com/zhinan/hainan_1803.html

20 http://newspaper.jfdaily.com/jfbr/html/2012-04/30/content_795380.htm

21 Data from December 2017 survey commissioned by WildAid and conducted by Intage China.

TABLE 5. HONG KONG SMUGGLING CASES (NON-EXHAUSTIVE)

TIME	LOCATION	CASE	ITEMS CONFISCATED
October 2014	Daya Bay, near Shenzhen	Fishing boat from Hong Kong	5312 pieces of hawksbill shells ^a
July 2015	Futian Border Crossing, Shenzhen	Passengers from Hong Kong	1kg hawksbill shells ^b
January 2016	Futian Border Crossing, Shenzhen	Passenger from Hong Kong	40 pieces of hawksbill shells weighing 12kg ^c
August 2017	Futian Border Crossing, Shenzhen	Passenger entering from Hong Kong	246 pieces of hawksbill shells, weighing a total of 9kg ^d

a. http://www.sznews.com/news/content/2014-10/24/content_10578396.htm

b. http://www.hfdsb.gov.cn/News/kuaixun/sn/201507/20150703095415_24599.html

c. <http://www.customs.gov.cn/publish/portal0/tab65602/info784606.htm>

d. http://cnews.chinadaily.com.cn/2017-08/26/content_31136107.htm

市场) in November of 2017. There have been cases of shops selling hawksbill products reported in cities as far north as Hohhot.

Online shopping has also opened a new platform for the selling and buying of sea turtle products in China. Although rarely found on major retail platforms such as Taobao and JD.com, hawksbill products appear much more often on smaller online retail platforms focused on antiques or jewelry. For example, the Shanghai Industry and Commerce Bureau identified several online shops selling hawksbill products as a part of the November 11 major online shopping sale campaign.²² To avoid increasingly strict regulations, vendors sometimes use the websites mainly to list their products, and take the trade private after being contacted by interested buyers. The products are usually listed as an image that include a contact number as a part the image or a WeChat QR code as a link below, thereby making law enforcement and regulation on these vendors much more difficult.

OTHER TRADE ROUTES INTO CHINA

SMUGGLING FROM THE CARIBBEAN TO CHINA

Trade of hawksbill products is widespread in the Caribbean and Latin America, and the export of hawksbill materials and products from the Caribbean once formed a major source of raw materials for the Japanese Bekko industry.²³ Although up until recently there seems to be no large-scale trade network between the Caribbean and China, several individual cases suggest the potential emergence of one in the future if demand for hawksbill products in

China continues to remain strong. There have been two high profile cases of Chinese students studying abroad in Cuba bringing back large amounts of hawksbill raw materials. In 2015, a student returning to Chengdu from Cuba brought back 165 pieces of hawksbill shells, and in 2016, a student returning to Beijing from Cuba tried to bring into China 28 kilograms worth of hawksbill products and shells. On an even larger scale, French authorities intercepted half a ton of hawksbill shells bound for Vietnam from Cuba in July 2017, suggesting the extension of the smuggling

network between China and Vietnam to Latin American sources, and the continued robust demand for these products in China.

SMUGGLING FROM HONG KONG

Multiple cases of smuggling of hawksbill shells across the busy land border between Hong Kong and Mainland China, especially across the Futian Border Crossing, have also been reported in recent years. As customs checks on arriving passengers in Hong Kong are not as intense as those in Mainland China, and given Hong Kong's extensive ties and connectivity with the Philippines, smuggling of sea turtle raw materials through the region has become another minor but attractive trade route. These cases also indicate the need for Hong Kong customs to strengthen their efforts in preventing these items from flowing into Hong Kong in the first place, and also for more effective collaboration of the law enforcement forces of Hong Kong and Mainland China

TOURIST PURCHASES AND SMUGGLING BY MAIL

Chinese tourists purchasing sea turtle products, predominantly hawksbill products, in tourist destination countries form another major component of the sea turtle trade in China. There have been multiple cases throughout recent years of interception of sea turtle products brought back by tourists at Chinese airports, especially those with direct connections to Southeast Asia. These cases include both purchases for their own use as well as for sale to vendors within China. In addition to purchasing sea turtle products while traveling, there have also been cases of direct purchase from abroad, which are then fulfilled by mail packages, most of which are from Japan.

Sales of sea turtle products, especially those made from hawksbills, are common in several popular destinations for Chinese tourists. Some hotspots include Indonesia (e.g. Derawan Islands), Vietnam, as well as Japan and Palau, where the sale of hawksbill products is regulated but legal. Sea turtle products are frequently found in markets that sell other illegal wildlife products popular with Chinese tourists, such as ivory and rhino horn. For example, the

22 <http://business.sohu.com/20161110/n472780599.shtml>

23 <http://www.seaturtle.org/mtn/archives/mtn54/mtn54p17.shtml?nocount>



TABLE 6. CONFISCATION OF SEA TURTLE PRODUCTS FROM RETURNING TOURISTS AND INBOUND MAIL PACKAGES, 2015 - CURRENT (NON-EXHAUSTIVE)

TIME	LOCATION	CASE	ITEMS CONFISCATED
March 2015	Weihai Airport	Passengers from Korea	220g hawksbill shells ^a
June 2015	Xiamen Post Office	Mail package from Tanzania	0.5 kg hawksbill shells ^b
August 2015	Guangzhou Post Office	Mail package from abroad	4 hawksbill hand fans ^c
August 2015	Qingdao Post Office	Mail package from Japan	2 hawksbill taxidermies ^d
September 2015	Nanjing Airport	Passenger from Hong Kong	11 hawksbill products ^e
February 2016	Qingdao Airport	Tourist returning from Japan	2 Green turtle taxidermies ^f
March 2016	Fujian Customs	Mail courier from Japan	1 Green turtle taxidermy ^g
July 2016	Xiamen Airport	Tourist returning from Jakarta	33 hawksbill items ^h
December 2016	Xiamen Airport	Tourist returning from Jakarta	1 unspecified sea turtle taxidermy ⁱ
February 2017	Dalian Airport	Passenger from abroad	1 green turtle taxidermy ^j

a. http://www.sohu.com/a/7698578_102151

b. http://www.cqn.com.cn/zggmsb/content/2015-06/30/content_2508664.htm

c. <http://www.customs.gov.cn/publish/portal0/tab49564/info771158.htm>

d. <http://www.customs.gov.cn/publish/portal0/tab65602/info771061.htm>

e. <http://www.cwca.org.cn/news/tidings/ff808081471ed293014fffe970c35982.html>

f. http://news.qingdaonews.com/qingdao/2016-02/23/content_11491877.htm

g. <http://www.fjciq.gov.cn/yjbsc/291502/291542/547715/index.html>

h. <http://www.customs.gov.cn/publish/portal0/tab65602/info810857.htm>

i. <http://www.customs.gov.cn/publish/portal0/tab65602/info831091.htm>

j. <http://liaoning.nen.com.cn/system/2017/02/15/019659254.shtml>



Sea Turtle Bust

“arts and crafts” market in Angola targeting mostly Chinese customers sell both ivory products and whole hawksbill taxidermies, and the San Jiang Market in the Laotian capital of Vientiane sell ivory, rhino horn, tiger bones, and hawksbill turtles side by side.²⁴

Many tourists from China are not even aware of the fact that purchasing and importing of sea turtle products is illegal, especially if they purchased the products in countries where law enforcement against the selling of these products is not particularly strong. Fifty-seven percent of Chinese residents surveyed know that it’s illegal to buy sea turtle products in China, the rest are unsure or believe the sales are legal.²⁵ The lack of awareness is made worse by travel services providers both in China and abroad encouraging the buying of sea turtle products as souvenirs. For example, the shopping advice section of the online tourism guide for Nagasaki, Japan, by Ctrip, one of China’s largest and most influential travel companies, lists bekkō products made from hawksbill shells as a recommended local souvenir for purchase. Similarly, Beijing Youth Travel Services Company, a large officially recognized travel services company, published an online entry in 2014 recommending different local specialties under its Vietnam travel tips, within which it says:

“Hawksbill...can be categorized as a type of sea turtle, but it can be made into all kinds of jewelries and wearables, as well as taxidermies, which makes it a local specialty [in Vietnam]. Taxidermies can be purchased in places such as Ha Long Bay and Hai Phong, and these beautiful taxidermies can be hung on walls as a great decoration.”

CONSUMPTION OF MEAT

Although the trade of hawksbill products is the most pressing issue in China, sea turtle meat consumption is also documented in several coastal communities in China, most prominently in Haikou, the capital of Hainan Province. Despite official crackdowns, turtle meat vendors occasionally appear in popular wet markets in Haikou as well as open-air seafood markets, including the popular Banqiao Seafood Market and Dongmen Market.

The Chaozhou-Shantou Region in the eastern part of Guangdong Province has a tradition of consuming sea turtle meat for its medicinal purpose for “soothing the lungs and stopping coughs.” In April 2014,

²⁴ <https://international.thenewslens.com/article/70808>

²⁵ Data from December 2017 survey commissioned by WildAid and conducted by Intage China.

10 live green turtles were found on a bus traveling from Hainan to Shantou. In November of the same year, videos of a secret sea turtle butchery in Huilai County, which sourced its sea turtles from nearby Zhejiang and Fujian, was shared online. As a response to this report, the Shantou Association for Science and Technology published an article stating that although sea turtles may have some effects strengthening the lungs, they are much less effective compared to smaller land turtles which are legally farmed and consumed, thereby urging local residents to consider alternative foods with similar medicinal properties.²⁶

Eating sea turtle meat is also a common practice along the coast of Guangxi and western Guangdong, with markets and restaurants selling sea turtle meat reported in Weizhou Island of Guangxi and even in Shenzhen. The most recent major case of sea turtle consumption happened in December of 2016, when a 208 kg loggerhead turtle captured by fishermen from Xuwen County in western Guangdong was cut into pieces and sold to local residents on the beach for 140 CNY per kg. The entire turtle was sold off

within two hours, showing the extreme popularity of sea turtle meat among the local community.²⁷

As smuggling across borders takes time, the supply of turtle meat comes predominantly from domestic bycatch, which occurs all along southeastern China's coastline. Most meat consumed in China is that of green turtles.²⁸ This may be due to the larger presence of green turtles in Chinese waters and the lower value of processed green turtles as compared to hawksbills.

Sea Turtle Meat For Sale- ©Design Pics Inc_Alamy Stock Photo



²⁶ <http://www.stkx.gov.cn/ArticleDetail.aspx?fid=1485&fmnuuid=80>

²⁷ <https://news.qq.com/a/20161207/019624.htm>

²⁸ TRAFFIC 2012.xxxxxxxx



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IV. CURRENT MEASURES OF PROTECTION

INTERNATIONAL PROTECTION STATUS

Internationally, all seven species of sea turtles are included in Appendix I of CITES as well as the IUCN Red List of threatened species. The Convention on International Trade in Endangered Species of Wild Fauna and Flora species listed under Appendix I are threatened with extinction, and CITES prohibits international trade by member states, except for non-commercial use.

Almost all countries that have turtle consumption are contracting parties to the convention, and are thereby formally held by its obligations. However, law enforcement varies greatly across member states on combating the illegal trade of sea turtle products. Some member states, such as Palau and Grenada, have regulated but legal domestic markets for the products, while other

states that have strong traditions of turtle consumption or where turtle trade is important for the local economy often do not proactively combat the trade.

PROTECTION STATUS AND SITUATION IN CHINA

LEGAL PROTECTION STATUS IN CHINA

China has been a contracting party to CITES since 1981. Domestically, all five species of sea turtles found in the waters around China are listed as level II nationally protected animals according to the Wildlife Protection Law of China from 1988. As a level II nationally protected animal, all capturing, purchasing, selling, transporting, holding, and usage of sea turtles is absolutely forbidden. However, usage of sea turtles for scientific research, domestication and breeding, and exhibition is allowed if approved by wildlife protection administration departments at the provincial level, as compared to at the national level for level I nationally protected animals.

The original list of the level I and level II designations has not significantly changed since its publication, and may not necessarily reflect the current protection needs and situations. There have been continued calls for strengthening the legal protection of sea turtles in China. In a national level expert meeting in 2006, marine wildlife protection experts reached a consensus on proposing the



elevation of sea turtle's protection status to China's State Council.²⁹ More recently, in 2016, Huang Xi Hua, one of the delegates to the National People's Congress (NPC) from Huizhou, Guangzhou, home to the only national level sea turtle nature reserve in China, raised a formal proposal at that year's NPC meeting, along with ten other delegates to the NPC, calling for the elevation of all sea turtles species' protection status from that of level II to level I.³⁰ Subsequently, China's Ministry of Agriculture issued a positive response to Huang's proposal and promised to elevate all five species of sea turtles' protection status to that of level I in the undergoing adjustment to the overall list of protected animals.³¹ However, the adjusted list has not been published as of November 2017, and sea turtles continue to officially remain as a level II protected animal. An overwhelming 95 percent of Chinese survey respondents support elevating sea turtles' protection status to Class I Protected Species.³²

However, despite sea turtle's status as a nationally protected animal, public awareness of the protection status of turtles and implications of its status as a national level protected animal remains relatively low, as shown by various cases involving consumption and purchase of turtle products. For example, media

reports on a case of delayed shipment of sea turtle meat from Chongqing to rural Sichuan in 2014 purely focused on the fault of the mail courier for not delivering the sea turtle meat in time, causing it to be inedible, rather than making any mention that the action of buying, shipping, and eating sea turtle meat is all illegal.³³ In addition, there are reports of individuals buying bycaught turtles from fishermen to ensure that the turtles be released back to the sea rather than being served as food or made into craft products. Ironically, although such actions are based on good intention of protecting the lives of the turtles, the action undoubtedly violates the legal ban on the purchase of such a protected animal, and at the same time can potentially encourage and incentivize more selling of turtles caught in this manner.

ADDITIONAL GOVERNMENTAL EFFORTS

In addition to designating sea turtles as a group of nationally protected wildlife species, China has also established a number of nature reserves along its coastline to protect nesting places that are essential for the viability of local sea turtle populations. While these reserves undoubtedly help preserve nesting environment and the

29 <http://news.sina.com.cn/o/2006-05-31/12029079494s.shtml>

30 <https://news.qq.com/a/20160303/049903.htm>

31 http://www.moa.gov.cn/govpublic/YYJ/201607/t20160708_5200736.htm

32 Data from December 2017 survey commissioned by WildAid and conducted by Intage China.

33 http://region.scdaily.cn/gdbb/content/2014-02/25/content_6963399.htm



An accidentally-caught green turtle is released in Fujian Province © Xinhua_Alamy Sotck Photo.jpg

overall sustainability of sea turtle populations along China's coast, there are significant limitations to their effect on the country's impact on turtle populations globally, as these reserves predominantly target green turtles, rather than hawksbills.

GUANGDONG HUIDONG HARBOR SEA TURTLE NATIONAL RESERVE

Established by Guangdong Province in 1985 and elevated to a national level nature reserve in 1992, Huidong Harbor is currently China's only national level nature reserve dedicated to the protection of sea turtles, and the only remaining nesting place for sea turtles (predominantly green turtles) along all of mainland China's coastline. In addition to maintaining the environment and minimizing human activities on the sea turtles' nesting beach, the reserve also collaborates with fishermen in the nearby waters to supervise bycatches and rescue bycaught turtles as needed.

However, despite these measures taken by the government and the local communities to minimize disturbances to nesting turtles, the number of turtles nesting on the beaches within the reserve has fallen dramatically over the past few decades. In recent years, only two to three turtles have been observed to nest on the beaches in Huidong, compared to 500 annually decades ago. To reverse this trend, the reserve has shifted efforts in recent years to developing artificial egg hatching techniques to increase the survival rate of the much smaller number of eggs laid each year. For example, by artificially raising the young turtles for a short duration after hatching, the reserve has been able to dramatically increase the survival rate of hatched turtles from 0.1% to 90%.

QILIANYU SEA TURTLE PROTECTION STATION IN SANSHA, HAINAN

This prefectural level nature reserve was created after the establishment of Sansha as a prefectural level city in 2012. Being located on the small island near the Xisha (Paracel) Islands in the middle of the South China Sea, this reserve has documented a much more optimistic situation as compared with that in Huidong. With dedicated staff to monitor egg laying activities, deter potential poachers, and rescue injured turtles, the number of nests laid on the island has steadily increased from 52 in 2014 to 152 in 2016.

HAINAN'S PROTECTION EFFORTS

As the center for processing and supplying a number of marine wildlife products, Hainan has implemented stricter local measures to curb the production and trade in marine wildlife. In addition to supporting the development of alternative livelihoods such as tourism and providing subsidies to discourage fishermen from engaging in illegal fishing activities, Hainan has also recently published the "Hainan Province Ecological Protection and Action Plan, 2017-2020" which specifically listed the provincial government's commitment to strengthening the protection of habitats for rare marine wildlife including hawksbill and other species of sea turtles. Hainan initiated a coordinated action to combat the illegal sales of sea turtle, tridacninae, and coral products in June 2016: The "Decision by Hainan Province on Protection of Coral Reefs and Tridacninae" passed in late 2016 and enacted at the beginning of 2017 bans all forms of processing and



WildAid ambassador and actor Liu Ye releases a rescued sea turtle in the Paracel Islands ©WildAid

sale of tridacninae and its products. Although not targeting sea turtle products directly, the close association and clustering of the processing and sale of different marine wildlife products and the increase in law enforcement action against the sale of these products have generated direct impact on the industry overall as well as the economy of Tanmen, Qionghai, which used to depend on the processing and sale of the tridacninae and similar marine wildlife products.

NGO EFFORTS AND ACTIVISM

A number of domestic and international non-government organizations have contributed to the protection of sea turtles in China. However, they have mostly focused on either rescuing turtles that are injured or captured by mistake or collaborating with local law enforcement to identify and confiscate sea turtle products from manufacturers and retailers. This in turn creates an opportunity for campaigns targeting the consumers of sea turtle products.

HAINAN NORMAL UNIVERSITY'S COLLEGE of Life Sciences established its Sea Turtle Rescue and Education Center in 2014. Formed by ten staff members at the college and about 20 students, the center mainly works on rescuing and rehabilitating injured sea turtles found on the beach or in fishermen's gear. The center has rescued up to 51 green, hawksbill, and loggerhead turtles as of May 2017. In addition, the center collaborates with Sea Turtles 911 to establish a foundational database for sea turtle activities on China's coast, through GPS tracking mechanisms on rehabilitated turtles released.

SEA TURTLES 911 was established in Hawaii in 2008 by Frederic Yeh, a Chinese American born in Hainan. The organization is mostly focused on rescuing illegally captured turtles and releasing them back to the sea, while raising public awareness. Sea Turtles 911 has established a sea turtle hospital in Lingshui, Hainan, to help rehabilitate injured turtles and prepare them for release. The organization has held several high-exposure turtle release events in Hainan with notable guests such as Yao Ming to raise public awareness of the need for protecting sea turtles.

TRAFFIC has also worked on a sea turtle campaign in China both to raise public awareness of the issue and to collaborate and aid local authorities on regulating the issue. In the past, Traffic has conducted several undercover investigations in Beihai, Guangxi, and collaborated with the Beihai police on identifying and confiscating sea turtle products sold in local markets. In addition, the organization has collaborated with Chinese online travel services providers to promote education of tour guides in major Chinese tourist destinations in Southeast Asia.



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V. ACTIONS NEEDED TO DISCOURAGE TRADE AND CONSUMPTION

DEMAND REDUCTION

When the buying stops, the killing can too. Consumption is undoubtedly the biggest contributor to the still-present sea turtle trade, and this root cause needs to be addressed to combat the illegal poaching and trade of turtles.

Specifically, as tourist purchases are a major source of consumption both domestically and internationally, educating tourists in trade hotspots is essential for curbing demand and consumption in China. Domestically, efforts should target the tourist cities of Sanya and Haikou in Hainan and Beihai in Guangxi. Collaboration with the local airports and train stations to broadcast messages and warnings against buying turtle products, and with the local tourism

agencies that send SMS messages to all incoming tourists can be effective ways to reach domestic tourists visiting these places.

As for outbound tourists, efforts should focus on the popular destinations for Chinese tourists in Southeast Asia, especially Vietnam, Thailand, Philippines, and Indonesia, which are countries that either supply the turtles to China in the first place, or have markets for sea turtle products themselves. Collaboration with airports that have direct connections with these destinations and with Chinese customs can be effective ways to educate outbound tourists. In both cases, collaboration with travel services providers, both those that organize and sell tours as well as online platforms that provide travel information and tips, are useful channels for educating tourists.

ENHANCING ENFORCEMENT

As the sea turtle trade regarding China has become highly international in nature, effective law enforcement action against this illegal trade requires the collaboration of governments in all countries and regions involved. Not only is there great room for collaboration with Philippines, Vietnam, and Indonesia, the main sources of raw materials and finished sea turtles products, Chinese law enforcement can collaborate with Hong Kong and Japan, which are important intermediaries within the trade network.

There is also a need for the establishment of a reporting hotline and mechanism for by-caught and injured sea turtles to the



relevant fishery authorities. Domestically, bycatch is a key source of supply for the turtle meat market. Fishermen can often get away with selling their bycatch to underground buyers, and individual animal protection enthusiasts often have to buy captured turtles themselves from fishermen to protect them from being sold off. Therefore, a well-tracked and monitored reporting mechanism similar to those for environmental pollution and for second-hand smoking in Beijing can raise the threat of punishment for selling off turtles, and further encourage fishermen to release or turn in their by-caught turtles to rescue centers.

KEY MESSAGES

- **CRUELTY IN THE PROCESSING AND MAKING OF SEA TURTLE PRODUCTS.** In some places, the processing and making of hawksbill taxidermies require emptying the animal's internal organs and meat. Some makers perform this process when the hawksbill is still alive in order to ensure the color and appearance of the finished product.³⁴
- **TRADITIONAL RESPECT FOR SEA TURTLES IN CHINESE CULTURE.** Sea turtles have been revered as a symbol of longevity and fortune, and are thought to have a certain degree

of connection with humans. This is why fishermen along some parts of China's coast used to release accidentally-caught sea turtles. Unfortunately, during the era of rapid economic development and wealth accumulation, this traditional respect has been distorted into a driver for the consumption of sea turtle products. The appropriate way to embrace China's traditional respect for sea turtles is not to hang their taxidermies at home or wear parts of their bodies, but to protect them in their natural habitats and coexist with them.

- **POTENTIAL TOXINS IN TURTLE MEAT:** despite popular beliefs that sea turtle meat can have health benefits, sea turtle meat is increasingly dangerous for human consumption due to pollution. In recent years, there have been cases reported of illness and even death resulting from eating turtle meat in various places, including the Philippines, Thailand and Micronesia.^{35, 36, 37}

34 <http://qionghai.hinews.cn/system/2014/11/12/017105869.shtml>

35 <http://ojs.wpro.who.int/ojs/index.php/wpsar/article/viewFile/299/601>

36 <http://ojs.wpro.who.int/ojs/index.php/wpsar/article/viewFile/283/543>

37 <https://www.pressreader.com/thailand/the-nation/20100725/281539402239468>

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