



INFOFISH speaks to.....

SHELLEY CLARKE

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Q: *First, congratulations on having recently received an award from Japan's Foreign Minister at a ceremony in Tokyo, in recognition of your contributions to sustainable fisheries in Japan and internationally. According to the citation, you have spent years from your home base in Japan on the management of sharks as a fisheries resource, and promoting techniques to reduce unintended shark catches. Could you give readers some background on why Japan, why sharks, what did you aim to achieve at the outset, and what have been the indicators of progress so far?*

A: Thanks very much! Japan has been my adopted country since the early 2000s so it was wonderful to receive this accolade. One of the many things I love about Japan is that records of fish catches have been kept for over 100 years! This is really a gold mine of information for scientists interested in the long-term trajectories of fish stocks, especially those like sharks that can take a long time to recover from over-exploitation. Also, Japanese society cherishes fish as not only an essential resource but also from a cultural perspective. As a result, everyone I meet here recognizes the importance of managing and protecting fish populations.

It seems like many people are drawn to work in shark science because they love sharks. Actually, it's not that I like sharks; rather, I was more interested in the fact that sharks are used for so many different products (meat, fins, liver oil, skin, even teeth) and can be economically quite important, yet their management really lags behind that of many other fish. So, when I started working on shark issues in 2000, it was because I wanted to work on fisheries management of sharks, not because I wanted to go diving with them (although I have done that too)!

Over the last 25 years, there has been a lot of development of management measures for sharks including more requirements for catch reporting, restrictions on retaining certain threatened species if caught, and more species-specific reporting of trade. However, there is still a long way to go in terms of achieving full compliance with these measures. Ongoing data deficiencies mean that our understanding of the status of the most heavily exploited sharks is still sketchy at best. It's a mixed picture with some successes and definitely more work needed.

Q: *While there are many examples of the sustainable management of shark populations, sharks and their products (notably, fins) are still being traded illegally throughout the world. What is your estimate of the volume of shark fins obtained in this manner and traded on the global market? What are some of the important developments in recent years aimed at "plugging the holes" in this illegal trade of fins?*

A: Some environmental groups claim that there are no sustainable shark fisheries, but I agree with you that there are some examples of populations that

are managed and are doing fine. The shark fin trade is definitely controversial, and as you say some fins are traded illegally, but much of the trade is legal and some fins derive from sustainable fisheries. I was one of the first researchers to do a quantitative study of the shark fin trade and I estimated that between 26 and 73 million (median 38 million) sharks were used each year to support the global fin trade. That estimate is rather old now but I still often see it quoted in the press.

Although I get asked a lot about the fin trade I think it's important not to focus too much on that, rather we need to pay attention to the number of sharks killed whether that be for their fins, their meat or simply by accident and then discarded. One of the guiding principles of FAO's International Plan of Action-Sharks is that total fishing mortality should be kept within sustainable levels. That requires setting and maintaining an acceptable level of mortality regardless of the reason for that mortality. We also have a responsibility to minimize waste under the FAO Code of Conduct for Responsible Fisheries. In other words, if sharks are being caught for their fins with the carcass discarded, then we should be concerned that the fishery is not fully utilizing the resource. A third concern is that the shark was not finned while still alive, and this is prohibited in many jurisdictions. Some shark fins will meet all conditions—from a sustainably managed population, fully utilized shark, and not live-finned.

There are however additional regulations that may apply based on the species of shark. There are now over 150 (depending on taxonomic resolution) shark or ray species that are listed by the Convention on International Trade in Endangered Species (CITES). This means there are some restrictions placed on how products of these sharks can be traded. There are also fishery regulations that prohibit the take of certain species in certain countries. As you can see, there are many ways that trade in shark products can be regulated. Unfortunately, few of these actually restrict, or even account for, whether sharks are killed by fishing gear—they only govern whether they are traded or landed. So, if we consider that mortality is the most important factor to regulate we need to stay focused on what happens on the water, not only landings and trade.

Q: *Has FAO published any guidelines that would assist States and research organisations to determine the economic, environmental and social impacts arising from IUU fishing?*

A: IUU fishing is always one of the main topics discussed at FAO's Committee on Fisheries so it's clear there is a lot of interest in knowing how much IUU fishing is still going on and whether the situation is getting better or worse. For this reason, FAO has been working on providing guidance to its members to how to answer these questions in the form of four technical guidance documents¹.

¹ <https://www.fao.org/iuu-fishing/tools-and-initiatives/quantifying-iuu-fishing/en/>



Credit: FAO/Matthew Camilleri/FAO

The first two volumes provide background on previous IUU fishing estimates so that readers can better understand how they might want to approach doing their own estimate. Then in the third volume we decided to provide a kind of “cookbook” of methods that can be used. The idea is that readers can look through examples and pick one that resembles what they want to do and then follow a recipe. That probably makes it sound easier than it really is! Doing IUU fishing estimation can be quite difficult, so for those who are more comfortable with a simpler approach, in Volume 4 we suggest using indicators which is like having a dashboard measuring several different things at the same time to see whether the overall situation is improving. The downside of indicators is that no single indicator will tell you the level of IUU fishing, so while it's quite easy to calculate them, it can be a bit tricky to interpret them, especially if some indicators are getting better and some are getting worse.

We have published all four volumes and introduced them to countries around the world. Now we hope that national fisheries will pick up these methods and apply them to produce their own estimates or indicators. That will be really interesting and help us start answering questions about the magnitude of IUU fishing at the regional or global scale. We also plan to produce a fifth volume to look at biological, social and economic impacts of IUU fishing.

Q: *Moving on to the international instruments formulated to address IUU fishing, FAO has said that during the 2018–2022 period, globally, the degree of implementation of these instruments in combating IUU fishing has risen from 3 to 4 (out of a maximum score of 5), indicating good overall progress, with close to 56 percent of States scoring highly in their degree of implementation of relevant international instruments in 2024 compared to 48 percent in 2018. While there appears to be hope for further progress by 2030, what, in your opinion, could we realistically expect to see?*

A: Yes, you're referring to Indicator 14.6.1 under Sustainable Development Goals, which measures implementation of international instruments to combat IUU fishing. The indicator is based on countries' self-assessment, so it's likely that implementation will vary even amongst countries which give themselves the same rating. Still, it's encouraging to see awareness of commitments under these instruments, and the reporting of increased levels of implementation. We hope these trends will continue but we know that won't happen automatically.

This is why in addition to providing guidance on how to quantify IUU fishing, FAO has a large team of legal and operational experts that are being deployed all around the world to help countries meet their commitments. In fact, I'm part of the team delivering technical assistance and training to 51 countries since the program started. We just opened a new training hub in Busan, Republic of Korea, which will be the focus of our delivery of up to 11 additional courses in the next three years. Training modules range from international fisheries law and Port State Measures Agreement inspection training to enforcement and monitoring, control and surveillance. The Busan hub will support professional development for fisheries professionals from Asia and the Pacific, and we also offer courses and workshops for fisheries professionals from Africa and Latin America.

Each person who is trained contributes to their national administration, and as national capabilities strengthen we can tighten the net on IUU fishing.

However, we not only need dedicated professionals on the job, we also have to give them the right information and tools. That's why we're developing systems like the Global Information Exchange System which helps Port States execute due diligence checks when foreign fishing vessels enter their ports. In addition, we maintain the Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels that compiles certified information on vessels for use by inspectors, or port or flag State authorities. We also offer assistance to countries that wish to use these systems.

Q: *You've mentioned that FAO has developed (or is developing) several guidance documents and tools which aim to prevent or eliminate IUU fishing, and also seek to prevent fish products derived from IUU fishing from entering international markets. However, as delegates at the World Economic Forum's Annual Meeting in January 2024 noted: "International instruments aimed at stopping IUU fishing - including the Port State Measures Agreement (PSMA) and FAO data-sharing platforms - already exist but are inadequately implemented and under-used, largely due to critical data gaps". In your opinion, what can governments and industry do to close these gaps?*

A: Of course, I agree that we need better implementation of international instruments and data-sharing platforms, but I wouldn't say that the problem is largely due to data gaps. In my view, we need to work on this implementation problem from three angles.

First, we need to ensure the tools we are providing to countries are the right ones. Sometimes that's impossible to know when the instrument is initially drafted or when the data system is first created but over time it becomes clear what improvements are needed. As I was talking about earlier, our team spends a lot of time in-country with national authorities and we do our best to listen to their needs. For example, we're continuously trying to roll-out new functions for our global systems and make them more user-friendly.

The second angle is that we need to build capacity to use the tools through training. The level of expertise in countries around the world can vary a lot, and often there is turn-over of staff and the same training needs to be given again. This is an ongoing challenge—not only for combatting IUU fishing—and the reason why we have such a large team that is always on the go.

The third angle is the most difficult to tackle because it involves political will. We have to admit that IUU fishing is not the top priority for many countries around the world facing economic, health and security crises. We need to make it as easy as possible for national governments and industry to do the right thing but we also have to recognize that these decisions are their own. Meanwhile, countries that do want to tackle IUU fishing are raising standards and improving systems and can serve as good models for countries that decide they want to join in.

Q: *And on a final note, what are your thoughts on the following statement: "Women and youth can play an important role in enhancing sustainable fisheries management, including addressing IUU fishing".*

A: When considering IUU fishing, it is important to move beyond stereotypes, such as the image of “men at sea from foreign countries committing crimes.” IUU fishing involves diverse groups of people and encompasses a wide range of activities that threaten the sustainability of fish stocks, which are critical to livelihoods, food security and ecosystems. While data on the specific roles of women and youth in IUU fishing is limited, their potential to contribute to sustainable fisheries management should not be overlooked. For example, women and youth tend to appreciate the importance of being able to use natural resources over the long-term to support families' livelihoods and traditions into the future. This can help incentivize more sustainable practices at the local level. 🌱