“Bringing maritime capture back to sustainable levels will not be possible unless illegal, unreported and unregulated fishing, also referred to as IUU-fishing, is curtailed.”

Port State Measures Agreement: Tackling IUU fishing through inspections
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**Introduction**

The responsible use of Earth’s oceans forms part of the United Nations’ Sustainable Development Goals (SDGs), adopted by the organisation in 2015.1 The fourteenth of these goals aims to ‘conserve and sustainably use the oceans, seas and marine resources.’ Moreover, it notes that ‘more than 3 billion people [depend] on the oceans as their primary source of protein’ and that ‘fisheries directly or indirectly employ over 200 million people’ worldwide. The goal is broken up into 14 targets, one of which aims at ending, amongst other things, ‘illegal, unreported and unregulated fishing’ so that fish stocks can be restored ‘in the shortest time feasible.’ Through the adoption of the SDGs, United Nations member states have pledged to achieve this goal by 2020, or in less than five years. Such an ambitious goal can only be realised through a combination of measures, and one important such step is regulating the use of the world’s ports.

This briefing paper describes the problem that illegal, unreported and unregulated fishing poses to the industry. It then highlights the recent entry into force of the 2009 Port State Measures Agreement (PSMA), which aims to regulate port use. The brief outlines the agreement’s main prohibitions and verification clauses,2 offers a short analysis of the effectiveness of the PSMA and comments on future challenges and opportunities for strengthening the instrument.

**The state of fisheries**

The Food and Agriculture Organization of the United Nations (FAO) regularly reports on the state of fisheries and aquaculture globally.3 According to their latest report from 2016, marine capture production in 2014 stood at 81.5 million tonnes, of which 87% was hauled up from the world’s oceans and the remainder from inland sources, such as lakes and rivers. Of the 25 major fish producing countries, four -- China, Indonesia, the Russian Federation and the United States -- stood for approximately one-third of the global catch. The traditional method of heading to the oceans to catch produce is on the decline: after the volume of marine capture peaked at 86.4 million tonnes in 1996, production has gradually been declining to today’s levels. This slight reduction is a result of overfishing and the rise of aquaculture—the controlled breeding and harvesting of fish—which has had a positive effect on resource depletion trends. Aquaculture allows for better control of fish stocks and ensures that production is sustainable; however, it is not enough to overcome the challenges facing this sector.

Fishing is still carried out at unsustainable levels. According to the FAO, and based on state-submitted information, one-third of the world’s fish stock is harvested at biologically unsustainable levels. 58% of all stocks are ‘fully fished’ and only approximately 10% ‘underfished.’ These numbers—already deeply concerning—may, in fact, be underestimates of the precise state of health of the world’s oceans.

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Illegal, unreported and unregulated (IUU) fishing: a global menace

Bringing maritime capture back to sustainable levels will not be possible unless illegal, unreported and unregulated fishing, also referred to as IUU-fishing, is curtailed; this is why UN member states, through the SDGs, have pledged to eliminate IUU fishing by 2020. The three main elements comprising IUU fishing can be described as follows:

- Illegal fishing refers to activities by national or foreign vessels which violate the laws of the state that exerts jurisdiction over the waters. Illegal fishing also occurs when a vessel violates measures adopted by regional fisheries management organisations (RFMOs). A typical example of illegal fishing would be to catch without a permit.
- Unreported fishing includes activities that are un- or misreported to national authorities and RFMOs. For example, a ship that has caught 100 tonnes of fish but declares only 50 tonnes to the authorities, keeping the remainder ‘off the books.’
- Unregulated fishing comprises fishing activities carried out by unflagged vessels or ships flying the flag of a state not a party to the relevant RFMO, or simply by harvesting in an area not covered by any regulation.

It is difficult to offer an estimate of the value of this IUU trade, and official accounts do vary significantly. However, a tentative range is often placed at US$10-24bn annually, which corresponds to 11-26m tonnes of fish. If these estimates are correct, illegal, unreported or unregulated fishing comprises one-quarter of the total harvest. This is an immense amount of money (which could be taxed) and stock (which is consequently subjected to increased stress). While the FAO estimates that aquaculture will overtake capture fisheries in the latter half of the 2010s, fish stocks may be in serious jeopardy unless all IUU activities are eradicated by 2020 as planned.

As one might expect, the driver for engaging in IUU fishing is financial. As Seafish, a UK industry organisation established by Parliament, points out: ‘A vessel that is fishing illegally is able to minimise operating costs in terms of licensing, regulation, use of vessel monitoring systems and documentation. IUU fishers may ignore quota levels, enter closed fishing areas, catch undersized fish or target rare or even endangered species, attracting a premium from unscrupulous buyers.’

Agreements such as the PSMA have therefore been designed to close international markets to IUU fishers. Ensuring that these individuals cannot prosper by evading regulation is a benefit to those that depend on the trade for their living and those that depend on fish for food. Fishery still employs a large workforce around the world. Estimates from 2014 indicate that approximately 57 million people work directly in capture fisheries and aquaculture. Of these, 40 million people rely on catch at sea, and those

abiding by regulations are negatively affected by IUU activities.\textsuperscript{7} Asia is the continent with the highest number of fishers, with 30 million people engaged in catch at sea. It is followed by Africa, with approximately five and a half million people employed, and Latin America and the Caribbean, with two million people working in the sector. All of these individuals stand to gain from the eradication of IUU activities.

**Background to the Port State Measures Agreement (PSMA)**

‘Port state measures’ — meaning the ‘right and duty of a port State to inspect, take measures, and enforce fisheries conservation and management measures over non-flag vessels seeking entry into, or in port’ — is one of many actions devised to eradicate IUU fishing.\textsuperscript{8}

Port state measures have been strengthened over time, ever since the 1982 adoption of the United Nations Convention on the Law of the Sea (UNCLOS).\textsuperscript{9} Accepted international law and practice give coastal states limited jurisdiction over vessels for acts taking place during high seas navigation. Instead, the laws of the ship’s ‘flag state’ govern its conduct on international waters, with some exceptions: UNCLOS article 218, for example, gives states some limited authority to enact and enforce their laws against foreign vessels concerning discharges outside its ‘internal waters, territorial sea or exclusive economic zone’ should the spill violate ‘applicable international rules and standards.’ The provision was principally designed to tackle cases of marine pollution.

In 1992, the United Nations convened the Conference on Environment and Development (UNCED).\textsuperscript{10} After this conference — often referred to as ‘Agenda 21’—states started to negotiate and adopt several agreements on fisheries with an increased emphasis on port state measures. Those agreements include:

- The 1993 FAO Compliance Agreement, Article 5 of which gives a port state the option to carry out ‘investigatory measures’\textsuperscript{11} targeting fishing vessels believed to have been used for an activity undermining ‘the effectiveness of international conservation and management measures.’ The objective of this investigation is to establish ‘reasonable grounds,’ and the only sanction is a notification to the flag state.
- The 1995 Straddling Fish Stocks Agreement, Article 23 of which goes further than the Compliance Agreement by giving a port state the right (but not an obligation) to carry out inspections of documents, fishing gear and catch onboard, when the vessel is voluntarily in its ports or terminals. It may also adopt legislation that prevents landings in circumstances where IUU fishing has ‘been established.’ The burden of proof lies with the port state.\textsuperscript{12}

Over the years, port state measures were also included in non-legally bind-
ing guidances, such as:

- The 1995 FAO Code of Conduct for Responsible Fisheries;13
- The 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU)14; as well as
- The 2005 FAO Model Scheme on Port State Measures.

The 2006 Review Conference of the Straddling Fish Stocks Agreement endorsed the idea of a global legally binding instrument on port state measures, which it deemed to be a necessary step against the phenomenon of so-called ‘ports of convenience.’ In the following years, port state measures were included in annual UN General Assembly resolutions on sustainable fisheries and were regarded as a useful tool in the fight against IUU fishing.

In 2007, an expert consultation process was tasked to prepare a draft treaty for negotiation. These took place in four sessions between June 2008 and August 2009. The final approval of the Port State Measures Agreement by the FAO Conference came on 22 November 2009. The treaty remained open for signature until 21 November 2010. Under Article 29, the convention entered into force on 5 June 2016, thirty days after the date of deposit of the twenty-fifth instrument of ratification, acceptance, approval or accession.

**PSMA structure and objectives**

The PSMA has 37 articles divided over ten parts, with five annexes. Articles 1-6 set out the general provisions of the agreement, including the use of specialised terms and the objective and application of the treaty. They also cover the PSMA’s relationship with other agreements in the field and look at national integration, as well as the international exchange of information.

The second and third part of the Convention (articles 7-11) deals with entering ports and their use. The fourth part (articles 12-19), as well as the agreement’s five annexes, deals with inspections and follow-up actions, which will be covered in more depth below. The fifth and sixth part (articles 20 and 21) deal with the role of flag states as well as capacity needs and requirements of developing countries. The final four parts (articles 22-37) deal with the operation of the treaty.

The agreement’s objective is spelled out in article 2, namely to ‘ensure the long-term conservation and sustainable use of living marine resources and marine ecosystems.’ It aims to do so by preventing, deterring and eliminating IUU fishing through the implementation of effective port state measures.

The PSMA applies to all fishing vessels under foreign flags that seek entry to a member state’s port. Consequently, it does not apply to ships carrying the port state’s flag. The ship’s flag state does not need to be a party to the convention, meaning that it has application to all foreign fishing vessels

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that may enter a port. The convention also applies to all forms of IUU fishing, irrespective of where it took place. This broad application aims to prevent illicit fishing activities outside the territorial waters or the exclusive economic zone of the port state.

There are exceptions to the rule: ships from neighbouring countries that have carried out ‘artisanal fishing’ (small scale fishing activities carried out by traditional fishers), are not covered. Neither are container ships that have previously landed fish in its hold (to avoid cargo being inspected twice). However, container ships carrying fish that have not been through port, as well as ships suspected of having supported IUU activities, are both covered by the treaty.15

Inspecting fish

The agreement contains a well-developed verification regime, designed to catch illicit fishers. The regime is based on a system of randomised inspections conducted under an annual quota; this ensures that IUU-fishers cannot be entirely certain that they would not be inspected upon docking, while simultaneously holding down costs for the inspecting state.

In most cases, the fishing boat can then enter port to offload its cargo, refuel and restock its provisions without inspection; however, in a number of cases, the port state will inspect the incoming ship. This depends upon a number of factors.

The port state is required to check enough fishing boats to ‘achieve the objectives’ of the PSMA; this is done by establishing an ‘annual level of inspection.’ This is not defined in the treaty, but it usually centres on approximately five percent (or one in twenty fishing boats).18 The selection process is not entirely random, as the inspections can focus on vessels that have been denied entry to port.16

Pre-inspection actions

When a fishing vessel wants to enter a port that is under the jurisdiction of a PSMA party, it would need to subject itself to the following procedure:

1. Before the ship is expected to arrive, it would need to transmit a pre-entry form to the port, providing information relating to the identity of the ship and the master, the relevant fishing permits and transhipment authorisations, and information on the total catch on-board. The form is normally transmitted with 24 hours’ notice.16

2. The port state reviews this information, as well as other information that it may require, and then decides whether to authorise or deny entry into the harbour. The port state is required to communicate denials to the flag state as well as to other relevant parties. In some cases, it could authorise the ship to proceed to port just for inspection.17

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15. PSMA, article 3.
17. PSMA, article 9 (5) and (6).
18. PSMA, article 12 (1).
other ports, or vessels where there are ‘clear grounds’ to suspect IUU fishing. Finally, other relevant parties can submit a request to have a specific ship inspected.  

**Inspection procedure**

The conduct of inspections is set out in article 13 of the PSMA. As in most verification regimes, the PSMA system is information-driven. The port state verifies that the ship’s declaration is correct using facts garnered during a visual inspection and supplemental information from other sources.

The treaty does not rely on an international inspectorate. Instead, inspectors need to be authorised by the government, but must also be ‘properly qualified’ to carry out the job. The onus lies on the port state to provide a minimum set of training for its personnel in certain fundamental areas established by the treaty. The inspector needs to be versed in, amongst other things, the applicable laws and regulations, general inspection procedures and handling of evidence as well as identification of fish and gear.

If appropriate arrangements between the states concerned are in place, the port state should invite representatives from the flag state to participate in the inspection.

The inspection will begin with a pre-boarding call, where the port state calls up the master of the incoming vessel. This call aims to confirm the information given in the pre-entry form, but also establishes whether the inspector and the captain share a common language. The port state should make ‘all possible efforts’ to facilitate communication with the master, which may require the employment of an interpreter. Towards the end of the call, the boarding officer can either inform of his or her intention to board immediately or designate a particular time. An ideal inspection team is comprised of two boarding teams with two inspectors each, as well as a team standing by on-shore. Before any inspection can start, the inspectors must provide appropriate identification to the master of the vessel.

The inspectors operate in pairs, where one person in each team takes notes and one person takes photographs and video. The inspection should always start with an ‘Initial Safety Inspection,’ which aims to determine whether the port inspection can be conducted without unnecessary risk to the boarding party. During this phase, the inspector reviews the ship’s vessel registration papers, licenses and logs. He or she may also ask questions relating to the physical state of the ship, and if there are any weapons on-board. The rest of the team may board when the ship is declared safe.

The inspection then centres on three key aspects:

- A documentation review aimed at verifying the identity of the ship, its owner and its master.
- A physical examination of the gear and fish.
- An evaluation, followed by a report.

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19. PSMA, article 12 (3).
20. PSMA, article 13 (2) (a).
21. PSMA, article 17 and Annex E.
22. PSMA, Annex E.
23. PSMA, article 13 (2) (e).
25. PSMA, Annex E.
26. PSMA, article 13 (2) (b).
27. See note 24 p.6.
**Documentation**

The inspection of relevant documentation occurs on the bridge. The boarding officer goes through vessel, catch and crew records and also examines electronic equipment, such as GPS logs. While it can be held throughout the inspection, it is more often done as a final step, as the boarding officer may need to question the captain on matters pertaining to the rest of the inspection.

**Fishing gear and fish**

The boarding team’s physical inspection includes checking all holds, fridges and freezers. The objective is to assess the quantity and the type of catch on-board, as well as the types of fishing gear used. The inspector notes the position of each hold, as well as its size, type and contents. He or she will be comparing the hold areas against the layout and dimensions of the vessel, to assess whether there could be any hidden compartments. The inspector will also note any quantities of non-target catch, as well as prohibited catch or fish parts.

If the ship intends to offload fish, the inspectors would also need to discuss the established offloading schedule with the ship’s captain. The boarding party would want to confirm the weight of the catch. If the ship has a weight scale on its loading crane, the inspectors may ask to access its readings. If there were no such scale, they would need to agree on a way in which the catch can be sampled for average weight.

The boarding team also examines the ship’s gear. The team assesses what type of fishing activity has taken place, and how recently. Moreover, they measure the fishing gear against required specifications. If the equipment does not appear to comply with regulations, they follow up with the ship’s captain. The boarding team records all serial numbers and types of gear found on-board.

**Evaluation and report**

After the conclusion of the inspection, the team usually has three days to produce an inspection report. This report must contain a minimum set of information detailed in the convention. Key findings include:

- Whether the vessel has been compliant with catch documentation schemes;
- Whether the vessel has been compliant with trade information schemes;
- Whether the gear is compliant with relevant schemes;
- Whether there were any apparent infringements noted throughout the inspection.

The report also details whether any action was taken as a result of the inspection. The ship’s captain is allowed to comment on the inspection report, before it is signed by him- or herself and the boarding officer.
Analysis

Benefits

It is worth reiterating that IUU fishing is detrimental to both the management of fisheries as well as fish stocks. First, illegal fishers contribute to overfishing since they, like all business people, aim to increase their earnings by maximising their catch—but by exploiting a lack of appropriate regulation or by deliberately flouting relevant laws.

Second, and by definition, IUU fishing is not reported. As a consequence, the FAO or relevant RFMOs cannot take it into account when determining the number of fishing licenses and total allowable catch.

Third, IUU fishing affects many maritime species because of by-catch when unwanted marine creatures are trapped in nets while fishing for other stock types. Species caught as by-catch often die during transport and are released back into the aquatic environment; this too contributes to mismanagement, as it becomes harder to account for dead fish.

The objective of the PSMA is to enhance the sustainable management of fisheries and the maritime environment by denying individuals involved in IUU fishing access to ports. Thus, illegal fishers should be discouraged as they would not be able to sell their products through the use of port services. Moreover, IUU-engaged vessels cannot resupply, as they have no access to port; this should affect their ability to operate in international waters.

The PSMA verification, monitoring and information sharing regime is designed to collect more details on vessels involved in illegal activity, and their catch; this will allow relevant organisations to create improved programmes for the conservation of fish stock, especially migratory fish.

The PSMA is also cost-effective. Patrols in international waters are both challenging and expensive. Denying access to a port is cheap and efficient, as ships need to offload their catch and resupply somewhere. The resources states would need to train inspectors, carry out inspections and establish a database for information are small, compared to funds required to counter IUU fishing at sea.29

Moreover, the PSMA conveys special status to developing countries and creates a financial mechanism designed to help them build capacity and expertise to implement and comply with the treaty.

Information is power

The PSMA also mandates the establishment of an information-sharing mechanism coordinated by the FAO in cooperation with other relevant organisations and initiatives, to facilitate the electronic transmission of information. The creation of the platform will improve transparency and coordination. The swift exchange of data on an integrated system will prevent vessels from exploiting ports that they have not used before. State authorities

would have information available on a vessel by the time it requests access to port, giving them the opportunity to deny access to those involved in illegal activities.

A greater integration of information-sharing reduces the time, effort and resources on risk assessment when implementing port measures. Moreover, integrating procedures and sharing data could lead to greater regional cooperation. Applying the same rules and procedures to illegal fisherman on a regional basis will reduce the value of illegal fishing.

Finally, there are economic benefits from ratifying the PSMA. First, by adopting the agreement states show they are willing to take responsibility in tackling this issue. As a result, states would benefit from continued market access and have an advantage in selling seafood over states that have not ratified the agreement.

Closing loops

The PSMA is not without loopholes. Unless the agreement involves all the main fishing nations, vessels could choose the ports with the lowest regulations for offloading their catch: they would be using a ‘port of convenience.’

The accession of countries such as the People’s Republic of China, India and the Russian Federation will continue to be a priority in coming months and years.

The PSMA gives flag states an obligation to sanction vessels associated with IUU fishing. Despite this, many individuals decide to register their ships in states where there is no maritime legislation or the state is not able to enforce it: they chose a ‘flag of convenience.’ The use of a flag of convenience is hard to remedy for two reasons. First, if a flag state has not ratified the PSMA, it does not have any responsibility to sanction the vessel, and thus it cannot be held accountable for failing to meet its obligations.

Second, it may be hard to track ships changing flags because they may not be obliged to have an IMO number (a unique identifier to a particular vessel), should the flag state not be a party to the International Convention for the Safety of Life at Sea (SOLAS). Should that be the case, the vessel can change its name, its international radio call sign, and other information, to avoid inspection in ports close to the area they operate. Such practices also make it harder for port states to keep a coherent database of IUU fishing vessels.

It can also be argued that the PSMA also does not adequately take into account the problem of transhipment at sea, a method by which vessels can offload their catch and re-supply at sea with the use of ‘reefers’—refrigerated

30. Ibid.

cargo ships. Because the PSMA does not proscribe any at-sea activity, it is challenging to prevent and sanction such transhipment.

**Looking Forward**

The FAO’s Director-General, Mr José Graziano da Silva, has welcomed and praised the agreement as a tool that will ‘drive the seafood industry toward greater sustainability and have significant ripple effects throughout the entire fisheries supply chain.’ However, there are some obstacles it needs to overcome so stakeholders can enjoy all benefits.

First, it is important that as many states as possible adopt the PSMA for it to have take full effect.

Second, the special requirements of developing countries must be recognised to ensure that a disproportionate burden resulting from the implementation of the PSMA is not transferred to them. Thus, article 21 provides an obligation for developed states to help them with legal expertise, financial remuneration, and technical assistance to implement the agreement. It is critical for developed states to fulfil this obligation because, as mentioned above, many developing states are heavily dependent and involved in marine fisheries.

Third, states need to be held accountable for not fulfilling their responsibilities. There is a considerable margin of appreciation for flag states when they are notified of a violation from a vessel that is flying its flag. The PSMA proposes a dispute settlement system for nations that have ratified the treaty. It is less clear how flag states that have not ratified the treaty could be prompted to investigate reported IUU fishing violations, or held accountable if they do not carry them out.

If the international community deals with these important issues, the PSMA could further significantly reduce IUU fishing and fulfil its purpose in conserving maritime species and protect fishers’ rights.

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About this paper

Combating and eradicating illegal, unreported and unregulated (IUU) fishing is necessary to achieve the sustainable use of marine capture fisheries. UN member states have pledged to do so by 2020, as part of their commitment towards the Sustainable Development Goals. Over the past 25 years, port state measures have evolved and have received increasing attention as one of the many tools to tackle unlawful behaviour at sea. The inspection regime set up by the Port State Measures Agreement (PSMA) is another step in the direction of attaining the sustainable use of fish stocks.

This paper examines the features of the inspection mechanism set forth by the treaty and explores the way forward to ensure that the agreement successfully contributes to the prevention of IUU fishing.