

September 2019

UNCTAD Research Paper No. 36
UNCTAD/SER.RP/2019/8

Transparency in fisheries subsidies: Notification-driven analytics of country performance and disclosure requirements

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Abstract

The availability of fisheries subsidies data has been a challenge since the beginning of WTO negotiations, with government disclosure being historically low. No multilateral agency is currently mandated to systematically collect, assemble and disseminate fisheries subsidies data and the knowledge base remains weak. While anecdotal evidence is abundant, subsidy notifications have not been systematically explored as a source of policy intelligence. By proposing a novel approach to extract and analyze information from WTO notifications, this paper aims to fill this gap and shed new light upon the ultimate determinants of government transparency. By screening texts of notifications by China and the United States under the Agreement on Subsidies and Countervailing Measures (SCM) (1995-2016), this paper identifies a unique set of 61 fisheries and aquaculture policies. For each, budget allocations or expenditures are extracted, and qualitative policy information categorized. This is then used to measure the degree of compliance with notification requirements (Art 25.3 SCM Agreement). This paper argues that, while government transparency plays a role in determining the level and quality of notified information, intrinsic characteristics of the notification framework may also work as bottlenecks to sound reporting. A comprehensive effort that simultaneously involves the content, institutional and technological dimensions is needed in order to modernize the WTO notification framework in a way that creates new and better incentives for disclosure.

Key words: Fisheries subsidies, notifications, transparency, data, text analysis



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Acknowledgements

The findings of this research were first presented at an expert workshop on Transparency in Fisheries Governance, held on 20-21 May 2019 in Utrecht, the Netherlands. Special thanks go to the organizers, Solène Guggisberg (University of Utrecht) and Timothy Stevens (University of Sydney), for the opportunity to receive feedback from authoritative fisheries experts.

The contributions of UNCTAD colleagues Lucas Assuncao, Jeanelle Clarke, Marco Fugazza, Graham Mott, Tansug Ok, Carlos Razo, Gabriela Riffard Jonas and David Vivas Eugui, who have provided insightful inputs and comments to previous drafts of this paper, have been gratefully received. By different means, their support has been instrumental to improve this work's analytical rigor and relevance for policy making.

1. Transparency in fisheries subsidies

1.1 Introduction

Fisheries subsidies have a unique mix of economic, environmental and social implications which makes them a particularly complex policy issue.¹ While being multi-faceted, the problem has been historically treated as a trade policy matter. Within the multilateral trading system, the narrative has been shaped around the concept of harmful fisheries subsidies that practitioners tend to identify with those that enhance fishing capacity and activity, as well as encouraging illegal, unreported and unregulated (IUU) fishing.² A major driver behind this policy pathway was undoubtedly the state and outlook of global fisheries, as resources have been increasingly put under pressure in the past decades and are still being depleted at a rapid rate. The Food and Agriculture Organization of the United Nations (FAO) estimates that stocks fished at biologically unsustainable rates globally have increased from 10% in 1974 to 33% in 2015, with a peak of over 60% in the Mediterranean and Black Sea (FAO, 2018).

As part of renewed efforts to preserve life below water, the international community has called for concerted and collective action on reaching an agreement that phase out harmful fisheries subsidies. While the issue has been central to WTO negotiations since the Doha round (2001), significant disagreement remains on how to enforce the prohibition and a binding agreement has not been reached yet (UNCTAD, FAO and UNEP, 2018). However, the issue has received increased attention since 2015 with the launch of the Sustainable Development Goals (SDGs).³ Despite uncertainty, policy momentum has accelerated, and negotiations have received new impetus. As of November 2018, a consolidated draft negotiating text has been put forward by negotiators, with alternative approaches to prohibition proposed by large fishing nations.⁴ Fugazza and Ok (2019), among others, argue that in order to reach a positive outcome, other policy tools such as non-tariff measures (NTMs), should be central to reform.

Despite growing momentum, the availability of information on the type, amount and beneficiaries of subsidies remains a major challenge. Not only is the availability of official data crucial to inform policymaking but would also enable effective monitoring once an agreement is reached. Yet, no multilateral agency is currently mandated to systematically collect, assemble and disseminate fisheries subsidies data. Fisheries subsidies also lack a well-established statistical framework, including a universally accepted classification and global standards for reporting. Surprisingly, subsidy notifications to the WTO – the only global and direct channel of disclosure – have not been systematically explored as a source of evidence. As presumptions of limited transparency permeate debate in policy circles, the quest for better evidence remains ever more open.

The overall objective of this paper is to explore the viability of WTO notifications as a source of subsidy information. By extracting and analyzing data and information from WTO notifications, this research provides new insight into government transparency, e.g. the degree of compliance with notification obligations, and assess the effectiveness of notification mechanisms, rules and obligations under the WTO Agreement on Subsidies and Countervailing Measures (SCM). The analysis is performed on a unique set of 61 fisheries and

¹ Fisheries have some specific characteristics that makes the effects of policy support peculiar. Some are related to intrinsic features of the industry and include the highly-depletable nature of commodities, the geography of global fishing activities and the plethora of beneficiaries (e.g. operational vs. non-operational, large vs. small scale). Other factors such as the variety of subsidized goods or services (final products, instrumental goods and knowledge assets), the complexity of governance - involving complementary actors (national, regional, multilateral) and rules (territorial waters, exclusive economic zones, high seas) are institutional or policy-related.

² Popular policy instruments in fisheries include, but are not limited to, boat construction and modernization programmes, fuel tax concessions and the construction or renovation of port infrastructure.

³ Specific reference to fisheries subsidies is made in Sustainable Development Goal 14, target 6, which sets a deadline to “prohibit, by 2020, certain forms of fisheries subsidies which contribute to overcapacity and overfishing, and eliminate subsidies that contribute to IUU fishing, and refrain from introducing new such subsidies...”.

⁴ For a detailed review and discussion of recent developments in negotiations, see Vivas Eugui and Bellmann (2019).

aquaculture policies, identified by screening notification texts by China and the United States from inception until the last notification cycle (2017). For each, subsidy amounts, i.e. budget allocations or expenditures in domestic currency, were extracted and qualitative policy information categorized. This resulted in the compilation of a first-of-its-kind database, including time series of subsidy amounts.

The rest of section 1 provides theoretical background and reviews the most authoritative literature on the topic. Section 2 describes the methodology underpinning this work, with a focus on data collection. Section 3 presents the methods and results of the analysis. In particular, compliance of notification content with SCM requirements is assessed against equally weighted criteria, developing binary indicators of country performance (sub-section 3.1). The values of subsidies notified to the WTO and the OECD are compared and contrasted, with a view to detect trends in policy disclosure (sub-section 3.2). An in-depth assessment of the WTO notification framework is also provided in an effort to identify content-related, technological and institutional shortcomings, i.e. bottlenecks to better reporting (sub-section 3.2). Section 4 summarizes research findings and develop accordingly some policy recommendations.

1.2 The importance of transparency

The availability of fisheries subsidies data and information has been a challenge since the beginning of WTO negotiations, with no official statistics being collected to date. Government transparency and the lack of incentives for better reporting remain major challenges in this domain (Appleton, 2017; South Centre, 2017; Tipping, 2015; Moltke, 2011). Contrary to other popular policy topics, such as merchandise trade, no official reporting framework - including a universally-accepted classification, reporting mechanism and guidelines - has been adopted.⁵ Unilateral efforts by policy institutions and academics have proliferated in recent years, with some having become reference points in the field (Table 1). Yet, no multilateral agency is currently mandated to systematically collect, assemble and disseminate fisheries subsidies data, and the evidence base remains weak. A large number of estimates has been produced, placing global fisheries subsidies in the range of US\$10 billion to US\$35 billion (Arthur et al., 2019; OECD, 2017a; European Parliament, 2013; Milazzo 1998).

Table 1. Global databases and classifications of fisheries subsidies

Type	Source	Name	Key features
1. Direct notification	Organisation for Economic Co-operation and Development (OECD)	Fisheries Support Estimate (FSE)	<ul style="list-style-type: none"> • Questionnaire notifications; • Proprietary classification (budgetary vs. non-budgetary measures); • 40+ OECD members and observers; • Yearly releases; • OECD.Stat (open access).
2. Global estimate	University of British Columbia – Fisheries Economics Research Unit	Self-titled	<ul style="list-style-type: none"> • Estimate, based on best-available sources (official and non-official); • Proprietary classification (beneficial, harmful, ambiguous subsidies); • 152 countries; • Subsequent updates (last: 2016); • Disseminated via the Sea Around Us project (country and territory profiles only).

⁵ Subsidies are currently covered by UNCTAD Classification on Non-Tariff Measures (NTMs), chapter L, as developed by a Multi-Agency Support Team (MAST) of experts from 8 multilateral organizations (UNCTAD, 2015). A revision of the classification is currently ongoing and aims to include in Chapter L a detailed breakdown of subsidy administrative forms. No chapter, or nomenclature within it, is specific to fisheries subsidies.

Source: Author.

Note: For more information, see: 1. OECD (2015, 2017b); 2. Khan et al. (2006), Sumaila et. al (2010, 2016). Data access: 1. OECD.Stat: <https://stats.oecd.org/> and 2. Restricted access, country and territory profiles published via the Sea Around Us project: <http://www.seaaroundus.org/>

In this context, government transparency becomes even more important in that it determines, to a large extent, the availability of official information that informs multilateral negotiations. Crucial information include the type, amount (unit vs. total), objective, duration and beneficiaries (small vs. large-scale fishermen) of policy support. In this view, institutional transparency matters for at least three reasons. Better government disclosures would enable policy practitioners to more objectively and effectively: a) assess the magnitude and impact of fisheries subsidies nationally and globally; b) advance (real) evidence-based policy making and c) monitor the implementation of prohibition or regulation once an agreement is reached. Relying as much as possible on official information would also reduce the costs associated with consensus-building.

1.3 Notifications as a source of evidence

To date, the subsidies notification mechanism under the SCM Agreement of the WTO is the only global channel of direct disclosure. By ratifying the agreement, members commit to notify the Chair of the Negotiating Group on Rules on specific subsidies granted or maintained within their territories on a biannual basis (Art. 25.1) (WTO, 1995).⁶ Although not specifically meant for fisheries subsidies, this is, at least theoretically, an important source of information as it directly and regularly captures a large universe of subsidy providers (164 WTO members) within a multilateral trade agreement. However, governmental disclosures are at a historic low and most countries have failed to meet their notification obligations. According to the WTO, 78 out of 164 members (48%) did not notify any subsidies in the last notification cycle (June 2017). The share has almost doubled since 1995, when the share of non-complying members stood at 25%. (WTO, 2019a).

Notifications have not been systematically explored as a source of policy intelligence. While the Secretariat regularly tracks member compliance with notification obligations, it does not use notification content to compile economic statistics; nor does it consolidate and publish notified information in machine-readable formats. Scientific work has been sporadic and purely focused on quantitative information. The World Wildlife Fund has discussed the issue of government transparency by providing an in-depth statistical review of officially reported amounts (WWF, 2001). Later on, the WTO published some figures of notified subsidies - perhaps not fisheries specific - and a technical note on the compilation of data from notifications (WTO, 2006). In academia, Khan et al. (2006) and Sumaila et al. (2010, 2016) have repeatedly listed WTO notifications among the data sources underlying their global estimates but did not publish results as a standalone effort. No contribution has ever assessed, or even acknowledged, the value of qualitative information.

2. Notification-driven analytics: A novel approach

2.1 Objective

By proposing a novel approach to extract and analyze information from WTO notifications, this paper aims to shed light on fisheries subsidies in the multilateral trading system, particularly the determinants of government transparency. It aims to provide policymakers and negotiators with new tools in the interpretation of complex issues that are heading the negotiations agenda. These include, for instance, how to redefine disclosure requirements in a way that makes notification less burdensome but also more informative. In doing so, this research contributes to three main objectives:

⁶ A subsidy is deemed to be specific - and subject to SCMA discipline - if it has been specifically provided to an enterprise or industry or group of enterprises or industries. The basic principle is that a subsidy that distorts the allocation of resources within an economy should be subject to discipline. Where a subsidy is widely available within an economy, such a distortion in the allocation of resources is presumed not to occur.

- a) Enrich the evidence base of transparency in fisheries subsidies with new country insights (underpinned by a novel methodology).
- b) Identify bottlenecks to transparency by assessing the notification framework of the SCM Agreement.
- c) Inspire analysts and researchers to undertake similar efforts, paving the way for future data collection and economic research.

2.2 Methodology

While taking a relatively long time-frame, the analysis is limited to the “New and Full Notifications” of China and the United States - the two largest providers of fisheries support according to the Organisation for Economic Co-operation and Development (OECD) Fisheries Support Estimate (FSE).⁷ It was deemed a small but relevant sample for the purpose of a test. The process spans from the collection of original data to the analysis of numerical, categorical and text-codified information. While the former two are, with few exceptions, attached to WTO notifications, the latter results from analytical effort.

The underlying methodology can be summarized as follows:

- i. **Collect data and policy-relevant information from notification texts**, according to the content of notification requirements and the Questionnaire Format for Subsidy Notifications of the SCM Agreement (WTO, 1995 and 2003).
- ii. **Categorize qualitative subsidy information** (type, beneficiaries, objective, duration etc.) and **build coherent time series of subsidy amounts** (annual expenditures/budget allocations in domestic currency).
- iii. **Extract policy-relevant insight by:**
 - a. **Tracking country transparency in policy disclosures:**
 - Assess the level and quality of notified information against objective criteria and develop, accordingly, binary indicators of country performance (e.g. compliance with SCM notification requirements).
 - Calculate descriptive statistics with a view to ascertain levels of transparency across: i. countries and ii. different policy instruments within the same country (section 3.1).
 - Compare and contrast values of subsidies notified to the WTO and OECD (section 3.2).
 - b. **Assess the effectiveness of the SCM notification framework**, with a focus on its content of notification requirements (Art 25.3):
 - Identify content-related, institutional and technological shortcomings, e.g. possible bottlenecks to government transparency (section 3.3).
 - Propose actionable policy solutions to inform future rounds of negotiations (section 4).

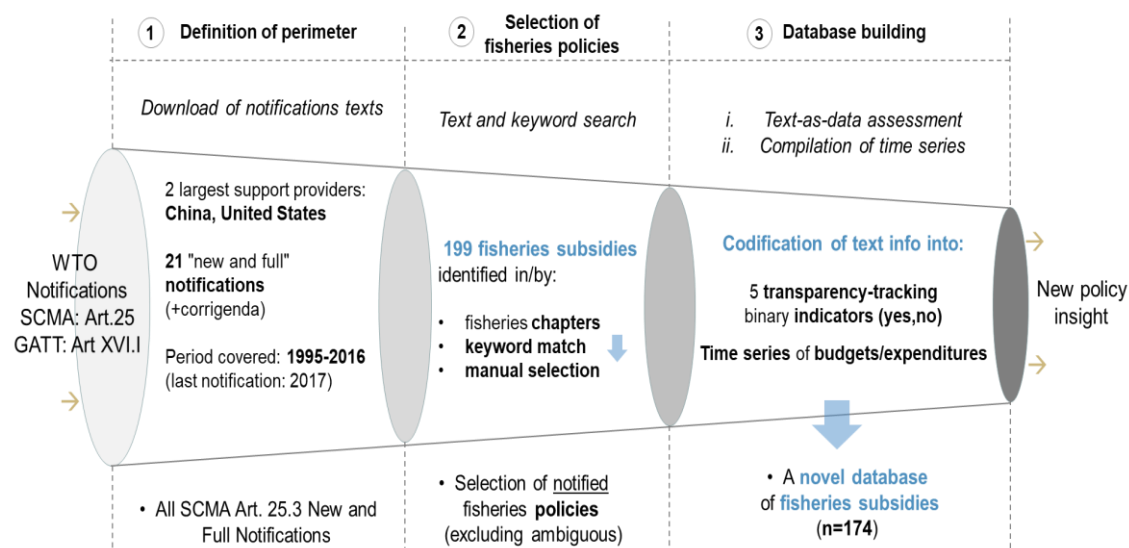
Given the pilot nature of this research and the limited size of the sample, this piece does not aim to draw definitive conclusions on the subject; but to rather present and disseminate, by means of new evidence, a new approach to the analysis of fisheries subsidies. It does so by taking a purely descriptive approach, with the hope of becoming the starting point of a more comprehensive analytical effort.

⁷ According to the latest release of the OECD FSE database, in 2016 the United States and China accounted for roughly 60% of support provided to fisheries sectors globally.

2.3 Data collection

The process of data collection involves three steps (Figure 1):

Figure 1. Measuring (notified) fisheries subsidies: A funnel



Source: Author

- i. **Definition of perimeter:** Texts of all "New and Full Notifications" submitted by China and the United States under art. 25 of the SCM Agreement and art. XVI.1 of the General Agreement on Tariffs and Trade (GATT), including *corrigenda*, were downloaded in pdf format. Submissions are from inception up to the last notification cycle (June 2017) and cover the period 1995-2016. While data collection is limited to two countries, the longest available time period was considered in order to increase the sample size and enable detection of trends in government reporting over time. Overall, detailed information of 1000+ notified policies was accessed.
- ii. **Selection of fisheries policies:** At this stage, fisheries-relevant policy instruments were identified. In some cases, the identification was straightforward as notifications contained specific fisheries chapters or sections that clearly pointed to meaningful policies. In most cases, however, manual selection via keyword search was necessary. In this way, policies matching search criteria (a small but relevant set of keywords) were marked as relevant.⁸ A comprehensive set of 199 policies covering marine fisheries and aquaculture was identified (United States of America=175; China=24).
- iii. **Database building.** For each of the 199 policies, policy-relevant information including duration, amount, beneficiaries, provider(s), objective and, when available, the indication of trade effects was extracted from notification texts. Even though disclosures are not always made in a standardized form, information was categorized as much as possible according to the notification requirements of SCM Art 25.3, considering also guidelines provided in the Questionnaire Format for Subsidy Notifications (WTO, 1995 and 2003). Ambiguous subsidies, i.e. sea-related policy instruments that were not explicitly linked to fisheries, were discarded.⁹ The original set was narrowed down to a *selection of 174 fisheries policies*, of which 61 unique entries.

⁸ Keywords set as matching criteria are words that clearly point to entities, concepts and principles underlying the functioning of global fisheries. These include fish, fishing, fisheries, aquaculture, vessels, landing, boat, fuel, capture, catch, port, sea.

⁹ See, for instance, tax concessions provided at United States ports for ships transit or access to/use of port infrastructure (loading etc.). In most cases, it was unclear from notified information whether fishing vessels or operators were beneficiaries of these support schemes.

3. Insight into country performance and disclosure requirements

The resulting database is used to conduct three types of descriptive analysis. By tracking country performance in disclosure and assessing the notification framework, the primary objective of the analysis is to provide new elements for the discussion of government transparency. Compliance of notification content with SCM requirements is assessed against equally-weighted criteria, developing binary indicators of country performance (sub-section 3.1). The values of subsidies notified to the WTO and the OECD are compared and contrasted, with a view to detect trends in policy disclosure (sub-section 3.2). An in-depth assessment of the WTO notification framework is also provided in an effort to identify *content-related*, *technological* and *institutional* shortcomings, i.e. bottlenecks to better reporting (sub-section 3.3).

3.1 Binary indicators of country performance

The notification process at the WTO is regulated by the SCM Agreement, which sets specific and detailed provisions regarding the time (art. 25.1), the type of subsidies (art 25.2) and the content of notifications (art. 25.3). With a view to assessing country performance in disclosures, collected information is used to measure the level of compliance of China and the United States with the five content of notification requirements of art. 25.3 (Box 1). This can be seen as a good proxy for, and measure of, government transparency.

Box 1. Art 25.3 of the SCM Agreement: Content of notifications

“The content of notifications should be sufficiently specific to enable other Members to evaluate the trade effects and to understand the operation of notified subsidy programmes. In this connection, and without prejudice to the contents and form of the questionnaire on subsidies, Members shall ensure that their notifications contain the following information:

- (I) form of a subsidy (i.e. grant, loan, tax concession, etc.);
- (II) subsidy per unit or, in cases where this is not possible, the total amount or the annual amount budgeted for that subsidy (indicating, if possible, the average subsidy per unit in the previous year);
- (III) policy objective and/or purpose of a subsidy;
- (IV) duration of a subsidy and/or any other time-limits attached to it;
- (V) statistical data permitting an assessment of the trade effects of a subsidy”.

Source: WTO (1995)

In order to minimize the subjectivity of judgement, equally-weighted criteria were defined for each requirement in Box 1. Criteria describe the type and minimum-sufficient level of information that is deemed necessary to consider a notification compliant (Table 1).¹⁰ According to these criteria, each of the 174 notified policies was classified as compliant or not compliant with requirements. For each defined criterion, “1” was assigned to

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