INFORMATION NOTE, APRIL 2018

Overfishing, Overfished Stocks, and the Current WTO Negotiations on Fisheries Subsidies

M. CASTRO DE SOUZA, A. LEM, AND M. VASCONCELLOS ICTSD.ORG

This note aims to clarify key fisheries management concepts relevant to the ongoing World Trade Organization negotiations on fisheries subsidies, in order to support progress towards new rules.

1. Introduction

The decline of global fish stocks has implications for both the food security and the livelihoods of many communities around the world. A World Trade Organization (WTO) agreement on the prohibition of harmful fisheries subsidies, currently under negotiation, could make an important contribution to the sustainability of global fisheries. In the context of these negotiations, several WTO members have proposed new disciplines on subsidies related to overfishing, and on subsidies related to stocks that are already overfished. Assessing and managing fisheries is a complex scientific field, and requests for technical clarifications about terms and processes have come up in the negotiations. This note hopes to aid in the understanding of concepts and processes related to overfishing and overfished stocks, in order to support progress towards an agreement on fisheries subsidies.

2. Background

In 2001, at the WTO Ministerial Meeting in Doha, countries agreed to clarify and improve WTO rules applicable to fisheries subsidies.[1] While the issue of fisheries subsidies had been discussed by the WTO Trade and Environment Committee for many years and, in legal terms, their trade effects were already covered by the WTO Agreement on Subsidies and Countervailing Measures (ASCM), it was not until the issue was specifically mentioned in the Doha Ministerial that fisheries subsidies became a negotiating topic within the Negotiating Group on Rules. Notably, the resulting WTO Doha Ministerial Declaration explicitly mentioned the importance of the fishery sector for developing countries.

The original Doha mandate on fisheries subsidies was then further refined at the Hong Kong Ministerial in 2005. In Hong Kong, it was agreed that fisheries subsidies rules should be strengthened, including "through the prohibition of certain forms of fisheries subsidies that contribute to overcapacity and overfishing." Ministers also urged countries to promptly detail future work in this area, "including the nature and extent of those disciplines, including transparency and enforceability." In addition, the

1 See Paragraph 28 of the Doha WTO Ministerial Declaration of 20 November 2001: WT/Min(01)/DEC/1.

ICTSD

International Centre for Trade and Sustainable Development

development aspect mentioned in the Doha Ministerial was further highlighted, with ministers indicating that the negotiations should take into consideration the importance of the fishery sector to development priorities, poverty reduction, and livelihood and food security concerns.[2] This call for specific rules on fisheries subsidies resulted from concern about the effect of such subsidies on overfishing and overcapacity—widely considered to be two of the main challenges affecting the sustainability of global fisheries resources.

The fisheries subsidies negotiations have largely focused on production from marine wild capture fishing, as distinct from production from aquaculture. In the case of aquaculture, the existing WTO rules on subsidies are already able to regulate government support measures to the sector. A farmed fish product is a national product produced in the territory of a country and thus is no different from other domestic products covered by the current rules.

For capture fishing operations in areas outside national jurisdictions, however, the fish has no specific origin before it is caught and can be considered a common good. If subsidies are provided in some countries to promote this particular fishing activity, access to the resource at sea as well as trade of the product can be distorted. Taking into consideration that the general pattern of trade involves developing countries supplying fish to developed countries, the distortion of access to resources caused by subsidies can particularly affect developing countries, with negative spillover effects on income generation, poverty alleviation, food security, and nutrition. In addition, unsustainable wild capture fishing can have environmental impacts that are borne by, or are of concern to, countries other than the fishing nation.

More recently, the 2015 United Nations Sustainable Development Goals (SDGs), which included a specific target on regulating fisheries subsidies (target 14.6), bolstered the push for new rules on fisheries subsidies. Complementing the WTO mandates, SDG target 14.6 sets the goal of prohibiting certain forms of fisheries subsidies linked to overfishing and overcapacity and the elimination of subsidies to Illegal, Unreported and Unregulated (IUU) fishing by 2020. It also recognises the need for special treatment for developing countries and the WTO's role in regulating this issue.

At the WTO, the proposals being discussed and the associated debate gravitate around specific issues that could be addressed in future rules on fisheries subsidies, including concepts like overfishing, overfished stocks, overcapacity, small-scale and artisanal fisheries, Regional Fisheries Management Organisations (RFMOs),[3] and IUU fishing. For example, among the proposals under discussion are prohibiting subsidies to any stock that was assessed to be overfished, prohibiting just those subsidies with negative impacts on an overfished stock or even subsidies to vessels that target an overfished stock. In all cases, the operationalisation of the disciplines would require tackling the issue of determining when a stock can be considered overfished, and what to do in the case of stocks which are currently unassessed because of insufficient scientific information (ICTSD 2017).

Fisheries, including fisheries subsidies, are a complex issue. Therefore, a good understanding of the main fisheries-related concepts being discussed at the WTO could facilitate the overall process of negotiation and help lead to a final positive outcome at the current round of talks—namely, an agreement on subsidy reforms where trade, the environment, and sustainable development all win.

2 See Annex D – Paragraph 9 of the Hong Kong WTO Ministerial Declaration of 18 December 2005: WT/MIN(05)/DEC.

3 RFMOs have the legal competence to adopt binding conservation and management measures for fisheries on the high seas, covering most of the high seas area. RFMOs operate in the Atlantic, Southern, Indian and Pacific Oceans, as well as the Mediterranean. Their membership is made up of states with a fishing interest in the region. RFMOs can manage the fish stocks found in a specific area, or can focus on particular highly migratory species (i.e. tuna species) throughout a vast geographical area. Most RFMOs have the competence to agree on binding conservation and management decisions, including catch and fishing effort limits, technical measures, and monitoring, control, and surveillance measures. RFMOs usually hold annual meetings where conservation and management measures are discussed and agreed, taking into account the state of fish stocks.

In this context, the present note aims to describe some of the basic concepts behind the assessment of marine fish stocks, in particular, the concepts of overfishing and of when a stock is overfished. It also provides a summary of some of the main findings of the assessment by the Food and Agriculture Organization of the United Nations (FAO) of the status of global marine fish stocks.

3. Assessing Fish Stocks

3.1. Overfishing and overfished stocks

Defining appropriate stock units of a species is a science of its own, involving basic knowledge of taxonomy, species biology, population dynamics, species distribution, and migratory behavior, among other parameters. Furthermore, a stock unit can be defined based on either a biological or a management unit, which may or may not coincide. Most commonly, a fish stock is understood to mean a discrete group of fish that share similar biological characteristics and do not mix with adjacent groups of the same species (see Box 1).

Box 1: Definition of a Fish Stock

> A fish stock is a subset of a species (fish, crustacean, mollusk, etc.) or population inhabiting a particular geographical area and participating in the same reproductive process. A fish stock can be seen as a discrete group of animals of the same species having similar biological characteristics (growth, mortality) and little or no mixing with adjacent groups of the same species.

Source: FAO (1997)

With rare exceptions, a fishery usually has effects on more than one species and consequently on multiple stocks. For instance, a shrimp fishery in a tropical area may have one or more species of shrimp as target species because of their high commercial values, but may also unintentionally catch dozens of other commercial or non-commercial species, which may be the target species of other fisheries. In addition, in many situations the boundaries of a stock do not coincide with the jurisdiction of a country, such as in the case of straddling and highly migratory fish stocks (e.g. tunas). The appropriate monitoring and management of these stocks cannot be done separately by each country, but only jointly through regional organisations or other international arrangements. Such situations need to be taken into account when discussing different proposals for controlling subsidies to overfished stocks.

3.2. Establishing the status of fish stocks

The potential productivity of a fish stock is given by the balance between its intrinsic capacity to reproduce and to grow in size and weight and the losses caused by natural sources of mortality. Any fisheries operation adds a source of mortality to this balance. The losses due to fishing can reduce the biomass of a fish stock and affect its productivity and resilience to natural variations in environmental conditions.

The status of a fish stock is normally assessed based on the relationship between stock biomass and productivity, established through a process of stock assessment. The assessment methodologies vary widely, depending on the nature of the fishery and the resources available to authorities. They are typically based on different sources of information, including resource surveys, knowledge of the fish species, catch statistics, and fishers' knowledge (see Box 2).

Box 2: Stock assessments and reference points

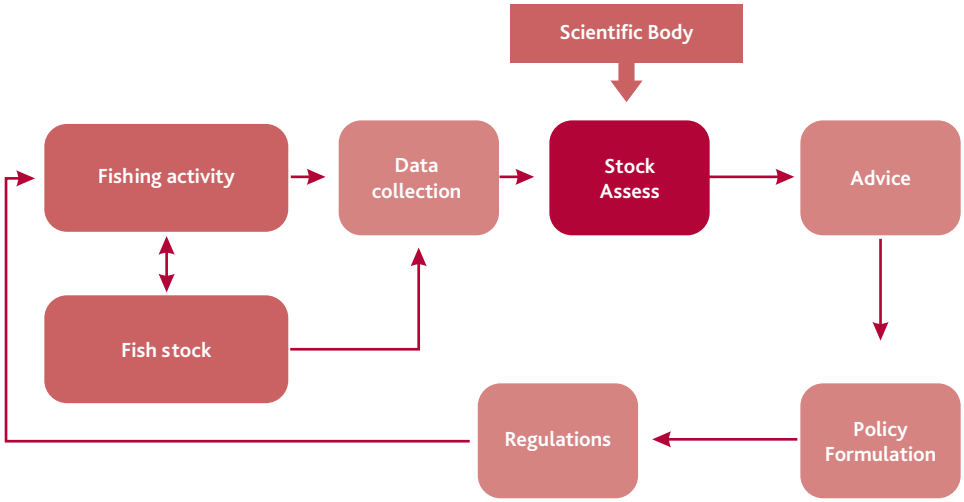
A stock assessment is the process of collecting and analysing biological and statistical information to determine the status of a fish stock in relation to agreed reference points and the changes in its abundance in response to fishing and environmental conditions. Stock assessments are typically based on different sources of information, including resource surveys, knowledge of the habitat requirements, life history and behaviour of the species, catch statistics, fishers' knowledge, among others. Stock assessments are normally conducted by a scientific body of experts, at a national or international level, taking into consideration coordination needs for shared stocks.

Management reference points are agreed values of indicators of the desirable or undesirable state of a fishery resource or the fishery itself. Reference points could be biological (e.g. expressed in spawning biomass or fishing mortality levels), technical (fishing effort or capacity levels), or economic (employment or revenues levels). Biological reference points are usually estimated from models in which they may represent critical values or thresholds.

Sources: Hoggarth et al. (2006), Berkes et al. (2001), FAO (2014a)

The conventional process of assessing fish stocks follows more or less the same procedure in any jurisdiction (Figure 1). A fishery-data collection programme is put in place to collect information about catches of a stock of interest, including information about the total weight (or number) of individuals in the catch as well as the size composition of the catch. Fish samples are routinely collected and brought to laboratories to determine (where possible) the age of individuals being caught, their reproductive status, and other biological characteristics of interest. In parallel to this fishery-data collection programme, some countries run scientific surveys to obtain direct observations about the biomass, density, size, age, and other biological characteristics of the stock at sea. This "fishery-independent" information is very useful as it provides complementary and less biased data about the stock, compared to the data obtained from the fishery, which can be affected by the market value of the catch, the selectivity of the fishing gear, and also by the regulations in place. After data (from the fishery and/or from surveys) is collected over a number of years, it is then used by scientists to evaluate the impacts of the fisheries on the stock. Models are used to estimate how the stock has responded to different levels of fishing and to estimate how it might respond to future management scenarios.

Figure 1: The process of stock assessment and fisheries management advice



Source: Authors' elaboration.

There is much uncertainty in these estimates due to incomplete and/or possibly biased data as well as natural variabilities. Therefore it is a good practice in stock assessments to inform managers in fishery authorities about the uncertainties of the predictions and the risks associated with their management decisions. There is a variety of methods which can be employed to provide management advice. Even in data-limited situations, advice can be provided based on the available knowledge and using, for instance, expert judgement. However, in line with the precautionary approach, decisions made with limited information should be much more cautious and conservative than in "data-rich" situations.

For areas and stocks managed by RFMOs, such as the ones managing the main stocks of tunas, the assessment of stocks is carried out by a specific scientific body of experts that meet regularly to analyse the available data and provide scientific advice to a decision-making body. Similar systems are also used by many countries to provide advice on the management of fish stocks within their exclusive economic zone (EEZ).

A key concept in the assessment of fish stocks is that of maximum sustainable yield (MSY); broadly, the surplus production of a stock (see Box 3). Two MSY-based reference points are commonly used in assessing the status of a fish stock. One is observed fishing mortality relative to the optimal mortality at MSY (F_{MSY}). The other is the level of a fish stock in relation to the level that can produce MSY ($B_{MSY)}$. Ideally, the two indicators should be evaluated together to understand the exploitation rate and status of a stock.

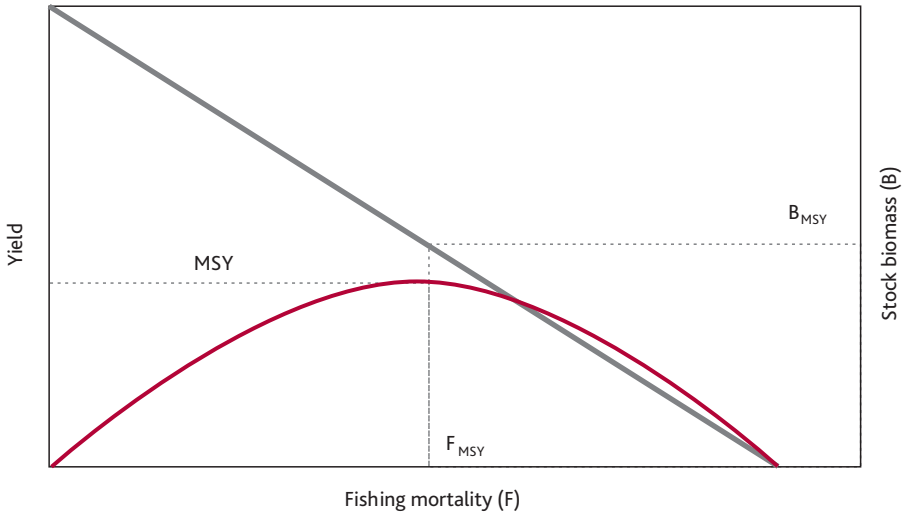
Box 3: Maximum sustainable yield (MSY)

The surplus production of a stock varies according to diverse factors, including the biological characteristics of the species, the environmental conditions in the stock distribution area and the size of the stock relative to the ecosystem carrying capacity. The maximum sustainable yield (MSY) is defined as the highest catch that can be continuously taken from a stock under existing environmental conditions.

Source: Caddy and Mahon (1995)

The relationship between the two indicators is set out in Figures 2 and 3. Commonly, if the fishing mortality applied to the stock is above F_{MSY}, the stock is considered subject to overfishing, while a stock with biomass values below B_{MSY} is considered overfished. The process of overfishing, which relates to the level of fishing effort, can thus go on for a period of time before the biomass of a stock is reduced to the point at which it is considered overfished. So a stock is commonly only defined as overfished if fishing has reduced the stock to a size below the level that can produce MSY. In these cases, fishing harvest needs to be reduced in order to allow the fish stock to recover to a level at which it can produce MSY. As Figure 3 illustrates, overfishing and a stock being overfished do not necessarily coincide. For example, if fishing effort has been reduced to allow a stock to rebuild, then a stock may be overfished, but overfishing may not be currently taking place.

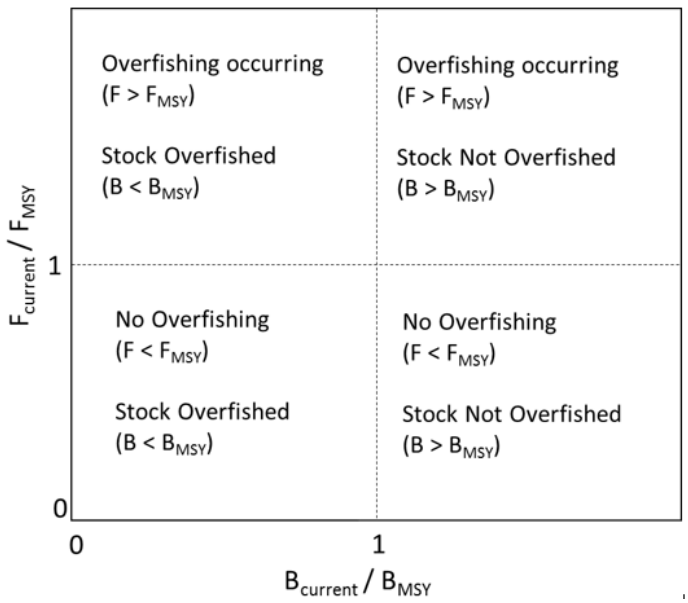
Figure 2: Relationship between MSY, yield and stock biomass



Note: This graph illustrates the theoretical relationship between stock biomass (B, grey line) and yield (red line) of a stock according to different levels of fishing mortality (F).

Source: Authors' elaboration.

Figure 3: Kobe plot illustrating the difference between fishing effort and stock status



Note: The first joint meeting of the tuna RFMOs (held in Kobe, Japan, in January 2007) agreed on the use of this four quadrant framework, now referred to as the "Kobe plot", as the standardised way of presenting stock assessment results and reference points. The diagram represents an MSY-based reference point system used to determine the status of stocks in terms of overfishing and being overfished. One reference point is observed fishing mortality relative to the optimal mortality at MSY (F_{MSY}). The other is the level of a fish stock in relation to the level that can produce MSY (B_{MSY}).

Source: Maunder and Aires-da-Silva (2011)

Although MSY is a key component of many fisheries management plans and programmes and is used as a reference in several international instruments (see Figure 3), there is no multilaterally agreed definition of when overfishing is taking place, or when a stock is already overfished (see Box 4). National and international organisations may apply additional or different criteria when determining stock status. To account for uncertainties in the assessment of fish stock status, some fishery advisory bodies adopt a precautionary approach to reference points. Those additional benchmarks usually set a more conservative basis for a trigger to reduce fishing pressure by management actions in order to bring the stock back to the target stock level. Exceeding those reference points can also be classified as being overfished. A wide variety of reference points are available and used as benchmarks to take into account different economic, social, and biological management objectives.

Box 4: The concept of over-exploitation in international fisheries instruments

There is no internationally binding definition of overfishing. Nor is there an internationally binding definition of when a fish stock is overfished. However, the United Nations Convention on the Law of the Sea (UNCLOS) states in Article 61 on the conservation of living resources that "[t]he coastal State […] shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation. Such measures shall also be designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield […]." This article, therefore, implies the use of MSY as a reference for measuring the risk of over-exploitation. The same wording is also used in the United Nations Fish Stocks Agreement (UN 1995) and the FAO Code of Conduct for Responsible Fisheries (FAO 1995).

Source: Caddy and Mahon (1995)

3.3 Status of global marine fish stocks

The FAO has been periodically assessing the status of marine fish stocks since 1974.

Due to the high data demands of formal stock assessment methods, assessed fish stocks represent only 17–25 percent of global landings, the majority of which are in developed countries. To balance the global representativeness of the assessment results and aiming to use the best available information, FAO employs a wide range of data and methods to extend its assessment to fish stocks that account for 70–80 percent of global landings.

A detailed description of the approach used by FAO is available in the Appendix of the Review of the State of World Marine Fishery Resources (FAO, 2011). In summary, this methodology combines the results of formal stock assessments available, including those carried out at the regional level by RFMOs and those on a smaller, more detailed scale by national institutions and scientific working groups. For stocks that do not have a formal stock assessment, the FAO collects data and information from the literature, or from local experts, that could be used to infer stock status (for instance trends in catch rates, size frequency distribution of the catch, occasional fishing mortality estimates through surveys, etc.). This information from various sources is analysed and synthesised to classify the exploitation status of fish stocks.

It is also worth noting that despite the overall expanded coverage of FAO's assessments, the level of uncertainty in the assessment of stock status still varies greatly among stocks and areas due to data deficiencies. Areas such as the Northwest Pacific and Western Indian Ocean have a relatively lower coverage because a considerable proportion of the catches are reported in heavily aggregated taxonomic categories (e.g. catch of all marine fish species), which precludes the assessment of particular species or stocks.

Stocks periodically assessed by FAO are grouped into two major categories:

- *Stocks within biologically sustainable levels*

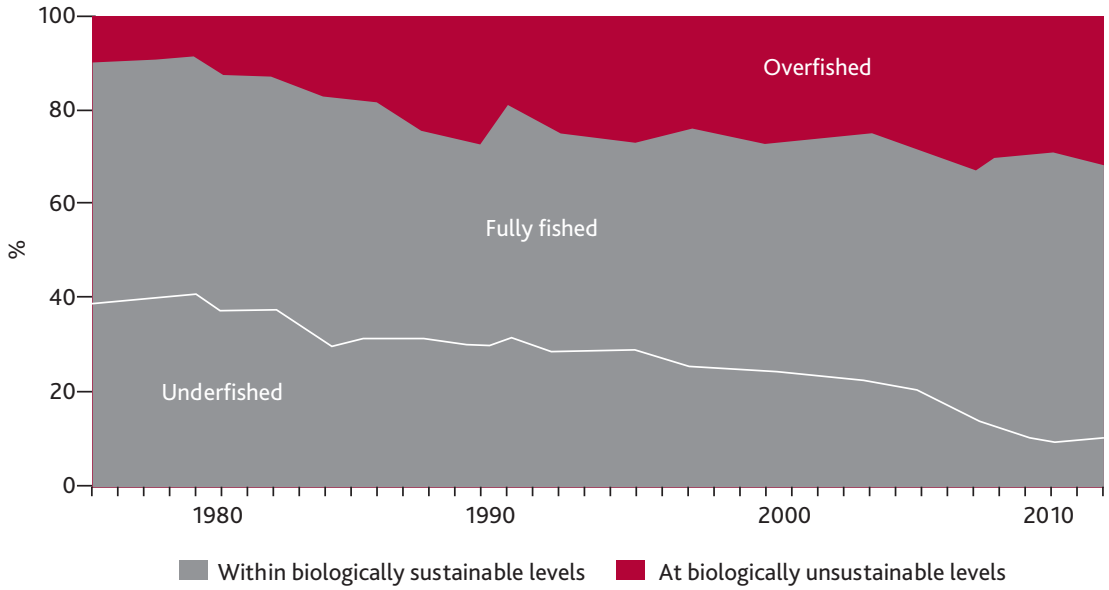
  These include stocks at or close to their maximum sustainable production and considered fully fished (i.e., at the biomass that produces MSY) and stocks with biomass substantially above the level that could produce MSY or are underfished, with potential for expansion in total production. To avoid overfishing, effective and precautionary management plans should be established before increasing the fishing rate of these underfished stocks.

- *Stocks at biologically unsustainable levels*

  These include stocks with biomass estimated to be below the abundance that can produce MSY in the long term. These stocks are considered overfished and require strict management plans to rebuild stock biomass to the level associated with MSY.

According to the last available global assessment (FAO 2016), the share of fish stocks within biologically sustainable levels has exhibited a downward trend, declining from 90 percent in 1974 to 68.6 percent in 2013 (Figure 4). Thus, in 2013, 31.4 percent of fish stocks were estimated to be at biologically unsustainable levels and therefore overfished. Of all the stocks assessed, 58.1 percent were fully fished and 10.5 percent underfished.

Figure 4: Global trend in the state of world marine fish stocks monitored by FAO (1974-2013)



Source: FAO (2016)

More detailed information on the status of commercially significant fish stocks is available in the report itself (FAO 2016). A small group of species accounts for about a third of marine capture fisheries production. Most of their stocks are fully fished and, therefore, there is no potential for increasing production without compromising their long-term sustainability. On the other hand, some stocks are overfished and increases in their production may be possible only after successful rebuilding.

For example, the two main stocks of anchoveta in the Southeast Pacific, Alaska pollock in the North Pacific, and Atlantic herring stocks in both the Northeast and Northwest Atlantic are all fully fished, i.e., their statuses are within biologically sustainable levels. Atlantic cod is overfished in the Northwest Atlantic, but fully fished to overfished in the Northeast Atlantic. Chub mackerel stocks are fully fished in the Eastern Pacific and overfished in the Northwest Pacific. Skipjack tuna stocks are either fully fished or underfished. Among the principal tuna species, 41 percent of the stocks were estimated to be at biologically unsustainable levels, while 59 percent were within biologically sustainable levels (fully fished or underfished) in 2013.

Significant variations exist in the productivity and status of fish stocks among FAO major fishing areas (see Table 1). The highest proportion of overfished stocks was found in the Mediterranean and Black Seas (59 percent), followed by the Southwest Atlantic (50 percent). On the other hand, areas such as the Northeast Pacific (14 percent) and Southwest Pacific (12 percent) are below the global average in terms of percentage of overfished stocks.

Table 1. Total catches (tonnes) and percentage of stocks assessed as overfished, by FAO major fishing areas (2010–2013)

FAO Major Fishing Areas	FAO Area Code	Total average catches (2010-2013)	Stocks overfished of stocks assessed
Northwest Atlantic	21	1,974,716	31
Northeast Atlantic	27	8,309,792	21
Western Central Atlantic	31	1,291,750	44
Eastern Central Atlantic	34	3,915,728	46
Mediterranean and Black Sea	37	1,290,512	59
Southwest Atlantic	41	1,774,855	50
Southeast Atlantic	47	1,383,828	44
Western Indian Ocean	51	3,468,078	32
Eastern Indian Ocean	57	5,443,390	15
Northwest Pacific	61	20,829,609	24
Northeast Pacific	67	2,876,677	14
Western Central Pacific	71	8,790,687	23
Eastern Central Pacific	77	1,460,566	41
Southwest Pacific	81	587,608	12
Southeast Pacific	87	8,822,087	42

Note: The table excludes the catches in the Southern Ocean and also of tunas globally.
Source: FAO (2016)

3.4 Challenges and opportunities regarding the assessment of fish stocks

The assessment of marine fish stocks can be a substantial challenge at the regional and country level due to limitations in the availability of data and capacity for the assessment and monitoring of fishery resources.

Data limitation tends to be more prominent in areas with high species diversity and small stocks where fisheries (normally small-scale) play an important role in food security, such as in many tropical, low-income countries of Africa, Asia, Oceania, and the Caribbean.

These data limitations can be attributed to different interrelated factors, such as:

- the difficulty in monitoring and assessing fisheries in tropical areas of high biological diversity, dominated by multi-species and multi-fleet small-scale activities, where conventional fisheries assessment methods are not suited;
- the tendency of countries to allocate human and financial resources preferentially to large and economically important fisheries;
- the lack of financial support for the development and maintenance of national fisheries statistical systems; and
- weak fisheries management systems that lack mechanisms for monitoring and reporting management performance to stakeholders and the public at large.

Although data limitations are a reality, given the complexity of the issue, the methods employed by FAO can compensate for many imbalances and produce an assessment of a significant number of representative stocks.

In 2003 the FAO Committee on Fish (COFI) adopted the *International Strategy for Improving Information on Status and Trends of Capture Fisheries* (FAO 2003). This strategy applies to the assembly and dissemination of information on fishery status and trends at the national, regional, and global levels. Within its policy section, high priority is given to capacity building and the provision of technical assistance to developing countries with a focus on the particular requirements of the small-scale fisheries sector.[4]

In this context, the FAO has implemented several work schemes to enhance the capacity of developing countries for data collection, monitoring, and assessment, including the development and testing of novel approaches for fisheries assessment and management advice in data-limited situations. The end goal of this work is to support countries in improving the knowledge and understanding of fishery status and trends, and to use that knowledge as a basis for fisheries policy-making and management. Such improvements will also be instrumental in preparing developing countries to implement any negotiated fisheries subsidies disciplines linked to the status of fish stocks.

4. Conclusion

While there is no internationally agreed definition of when overfishing is taking place or when a stock is overfished, the concept of MSY is in practice central to many assessments of fishing and the status of fish stocks. The process of overfishing (a measure of the level of fishing effort) is quite distinct from the situation of a stock being overfished (a measure of the level of a stock's biomass). Although data limitations in fisheries management are a reality, it is currently possible to infer, with different levels of uncertainty, the status of the stocks accounting for about 80 percent of global landings.

Improvement in data collection and technical capacity for fisheries stock assessment and management will be instrumental in preparing developing countries to address any fisheries subsidies disciplines linked to the status of fish stocks.

References

Berkes, Fikret, Robin Mahon, Patrick McConney, Richard Pollnac, and Robert Pomeroy. 2001. *Managing Small-Scale Fisheries: Alternative Directions and Methods*. Ontario: International Development Research Centre (IDRC).

Caddy, John F., and Robin Mahon. 1995. "Reference Points for Fisheries Management." *FAO Fisheries Technical Paper* no. 347: 83.

FAO. 1995. *FAO Code of Conduct for Responsible Fisheries*. Rome: Food and Agriculture Organization of the United Nations.

FAO. 1997. "Fisheries management." *FAO Technical Guidelines for Responsible Fisheries* no. 4. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2003. *Strategy for Improving Information on Status and Trends of Capture Fisheries*. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2011. *Review of the State of World Marine Fishery Resources*. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2014a. *The State of World Fisheries and Aquaculture*. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2014b. *Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication*. Rome: Food and Agriculture Organization of the United Nations.

4 This was reinforced by the FAO's *Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication* (FAO 2014b).

FAO. 2016. *The State of World Fisheries and Aquaculture*. Rome: Food and Agriculture Organization of the United Nations.

Hoggarth, Daniel D., Savitri Abeyasekera, Robert I. Arthur, John R. Beddington, Robert W. Burn, Ashley S. Halls, Geoffrey P. Kirkwood, Murdoch McAllister, Paul Medley, Christopher C. Mees, Graeme B. Parkes, Graham M. Pilling, Robert C. Wakeford, and Robin L. Welcomme. 2006. "Stock assessment for fishery management – A framework guide to the stock assessment tools of the Fisheries Management Science Programme (FMSP)." *FAO Fisheries Technical Paper* no. 487. Rome: Food and Agriculture Organization of the United Nations.

ICTSD. 2017. "WTO Rules on Fisheries Subsidies: Progress and Prospects." *Bridges Weekly*, 21(40). https://www.ictsd.org/bridges-news/bridges/news/wto-rules-on-fisheries-subsidies-progress-and-prospects.

Maunder, Mark N., and Alexandre Aires-da-Silva. 2011. *Evaluation of the Kobe Plot and Strategy Matrix and their Application to Tuna in the EPO*. DOCUMENT SAC-02-11. 2nd Meeting of the Scientific Advisory Committee. Inter-American Tropical Tuna Commission (IATTC).

UN. 1995. *The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*. New York: United Nations.

Citation: Castro de Souza, Marcio, Audun Lem. and Marcelo Vasconcellos. 2018. *Overfishing, Overfished Stocks, and the Current WTO Negotiations on Fisheries Subsidies*. Information Note. Geneva: International Centre for Trade and Sustainable Development (ICTSD).

About ICTSD

The International Centre for Trade and Sustainable Development (ICTSD) is an independent think-and-do-tank, engaged in the provision of information, research and analysis, and policy and multistakeholder dialogue, as a not-for-profit organisation based in Geneva, Switzerland. Established in 1996, ICTSD's mission is to ensure that trade and investment policy and frameworks advance sustainable development in the global economy.

ICTSD is grateful for the support from its core donors including the UK Department for International Development (DFID); the Swedish International Development Cooperation Agency (SIDA); the Ministry of Foreign Affairs of Denmark (Danida); and the Netherlands Directorate-General of Development Cooperation (DGIS).

ICTSD welcomes comments and feedback on this information note. These can be sent to atipping@ictsd.ch.

ISSN 1816 6970