

At **ROCK BOTTOM**

*the declining
sharks of the
Eastern Tropical
Pacific*



WildAid

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Front cover: Finned Hammerhead shark.
Courtesy of
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Back cover pic: An extensive variety of
shark fin products on sale in Japan.
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Executive Summary

The signing of the “Pacific Corridor” agreement by Ecuador, Colombia, Panama and Costa Rica provides a framework within which to address the need for regional co-operation in the management of shark stocks.

Within the context of shark stocks, the countries of the “Pacific Corridor” are inextricably linked in both ecological and commercial terms. Most of the species commonly taken in shark fisheries throughout the Corridor are classified as “highly migratory”. The way in which sharks are managed in one country has a profound effect on the other countries’ ability to implement management plans.

There are, in addition, strong commercial fishing links, both legal and illegal, between the four countries of the Corridor. Costa Rican boats fish, often illegally, in Panama, Ecuador and Colombia; Ecuadorian boats fish extensively (and are reported to be finning sharks) in the waters of Colombia; Colombian and Costa Rican boats fish illegally in Panamanian waters.

There are also links between the four countries with regard to the trade in shark fins. The prices set by Costa Rican traders have affected the fin trade in Panama; fin dealers from Colombia, as well as from Peru and Uruguay, have settled in Ecuador; a major Uruguayan trader in Ecuador obtains his fins from Costa Rica, Chile, Brazil and Uruguay; a Panamanian dealer exports his fins to Mexico; Colombian drug dealers have become involved in the shark fin trade as a way of laundering drug money, making the Ecuador/Colombia border a “shark fin hotspot”.

There are many common factors that influence the exploitation of sharks in the Corridor. Firstly, the influence of the “donor” community on certain countries in the region indicates that, to some extent, the future of shark stocks lies in the hands of governments thousands of kilometres away. Costa Rica is heavily influenced by Taiwan, with the result that Taiwanese fin traders have managed to circumvent the law in Costa Rica with impunity. Japan pays handsomely for the use of the Panamanian flag of convenience and has attempted to influence the Panamanian vote at the International Whaling Commission. The Japanese flag is a permanent fixture on Panama City’s main fish market.

Another common factor is that governments across the region have numerous development priorities and fisheries are very often denied the resources that they need. Protected areas suffer the same lack of funding. For example, Panama’s Coiba National Park is run on a US\$15,000 annual budget, according to local NGO ANCON.

Although specific legal protection for sharks varies from one country to the next (and some have no legislation whatsoever) all four countries are experiencing frequent illegal incursions into their marine protected areas, mostly for the purposes of catching sharks. Fishermen and fin traders in all four countries point to the finning of sharks for the fin trade as the main reason for perceived shark declines. In Ecuador and Costa Rica, where there are laws relating to shark finning and the fin trade, illegal activity is widespread. In the case of Costa Rica, such activity (at least, where it involves the Taiwanese) is positively condoned by the government. Asian fin traders dominate the trade in Ecuador, Costa Rica and Panama, and all four countries export large quantities of fins to east Asia annually.

In some countries of the region, sharks were over-exploited many years ago, mostly by foreign fleets. In some cases these foreign fleets, notably the Taiwanese, Japanese and Koreans, have moved on to new fishing grounds, leaving devastation in their wake. In the early 1980s, it was estimated that the Japanese and Korean longline fleets operating in the region caught 2,000-5,000 metric tonnes (mt) of sharks per year, of which about 70% were finned and discarded. Today, even though sharks appear to have declined significantly in all four countries, extensive finning of sharks is still routine on both foreign and local vessels.

These factors, shared to a great extent by the countries of the Pacific Corridor, have had – and will continue to have - very similar effects on their common shark resource, unless courageous political and economic decisions are made.

Global Shark Declines

While there are still very few comprehensive global data on the decline of shark species, research carried out in the past few years in specific regions and on specific shark populations has revealed dramatic declines.

By 2004 the International Union for the Conservation of Nature (IUCN) had assessed a total of 262 sharks and related species. Of these, 56 species were classified as globally threatened: that is, either Critically Endangered, Endangered or Vulnerable. A further 26 sub-populations were assessed as threatened on a regional basis.

In recent years, scientists, NGOs and some political leaders have begun to realise the potentially devastating effects of the worldwide decline in shark stocks. For some countries in the developing world, the decline of fish stocks generally has led to an increased effort to catch sharks for human consumption, but now sharks, too, are becoming more difficult to find. This has already led to food shortages, particularly among coastal communities, and could have serious long-term consequences.

Research on the potential effects of the disappearance of sharks from selected ecosystems suggests that the consequences could be devastating for commercially and nutritionally-important fish species. In one model, the removal of sharks resulted in a total crash in populations of tuna and jacks.

INTERNATIONAL MEASURES TO PROTECT SHARKS

Various multi-lateral agreements, organisations and conventions have recently begun to take note of the urgent need for global shark conservation.

In 1999 the UN Food and Agriculture Organisation (FAO) adopted an International Plan of Action for Sharks (IPOA), which required that its member States devise and implement National Plans of Action for Sharks. The FAO, which concerns itself with global food security issues, recognised the problems that the decline of sharks could create, particularly in developing nations. One of the principal recommendations in the IPOA is that sharks should be fully utilised. However, shark finning continues unabated in many parts of the world.

In 2003, the UN General Assembly adopted a resolution recommending that member States ban the targeting of sharks for their fins.

In November 2004, the International Commission for the Conservation of Atlantic Tunas (ICCAT) adopted a resolution recommending that member States require boats fishing in the Atlantic ocean – in fisheries managed by ICCAT – to land fins and carcasses together, with the fins weighing no more than 5% of the weight of dressed carcasses.

In the same month, the World Conservation Union, made up of over 1000 governmental and non-governmental organizations from over 140 countries, passed a resolution recommending that all States ban shark finning and require shark fins to be



ABOVE: A DIVER DISCOVERS FINNED SHARKS

landed attached to their bodies.

In 2005, only three species of shark – the basking shark, the whale shark and the great white shark – are protected globally from over-exploitation in international trade. Now listed on Appendix II of the Convention on International Trade in Endangered Species (CITES), countries exporting live specimens of these species, or their body parts, must first show that their removal will not be detrimental to the species in the wild. It is likely, however, that more shark species will be listed on CITES in the coming years.

SHARKS AND THEIR PRODUCTS

An estimated 100 million sharks are killed every year around the world

Many millions of them are killed **just for their fins**

Sharks are very slow to reproduce and targeted populations collapse rapidly

Some species can live for 60 or more years. Many do not reproduce until they are in their second decade of life. Often, after many months of pregnancy, a female shark will give birth to only a few young. Many of these will die before they have a chance to reproduce

An estimated 10,000 tonnes of shark fins are traded around the world every year. Mainland China is now the largest importer

A bowl of shark fin soup can cost US\$100 in an up-market restaurant

Competition for shark fins has led to widespread corruption, gangland wars and contract killings

Some shark populations have declined by more than 80% in the past 50 years. A number of studies have shown drastic declines:

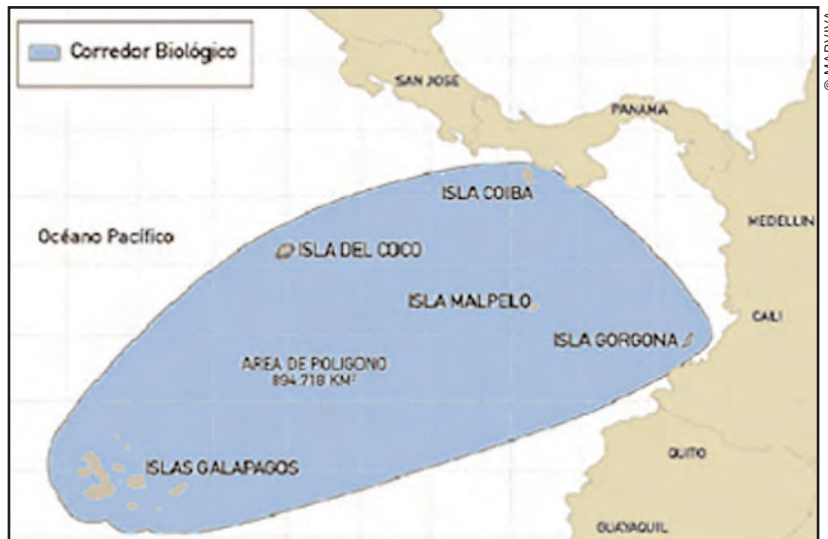
- 89% decline in hammerhead sharks in the NW Atlantic in the past 15 years^a;
- 80% decline in thresher sharks in the NW Atlantic^a;
- 79% decline in great white sharks in the NW Atlantic^a;
- 65% decline in tiger sharks in the NW Atlantic^a;
- 60% decline in blue sharks in the NW Atlantic^a;
- 99% decline in oceanic white tip sharks in the Gulf of Mexico since the 1950s^b;
- 90% decline in oceanic silky sharks in Gulf of Mexico since the 1950s^b;
- 88% decline in angel sharks in Brazilian waters^c;
- 60% decline in relative abundance of all sharks in Costa Rican waters in last 10 years^d;

The “Pacific Corridor” Declaration

In 2002, an agreement to form an Eastern Tropical Pacific Seascape (“Pacific Corridor”), was signed by the governments of Costa Rica, Panama, Ecuador and Colombia. This initiative has, as its overall objective, the conservation and sustainable development of an area of 211 million hectares, containing some of the greatest biological diversity in the world and encompassing the protected areas of the four participating countries: the Galápagos Islands (Ecuador), Gorgona and Malpelo Islands (Colombia), Coiba Island (Panamá) and Cocos Island (Costa Rica).

This area, which contains a number of endemic marine and terrestrial species, consists of highly complex, interrelated ecological characteristics, owing to the convergence of powerful sea currents that affect the migration and the distribution of a large number of species. The area is also subject to degradation resulting from human activity, such as over-exploitation of resources, habitat degradation and the

RIGHT: MAP OF THE PACIFIC CORRIDOR



introduction of exotic species. In addition, the region is prone to climatic events, such as El Niño, that may negatively affect both resident and migratory species.

The species viewed particularly as potential beneficiaries of the Corridor are sea turtles and sharks.

“From a resource management point of view, therefore, the only rational approach to the conservation of sharks is through regional co-operation”

The initiative, supported by UNEP and Conservation International among others, proposes a series of activities designed to promote regional cooperation in training, education and evaluation of marine and coastal biodiversity, and the creation of a unique marine protected area. It is hoped that it will serve as a model for other regions of the world.

OVERVIEW

Within the context of shark conservation, the countries of the “Pacific Corridor” are inextricably linked in both ecological and commercial terms.

Most of the species commonly

taken in shark fisheries throughout the Corridor are classified as “highly migratory”. These species can cover vast distances, some of them crossing entire ocean basins in their seasonal migrations. The way in which sharks are managed in one country has a profound effect on the other countries’ ability to implement management plans. From a resource management point of view, therefore, the only rational approach to the conservation of sharks is through regional co-operation.

There are, in addition, strong commercial fishing links between the four countries of the Corridor. Costa Rican boats fish, often illegally, in Panamá, Ecuador and Colombia; Ecuadorian boats fish extensively (and are reported to be finning sharks) in the waters of Colombia; Colombian boats fish illegally in Panamanian waters.

The links between the four countries – and to the wider Latin American region – are also very evident in the fin trade. The prices set by Costa Rican traders have affected the fin trade in Panamá; fin dealers from Colombia, as well as from Peru and Uruguay, have settled in Ecuador; a major Uruguayan trader in Ecuador obtains his fins from Costa Rica, Chile, Brazil and Uruguay; a Panamanian dealer exports his fins to Mexico; Colombian drug dealers have become involved in the shark fin trade as a way of laundering drug money, making the Ecuador/Colombia border a “shark fin hotspot”.

There are many common factors

COUNTRIES & REGIONS THAT HAVE FINNING REGULATIONS

American Samoa
 Australia (in most States & Territories)
 Brazil
 Canada
 Colombia (only in protected areas)
 Costa Rica
 Ecuador
 Nicaragua
 Oman
 Palau
 South Africa
 Spain
 USA

European Union



LEFT TOP:
HAMMERHEAD SHARKS
IN THE GALAPAGOS
ISLANDS. **LEFT BOTTOM:**
SHARK FIN WHOLE-
SALER IN GUANGZHOU,
CHINA



that influence the exploitation of sharks in the Corridor. Firstly, the influence of the "donor" community on certain countries in the region indicates that, to some extent, the future of shark stocks lies in the hands of governments thousands of kilometres away.

Taiwanese influence on the fisheries sector in Costa Rica is blatant. Costa Rica is one of the few countries that recognises Taiwan diplomatically and senior Taiwanese politicians, including the President and Vice-President, visit the country on a regular basis. Costa Rican officials have admitted that they depend on the "friendship" of Taiwan. Meanwhile, Taiwanese fin traders have openly flouted the law by landing fins without the corresponding carcasses at their "private" docks, where even government officials fear to tread. The offices of the Costa Rican Institute of Fisheries and Aquaculture (INCOPECA) are decorated with Taiwanese posters and calendars, while the streets of Puntarenas display

plaques commemorating the special relationship between the two countries. This appears to be interpreted by the Taiwanese fin traders as "carte blanche" to exploit the fisheries resources of the country at will.

Japanese influence on Panamá is reputed to be strong. The main fish market in Panamá City displays the Japanese flag and it has been alleged that Japan strongly influences the Panamanian vote at International Whaling Commission meetings. Since this arrangement with other countries is normally associated with Japanese "fisheries aid", it is safe to assume that a great deal of Japanese money is going into the Panamanian fisheries sector. Certainly, the many millions of dollars paid by Japan for the use of the Panamanian flag of convenience cannot be ignored in this context. Quantifying the effects of this on the fisheries sector generally, and the shark resource in particular, is perhaps something that should wait until the

new government, reputed to be more conservation-minded, has settled in.

Secondly, there is no doubt that east Asian fin traders across the region view shark fins as their private resource. An NGO based in Costa Rica, PRETOMA, has warned that Taiwanese fin dealers are now moving out of Costa Rica and settling in El Salvador. A fin trader in Panama independently confirmed this to WildAid, claiming that the law in Costa Rica was now too difficult to circumvent, and that it would be easier in El Salvador. However, given reports from local Costa Rican fishermen to the effect that sharks are becoming increasingly scarce, one may conclude that another motive for the move is that sharks are now severely depleted in Costa Rica. A fin dealer from as far away as Indonesia predicted to WildAid in 2003 that, as the Taiwanese had "nearly finished off" Costa Rica's sharks, they would soon move on.

It is highly likely that east Asian traders in the region, who have repeatedly admitted to WildAid that sharks are becoming scarce, will move on to other countries when the resource is depleted to a point where it is no longer profitable to stay.

Thirdly, governments across the region have numerous development priorities and fisheries are very often denied the resources that they need. Protected areas suffer the same lack of funding. For example, Panamá's Coiba National Park is run on a US\$15,000 annual budget, according to local NGO ANCON.

These factors, shared to a great extent by all the countries of the Corridor, have had – and will continue to have – very similar effects on their common shark resource, unless courageous political and economic decisions are made.

Shark Exploitation In The Region

Very little information on shark fisheries in the Pacific Corridor has been published to date. The information that does exist tends to characterise shark catches as “bycatch”. That is, the general perception is that there are very few directed fisheries for sharks in the region and that most sharks are caught accidentally when other fish species are being targeted. However, WildAid’s recent research in the region reveals an increasing tendency to target sharks for their fins.

Indeed, the entire region is suffering from the same change in attitudes to sharks that is spreading throughout the world: that the most valuable part of the shark is its fins, which can be sold on the international shark fin market.

This has led to the widespread practice of shark “finning” where the fins are cut off and the rest of the shark dumped overboard. It has been estimated that many millions of sharks are finned globally every year and, although there are no estimates of how many sharks are being finned in the Pacific Corridor, the evidence points to very large numbers.



ABOVE: FISHERMEN PROCESSING SHARKS IN MANTA, ECUADOR **BELOW TOP:** SHARK FINS FROM THE REGION OFTEN END UP IN PROCESSING PLANTS LIKE THIS IN TAIWAN. **BELOW BOTTOM:** SACKS OF SMALL SHARK FINS ON SALE IN GUANGZHOU, CHINA

In some countries of the region, sharks were overexploited many years ago, mostly by foreign fleets. In some cases these foreign fleets, notably the Taiwanese, Japanese and Koreans, have moved on to new fishing grounds, leaving devastation in their wake.

The expansion of the Chinese Pacific fleet in the past twenty years is also of great concern. As yet, there are few reports of vessels from mainland China operating in the Pacific Corridor but a 7-month study of Chinese tuna longline fisheries in the eastern Pacific – off the coast of Peru - has revealed that a large number of sharks are being finned in these fisheries. Most of their catch consists of blue sharks, but they also catch silky sharks, longfin and shortfin mako sharks, thresher sharks and dogfish. Thresher fins are believed to be of no value, with the result that thresher sharks are simply thrown overboard, but all other species are finned².

The level of high-seas fishing in the region is relatively low in comparison with other Pacific areas. Tuna and swordfish are targeted in longline and purse-seine fisheries, and the main shark bycatch consists of blue sharks,

mako sharks, thresher sharks, oceanic whitetips, hammerheads and silky sharks. In the early 1980s, it was estimated that the Japanese and Korean longline fleets operating in the region caught 2,000-5,000mt of sharks per year, of which about 70% were finned and discarded³.

“The United Nations General Assembly recognised “the economic and cultural importance of sharks in many countries, the biological importance of sharks in the marine ecosystem, the vulnerability of some shark species to over-exploitation” and called for full implementation of the UN FAO’s International Plan of Action for Sharks “as a matter of priority...”¹



Shark Fisheries in Costa Rica

Responsible Agency(ies):

Ministry of Environment; Costa Rica Institute of Fisheries and Aquaculture (INCOPECSA).

Marine Reserve(s):

Cocos Islands. National Park since 1978. World Heritage Site since 1997.

Finning regulations?

Yes. Sharks should be landed whole – see text.

Strong political ties with consumer nations?

Taiwan

Reports to the UN FAO on shark landings?

Yes

FAO Landings data are notoriously unreliable, often because shark fishing countries do not report their data accurately to the FAO. In some cases, data made available nationally differs significantly from data provided - by the same government department - to the FAO. In addition, INCOPECSA itself has estimated that reported landings are actually 20%-30% below actual catches. Total landings of sharks on Costa Rica's Pacific Coast in, for example, 1994 were therefore likely to be approximately 3,275mt⁴.

The shark species most frequently captured in Costa Rica are blue sharks, silky sharks, smooth hounds,

BELOW: SHARK MEAT ON SALE IN MARKET IN SAN JOSE, COSTA RICA.



hammerheads and thresher sharks⁵. Other species caught in Costa Rican fisheries are nurse sharks, tiger sharks and shortfin makos⁶. An FAO report reveals that the percentage of shark and ray landings to total fish landings increased from 9.22% in 1990 to 11.13% in 1995, peaking at 14.31% in 1994⁶.

Shark catches in Costa Rica have grown steadily since the late 1980s. Between 1988 and 1994, total reported landings on the Pacific Coast increased 2.7 times, from 916mt to 2,455mt⁷.

Although sharks are landed on both coasts of Costa Rica, the Pacific fisheries account for more than 99% of reported shark landings⁷.

THE FLEET

Local

There is a large, artisanal local fleet.

Foreign

There are numerous foreign vessels fishing in and around Costa Rican waters. A very large proportion of these are Taiwanese. Most foreign vessels are longliners, targeting tuna, marlin and sharks.

FOREIGN INFLUENCE ON COSTA RICA

In 2004 allegations surfaced in Costa Rica to the effect that the former President, Miguel Angel Rodriguez, had received "donations" from Taiwan during his presidency. These donations, said to amount to US\$400,000 in 2001 and 2002, were reported to have come from Taiwan's Ministry of Foreign Affairs and from the Taiwanese Embassy in Costa Rica. A ministry official, Michael Lu, admitted that "Our country offers aid to our allies through mutual negotiations. These aid projects primarily aim to help our allies' national development".

A Costa Rican court subsequently confirmed that it had opened an investigation into the allegations⁸.

On July 25 2003, an inauguration ceremony was held for the new

Costa Rica's shark landings reported to the FAO:

Year	Tons
1950	0
1960	0
1970	400
1971	400
1972	300
1973	400
1974	527
1975	552
1976	496
1977	747
1978	846
1979	782
1980	590
1981	682
1982	652
1983	703
1984	798
1985	750
1986	596
1987	830
1988	1,030
1989	1,230
1990	1,430
1991	1,519
1992	2,213
1993	2,582
1994	2,866
1995	2,941
1996	3,497
1997	5,549
1998	7,724
1999	7,897
2000	12,901
2001	9,659

Source: FAOSTAT

"Friendship with Taiwan" bridge across the Tempisque River in Costa Rica. The bridge cost US\$25 million, most of which donated by the Taiwanese government. In attendance at the ceremony were the ambassador of Taiwan, President Dr. Abel Pacheco of Costa Rica, dignitaries from both countries, 500 Costa Rican citizens, and protesting Costa Rican NGOs⁹.

Costa Rica's main fishing port, Puntarenas, which is home to 60% of the country's fishing fleet, is clearly proud of its links with Taiwan. In Puntarenas there are twin-flagged plaques in the streets, commemorating

the relationship between the two countries and celebrating the donation by Taiwan of funds for major buildings and pedestrian walkways.

According to Antonio Porras, a former Technical Director of INCOPECSA, other donors have deserted Costa Rica but Taiwan remains loyal. The Taiwanese President and Vice-President have both made visits to Costa Rica in recent years. Local NGOs cite the strength of this relationship as one of the principal obstacles to shark conservation in the country and have organised demonstrations against the quid pro quo operating between Taiwan and the Fisheries sector of Costa Rica.

PRIVATE DOCKS

The use of private docks by foreign boats based in Costa Rica is another of the most critical issues hampering shark conservation efforts. Government officials do not have free access to these docks, which both inhibits law enforcement and prevents the collection of accurate landings data.

On May 31, 2003 Costa Rican Coast Guard officials witnessed a

BELOW TOP: PLAQUES IN PUNTARENAS COMMEMORATING THE TAIWAN-COSTA RICA RELATIONSHIP.

BELOW BOTTOM: A TAIWANESE VESSEL ILLEGALLY LANDING SHARK FINS AT A PRIVATE DOCK.



© WATTS/WILDAID

© PRETOMA

Taiwanese vessel, *Guida U Ruey I*, flying a Panamanian flag of convenience, landing approximately 30mt of shark fins at a private dock in Puntarenas in violation of an INCOPECSA regulation which at that time banned the landing of shark fins separately from carcasses. Given the private nature of the dock, Coast Guard officials could not take action. The fins were quickly transported to an unknown location in three container trucks¹⁰.

On July 31, 2003, the Taiwanese vessel, *Ho Tsai Fa #18* was reported landing shark fins at a private dock in Puntarenas. Coast Guard officials sought a warrant to enter the dock, but INCOPECSA hindered the acquisition of a warrant, claiming that no irregularities had occurred. Film footage shows dock workers sorting the shark fins next to the vessel in the early morning¹⁰.

Central to the shark finning issue in Costa Rica is Costa Rican Customs Law. The law states that foreign fishing vessels can land products at private docks only in exceptional circumstances. However, it has been the norm for dozens of foreign vessels to land their catch each month at private docks in Puntarenas. Inspectors do not have free access to these docks; landings often take place at dead of night, and these vessels land up to 100mt of products at a time. Since these private docks have high walls topped with razor wire, and there is rarely any monitoring of the landings, it is more than likely that countless tonnes of shark fins have entered Costa Rica unreported in the past decade.

Furthermore, despite great controversy surrounding the issue and multiple cases of illegal and questionable shark fin landings at a time when such landings were banned, INCOPECSA has been reluctant to take any steps to enforce the law at these docks and has provided bizarre excuses for them: secretly filmed evidence of bags of fins – with no carcasses – being weighed and sorted alongside a Taiwanese fishing boat at a private dock, was met with a response from INCOPECSA to the effect that there was no proof that these specific fins had come from that specific boat¹⁰.

However, there are recent signs that the authorities are beginning to take their law enforcement responsibilities more seriously. The owner of a private dock, aptly named *Captura Todo*, which received illegal shark fin landings from the *Wang Jai Men 99*, has been prosecuted for tax evasion and ordered to pay a sizeable fine¹⁰.

On 22 November 2004, after years of pressure from PRETOMA, other local NGOs and thousands of Costa Rican citizens, Congress finally agreed to enforce the existing law and halted foreign vessel landings at private docks. However, Customs in Puntarenas is still allowing some foreign vessels to do this, an activity that is being challenged in court¹⁰.

PUBLIC DOCKS

Caldera Port is a large, commercial port a few kilometres south of Puntarenas. It has the capacity to accommodate a variety of boats, from containers to fishing boats. In 2003 a new regulation was passed, requiring all foreign fishing boats to stop at Caldera Port before proceeding on to Puntarenas. In theory, this was to allow for inspections. However, an official at Caldera informed WildAid that, while inspections are regularly carried out by the Health, Safety, Customs and Immigration authorities, boats are hardly ever inspected by INCOPECSA at Caldera. A Costa Rican NGO pointed out that when inspections of fishing vessels are actually carried out at Caldera, only the top layer of products in the hold is ever inspected.

There are other indications that all is not well at Caldera Port. In 2003, NGOs filed an official complaint against the former head of Port Security for Caldera, Marvin Jaen. He was given unpaid leave and later resigned. He now acts as legal representative for one of Puntarenas' largest fin trading companies¹⁰.

THE EXTENT OF FINNING

Shark finning has been a major problem in Costa Rica for many years. The extent of it is hard to quantify,

mainly because the worst culprits have been landing at private docks where controls are weak and, therefore, landings data are unreliable.

It would appear, from official estimates of sharks landed in Costa Rica, that more fins were landed in 2003 and 2004 than can be accounted for by the weight of landed shark bodies. According to figures provided by INCOPECSA, 12,319mt of shark meat and 894mt of shark fins were landed in 2003, and 6,478mt of shark meat and 479mt of shark fins were landed up to October 2004⁹. Although these figures should be regarded with caution, a rough calculation based on the accepted ratio of 5% fins to 95% dressed weight of shark carcasses, and on an estimated weight of 20kg per dressed shark, suggests that 233,000 sharks were finned in 2003 and 130,000 up to October 2004.

In May 2004, WildAid interviewed the Chinese Captain and crew of the *Chen Chieh No. 21* in Puntarenas. All of them were from mainland China, the Captain being from Fujian Province. However, the boat belongs to a Taiwanese company called Zhen Jie Fishing Company. Zhen Jie's boats are longliners, targeting mainly tuna destined for Japan. They have 11 boats, 10 of which are fishing boats, and the other one was referred to as a 'delivery boat'. These boats go out on a rotational basis for a period of 3-5 months at a time. While the boat is at sea, a motherboat comes and collects their load every 20 or so days, to enable them to continue fishing. Crew members sign 3-year contracts with the company and, during that time, they do not return home.

The crew stated that, on average, they land about 80 tonnes of sharks per trip, although they have landed up to 200 tonnes, mostly of blue and silky sharks. When out on the high seas, they always fin sharks. Within Costa Rica's waters they retain the shark, fillet the meat and use the meat as bait to catch more sharks. Only when the boat is on the return journey to port do they retain the whole shark. The crew of the *Chen Chieh No. 21* reported that they stored 100-200 whole sharks on their way back: the obvious conclusion



ABOVE: THE TAIWANESE-OWNED *CHEN CHIEH* No. 21, DOCKED IN PUNTARENAS.

is that these sharks formed the "top layer" in the rare event that an inspection was carried out at Caldera.

In 2003, the captain of another Zhen Jie-owned vessel had also reported that his crew finned sharks and it would seem safe to assume that this is routine on board most longliners operating out of Puntarenas. Zhen Jie boats unload at "Sammy's dock", so there is no way of establishing how many fins are landed each year.

WildAid interviewed two local fishermen in Puntarenas in 2002. Both had been fishing for more than 30 years. They reported that local fishermen had witnessed sharks being finned and had complained, in vain, to the authorities. They blame the diminishing catch on the international fishing fleets, particularly the industrial longliners, saying that they are interested only in the fins. One of them had seen a few whole sharks but, for the most part, he had seen only shark fins. While he does not know what proportion of sharks are finned, he claims that almost all blue sharks are discarded at sea.

For over a year there was a disagreement between INCOPECSA and NGOs regarding the overturning of a regulation that had previously banned shark finning and prohibited the landing of sharks without the corresponding carcasses. A new regulation, passed in November 2003, allowed fins to be landed separately, provided that the fins weighed no more than 12.7% of

the "dressed" weight of the shark. However, even that generous ratio could be significantly increased if fishermen claimed that they used the sharks they captured as bait¹⁰. The 12.7% ratio was based on research that scientists regard as dubious in the extreme⁹. NGOs were concerned that this high ratio would allow many thousands of sharks to be finned, while the fishermen could still provide the "correct" ratio of fins to sharks at the quayside. However, this law has itself been replaced by a new law stipulating that sharks must be landed with their fins attached.

PRETOMA's own research, fully supported by research carried out in Australia and the USA, showed that an average ratio of 4.75% would represent far more accurately the weight ratio of fins to sharks.

In November 2004, the Partido Accion Ciudadana (PAC) proposed to the Plenary of the Legislative Assembly the formation of a Commission to investigate shark finning, on the grounds that current legislation was ineffective. The PAC commented that the majority of the exploitation is currently carried out by means of Taiwanese capital¹¹.

In December 2004, after relentless pressure from NGOs, Congress approved the text of a "new" draft Fishery Law, although it has, in fact, been on the table since 1995. A key requirement of this law is that shark

fins must remain attached to the carcass at the point of landing. On February 11 2005, Congress approved the law and, at the time of writing this report, it is awaiting the formal signature of the President¹⁰.

THE SHARK FIN TRADE

Puntarenas is the largest port in Costa Rica and the most active in terms of shark fin trading. There are four principal shark fin collectors in Puntarenas: one is from Singapore, two are from Taiwan and the fourth is local¹².

According to a fin dealer in Puntarenas, fins of blue sharks are the most commonly traded, followed by those of threshers, "black" sharks (silky sharks), hammerheads, blacktips and sandbar sharks.

A Taiwanese-owned company, which operates from a private dock in Puntarenas, owns 12 fishing boats. Each boat goes out for a period of approximately 6 months, and catches mostly silky sharks. The owner reported that the containers used by his company to export dried shark fins can hold 23-24mt at a time. An official at Caldera docks, the commercial port near Puntarenas, reported that this company trucks its fins directly to the airport in San Jose, for export and that the container trucks that it uses are regularly seen on the main road to the airport.

A Costa Rican fin dealer in Puntarenas stated that he exports

RIGHT: COSTA RICANS DEMONSTRATE AGAINST THE LANDING OF SHARKS AT PRIVATE DOCKS



© PRETOMA

around 8mt of dried shark fins per month and that all of his fins go to one trader in Hong Kong. He did not admit to finning sharks but he did report that he sends 1,000 shark carcasses to San Jose each month, for local consumption. A very rough calculation, based on the assumption that dried shark fins weigh approximately 1.25% of the "dressed" weight of the shark, and that a dressed shark carcass from a regional longline fishery weighs, on average, 20kg reveals that this company may be finning 30,000 sharks per month.

This trader also buys shark fins from 60 other local boats based in Puntarenas, which probably makes him the biggest trader in the area. He owns a private dock and premises for storage and processing. WildAid visited his

storage premises and saw 2,000-3,000 fins laid out in the sun to dry. There were further crates of wet fins waiting to be sun-dried, although there are also ovens where fins can be dried.

ILLEGAL ACTIVITY IN THE COCOS ISLANDS

Fishing vessels 90-180m (259-590 feet) in length, equipped with state-of-the-art navigation and fishing technology, search for tuna, sailfish, marlin, manta rays and sharks around Cocos Island¹³.

In August 2001, a large trawler and seven support boats were apprehended by Cocos rangers with the help of the Sea Shepherd Conservation Society. The boats, which were using longlines to target sharks, were fishing illegally eight miles from Cocos Island. It is illegal to fish within 14 miles (22.5km) of the island. The authorities discovered 50 miles (80km) of longlines on board¹⁴. It was reported that, in 2001, up to forty fishing boats entered the marine protected area of Cocos Island.

In January 2001, an Ecuadorian vessel, the *San José I* and the Costa Rican *Primera 3* were apprehended fishing illegally around Cocos Island. It was reported that more than 17 Costa Rican vessels had been captured operating illegally within the limits of the Marine Protected Area during the previous 2 years. During "Black October",

Costa Rican exports of dried shark fin to the principal east Asian markets (in kilograms):

	1995	1996	1997	1998	1999	2000	2001	2002	2003
China	0	6,885	12,072	18,980	2,192	10,478	3,991	0	8,080
Hong Kong	-	-	188,803	104,827	97,666	99,805	65,547	101,842	191,579
Singapore	-	-	-	-	-	-	-	-	-
Taiwan	-	0	0	337	987	796	7,612	9,711	0

(Source: World Trade Atlas)

so called by local scuba dive operators, dozens of illegal fishing vessels were spotted, both Costa Rican and Ecuadorian¹⁵.

In January 2002, two Colombian pirate vessels, the *Puri* and the *Luz Marlene* were apprehended while fishing illegally around Cocos Island¹⁶. The *Puri* was carrying marlin and sharks¹⁷.

**“Oceanic silky sharks
have declined by
90% in the Gulf of
Mexico since
the 1950s”^b**

In February 2002 the captain and owners of a longline vessel were convicted of fishing illegally in the waters of Cocos Island National Park¹⁶. The vessel, the *San Jose I*, was confiscated and the owners were fined US\$300,000. The Ecuadorian captain was allowed to return to Ecuador, despite being sentenced to three years in prison¹⁶.

In February 2004, the *Leza N. 1* was apprehended by Cocos Island Park Guards, assisted by Marviva. The boat was fishing eleven miles inside the Cocos Island Marine Conservation Area. A three-mile (4.8km) long fishing line and 131 fishhooks were confiscated¹⁸.

In March 2004, the Costa Rican authorities confiscated 31 sharks - 24 live and seven dead - from the *Don Carlos*, a boat fishing illegally around Cocos Island National Park. A pregnant female shark carrying 10 embryos was found aboard. According to local NGO Marviva, 28 miles (45km) of fishing line with 138 hooks, 192 nets and more than 65 floats were seized. The live sharks were released¹⁹.

SHARK DECLINES

In a report, released in May 2004 and currently being peer reviewed, PRETOMA estimates that there has been a 60% decline in the relative abundance of sharks in the past ten

years. That is, for each line of hooks set, fishermen are catching 60% fewer sharks in the Costa Rican EEZ than they were 10 years ago²⁰.

It was reported in 1996 that the average size of shark being caught was decreasing. The “cazon” (<10kg) to “posta” (>10kg) ratio changed from 0.86 to 1.7 between 1988 and 1994⁷. This is a reliable sign that sharks are being overfished.

Anecdotal evidence suggests that fishermen now have to travel further and stay out longer than they did a few years ago and are landing only 1/3 to 1/2 of their previous shark catches²¹.

In 2004, artisanal fishermen in Puntarenas claimed that local shark stocks had been decimated. They estimated that there had been a 60-70% decline in their catch in the previous 5 years. In San José’s central fish market, a fishmonger reported that sharks, once plentiful, are now a rarity in the market. One fisherman reported that some of the foreign boats, which he believes may exceed 40 in number, can land 2,000 to 3,000 sharks at a time. The result, he claims, is a drastic

decline in his catches. He reported that not all foreign boats land their catch in Puntarenas: some fish for months at a time, regularly supplied by “mother boats”, and then sail straight to their home countries.

The crew of the *Chen Chieh No. 21* reported that the shark fishing season in 2004 was very poor compared with a few years ago.

USE OF MEAT

Shark meat is widely consumed in Costa Rica. Much of it is sent to the markets of San José. Costa Rica is also an exporter of shark meat²².

BELOW TOP: THIS COMPANY CAN EXPORT UP TO 8 TONNES OF DRIED SHARK FINS TO HONG KONG EVERY MONTH. **BELOW BOTTOM:** SHARK FINS LAID OUT TO DRY AT INVERSIONES CRUZ (OBTAINED USING A HIDDEN CAMERA)



© WATTS/WILDAID

Shark Fisheries in Panamá

Responsible Agency(ies):

Autoridad Marítima de Panamá (AMP); Ministry of Environment (ANAM)

Marine Reserve(s):

Coiba Island. A National Park since 2004. Currently being evaluated for World Heritage Site status.

Finning legislation?

No. Fins are often landed separately. Sharks considered unpalatable are usually discarded²³

A National Plan of Action for sharks?

No, but research rumoured to be in progress

Strong political ties with consumer nations?

Japan

Reports to the UN FAO on shark landings?

Occasionally since 1991

As with other countries in the region, Panamá has not allocated sufficient funds to carry out extensive shark research. At the time of WildAid's first visit, all researchers had been instructed that they must raise their own funds for research, including money to pay for their own boats and gasoline²³.

Little is known about the abundance, distribution or migration of sharks around Panamá, and there has been very little formal research on trends in shark fishing effort or on the commercial value of sharks to the country²⁴. This makes it extremely difficult to devise or implement a rational management plan.

What is known is that, historically at least, among the main species caught are black tips, blue sharks, oceanic white tips, bull sharks, tiger sharks, big-eye thresher sharks and three species of hammerhead. However, it is difficult to identify the species currently being caught by the artisanal fleet, since they are landed eviscerated and with their



ABOVE: TAIWANESE VESSELS AT VACAMONTE PORT, PANAMÁ

heads and fins removed²⁴.

There are numerous shark landing areas in Panamá. The largest of these is said to be Vacamonte, the commercial port in Panamá City, where WildAid discovered a large shark fin processing plant.

Research from Panamá suggests that fishing for sharks became more intensive in the late 1980s as a result of the market demand for shark fins, although the FAO statistics are not complete enough to reflect this. According to Ramirez and Medina (1999), however, this situation prevailed for little more than a decade. While sharks were targeted for their fins and, indeed, finned and discarded during the 1980s, the 1990s saw an increase in efforts to obtain shark meat. At this time, sharks became a target for large industrial operations, the meat being used both for human consumption and for bait²⁴. The huge increase in shark meat production in Panamá leads Ramirez and Medina to conclude that sharks can no longer be considered bycatch: they have become a target.

THE FLEET

Local

Thirty-five years ago, paddle boats and nets were used by local shark fish-

Panamá's shark landings reported to the FAO:

Year	Tons
1950	0
1960	0
1970	0
1971	0
1972	0
1973	0
1974	0
1979	0
1980	0
1981	0
1982	0
1983	0
1984	0
1985	0
1986	0
1987	0
1988	0
1989	0
1990	0
1991	1,962
1992	1,257
1993	611
1994	372
1995	85
1996	170
1997	0
1998	0
1999	202
2000	0
2001	0

Source: FAOSTAT

ers but now they use motorised boats and very small-meshed gill nets. According to the Registry of Artisanal Boats, in 1998 there were 1,412 artisanal boats with a license to capture fish. Approximately 63% of these used vertical nets to catch sharks. Of these 54% used 3-4" (7.6-10cm) mesh and the rest used mesh of between 4.5-8" (11.4-20.3cm)²⁴.

Although larger scale operators present a persistent law enforcement problem both around Coiba and in Panamanian territorial waters generally, a local NGO has warned that a more serious long term threat comes from small artisanal fishing boats from the poverty stricken communities along the Veraguas coast²⁵.

Foreign

There are numerous foreign fleets fishing in Panamanian waters, but the distinction between local and foreign is confused because of Panamá's tradition of allowing foreign vessels to fly its flag. Thirty-three percent of the "Panamanian" fleet consists of Japanese vessels flying the Panamanian flag²⁶, which earns Panamá a great deal of foreign exchange.

There are 120 boats altogether fishing in the vicinity of Panamá: until recently, forty-five of these were purse seiners, fishing for shrimps. Of these, 28 had allowed their licenses to expire. At the end of September 2004, however, the government imposed a moratorium on purse seiners in the Gulf of Panamá to allow time for an environmental impact study to be carried out²⁶.

Seventy-five longliners operate around Panamá, 38 of them in Panamanian waters. However, 24 of these longliners fish in international waters but fly the Panamanian flag and only 13 fly foreign flags²⁶.

Some of the larger foreign fleets are from the USA and Taiwan²³. Foreign fishing vessels tend to use longlines to catch sharks²⁴: Taiwanese longliners are reported to use up to 60 miles of lines, often with 3,000 hooks deployed at a time. Costa Rican boats, too, are numerous in

Panamanian waters²³.

Numerous unlicensed foreign boats are entering Panamá's waters to fish. In addition, records show that 75-80% of boats that had received 6-month licenses were still fishing, months after their licenses had expired²⁶.

SHARK DECLINES

According to research carried out in Bahia Las Minas on the Caribbean coast of Panamá, it is likely that sharks in the area (stretching from Rio Chagre to Viento Frio) are "commercially extinct". While shark meat is the second most common type of meat sold at local fish markets, the sharks – minus their fins – are transported across from the Pacific coast, rather than locally-caught²⁷.

Anecdotal reports also suggest that sharks have declined considerably in Panamá. The Director of the Panamá Maritime Authority reported that Panamanian waters are depleted of sharks. A Professor at the University of Panamá reported that Panamanian fishers have complained of significant declines in recent years²³.

A fin trader at Vacamonte port told WildAid that sharks used to be plentiful in the waters around Panamá. Now, there are few sharks left and all are very small. He acknowledged that,



because of intense fishing pressure, sharks are far more scarce and those that are caught are much smaller. The company finances boats in advance, to target sharks and these "sponsored" boats are having to travel further and further out to find them²⁸.

The representative of a local NGO reported that, in his youth, there were huge concentrations of hammerheads and other species around the shoreline. He recalled that one could throw meat off Panamá City pier and see dozens of sharks going for it. The area around the Panamá Canal was replete with sharks and, at Taboga island, one could watch sharks from the beach. This is no longer the case²⁹.

Some processing plant owners suggest that species targeted in commercial fishery operations have been espe-

BELOW: SHARK FINS LAID OUT TO DRY IN PUERTO MUTIS. ABOVE: FISH MARKET IN PANAMÁ CITY.



cially impacted and that continued overexploitation of these species could result in a collapse of the current supply²⁴.

Scientists from Oregon State University have recently reported seeing no sharks at all while diving around Coiba. The area used to boast a huge shark population³⁰.

THE EXTENT OF FINNING

The level of shark finning in Panamá is difficult to assess. The general view is that shark finning is carried out by local, as well as foreign fishing operations, and that local boats in Pédregal and Remédios routinely fin their shark catch, although there is no hard evidence of this at present. A Professor at the University of Panamá reported that tiger sharks and mature hammerheads are always finned because their meat is not considered palatable²³.

The research carried out by Ramirez and Medina, which highlights the discrepancy between reported shark meat exports and reported fin exports, suggests that the difference may be accounted for by shark finning.

THE SHARK FIN TRADE

Almost all fins are used in Panamá because of their high commercial value. The most valuable are hammerheads, big-eye thresher sharks, bull and tiger sharks²⁴. According to a fin trader in Panamá City, there is now a market for the upper caudal lobe of the tail fin. Traditionally, east Asian fin traders have rejected the upper caudal lobe because it contains no fin “needles”, but a possible explanation of this change is that there is a growing market for mass-produced shark fin, as reported elsewhere by WildAid. The manufacture of instant shark fin soup, shark fin cookies and even cat food does not require high-quality ingredients.

Fins are collected by 4-5 main companies in Panamá, the largest being Planta Processor Oceanic Export Corporation, which exports to Hong Kong²⁴.

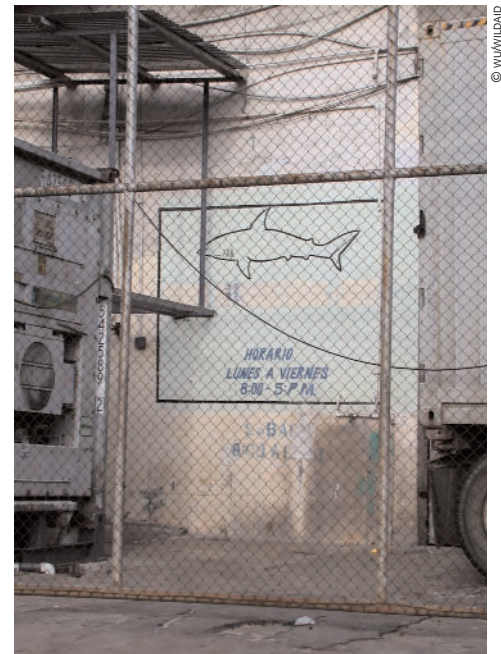
1997 saw a sudden increase in exports of both meat and fins from Panamá. From 1996 to 1997, fillet exports rose by 334% and fin exports by 52%. However, Ramirez and Medina suggest that the weight of exported shark meat is not accounted for by the volume of exported fins. Extrapolating from the fin exports, and using a conversion factor appropriate for hammerhead sharks, they suggest that the true figures for the export of meat during the period should be considerably higher. For example, the figure for 1997 ought to be 1,526,084kg, rather than the 473,294kg officially quoted²⁴.

One explanation given for this is that the shark carcasses were discarded once the fins had been removed. Alternatively, it may be that the meat was sold on the local market²⁴. Given the authors’ estimate of 350,000lbs (159,000kg) of shark meat sold in Panamá province alone in one year, this may be the correct explanation.

WildAid visited two of the larger shark fin processing plants in Panamá. Both reported that prices are rising steadily in Panamá, because shark stocks are decreasing.

The first company is located in Pueblo Nuevo, within Panamá City. It is run by a Guatemalan, with a Chinese

BELOW: FIN PROCESSING PLANT, PANAMA CITY



Exports of shark fins (fresh and dried), by Country of Destination (in pounds), (1996 - 1997)

Country	1996	1997
USA	92,460	67,780
Hong Kong	51,551	176,582
Mexico	1,162	4,760
United Kingdom	30,000	5,000
Costa Rica	3,192	8,768
Total	178,365	262,890

(Source: Contraloría General de La Nación)

Panamanian exports of dried shark fins to the principal east Asian markets (in kilograms):

	1995	1996	1997	1998	1999	2000	2001	2002	2003
China	0	437	160	0	0	0	19,786	54,336	18,457
Hong Kong	-	-	96,815	176,141	108,745	123,572	108,413	71,314	71,346
Singapore	-	-	-	-	-	-	6	18	84
Taiwan	-	-	-	-	-	-	-	-	-

(Source: World Trade Atlas)

partner, from Guangzhou. Here, the fins are dried in large ovens, ready for export. The plant produces 4-5mt of dried fins per month and it is all sold to a single buyer in Hong Kong. The company has been operating for 20 years and has exported to the same Hong Kong dealer for 15 of those years.

Many millions of sharks are killed every year just for their fins

Money is advanced to local fishermen, who bring their fins to the company. The manager informed WildAid that one fisherman ran up debts of US\$32,000 and the company responded by confiscating his boat.

The price of shark fins is rising in Panamá. The Guatemalan dealer blamed this on the Costa Ricans who, he claimed, were pushing the price up. He had visited Costa Rica to talk to dealers there, but with no success.

The second major company has offices in Panamá city and a processing plant at Vacamonte Port. The owner moved from Hong Kong to Panamá over 20 years ago. He also owns a Chinese restaurant in the city. His partner, also Chinese, is originally from Macau and moved to Panamá to help him with his shark fin business.

The company has been selling fins to the same customer in Hong Kong for many years and is able to export an estimated 6 tonnes of dried fins per month at a price of US\$36/kg, providing an income of US\$216,000 per month. They also sell 500-600lbs (220-270kg) of lower-quality fin fibre to the USA each month. This sells for US\$60/kg, providing a minimum of US\$13,600 per month. In addition, the company also exports dried fish maws and sea cucumbers, the latter being strictly prohibited in Panamá.

A third, smaller company based in Panamá City had 6,000lbs (2,700kg) of shark fins in stock at the time of WildAid's visit. The owner reported that these fins were intended for export to Mexico.

ILLEGAL ACTIVITY IN COIBA

Despite a reported stepping up of patrols, illegal fishing around Coiba is increasing. Commercial fishing boats, both local and from Costa Rica, trawl for sharks along the island's coast. In 2002, citing the problem of shark fin soup, the then Director of Coiba National Park, Clemente Nunez, reported that around 100 boats come to fish around Coiba every month³¹.

Apart from the activities of illegal commercial longliners, there are also "ghost nets" that continue to kill not only fish but also marine mammals long after they have been abandoned, and illegal shrimping operations that damage the coral formations around Coiba³².

USE OF MEAT

Shark meat is sold both to supermarkets and to individuals²⁴ although, as in many other countries, shark meat is often sold under an invented name. In Panamá it is often sold as "corvinata"²⁴. It is difficult to quantify, since only one province maintains records, however it is known that, in Panamá

province alone, over 350,000lbs (159,000kg) of meat was sold during 1997²⁴.

Shark meat is also exported from Panamá. In 1999, more than 50% of Panamá's shark meat exports were destined for the USA²⁴. It is also exported to Mexico and Guatemala. The Oceanic Export Corporation reported having received enquiries about shark meat from Sri Lanka and South Korea. The company has also exported meat to Felixstowe, England³³.

BELOW: PANAMANIAN-FLAGGED SHARK FINNING VESSEL SOL Y MAR. **ABOVE BOTTOM:** DIVER DISCOVERS FINLESS SHARK DISCARDED BY SOL Y MAR.



Shark Fisheries in Colombia

Responsible Agency(ies):

Ministry of Environment; INCODER

Marine Reserve(s):

Malpelo and Gorgona Malpelo has been a Sanctuary for Fauna and Flora since 1995 and a Particularly Sensitive Sea Area (UN FAO) since 2002.

Finning legislation?

Finning is banned only in the Malpelo and Gorgona reserves. If a vessel is caught *outside* the reserves with only fins aboard, the crew can claim that the finning took place outside the reserves and the fins are therefore legal.

A National Plan of Action for sharks?

In March 2005, the Colombian authorities reported that an 18-month programme of research would be undertaken, and a plan of action devised.

Strong political ties with consumer nations?

USA, Japan

Reports to the UN FAO on shark landings?

Yes

Colombia, in order, are: tuna, small pelagic species such as anchovies and sardines, shrimps (worth US\$20 million per year in exports, with 70-80% of the catch done by artisanal fishermen) and sharks³⁴.

There are limited data available on the shark populations of the Pacific Coast of Colombia. FAO statistics indicate catches fluctuating between 200-1,000mt per year, with a peak of 2,600mt in 1984. Almost all of this catch is reported to be the sicklefin smooth hound³⁵, along with silky sharks and hammerheads³⁴. Small quantities of batoids are also reported³⁵. The Environment Ministry reports that the most recent data available on shark stocks in Colombia dates back to 1981³⁶.

There is no shortage of scientists and NGOs in Colombia with an interest in shark conservation but, for all of them, a lack of funding is the major problem.

In addition, four separate government departments were brought together under one roof in 2003. These were agriculture, rural development, water and fisheries. Of these, rural development receives by far the lion's share of the funding and Fishery Department funds have been cut considerably. On top of this there has been a major recession. The fishing industry is not among the country's top earners, and it tends to get overlooked, thus hampering research efforts. There have been no serious stock assessments of sharks and no-

one has any real idea of population trends³⁴.

Sharks, as well as numerous dolphins and turtles, are caught in drift-nets, which are used extensively in Colombian waters, often by local fishermen³⁷. There is a good deal of shark bycatch in a number of fisheries, including longline fisheries for tuna³⁸. Research carried out on dolphin fish fisheries indicates that shark "bycatch" far exceeds the catch of the target species³⁴.

Sharks are also targeted for their fins. In earlier times, sharks were

Colombia's shark landings reported to the FAO:

Year	Tons
1950	0
1960	200
1970	300
1971	200
1972	200
1973	800
1974	751
1975	819
1976	604
1977	367
1978	417
1979	183
1980	316
1981	616
1982	600
1983	484
1984	2,608
1985	474
1986	955
1987	921
1988	613
1989	932
1990	618
1991	350
1992	745
1993	623
1994	467
1995	207
1996	1,010
1997	437
1998	363
1999	389
2000	361
2001	312

Source: FAOSTAT

The fisheries sector in Colombia is small compared with that of other countries in the region. The most commercially important species for



LEFT: PUENTE PINAL, BUENAVENTURA, COLOMBIA

caught only on hooks. Shark fishing with nets began at the end of the 1970s. Fishers used to use their nets for other species, such as dolphin fish, but now that the technology has improved, they can use them to catch shark³⁴.

Fishermen reported that sharks are caught as bycatch in both shrimp fisheries and tuna longlines. They are also targeted directly, but nowadays they are having to travel further out and remain at sea longer to catch sharks.

PRIVATE DOCKS

As in some other countries of the region, there are private docks in Colombia where commercial boats land their catches. WildAid visited one in Buenaventura, one of the country's largest fishing ports. Fishermen there were generally unwilling to speak but one reported that he used nets to catch sharks and that a trip of 20-40 days would generally result in a catch of 4-5mt of shark. The commercial boats travel 150km out to sea and land whole sharks. The fins used to go to the crew, but now the boat owners take the fins. He also reported that both the size and quantity of sharks had diminished considerably in the past few years.

THE FLEET

Shark fishing fleets are known to operate from 54–108km off the Pacific coast at night, using surface nets (known as *mallador*). The most common fishing area for these fleets appears to be the northern region of the Panama Bight, where high shark catches have been recorded³⁹. Colombian companies often sub-contract boats from elsewhere to do their fishing for them. Many of these boats – mainly pure-seiners - come from Vanuatu, Ecuador or Mexico³⁴.

Foreign vessels

A large number of foreign boats fly the Colombian flag and many of them sail straight home with their catch, making fish catches impossible to quantify. Foreign-flagged boats are mostly from Japan, Taiwan, Ecuador



ABOVE: THE MAJORITY OF SHARKS LANDED AT PUENTE PINAL ARE JUVENILES.

and Mexico and there are approximately 350 foreign boats currently fishing in Colombian waters³⁶. Approximately 120 driftnetters are operating in Colombian waters⁴⁰.

Local vessels

There are currently 145 Colombian vessels fishing in national waters.

ARTISANAL FISHERIES

There are far more artisanal fishers in Colombia than there were 5 years ago³⁶. WildAid interviewed a number of artisanal fishermen at Puente Pinal in Buenaventura. The general consensus was that the reduction in other edible fish species had coincided with the commercialisation of shark fins in Colombia, with the result that people began targeting sharks for both meat and fins. Not surprisingly, sharks were perceived to have diminished considerably both in quantity and in size. On the day that WildAid visited, 40 sharks were landed. All of them were juveniles.

One fisher said that he tended to take 10-day trips and that travel to the fishing grounds, some 400km out, takes 15 hours. He complained that

Artisanal boats have to travel much further than commercial boats because they do not have the technology to fish as intensively as the commercial fisheries.

Fishermen in Puente Pinal reported that the price they received for fins was in the range of 120,000-180,000 pesos/kg (US\$54-81/kg), depending on the size of the fins.

A middleman reported that the number of people involved in the shark fishing business had proliferated. Twenty years ago, no-one even thought of keeping and selling shark fins, but now they are one of the most highly-valued products and all the fishing boats target sharks.

EXTENT OF FINNING

There is little in the way of hard evidence about the prevalence of finning in Colombia. The general view amongst fishermen, government and NGOs is that it is mostly the crews of foreign vessels who fin in Colombian waters³⁷. One basis for this belief is that there is widespread poverty in Colombia and that people consume shark meat whenever it is available. An artisanal fisherman in Buenaventura told WildAid that, if he happened to

catch a very large shark, a rare occurrence, he has to fin it, as the artisanal boats are small and there is no room to store it. In addition, the meat from mature sharks is considered unpalatable. The vast majority of his catch consists of very small sharks, however, and these are all retained.

THE SHARK FIN TRADE

Colombia is unusual amongst fin-exporting nations in that there is little evidence that any individuals of Chinese origin are involved in the trade. In Buenaventura, one of the main shark-landing ports, there are only two fin dealers, both of them Colombian. This may be because foreigners feel the country is unsafe but an alternative explanation may be that, while imports from Colombia into Hong Kong continue on a regular basis, Chinese dealers do not consider that the volume or the size of fins available in Colombia warrants establishing a permanent base there.

There are two principal fin trading companies in Buenaventura. The manager of Company 1 claimed that every fin that leaves Buenaventura goes through one of these two premises. He reported exports of 800kg per month, while Company 2 reported exports of 400-500kg of dried fins per month, which is equivalent to approximately 1,800kg of fresh fins. However, these are likely to be underestimates. During WildAid's visit to Company 2 the crew of a Colombian boat arrived with five full sacks of fresh fins. Two were seen



being weighed: one weighed 43kg, the other 48kg. Taking 45kg as the average, the company received 225kg of fresh fins from one boat on one day. It is therefore likely that their monthly exports of dried fins exceed 400-500kg quite considerably.

Estimates of the price of shark fins in Colombia vary. An NGO reported that the export price of fins is around US\$50-60/kg³⁷. An informant in Buenaventura, whose brother is in the fin trade, said that he knew of people who bought fins in Buenaventura for US\$80/kg and then carried them overland to Ecuador, where they were paid US\$140/kg.

Company 2 pays 2,000 pesos/kg (US\$0.90/kg) as a commission to anyone who introduces fishermen with

shark fins. Both artisanal and commercial fishermen sell their fins here. They are paid an average of 150,000 pesos/kg (US\$68/kg) for fins. Most of the fins seen by WildAid were small but some of the larger fins, (measuring around 8”), were described by the owner of the company as “very big”. Considering that the main species in trade are hammerheads, however, these were medium-sized fins from sharks that were not fully grown.

Company 1, the larger of the two, has been operating for 15 years, but the owner reported that business was declining. He exports directly to Hong Kong, although he believes that a lot of the fins then move on to the Chinese mainland. The main species are hammerheads (50% of fins), and also mako, blacktips and *tinto* (oceanic

Colombia's exports of dried shark fins to the principal east Asian markets (in kilograms):

	1995	1996	1997	1998	1999	2000	2001	2002	2003
China	-	-	-	-	-	-	-	-	-
Hong Kong	-	-	23,505	10,777	21,579	19,385	16,245	19,031	13,426
Singapore	-	-	-	-	-	-	-	-	-
Taiwan	-	-	-	-	-	-	-	-	-

(Source: World Trade Atlas)

ABOVE: FISHERMEN BRING THEIR SHARK FINS DIRECTLY TO LOCAL FIN TRADERS SUCH AS THIS. **BELOW:** FRESH SHARK FINS UNLOADED AT A TRADER'S PREMISE IN BUENAVENTURA, COLOMBIA.



white tips). The size of fins has decreased and, to compensate, commercial fishers are trying to fish deeper and deeper waters. Artisanal fishermen are unable to do likewise. This trader reported that only the international boats fin sharks, particularly the Ecuadorian and Spanish boats, although he provided no evidence of this.

SHARK DECLINES

Data on trends in shark catches are scarce in Colombia. However, there are observations from scientists and fishermen that point to a decline in shark stocks. Twenty years ago it was possible to catch large quantities of sharks in many parts of the Colombian Pacific, but now there are regular raids on the Malpelo protected area as fishermen try to find sharks³⁴. An INCODER official, himself an ex-fisherman, reported that he used to catch large sharks in abundance 20 years ago. The size of individual sharks being caught has decreased and it appears that immature sharks are being caught. One study indicated that the average size of silky sharks was ~170cm, while the size at sexual maturity is approximately 180cm³⁴.

Ministry of Environment officials reported that, between 1970 and 1990, the Japanese, Ecuadorians and Taiwanese had “carte blanche” to carry out unrestricted fishing operations in Colombian waters, which the officials cited as the main cause of the current scarcity of sharks³⁶.

In Buenaventura, WildAid filmed extremely small hammerhead sharks being landed at Puente Pinal. Some appeared to be no more than 25-40cm long, but even their tiny fins were carefully removed. Juvenile guitar fish and silky sharks were also landed. Artisanal fishermen explained that these were now the most common size landed: if there are any mature sharks left, they are not accessible to the artisanal fishing boats.

With regard to shark stocks in Colombia's protected areas, anecdotal information from an NGO working to protect Malpelo Island suggests that shark abundance in the area appeared

to drop at the end of the 1980s and beginning of the 1990s. However, since the establishment of the Malpelo marine protected area, shark stocks appear to have rebounded to some extent⁴¹.

Divers in Gorgona report seeing schools of hammerhead sharks in the early 1980s. These are no longer in evidence⁴¹.

Artisanal fishermen who have operated around Gorgona for many years have noted that there were so many sharks in the early 1970s and 1980s that could not bring them all back to shore. There was an abundance of large thresher sharks but these are now a rarity⁴¹.

Another Colombian NGO reports that information gathered from divers in the Gorgona area suggests that, as little as ten years ago, hammerhead sharks were commonly sighted, but that they are no longer seen³⁷.

ILLEGAL ACTIVITY IN MALPELO

The US navy vessels in Colombian waters have the right to board any vessel they suspect of carrying drugs. They can alert the Colombians if they find illegal fisheries products. Recently, however, a vessel carrying 1,000 sharks in Malpelo was released on the grounds that there was no proof of finning.

In March 2002, 503 sharks were seized from a vessel flying the Colombian flag in the archipelago of Malpelo, according to the Director of the National Fishing Institute. In 2001, a total of 41 Ecuadorian and 11

Colombian boats were caught fishing in Colombia's prohibited areas⁴².

In July 2003, members of the Sea Shepherd Conservation Society discovered a discarded gillnet wrapped around rocks of Malpelo Island. Caught in the mesh were over 100 hundred dead silky sharks. The Sea Shepherd Conservation Society has entered into an agreement with the Department of National Parks in Colombia to help defend Malpelo Island⁴³.

The problem of the permanent presence of fishing boats, both Colombian and foreign, that engage in illegal fishing around Malpelo Island was highlighted in a document from the UN FAO, along with the request from Colombia for the area to be designated a “particularly sensitive sea area”⁴⁴. Such designations permit specific measures to be used to control the maritime activities in that area, such as routeing measures, strict application of discharge and equipment requirements for ships (such as oil tankers) and installation of Vessel Traffic Services. The designation was agreed by the Marine Environment Protection Committee of the International Maritime Organization in 2002⁴⁵.

USE OF MEAT

There is a local demand for shark meat, at least in Buenaventura Port. Known locally as *tollo* or *toyo*, shark meat is commonly smoked and sold at local markets³⁴, although few people know that they are eating shark meat. It is increasingly in demand because other fish stocks have declined³⁸.

RIGHT: SMOKED SHARK MEAT ON SALE AT A LOCAL MARKET.



Shark Fisheries in Ecuador

Responsible Agency(ies):

Ministry of Commerce; Ministry of Environment

Marine Reserve(s):

The Galápagos Islands. A National Park since 1959. Marine Reserve designated in 1986. A World Heritage Site since 1978.

Finning legislation?

Shark finning is banned throughout Ecuador. In the Galapagos Islands, shark fishing is also banned. Any live sharks caught incidentally must be returned to the sea. If dead, the catch must be reported and the shark discarded. On the mainland, sharks may be used only if they are caught incidentally in waters outside the Galapagos Reserve but they must be landed whole.

A National Plan of Action for sharks?

Environment Ministry reports that a second draft is in progress

Strong political ties with consumer nations?

Strong commercial ties with east Asia

Reports to the UN FAO on shark landings?

Ecuador has never reported its landings

Note: In September 2004, the export of shark fins from Ecuador was banned. The majority of the research for this report was carried out shortly before the adoption of this new regulation, so its effects have not yet been fully assessed. However, it appears that the ban was routinely ignored.

Despite rumours that were quickly spread by the Ecuadorian fishing industry to the effect that the price of fins paid by traders had dropped from US\$15 to US\$8 as a result of the ban and that some traders were stockpiling fins in the expectation that the ban would be overturned⁴⁶, World Trade Atlas figures show that the volume of exports in January 2005 were over 46% higher than in January the previous year. The value of exports between September and December 2004 increased by over 70%. It is possible that the traders paid less to the fishermen, using the ban as an excuse, but the increased volume of trade suggests that the rumours were nothing more than an attempt to overturn the ban.



ABOVE: A FISHERMAN GUTTING HIS CATCH OF JUVENILE HAMMERHEAD SHARKS IN MANTA, ECUADOR.

Ecuador does not report any elasmobranch catches to the FAO. However, some data on elasmobranch landings are quoted in Bostock and Herdson, and Martinez. Shark landings are reported to be mainly the result of bycatch in multispecific small-scale fisheries, large-scale longline tuna fisheries and shrimp trawl fisheries. Bostock and Herdson estimated that in the early 1980s small-scale fishermen landed some 1,800-2,000mt of sharks per year. They also estimated that the Japanese and Korean longline fleets operating during that period in the region caught 2,000-5,000mt. per year, of which about 70% were discarded after fin removal³.

At least thirty-two and possibly thirty-eight species of shark are thought to occur in Ecuadorian waters: among these are pelagic threshers, bull sharks, tiger sharks, blue sharks, mako sharks, scalloped hammerheads, black tip sharks and smooth hammerheads. Sharks are taken with several kinds of fishing gear: pelagic and bottom longlines, drift and set gillnets, hand lines and shrimp trawls. Although most of the landings are considered incidental catches, fishermen from at least three small-scale communities specifically target sharks, mainly bull sharks, mako sharks and *Carcharhinus* species. Their fishing areas comprise a consid-

erable part of the Ecuadorian coast⁴⁷.

Catch data, both current and historical, are limited. Bostock and Herdson estimated that in the early 1980s small-scale fishermen landed around 1,800-2,000mt of shark per year⁴⁸. Currently, catch statistics are reported to be gathered at only eight landing ports and for only eight days per month. Official estimates of catches at these eight ports amounted to around 4,000mt per year for 1993-5, but there appear to be no data for other ports or landing areas⁴⁷.⁴⁹ Extrapolation from shark fin exports suggests that the total catch of sharks in Ecuador was likely to be around 3,000mt in 1975, 9,800mt in 1990 and 12,200mt in 1996, leading to the conclusion that the trend of shark catches is rising³ (but see below).

The Galápagos Islands, designated a UNESCO World Heritage Site in 1978, have suffered extensive illegal fishing incursions from both local and foreign boats. A large proportion of these are undertaken for the purpose of obtaining shark fins. The area supports large populations of sharks, including hammerheads, Galápagos sharks and other *Carcharhinus* species.

Local residents report that fishing for sharks began in the Galápagos Islands in the 1950s, but growing demand for shark fins resulted in inten-



LEFT TOP: COLOMBIAN VESSEL ARRESTED FOR FISHING ILLEGALLY IN THE GALÁPAGOS MARINE RESERVE IN 2001. **LEFT BOTTOM:** ILLEGAL CARGO OF SHARK FINS.



sive fishing for sharks in the 1980s³ and has continued at a high level since then, despite a ban on large-scale shark fishing in 1998.

There appears to be no recent research on elasmobranchs in Ecuador and no stock assessment process in place, although the Ministry of Environment reports that a first draft of a National Plan of Action has been completed and is in the process of amendment. A number of legal measures, such as protected or restricted areas, maximum vessel sizes and full utilisation of sharks, have been implemented³, but these are unlikely to provide for a coherent system until the Plan of Action establishes a framework for the implementation of specific management goals and regulations.

THE FLEET

Local

There are approximately 1,000 Ecuadorian fishermen now operating in the Galápagos Islands. At the time of preparing this report, they were lobbying for permission to use longlines in the reserve, which they have already been doing illegally. The move is being opposed by scientists and NGOs, who fear the consequences not just for the “target” species but also for sharks and turtles. A decision was expected on 7th January 2005.

Foreign

There used to be 3 or 4 Japanese boats fishing for tuna in Ecuadorian waters but they have now been sold to Ecuadorians. Some years ago, there were as many as 26 Taiwanese fishing

vessels in Ecuador: today there are probably only 5 or 6 remaining. However, the Galápagos Islands are subject to unrelenting pressure from illegal fishing boats from Costa Rica and Colombia.

SHARK DECLINES

Despite the general lack of information on elasmobranch stocks in this region, Martinez (1999) noted a reduction in the landings of sharks in coastal small-scale fisheries in the late 1990s, compared with those of the early 1980s.

Anecdotal information from fishermen and shark fin traders also points to a decline in shark populations. An artisanal fisherman interviewed at Puerto Tarqui said that there had been a drastic decline in all fish stocks - including sharks - in recent years and that he was forced to travel increasingly further out and to spend longer periods at sea in order to catch sharks.

A fisherman in Manta reported that sharks have decreased significantly in coastal waters. Some years ago it was common to catch 200-300 sharks during one trip, but the average now is 50-60. He revealed that some Ecuadorian boats travel into Peruvian waters to catch sharks, as well as to the Galápagos Islands.

“An estimated 80% of shark fins exported from mainland Ecuador originate in the Galápagos Islands, where shark fishing is illegal”

Two mainland fin dealers reported in 2004 that there were fewer and fewer sharks, with the result that prices for fins were escalating⁵⁰. A Chinese-Ecuadorian dealer lamented that the increasing scarcity of sharks meant that the fin trade in Ecuador would probably continue for only a few more years.

The owner of a diving company in the Galápagos reported that “huge schools of hammerheads”, often num-

Ecuador's exports of dried shark fins to the principal east Asian markets (in kilograms):

	1995	1996	1997	1998	1999	2000	2001	2002	2003
China	0	0	10,000	6,488	26,629	21,129	36,088	42,240	34,250
Hong Kong	-	-	70,334	56,233	97,287	132,572	108,534	115,219	93,017
Singapore	-	-	-	-	-	-	-	-	-
Taiwán	-	0	0	0	50	0	0	10	0

(Source: World Trade Atlas)

bering up to 300, could be seen in the area 15 years ago. Nowadays tourists are lucky to see 20 or 30⁵¹.

Extrapolating from shark fin exports, it has been suggested that the total catch of sharks in Ecuador was likely to be around 3,000mt in 1975, 9,800mt in 1990 and 12,200mt in 1996. The trend of shark catches, when estimated from fin exports, is therefore seen as rising³. However, there are some major features of the fin trade in Ecuador that may affect this assessment. The volume of fins reported as having been exported each year is not an accurate indication of actual exports.

Firstly, large quantities of fins have been exported "outside" the official figures, using methods such as forgery, as reported by an ex-Fisheries official.

Secondly, large quantities of shark fins are trucked overland to Peru⁵² and exported to east Asia from there. It has been reported that the fins trucked to Peru do not appear in the official statistics.

THE EXTENT OF FINNING

It is believed that most of the shark finning that occurs in Ecuador takes place in the waters of the Galápagos Islands. A shark fin dealer reported that "the Chinese" (this term is often used to describe both Japanese and Taiwanese crews, as well as those from the Chinese mainland) routinely fin sharks, but that finning does not normally take place on locally-owned boats because of a significant market

for shark meat in the highlands of Ecuador⁵⁰. While this may well be true of most mainland-based boats, it is not true of the illegal Galápagos fisheries, where seizures of fins without the corresponding carcasses show that sharks are finned extensively by vessels from a number of different countries.

THE SHARK FIN TRADE

In the past few years the shark fin trade in Ecuador has been completely out of control, with large volumes of fins originating in the Galápagos Islands. Despite a number of governmental attempts at controlling the trade, widespread corruption has allowed illegal activity to flourish.

In September 2004, the President of Ecuador signed a decree banning the export of shark fins from Ecuador. Prior to this, Ecuador was a major exporter of shark fins to east Asian markets. Given the lengths to which fin traders have gone in order to protect their business, it would not be surprising if large-scale illegal trading were still occurring.

Statistics obtained in Ecuador indicate that exports of fins amounted to 128,865kg in 2001, 128,768kg in 2002, 98,815kg in 2003 and 24,689kg in the first three months of 2004. According to the World Trade Atlas, exports to mainland China, Hong Kong and Taiwan between 1997 and 2003 amounted to over 850mt as seen in the table above.

The discrepancy in the figures is very common in fin trade statistics, particularly when comparing export statistics of producer countries against import statistics of consumer countries.

ILLEGAL ACTIVITY IN THE GALÁPAGOS ISLANDS

Illegal fishing

Growing demand for shark fins resulted in intensive fishing for sharks in the 1980s³. In 1986 the Galápagos Marine Resources Reserve was declared around the Islands and a multi-zone management plan was implemented in 1992. Pressure on the Ecuadorian government from both

BELOW: SHARK FINS FROM THROUGHOUT THE PACIFIC CORRIDOR REGION ALL END UP IN EAST ASIA.



© CHEN WILDAID

national and international conservation groups led to a ban on large-scale shark fishing in 1998. However, widespread illegal shark fishing has continued, often directed solely at shark fins. Shark finning began to soar in 1997/98, mainly in response to a decline in sea cucumber.

Illegal shark fishing in the Galápagos is widespread, particularly during the season that extends from late October/early November to March/April, when the water is warmer. A Galápagos fisherman reported that the intensity of illegal shark fishing increases in areas where patrols are least frequent. Fishermen regard Isabela island as less well-patrolled. During the season, virtually all the fishermen on Isabela go out in search of sharks and illegal fishing and shark fin trading take place there relatively openly. There are approximately 180 fishing boats on Isabela, and they generally employ longlines and gillnets to fish for sharks. Sharks are almost always fished in the Galápagos⁵³.

The local fishermen now number 1,000. Many of them are relative newcomers to the Islands, contrary to the claims made by certain political lobbies that they are members of traditional fishing families. Over the years they have succeeded in reversing some laws and in breaching others with apparent impunity. Riots, invasions of both government and private buildings, hostage-taking and physical assaults have all been used as methods of persuasion. While the illegal harvesting of sea-cucumber is the most lucrative of the fisheries that the local fishermen wish to protect, shark fins, usually taken from sharks that are subsequently discarded, are also a significant attraction.

A recent newspaper article lamented the impact, both social and ecological, brought about by the illegal fisheries for shark fins and sea cucumbers, suggesting that they have affected the governability of the Islands⁵⁴.

Local fishermen claim that they can make more money by finning sharks than by labour-intensive tuna fishing that does not bring home enough cash for them to feed their families. A fisherman in Santa Cruz told the press, on

condition of anonymity, that he manages to get his fins past the sniffer dogs by hiding them in sacks of coffee or fuel tanks⁵⁴.

Fishing fleets that enter the park to fish illegally are generally targeting swordfish, marlin, tuna and dolphin fish, with sharks as a welcome bycatch. Others, however, target sharks specifically. Some boats retain shark carcasses for sale on the shark meat market. Teeth and jaws are also sold, mainly to the USA.

A fin trader in Manta reported that Costa Ricans are among the worst offenders when it comes to fishing illegally in the Galápagos Islands, although it is known that vessels of many nationalities also fish there illegally.

The widespread use of “mother boats”, not only in Ecuador but throughout the region, allows illegal fishing boats to fish continuously without having to return to port for supplies. A fin dealer reported that mother boats are positioned just outside the 40-mile (65km) Galápagos exclusion zone, and that speed boats are often used to ferry fins out to them, as a way of outrunning the patrol vessels.

In 2001, fishermen from Colombia and Costa Rica were caught fishing for sharks in the Galápagos Islands. On board the *Indio 1* from Costa Rica and the *Calima* from Colombia, authorities found hundreds of shark fins stored in freezers, with dozens of sharks trailing on longlines. Three other boats escaped.

In March 2001, the industrial long-liner *Maria Canela II* was caught inside the Galápagos Marine Reserve by Sea Shepherd patrol vessel *Sirenian*. The vessel had 78 sharks and 1,044 shark fins in her hold and 25 miles (40km) of long lines laid across the reserve. Live sharks were found on the line when recovered by rangers⁵⁵.

In July 2001 the Galápagos National Park Service (GNPS) and the Ecuadorian Navy discovered several boats illegally fishing close to Floreana Island in the Galápagos Marine Reserve. They apprehended the *Cruz Araceli*, which had come from Manta on the mainland. The vessel contained 5 motor launches, a tugboat and a



© PARQUE NACIONAL GALAPAGOS



© PARQUE NACIONAL GALAPAGOS

ABOVE TOP: GALAPAGOS PARK RANGERS INTERCEPT SUITCASES FULL OF SHARK FINS. **ABOVE BOTTOM:** SNIFFER DOGS ARE TRAINED TO DETECT HIDDEN SHARK FINS AT BORDER CONTROL.

crew of 21 people. According to the GNPS press release, when the hold was first inspected 10 sharks and 70 swordfish were found. Later the same evening a second boat from Manta was also apprehended. It contained 4 motor launches, a tugboat and 20 crew members. Thirty-two swordfish were found in the hold⁵⁶.

In 2003, WildAid-Ecuador recorded 33 illegal incidents in the Galápagos Marine Reserve. In all, 46 shark carcasses and 4,404 shark fins were recovered, along with 22,053 sea cucumbers (*pepinos*). The largest seizure of fins occurred in March, when 4,147 fins were found at Isabela Island. In the same month, 46 shark fins were found stored in sacks at an illegal fishing camp on Santa Cruz Island⁴⁶. In September 2003, 815 shark fins were discovered by the park authorities on

board a vessel fishing illegally around the islands⁴⁶. A few days later, 211 shark fins were found aboard an Ecuadorian cargo ship⁵⁷.

In January 2004, Galápagos National Park officers seized 409 shark fins and 100,000 illegally gathered sea cucumbers⁵⁸.

Between May and July 2004, the Sea Shepherd Conservation Society assisted Park officials in intercepting a Costa Rican longliner, an Ecuadorian gillnetter and a large Ecuador-registered tuna seiner⁵⁹.

ILLEGAL FIN TRADE

A Galápagos fisherman told WildAid that “Chinese people” are the main buyers of fins. They send inspectors to the islands to ensure that the fins are of good quality and to oversee their transportation to the mainland. There are various methods of transporting fins out of the Galápagos. Small quantities are flown out on regular, scheduled flights to Guayaquil and Manta for export. Some companies use large “mother boats”, which are stationed at an agreed GPS position, just outside the 40-mile boundary and are regularly supplied with fins by small, fast-moving fiberglass boats, usually at night. Other fin collectors amass a large volume of fins and then charter a boat to trans-

port them to the mainland.

Fins are also transported on visiting petroleum boats. These boats visit the islands on a monthly basis and the fins are stowed on board and smuggled out to the mainland. Some dealers have been known to rent tourist sailboats, which transport fins to mainland destinations, usually Manta.

One of the best-known fin dealers in the Galápagos informed WildAid that he uses his company’s bank account to launder fin money, in case his personal bank account is checked. He is the main supplier of fins to another major fin trader, a Chinese national.

“An estimated 10,000 tonnes of shark fins are traded around the world every year”

There is no reliable method of estimating how much shark fin is harvested from the Galápagos, but the volume of dried shark fin that can be produced from Isabela alone has been estimated to be as much as 1,500kg per month⁵³. This represents approximately 3,000 sharks.

Some companies on the mainland informed WildAid that they had local

representatives based permanently in the Galápagos, organising fin collection and smuggling to the mainland. The larger companies and investors provide fishing gear and equipment to fishermen. One trader said that he required fishermen to use their personal belongings as a “mortgage” for this equipment, returnable when the fins were delivered.

Seizures of fins around the islands show that, in addition to the use of mother boats, some fishing vessels land their entire cargoes of fins for drying on land prior to export. A Colombian fin dealer reported that there are large underground ovens hidden in caves around the Islands, but the truth of this claim has yet to be established.

FIN TRADE ON THE MAINLAND

An estimated 80% of shark fins exported from mainland Ecuador originate in the Galápagos Islands⁵², where shark fishing is illegal. Once the fins arrive on the mainland, there is no way of distinguishing them from fins harvested in the waters outside the Galápagos: to all intents and purposes, the illegal fins become “legal”. The main species in trade are hammerheads, blue sharks, threshers, black-tips, mako sharks and Galápagos sharks.

In order to export shark fins legitimately, exporters must have a shark fin export license. Not many companies possess these licenses, as they are difficult and expensive to obtain. However, they use the licenses of other traders to ship their fins out. One license-holder told WildAid that he charges 5% of the total value of the shipment as payment for this service, while others charge US\$1 for each kilogram exported.

An export license allows traders to export fins freely, but they must still apply for a permit each time they export. The permit can take up to 2 weeks to obtain and it requires the final approval of the Department of Fisheries and the National Bank. One of the supporting documents that has to be submitted is an invoice from the supplier, verifying that the fins were

BELOW: AN ILLEGAL COSTA RICAN VESSEL FINNING SHARKS IN THE GALÁPAGOS MARINE RESERVE.



© VARGAS/STRP



“The fin trade in Ecuador is reported to have become increasingly competitive during the past eight years particularly as supplies appear to be dwindling”

obtained from legal sources. For Galápagos fins, these documents are forged.

In recent years, exporters have been required to have a processing plant (with facilities such as coolers and drying rooms) in order to obtain a permit. Those license holders who do not have such facilities simply rent a plant, and use the name of its owner to “front” the export.

At this stage of the trade, the fins are sometimes exported directly, but they can also be traded up to three times prior to export: shark fins collected on commercial boats can go directly to companies holding export licenses; fin collectors can buy them from commercial boats and then re-sell them to export license holders; or, less frequently, fin collectors can buy fins from commercial vessels, and sell them to a second collector, who in turn sells them to an export license holder.

In previous years, fishing crews were allowed to keep any fins they had harvested as a bonus, but the commercial value of fins is now so high that this is no longer the norm.

While the “legal” export of fins has provided a cover for the exportation of large quantities of illegal (Galápagos) fins, some fins are simply smuggled out of Ecuador. A common method is simply to declare shark fins as other products. Another method is to send vacuum-packed fins via courier, labelled ‘plastic sheeting’ or sometimes as unspecified dried marine products.

There are as many as 10 ports on

the mainland where shark fins can be collected. Guayaquil and Manta are known to be the two busiest ports for shark fin trading but other, smaller ports cited by fin dealers are Puerto Lopez, Salinas, Santa Rosa and Ismeralda. It appears that shark fins that are bought from these smaller ports are harvested by artisanal fisheries. They are usually fresh and ‘straight-cut’. These fins have to be dried and processed, which requires that they be re-cut into a semi-lunar shape. One buyer in Guayaquil claimed that the half-moon cut distinguished mainland fins from Galápagos fins, since these are cut in a full-moon shape.

Shark fins are exported from Ecuador in a variety of forms. Most of the fins destined for Asia are uncleaned and unprocessed dried fins. These fins are processed in Asia, and re-distributed throughout Asia and North America. Fresh, frozen fins are also shipped to China. There are a few companies that process shark fins in Ecuador, and these tend to supply the US market, where cleaning and sterilizing of the fins is a requirement. There is also a small market for cleaned fins in Hong Kong.

In May 2004, 4 months prior to the export ban, there were reported to be 27 shark fin export license-holders in Ecuador. Of these, 8 individuals were considered to be the main shark fin exporters and all of them were closely associated with the Chinese community. Dealers who did not hold licenses

frequently paid licensed dealers to export fins on their behalf. Dealers from a variety of countries - Japan, Peru, Colombia, Uruguay and Taiwan - have settled in Ecuador to make a living from the fin trade. The fin trade in Ecuador is reported to have become increasingly competitive during the past 8 years, particularly as supplies appear to be dwindling⁶⁰. A local shark fin trader reported that shark fin prices in the region had skyrocketed in recent years.

Most of the fin trade is carried out at the ports of Manta and Guayaquil. Widespread corruption in both places has provided ample opportunities over a period of many years for unscrupulous fin traders to export as much shark fin as they wish. An ex-official of the Ecuadorian Fisheries Administration informed WildAid that exporters routinely changed the figures on the documents after they had been signed by the authorities, enabling them to export a far greater weight of fins than was recorded.

For the past 6 or 7 years, Colombian immigrants have been major buyers of shark fins in Manta. An

ABOVE LEFT: SEIZED SHARK FINS IN THE GALAPAGOS ISLANDS. **BELOW TOP:** SHARK FINS BELONGING TO THE WORLD’S LARGEST FISH, THE WHALE SHARK IN MANTA, ECUADOR. **BELOW BOTTOM:** HAMMERHEAD SHARK FETUSES REMOVED FROM PREGNANT FEMALE.



ex-Fisheries official reported that shark fins were used to launder Colombian drug money, a view that was corroborated independently by a shark fin trader in Panamá. There are reported to be eight Colombian buyers in total in the whole of Ecuador, along with numerous Chinese and Peruvian traders⁵⁰.

In May 2004, around 40% of the fin trade out of Manta was reported to be controlled by a single Colombian trader who moved to Manta some 9 years ago. She controlled 60% of the trade at one stage. She owns 3 longline boats that target mainly albacore and big-eye tuna and she fishes throughout Ecuadorian waters, including in the Galápagos Islands, where she has people collecting fins for her in Puerto Esmeralda and Salinas⁵⁰.

The Colombian fin trader stated that she could supply up to 10mt of frozen, unprocessed fins per month, which she estimated to be worth US\$150,000. The main buyer of this dealer's fins is a Uruguayan trader who also buys large quantities from Costa Rica, Chile, Brazil and Uruguay. The Uruguayan in turn sells his fins to a Hong Kong trader based in Brazil.

There are numerous traders who can supply large quantities of dried shark fins. One trader claimed that he could offer up to 5,000kg in one month, during the shark fishing season. Smaller traders were able to offer up to

800kg per month.

An Ecuadorian trader reported that he could supply up to two tonnes of dried fins in a good month. A Chinese trader, who buys fins from him, claims to have 'high-level assistance' in exporting the fins out of Ecuador. He is an Ecuadorian Chinese, originally from Canton in China, who has lived in Ecuador for 20-30 years. He revealed that he sometimes buys fins that originate from the Galápagos, but he buys them in Manta. Smugglers call him once the goods arrive in Manta and he goes to meet them. He had recently bought 400kg of shark fins from the Galápagos⁶⁰.

The owner of a Chinese restaurant in Manta is also a major fin dealer. He told WildAid that he used the premises and the boats belonging to a major seafood company to smuggle fins out from the Galapagos.

USE OF MEAT

Shark meat consumption in Ecuador is relatively low, and local markets for shark products are not well documented. However, according to Martinez there are exports of Ecuadorian shark meat, fins, cartilage and skins to more than 20 countries worldwide⁴⁷. FAO statistics document more than 1,000mt per annum of elasmobranch exports from Ecuador between 1998 and 2000,



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consisting almost entirely (>95%) of frozen or fresh whole sharks or fillets.

In 1997, Ecuador was the main Latin American exporter of elasmobranchs with 1,900mt, worth US\$3.2 million. These exports consisted mainly of frozen (62.5%) and fresh (37.4%) dogfish. The principal markets for these exports are the USA, Europe and Japan⁶.

TOURISM

The Galápagos Islands attract more than 80,000 international tourists who spend more than US\$140 million per year, although what proportion of this is generated by shark diving is unknown. By contrast, Ecuador is reported to earn just US\$1.5 million from the shark fin trade, accounting for the death of 200,000 sharks⁵⁴.



© PARQUE NACIONAL GALAPAGOS

ABOVE RIGHT: TOURISTS FROM ALL OVER THE WORLD TRAVEL TO THE GALAPAGOS ISLANDS TO SEE HAMMERHEAD SHARKS. **LEFT:** CARACASSES OF FINNED SHARKS WASHED UP ON A BEACH IN THE GALAPAGOS MARINE RESERVE.

The Real Value of Sharks

The realisation that sharks are worth far more alive than dead is gradually taking hold around the world. Some of the most vociferous calls for global shark conservation have come from the governments of nations that have a developed or developing marine tourism industry. Divers are prepared to pay huge sums of money to view and even to dive with sharks. The figures speak for themselves:



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ABOVE: A DIVER SWIMS WITH A WHALE SHARK. **BELOW:** A WHITE-TIP REEF SHARK

Shark Statistics

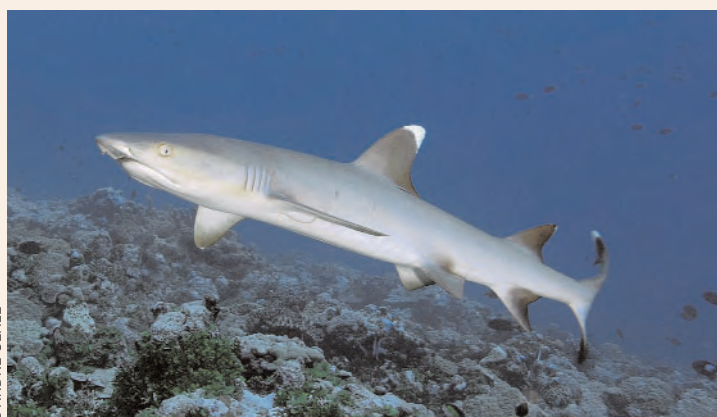
The value of whale shark tourism to the Western Australian economy is currently about A\$9 million (US\$6.5 million) a year⁶².

In the Bahamas a single live reef shark is estimated to be worth US\$250,000 a year through dive tourism, whereas a dead reef shark has a one-time value of \$50-60 to a fisherman⁶³.

In the Maldives in 1993, a single reef shark had a renewable value of US\$35,500 per year from diving, while the same shark brought only US\$32 to the fisherman⁶³.

Altogether, divers spend US\$2.3 million a year on shark dives in the Maldives - estimated to be 100 times more than the export value of shark meat⁶⁴.

Revenue generated by diving, snorkelling and coral viewing has been estimated to be 10-20 times higher than income from fishing in reef areas. Tourism to Australia's Barrier Reef is estimated to be worth over US\$1.67 billion a year⁶⁴.



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In the Philippines, fishermen who once used to target whale sharks in the Donsol region have been re-trained as tour guides for whale shark-watchers. According to the Donsol Local Tourism Office, registered tourist arrivals during the whale shark season from January to May have ranged from 840 to 1,400 per year since 1998⁶⁵. This is expected to increase significantly.

Conclusions

While donor funding – in exchange for what appears to be carte blanche for foreign fishing fleets - may appear to have immediate, short-term benefits to countries in the region, the long-term consequences are likely to be devastating. Sharks cannot withstand the kind of over-exploitation that has been perpetrated by foreign vessels that have no concern for the long-term conservation of fish stocks in the region and there are indications from all four countries that declines in shark stocks have been accelerated to a considerable extent by the activities of foreign fleets.

However, local fleets are not exempt from responsibility. Both industrial and artisanal fishermen target sharks for their fins and there is evidence, albeit anecdotal in some cases, of widespread finning. In the case of Coiba, there is concern that the artisanal fleet poses a serious threat to Coiba Island.

Sharks provide tremendous economic advantages to those countries that have a diving industry but it is likely that, if the fishing industry is permitted to continue over-exploiting sharks in the Pacific Corridor, there will be no possibility of shark tourism for many decades. Currently, the Galapagos Islands generate about a third of Ecuador's US\$430 million-a-year tourism business⁵¹, although there is no information as to how much of that figure is generated by shark diving. Whatever the case, the diving industry will collapse if sharks disappear from the reserve. The Malpelo, Cocos and Coiba islands, all of which are regarded as having enormous tourism potential, are all subject to regular illegal fishing incursions and it is highly likely that shark stocks there are already declining.

Many shark species are highly migratory and should therefore be seen as a resource shared by the four countries of the Pacific Corridor and their neighbours. What happens to sharks in the waters of one country has an impact on the ability of another to manage – and benefit from - its shark

stocks.

The damage already done to shark stocks in the region could take years to repair but there is still time, if action is taken quickly, for shark stocks to rebound so that future generations will be able to benefit from them.

RECOMMENDATIONS

As a priority, those countries that have not devised a National Plan of Action for Sharks should do so. Donor countries and agencies should assist with funding for this critically important step, and should make a commitment to provide funding for any management measures that may need to be taken in order to implement these plans.

At a minimum, countries in the Corridor should identify the most important fishing grounds for sharks and study the seasonal fluctuations in shark populations in these areas.

Basic research should be carried out in order to determine abundance, distribution, trends in catch-per-unit effort, trends in age structure of heavily fished populations and levels of mortality in sharks caught as bycatch, as well as those caught in targeted fisheries.

Prior to the publication of National Plans of Action, Fisheries agencies should take action on problems already known to exist: they should consider closed areas, closed or restricted seasons, restrictions on the use of certain types of fishing gear or fishing methods in particular areas and catch quotas or other protective measures for specific shark species that require them.

Governments should allocate far more resources for law enforcement, particularly in marine protected areas. Donors should provide assistance, both financial and technological where necessary.

Governments should also clamp down on corrupt practices, whether within government or industry.

NGOs should assist governments in establishing consumer education programmes, to inform and educate both the general public and the fishing sector about the vulnerability of sharks and the need to conserve them.

The four countries should co-oper-

ate regionally within the framework of the Pacific Corridor agreement. They should share scientific data, particularly on highly migratory species and assist each other, where necessary, with the preparation of management plans.

All four countries should impose a total ban on shark finning across the entire region and should work together to ensure that it is implemented.

Under such a ban, all sharks should be landed whole, with their fins attached and those violating the ban should incur strong penalties.

BELOW: SHARK LANDINGS AT AN ARTISANAL PORT IN MANTA, ECUADOR.



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