

PLENARY ADDRESS

How Big is Small? Understanding Small-Scale Fisheries for What They Are

¿Qué tan Grande es Pequeño? Entender la Pesca en Pequeña Rscala para Lo Que Son

Quelle est la Taille Petit ? Comprendre les Pêches Srtisanales pour Quoi Ils Dont

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INTRODUCTION

Fisheries span a range of operation, from small to large. But unless it is explicit which sector is referred to, there is a tendency to talk about them as if they share similar characteristics, represented mostly by the large-scale, commercial fisheries. The diversity, complexity and dynamics of the fisheries, and of the fishing communities, are often not well captured in development policy and in the general fisheries discourse. Why people fish and what fishing means to people cannot be easily understood and thus are not incorporated in the decision-making process. Talking about small-scale fisheries alone, and not in the context of other activities taking place in the same ecosystem, including large-scale fishing industry, is also counter-productive because, for the most part, small-scale fisheries co-exist with other activities. Understanding how they interact with each other, as well as with other non-fishing activities, is therefore equally important.

Despite the recognition that fisheries include large- and small-scale and that they vary from place to place, insufficient attention has been given to emphasize the scale diversity, let alone the difference in other dimensions that characterize each sector. Knowledge and information about fisheries is skewed towards large-scale, with official national statistics containing production records obtained at major commercial landing sites. Along with this is an imbalanced research focus on economically important fisheries, and uneven financial support given mainly to promote fisheries industrialization (Chuenpagdee and Bundy 2006, Bavinck 2011). On the contrary, no systematic data collection system at a country level exists for small-scale fisheries, partly because this fishing activity takes place in any water body, large or small. Small-scale fishing operation also varies by types of gears, boats (types, size, and engine), distance from shore, number of crew and fisheries-related workers and who they are (family members, relatives or others), and by the nature of operation (part-time, full-time) (Chuenpagdee et al. 2006). In other words, the small-scale 'fish chain,' i.e., what happens at the pre-harvest, harvest, and post-harvest stages of the fisheries (Kooiman et al. 2005), is very complex and context specific. The lack of understanding about who is involved in small-scale fisheries, how many and in what capacity, and who benefits at different parts of the chain, creates barriers for policy development and good fisheries governance. It also makes it difficult to appraise the actual and potential contribution of small-scale fisheries, resulting in the low appreciation for their roles in food security provision, poverty alleviation, and ecosystem stewardship.

This paper describes a new initiative, Too Big to Ignore (TBTI), a global partnership for small-scale fisheries, which aims to address the marginalization issues concerning small-scale fisheries mentioned above. It begins with some discussion about small-scale fisheries definitions and makes reference to the work by the Food and Agriculture Organization of the United Nations (FAO) to help promote sustainable small-scale fisheries, which TBTI builds upon. It then presents the rationale for TBTI and its key aspects, and concludes with what it hopes to contribute to the future of small-scale fisheries.

HOW SMALL IS SMALL?

The first question that comes to people's mind in the discussion about small-scale fisheries is related to how they are defined. Such a question reflects the reality that what considers small in one place may indeed be big in another place, and vice versa. Yet, while it is not possible to provide one definition for small-scale fisheries of the world, studies show that they are, for the most part, not all that dissimilar. In a global database of small-scale fisheries put together in 2006 (Chuenpagdee et al. 2006), about 70% of the coastal nations provided definitions for their small-scale fishing sector, using 'measurable and observable' characteristics such as boat size, horse power, gear type, and distance from shore. Small-scale fisheries worldwide fall generally within a certain range of these parameters, making it possible to distinguish them from the large-scale counterpart for management and regulatory purposes.

But small-scale fisheries differ from large-scale sector beyond scale. Although these other aspects characterizing small-scale fisheries are difficult to capture or to obtain estimates for, they are what truly define small-scale fisheries. Thus, FAO refers to the following in their consideration about small-scale fisheries.

“Small-scale fisheries can be broadly characterized as a dynamic and evolving sub-sector of fisheries employing labour-intensive harvesting, processing and distribution technologies to exploit marine and inland water fishery resources. The activities of this sub-sector, conducted full-time or part-time, or just seasonally, are often targeted on supplying fish and fishery products to local and domestic markets, and for subsistence consumption. Export-oriented production, however, has increased in many small-scale fisheries during the last one to two decades because of greater market integration and globalization. While typically men are engaged in fishing and women in fish processing and marketing, women are also known to engage in near shore harvesting activities and men are known to engage in fish marketing and distribution. Other ancillary activities such as net-making, boat-building, engine repair and maintenance, etc. can provide additional fishery-related employment and income opportunities in marine and inland fishing communities. Small-scale fisheries operate at widely differing organizational levels ranging from self-employed single operators through informal micro-enterprises to formal sector businesses. This sub-sector, therefore, is not homogenous within and across countries and regions and attention to this fact is warranted when formulating strategies and policies for enhancing its contribution to food security and poverty alleviation.” (FAO 2005)

This characterization works well in addressing the diversity and complexity of small-scale fisheries, whether they are marine or inland, captured or cultured. It also recognizes the different gender roles, particularly in post-harvest activities, as evident in many studies that illustrate how women and children contribute significantly to the household income and food security with their involvement in all aspects of the fish chain (see, for example, Frangoudes 2011). The emphasis on formulating appropriate food security and poverty alleviation policies, based on these characteristics, is evident in the current FAO initiative, which aims mainly to establish principles and criteria that can assist nations and stakeholders to achieve secure and sustainable small-scale fisheries and related livelihoods (FAO 2013). The guidelines align closely with the Code of Conduct for Responsible Fisheries, but with governance principle that strongly respect ‘human rights’ of current and future generation of small-scale fishing people. Another important aspect of this initiative is its global applicability, which counter-argues the tendency to consider small-scale fisheries issues as those belonging to the ‘south,’ when small-scale fishers of the ‘north’ face similar socio-economic and political marginalization and challenges in their own contexts.

SMALL-SCALE FISHERIES ARE “TOO BIG TO IGNORE”

Several attempts have been made to estimate the number of people involved in small-scale fishing activities and their catches. Examples of these are reported in FAO’s State of World Fisheries and Aquaculture (FAO 2012), the “Big Number” project (FAO and WorldFish Center 2008) and the “Sunken Billions Report” produced by World Bank, in collaboration with FAO (World Bank 2009), and in the study by Chuenpagdee et al. (2006), conducted as part of the *Sea Around Us Project*. These estimates point in the same direction, that at least 90% of all fishers are small-scale. If judged by the number of people involved alone, all fisheries policies should be directed at managing and supporting this sector. But since the rationale for management has been largely based on economic efficiency, it is the commercial, large-scale fisheries that benefit most from the existing fisheries development policies.

We argue that the word ‘small’ is applicable only to their scale of operation. On other aspects, especially in terms of their importance to livelihoods, income, employment, and food security, this fishing sector is too big to be ignored. The focus on small-scale fisheries is, in effect, to reconcile the current marginalization, shown by inadequate financial, institutional, and scientific support for the sector, and an under-representation of the concerns of people involved in small-scale fisheries in the current policy discussions and the general discourse about fisheries (Bene 2003, Pauly 2006, Teh et al. 2011). The under-appreciation of the importance of small-scale fisheries is a global phenomenon, even in places characterized by longstanding fishing traditions. For this reason, worldwide and concerted efforts are needed to preserve the ability and ‘freedom’ of small-scale fishers to provide economic and social wellbeing locally, and to contribute to global environmental sustainability, as argued by Jentoft and Eide (2011). It is under this premise that the new initiative, *Too Big to Ignore* (TBTI; toobigtoignore.net), is developed.

TBTI is a global partnership that promotes research, policy dialogue and advocacy on issues pertinent to small-scale fisheries around the world. The main goals are to elevate the profile of small-scale fisheries, to argue against their marginalization in national and international policies, and to develop research to address global food security and sustainability challenges in fisheries policy. It does so by:

- i) Providing evidence to promote recognition and understanding of the importance of small-scale fisheries to livelihoods, wellbeing, poverty alleviation and food security,
- ii) Exploring their potential contributions to economic growth and development, environmental sustainability, stewardship, and community resilience,
- iii) Assessing their vulnerability to anthropogenic global change processes such as the growth of large-scale fishing operations, climate change,

- aquaculture development, tourism, marine protected areas, the private enclosure of coastal spaces, urbanization and migration,
- iv) Encouraging policy discussions and contribute information for improving decision-making about small-scale fisheries, and
 - v) Advancing knowledge and build local and global capacity in research and governance for the future of small-scale fisheries.

The ‘partnership’ approach requires collaboration and contribution from a broad range of stakeholders, including in this case, intergovernmental organizations, environmental and civil society organizations, and research communities from multiple social and natural science disciplines, in the identification of issues, formulation of research questions, development of research framework, conducting of local case studies, dissemination of research findings, and in the discussion about small-scale fisheries policy and governance. Following scholars interested in alternative forms of disciplinary learning and knowledge sharing (see, for instance, Lawrence and Deprés 2004), this ‘transdisciplinary’ approach to study small-scale fisheries and to address their issues and concerns is promoted in TBTI to recognize the ‘wickedness’ of the problems associated with them (Jentoft and Chuenpagdee 2009, Brown et al. 2010).

There are three main components to TBTI. The **first** is related to the development of an “Information System for Small-scale Fisheries” (ISSF) as a global database to address the current lack of systematic information about small-scale fisheries. ISSF aims to capture key characteristics of small-scale fisheries in any given location across the ‘fish chain’ from aquatic ecosystem to plate, in order to enhance understanding and enable global and comparative analyses about the importance of small-scale fisheries to the society. The **second** component addresses key concerns in small-scale fisheries, related to issues such as economic viability, livelihoods and wellbeing, ecological impacts, access and rights, and governance for sustainability. Concept notes and methodological frameworks are deployed to enable in-depth research and case studies about these issues. Finally, the **third** component is concerned with building capacity in research and governance to fisheries stakeholders, as well as future generations, through various initiatives including a training course on ‘transdisciplinary fisheries science’. Details about these components are provided below.

INFORMATION SYSTEM FOR SMALL-SCALE FISHERIES (ISSF)

Two main challenges are apparent in the development of a database like ISSF. First is related to the balance between the ‘need-to-know’ and the ‘nice-to-know.’ The other is about how to deal with both quantitative and qualitative information. The more we try to cover the

diversity and complexity of small-scale fisheries, the more difficult it is to deal with these issues. The risk of developing an information system that is empty and meaningless is also high. In other words, it is difficult to design a database that can capture the intricate details about small-scale fisheries, while simple enough to populate with existing information or with information that can be easily and systematically obtained. The fact that small-scale fisheries are mostly context specific also makes it difficult to design a system that is globally applicable. Discussion about appropriate level and scale of the data in ISSF is also required. At least for the first phase of the development, it is important to include key information that can do the following:

- i) Help explain the importance of small-scale fisheries,
- ii) Answer urgent questions about this sector, and
- iii) Enable analyses leading to improving fisheries governance.

In the development of the ISSF, we review literature and existing databases to learn about key attributes that are mostly captured. We also conduct an iterative expert judgment exercise to help prioritize these attributes. Finally, we validate this with another process where analysis scenarios are developed, with key attributes identified.

In addition to capturing key characteristics about small-scale fisheries, the ISSF also contains other databases that can help secure and sustain this sector. These include, for instance, databases about researchers working on small-scale fisheries, research projects related to these fisheries, organizations supporting small-scale fisheries, and training and capacity development programs for small-scale fisheries. These databases can be developed through a combination of web research, online surveys, onsite observation, and field data collection.

THE BIG RESEARCH QUESTIONS

Concerns and challenges facing small-scale fisheries around the world are numerous. In order to focus the work of TBTI on the important ones, we conducted an online survey to solicit inputs from a broad range of stakeholders about research priorities. Additionally, we convened research meetings and stakeholder consultations in various locations, to distill what questions are important for TBTI to address. The results are then compiled into the following five research themes.

(1) Strengthen the Base —This research theme is concerned with questions about options for improving economic viability of small-scale fisheries and for increasing their resilience to large-scale processes of change. Do these options exist and do they contribute to making small-scale fisheries more economically, and socially, viable? Questions about the vulnerability of small-scale fisheries to processes such as climate change and global-

ized seafood markets are also discussed. The underlying concept for this research theme is similar to the sustainability discourse, which recognizes the need for balance and trade-offs between economic, social and ecological objectives. We argue that viability of fisheries, particularly small-scale, is not only about how much money the sector is contributing to the national economy alone, but also about its contribution to sustaining fishing communities. Fisheries policies that favor economic viability of certain sectors, like funding priorities, subsidies on fuel, market and gear/technology modernization given mostly to industrial fishing sector (Jacquet and Pauly 2008), and seafood certification systems with criteria that are mostly applicable to large-scale (Ponte 2008), create unfair competition and barriers for others to benefit from the schemes. Thus, we need to examine all possible options in strengthening the economic, social and ecological basis for the existence and viability of small-scale fishing people.

(2) *Broadening the Scope* — In many coastal communities around the world, small-scale fisheries play an integral role and have close connection with local activities, such that the wellbeing of these coastal communities relies, for the most part, on vibrant fishing livelihoods. How members of the communities see and value small-scale fishing people have consequences, however, on how fishers are treated in the society and on their ability to enjoy their fishing lifestyle. It is therefore important to critically examine factors constituting their overall wellbeing, that is beyond material wealth to include subjective and relational aspects (Coulthard et al. 2011). Comprehensive understanding of the values and importance of small-scale fisheries is difficult to obtain due to the complexity of their functions and contributions, as previously mentioned. The key question underlying this research theme is related therefore to the determination of aspects of small-scale fisheries that need to be accounted for and emphasized, in order to increase awareness of their actual and potential social contributions and their overall societal importance. A good place to start is to look at their contribution in terms of food security, poverty alleviation, generation of employment and revenue at local level, maintenance of culture and heritage, and their role as social cohesion safety net to



the local community (Allison and Ellis 2001, Jentoft and Eide 2011).

(3) *Enhancing the Stewardship* — Another key contribution of small-scale fisheries, which is often underappreciated, is conservation and stewardship of the aquatic environment. Studies show that when small-scale fishers take part in community-based conservation initiatives, they are likely to succeed (see for instance, Chuenpagdee et al. 2002). Further, early involvement of local fishing communities in conservation efforts, such as in the establishment of marine protected areas, often leads to successful implementation, while the lack thereof creates conflicts and regulatory problems (Jentoft et al. 2012, Chuenpagdee et al. 2013). It is important, however, to acknowledge that small-scale fisheries can also result in resource degradation, especially when destructive methods are employed. A balanced consideration of factors such as differential capacity and flexibility of gears and fleets, to account for the complexity in fisheries is required (McConney and Charles 2010). It is within this context, upon which this research theme focuses. The key question is whether alternatives are available for minimizing environmental impacts and fostering stewardship within small-scale fisheries. Specifically, information about gear and fleet interactions, both among small-scale fisheries and between small- and large-scale fisheries, needs to be captured. The difficulty in the assessment of impacts and interaction is recognized given the large number of small-scale fisheries, often operating in remote areas, in the absence of monitoring systems.

(4) *Defending the Beach* — Fishing is but one activity taking place in coastal areas, co-existing with other economic and social development. Population expansion, aquaculture, the growing tourism sector, marine protected areas, the emergence of other marine industries such as offshore oil and gas extraction and transportation, and increasing demands on fish and other seafood products have contributed to intensifying competition within coastal zones (Boissevain and Selwyn 2004). Effects of such competition are mostly felt by small-scale fishers who depend heavily on access to shorelines, which are their places for activities such as shellfish gathering, gleaning, and near-shore or beach seine fisheries, landing and anchoring boats. Unfortunately, their perspectives and voices are often not considered and their rights violated by economically and politically powerful individuals (see for instance, Pinkerton and Silver 2011). An important question under this research theme thus involves an examination of appropriate mechanisms required to secure livelihoods, physical space and rights for small-scale fishing people. Issues related to traditional uses, territorial rights, ownership, mobility, migration patterns, and power relations need to be understood, along with factors and conditions underlying their displacement and marginalization.



(5) *Governing the governance* — Related to, and implied in, the above questions are governance issues, which are the focus of this final research theme. The key question, “what institutions and principles are suitable for the governance of small-scale fisheries”, reflects the fact that fisheries policies and instruments are often developed based on the knowledge about large-scale fisheries, and with their interests in mind. They do not sufficiently address the interests of small-scale fishing people. Neither do they enable them to become directly involved in the process of governance. Different governance thinking is required to recognize the diversity, complexity and dynamics of small-scale fisheries, as well as their governing capacity and their ability to be governed (Kooiman et al. 2005). For instance, more effective institutions or new ones may be needed in order to provide action spaces for small-scale fishers to manoeuvre in the changing economic, social and political landscape within which they operate (Chuenpagdee and Song 2012). Further, as outlined in the new FAO international guidelines (FAO 2013), governance principles that align well with those of small-scale fisheries are likely different from those applicable to large-scale fisheries. Under this research theme, an analysis of current governance discourse to understand what images, principles, and practices underlie key policies and decisions, how they materialize in governing institutions and strategies, as well as how closely they relate to those of small-scale fishing people, is conducted.

THE FUTURE OF SMALL-SCALE FISHERIES

The ultimate question about small-scale fisheries is whether they will continue to exist and for how long. Aging fishing population, coupled with the lack of interest among young people in fishing occupation observed in many parts of the world, as well as the inability to rely on fisheries for economic viability, due in part to the unsustainable exploitation, present challenges to the future of small-scale fisheries. Nevertheless, opportunities for small-scale fisheries exist with the heightened interest from

intergovernmental organizations like FAO, civil society organizations and research communities, including TBTI. One of the core aims of TBTI, for instance, is in synergy creation, knowledge mobilization and capacity building to help secure sustainable small-scale fisheries of the world. The ambition to develop a trans-disciplinary fisheries course is to recognize that different sources and type of knowledge need to be incorporated in the research and governance about small-scale fisheries. The development of such course, with various delivering options, e.g., online and on-site, in different settings (formal and informal), targeting a range of stakeholders, requires multitude of inputs and collaboration, including from small-scale fishers themselves. Local realities, priorities and capabilities are key considerations. Innovative tools and approaches in teaching and learning that encourage multidirectional flows of knowledge about small-scale fisheries will need to be employed.

Many of the ideas presented in this paper come from collective thinking of TBTI members, along with those expressed in a collection of essays entitled *Contemporary Visions for World Small-Scale Fisheries*. Many of them were also at the first World Small-Scale Fisheries Congress held in Bangkok in 2010. Together with TBTI partners and collaborators around the world, they provide solid foundation and support for the work of TBTI. The discussion about the future of small-scale fisheries, looking particularly at options and opportunities for their viability and wellbeing, will continue at the 2nd congress, to be held in Mérida, México in September 2014. The work on small-scale fisheries does not end there or with TBTI, however. It is the responsibility of all members of the society to pay attention to this important sector, to understand them for what they are, and to help influence policies that support them, in order for them to continue to make their contribution.

ACKNOWLEDGEMENTS

Funding for TBTI (toobigtoignore.net) is provided by the Social Sciences and Humanities Research Council of Canada to Memorial University, supplemented by in-kind contributions from partner organizations and research team members. The author is grateful for the strong support and encouragement from TBTI members and partners. Many thanks also to Alejandro Acosta, who facilitated her participation at the GCFI conference.

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