



HANDBOOK

Transdisciplinarity in Fisheries & Ocean Sustainability

Online Learning and Training
Course

ABOUT THE HANDBOOK

Since 2015, TBTI has been developing a transdisciplinary (TD) training program to help build capacity for the implementation of the SSF Guidelines, as well as for promoting viable and sustainable small-scale fisheries (SSF) more broadly. Starting in 2018, this program, titled 'Transdisciplinarity in Fisheries & Ocean Sustainability', has been offered both as an online training course or training workshops, either in-person or online. In 2019, with the support of the FAO, TBTI started developing a teaching guide that captures the key elements of the TD training program. The result – the TD Handbook – summarizes the key tenets of TD, as well as the underlying principles, approaches and methods for participatory problem analysis. The main goal of the handbook is to serve as a guide to support capacity development training for the implementation of the SSF Guidelines and the SDGs. The TD Handbook can be used to compliment the online TD course or as a stand-alone guidebook to help practitioners, governments, and policy makers in their effort to implement the SSF Guidelines.

The handbook is a joint effort, developed by the TBTI TD course facilitators, guest lecturers, members of the TD research cluster, and with the contributions from those who took part in the TD online course or in the TD training workshops, either in-person or online. The handbook has gone through several developmental stages and was evaluated on a number of occasions. In accordance with the TD principles, the development of the handbook will continue to be an interactive and iterative process for which there is no particular end date in mind. In other words, the TD Handbook is meant to be a 'live document', which will continue to be updated and revised in sync with the development of the TD philosophy and practice as well as with the present-day challenges and opportunities experienced by the SSF communities and those who work with them.

ABOUT TBTI

Too Big To Ignore - Partnership for Small-Scale Fisheries Research (TBTI Global) is an international research network and knowledge mobilization partnership supported by over 700 members from around the world. TBTI has been conducting in-depth research and capacity building activities that enhance knowledge and understanding about all aspects of small-scale fisheries since its establishment in 2012. The overall aims of TBTI are to raise the profile of small-scale fisheries and reduce their marginalization, promote their wellbeing, and improve governance. We argue for a more inclusive and holistic approach to sustainable development by incorporating issues and concerns facing small-scale fisheries, as expressed by small-scale fishing communities, more centrally in the discussion about the future and ways forward.

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PREFACE

Interest around small-scale fisheries (SSF) is increasingly heightened, especially during the past decade with the adoption of the [Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication \(SSF Guidelines\)](#) by FAO member states in 2014. Parallel to that is the effort from civil society organizations and research community to continue to provide evidence and bring to the discussion the values and importance of SSF, and why they need better attention from governments. As part of this effort, TBTI has been contributing to enhancing knowledge on a range of topics, such as access and rights, economic viability, livelihoods and wellbeing, food security, gender, and governance. In 2017, [TBTI published a book about the implementation of the SSF Guidelines](#), with more than 30 case studies illustrating challenges and opportunities that countries face in their attempt to implement the SSF Guidelines. TBTI has also been developing a training course on ‘Transdisciplinarity for Fisheries and Ocean Sustainability’, to help build capacity for the implementation of the SSF Guidelines, as well as for promoting viable and sustainable SSF more broadly. This handbook summaries some of the key elements covered in the course, which is now being offered both as online and onsite training program.

The main objective of the transdisciplinary (TD) training program is to engage a broad range of stakeholders at all levels in a critical examination of a range of issues, challenges and concerns related to fisheries and ocean sustainability, especially those affecting SSF.

The training aims to challenge the way we think about problems and appreciate that problems may be differently defined, depending on who frames it. TD thus begins from the process of co-identification of the problem, before going into deepening the understanding about the underlying causes. Discussion about what we know or what we can and should know, and what we never know, is part of the knowledge co-production process. The final step is then about co-creation and co-development of pathways towards solutions and the co-implementation. This is where we invite innovative ideas and creative approaches to achieving sustainable SSF.

Clearly, TD is mostly about process, especially in understanding problems and challenges, and identifying of solutions and opportunities, keeping in mind many other relevant issues facing SSF, including gender and power dynamics. It is also about learning to appreciate the differences and be respectful of other people's values, so that we can engage and communicate effectively across the board. The TD training program consists of a series of lectures on theories and main concepts, followed by approaches, methods and frameworks to promote sustainability for fisheries and ocean. An important aspect of the training is the practical application of the theories and methods through exercises and case studies, which can offer valuable lessons and prevent us from reinventing the wheel. Again, this handbook is only a glimpse of what the TD training course offers. If you like what you see here, contact us to learn more about how to participate in the TD training program.

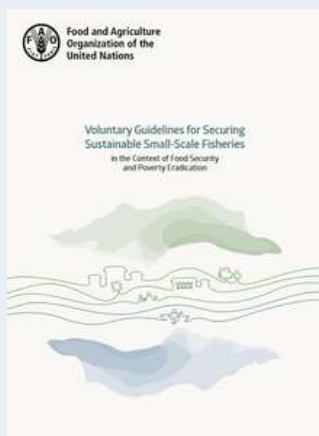
Ratana Chuenpagdee, Evan Andrews and Vesna Kerezi
TD Facilitators, TBTI Global



INTRODUCTION

Embarking on a TD journey

SSF Guidelines as a great starting point



A good place to start the conversation about SSF sustainability is at the SSF Guidelines. There is an interesting history how this instrument came to be, which upon reflection, is a very TD process. The concern is there, however, about whether there will be an uptake by governments and other key actors in the implementation. From the understanding about what the SSF Guidelines are about and why they should be implemented, we will bring in the TD perspective to examine why some countries are able to implement the SSF Guidelines and others are not. The understanding of institutions responsible for fisheries management and governance, and the unpacking of the legal and policy instruments that countries use to manage and govern fisheries are imperative.

The SSF Guidelines are an internationally-endorsed policy instrument that can be used to support, sustain and promote SSF. The SSF Guidelines contribute a holistic legal and political basis for advancing other international goals, including [Sustainable Development Goal 14 \(SDG14\)](#), and many other [SDGs](#). As such, the SSF Guidelines are a useful tool to find consensus around the various problems facing SSF. These problems are increasingly complex and uncertain. From the governance perspective, they are considered ‘wicked problems,’ that cannot be fixed through technical tools but rather through nuanced approaches and careful considerations of all inter-related elements. In a nutshell, they require a TD perspective.

TD involves working between, across, and beyond academic disciplines in collaboration with people that hold different knowledge and perspectives about SSF. TD is a **process** that guides how we should conceive, perceive and articulate problems facing SSF. TD is **interactive**, meaning that through exchange and sharing of knowledge and information, the understanding is enhanced. TD is also **iterative**, so we continue to listen, learn and share.

Sustainable Development Goals



Transdisciplinarity as a step zero

Course modules

1 Wicked problems & governability

Fisheries problems are the same everywhere and easy to solve!?! Not really. Not all problems are the same and there are many reasons why we should resist the temptation to reach to the tools we know.

Small-scale fisheries are not isolated, and should not be treated as such. Broadening the discussion about small-scale fisheries can lead to achieving many Sustainable Development Goals.

4 Broadening the scope

2 The fundamentals of TD

Everyone is talking about TD but not too many people can really explain what it is about. But perhaps it does not require a proper definition as long as we know what it means.

Are fisheries institutions the weakest link? Let's understand how formal and informal institutions work, and figure out how to strengthen them.

3 Unpacking governance & governing systems



How to use the handbook

Legend



Theory / Concept



Video presentation



Exercise / Assignment



Publication



Skill building



Case study / Example



Deep dive



Tips

The handbook is organized into four modules, related to the main topics and the objectives of the course. Each module contains lectures presented by renowned scholars who have contributed to theoretical development, conceptualization, and practice of TD. Early career scientists also present their experiences, through 'deep dive' into case studies, and contribute to the discussion about the practical application of TD.

Literature on SSF is vast and the one on TD is fast growing. The handbook includes selected readings; thus readers are encouraged to check more papers and books on the topics.

Exercises, assignments and case studies aim to illustrate topics covered in the course, and facilitate learning and sharing of experiences and information. There are a lot of great examples about SSF out there, offering great insights and valuable lessons.

Many new skills will be required to do TD, especially concerning communication and engagement. But some of the skills are useful for any research, whether TD or not. It is about making good use of existing tools and approaches, and innovate as we go, especially in how we apply them.

TD is also about reflection, and it is a good way to return to new and unfamiliar concepts, revisit some of the questions that require further evaluation, and think critically about how to make use of the materials presented.

Tips are on-going resources that we invite you to help populate. It is also a space to share insights and offer advice for those who are embarking on the TD journey.

Acronyms

EBM

Ecosystem-Based Management

HRBA

Human Rights-Based Approach

MSP

Marine Spatial Planning

SDGs

Sustainable Development Goals

SSF

Small-Scale Fisheries

SSF Guidelines

Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication

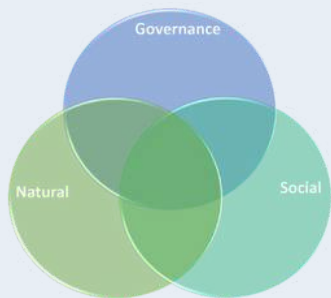
TD

Transdisciplinary / Transdisciplinarity

Exercise #1 - Big Questions in SSF



Let's explore some of the most pressing issues in SSF



Reporting back



Participants are asked to write down what they believe are the most important questions in SSF that we should try to address. While doing so, it will become apparent that the big questions in SSF have these common characteristics:

1. Capture trends and start new ones.
2. Shift/broaden/deepen our lens.
3. Reveal new interacting problems.

For instance, one such question is [Blue Justice](#).

Course facilitator should collect the SSF big questions from the participants and summarize them according to the 13 guiding principle outlined in the SSF Guidelines (below). The facilitator should then indicate which SSF Guidelines principles were identified as the least important (or not important at all). **The principles that received the least attention will guide Exercise #3 in Module 2.**

SSF 1	Human rights and dignity
SSF 2	Respect of cultures
SSF 3	Non-discrimination
SSF 4	Gender
SSF 5	Equity
SSF 6	Consultation and participation
SSF 7	Rule of law
SSF 8	Transparency
SSF 9	Accountability
SSF 10	Sustainability
SSF 11	Holistic and integrated participation
SSF 12	Social responsibility
SSF 13	Viability

MODULE 1

Wicked problems & governability



ABOUT MODULE 1

This module introduces participants to the concept of wicked problems in governance, and why the problems are even more wicked in the context of SSF. To learn how to address such wickedness, participants will be guided to examine SSF in their diversity, complexity and dynamics, and the scale issues associated with their governance. The aim is also to gain appreciation about the challenges and tension in navigating between sustaining the resources and providing viable livelihoods, which are interconnected and multi-faceted, and there might not be trade-off or win-win solutions. In effect, there may be no general consensus as to what these challenges are, why they occur, and how to address them. Starting in this module, and continuing throughout the course, the participants will be prompted to apprehend the uniqueness of the SSF Guidelines as an instrument that recognize and addressed this duality of combining responsible fisheries with social and economic development. Participants will also be introduced to the interactive governance as a theoretical framework to examine features of aquatic, social, ecological, and political systems that may foster or limit overall governance quality – the governability of SSF. Assessing governability requires detailed examinations of the systems-to-be-governed, the governing system, and the governing interactions. By engaging in exercises specifically based on such analyses, participants would be able to identify opportunities and limitations for improving governance.

Key topics, concepts and theories

Topics

- Governance
- Sustainable fisheries
- Fisheries management
- Case study: Sakura fishery

Concept & theories

- Wicked problem
- Interactive governance
- Governability

Required reading

- Jentoft, S., and Chuenpagdee, R. (2009) Fisheries and coastal governance as a wicked problem. Marine Policy 33: 553-560.
- Chuenpagdee, R. and Jentoft, S. (2013) Governability assessment for fisheries and coastal systems: A reality check. Human Ecology 37:109-120.

Recommended reading

- Jentoft & Chuenpagdee (2015). Assessing Governability of Small-Scale Fisheries. In Jentoft and Chuenpagdee (eds.) Interactive Governance for Small-Scale Fisheries: Global Reflections. Springer, Switzerland.



Wicked problems in SSF

Svein Jentoft
The Arctic University of Norway

Have you ever come across a term 'wicked problem'? A wicked problem generally refers to a complex problem for which there is no simple method of solution and for which there is no clear stopping rule. Because the problems facing fisheries are often 'wicked' in nature, there is no simple formula available to address them. This is especially true for SSF.



Click on the icon to watch the presentation by Prof. Jentoft to learn about wicked problem and understand why this concept is useful in addressing the SSF issues.



Click on the icon to read a short essay by Prof. Jentoft on the issue of wicked problems.

Exercise #2 - Wicked problem



Participants should think of a wicked problem in small-scale fishery that they are familiar with. These are some of the questions to keep in mind when deliberating on whether a problem is wicked:



- How difficult is to define this problem?
- Can it be easily differentiated from other problems?
- What kind of solution do we need in order to fix this problem?

Explain and write down why you believe this fishery is wicked, following the definition in Jentoft & Chuenpagdee (2009).



SSF governance: conceptual clarification

Svein Jentoft
The Arctic University of Norway

Governance is not a new concept but it is within the past decade that the concept is being used broadly in the discourse about fisheries and ocean. Not everyone thinks and understand the term in the same way, however.



Click on the icon to hear how Prof. Jentoft conceptualizes governance within the context of SSF.

Interactive governance & governability

Ratana Chuenpagdee
Memorial University

By now, you may have a lot of questions about interactive governance and governability. Watch this video as Prof. Chuenpagdee unpacks the theory and concept.



This video is aimed to accompany the required papers for the module. The detailed explanation about the step process of governability assessment can be found in the third paper (Jentoft & Chuenpagdee 2015). These materials should help enhance your understanding about interactive governance and governability, and help you with governability assessment exercise.



Unpacking the concepts

Deep-dive with Svein Jentoft

So far, you've learned about the concepts of **wicked problem**, **governance**, **interactive governance** and **governability**. Well done! But these are not easy concepts to grasp and you are likely wondering about questions such as:

How do we define a wicked problem? How do we intervene in a wicked problem? How do we govern a less governable system? Is governability actually a wicked problem in itself?

Don't worry, we've got you covered! So buckle down and join our resident expert on a deep dive as we explore these and other questions. To do that, log into the TD online platform and join the group discussion.



When a problem gets wicked, adjust your lens: TD lens for Sakura fishery, Japan

Yinji Li
Tokai University

Here is a great example of a wicked problem, explained by Prof. Li as she observed the ebb and flow of the Sakura shrimp in Japan.



Watch the video to find out what happened to this famous fishery, and why the name sake.



Read a paper by Li and Chuenpagdee (2021) that proposes a TD lens to address current problems in Sakura fishery.

Bonus material



Wicked problem analysis: Governance in the SSF in Fårö, Sweden, by Milena-Arias Schreiber



Discussion about wicked problems: 'Using Transdisciplinarity for Fisheries Policies and SSF Guidelines Implementation' - Report from a virtual workshop for governments and policy-makers [p. 13-22]

A photograph of three people in a laboratory or research setting. They are wearing blue gloves and using digital scales to weigh red fish. The background shows a window with a view of a street and parked cars. An orange text box is overlaid on the image.

MODULE 2

The fundamentals of transdisciplinarity

ABOUT MODULE 2

By now you must be wondering what TD is all about and whether there are any principles and methods associated with it. In this module, we'll share with you some experiences from researchers who have been practicing TD.

While it is recognized that multiple perspectives are required to address multi-faceted and complex problems, an integration of knowledge and sciences does not always happen. Progress has been made in advancing the knowledge and scientific integration through multi-disciplinary and interdisciplinary research. Why TD? Is it just another buzzword or it is an essential approach required for the kind of problems the world is facing today? In this module, we will discuss what TD is about and its value proposition. Is it true that a TD approach can help enhance understanding about fisheries and ocean and improve successful management and governance? A TD approach embraces complexity of SSF and governability challenges in achieving sustainability, including the diverse viewpoints and priorities of different stakeholders. This module aims to examine and integrate different theoretical perspectives often used to approach issues within SSF: 1) natural science, 2) social science, and 3) governance. Since TD is also a process, there will be a strong focus on approaches and tools to enhance interactions, communication, information sharing, and co-construction of knowledge.

Key topics, concepts and theories

Topics

- Successful management & governance
- Integrating natural science, social science and governance
- The SSF Guidelines

Concept & theories

- Transdisciplinarity
- TD approaches
- Knowledge co-production

Required reading

- [Food and Agriculture Organization of the United Nations \[FAO\]. 2015. Voluntary guidelines for securing sustainable small-scale fisheries in the context of food security and poverty eradication. Rome](#)
- [Jentoft, S., and Chuenpagdee, R. 2017. From rhetoric to reality: implementing the voluntary guidelines for securing sustainable small-scale fisheries. In S. Jentoft, R. Chuenpagdee, M.J. Barragán-Paladines, and N. Franz \(Eds.\) The small-scale fisheries guidelines \(pp.789-812\). Cham: Springer.](#)

Recommended reading

- [Nicolescu, B. \(2007\). Transdisciplinarity: Basarab Nicolescu talks with Russ Volckmann. Integral Review 4: 73-90.](#)
- [Said, A., Chuenpagdee, R., Aguilar-Perera, A., Arce-Ibarra, M., Gurung, T. B., Bishop, B., et al. \(2019\). The principles of transdisciplinary research in small-scale fisheries. In R. Chuenpagdee, and S. Jentoft \(Eds.\), Transdisciplinarity for small-scale fisheries governance \(pp. 411-431\). Cham: Springer.](#)



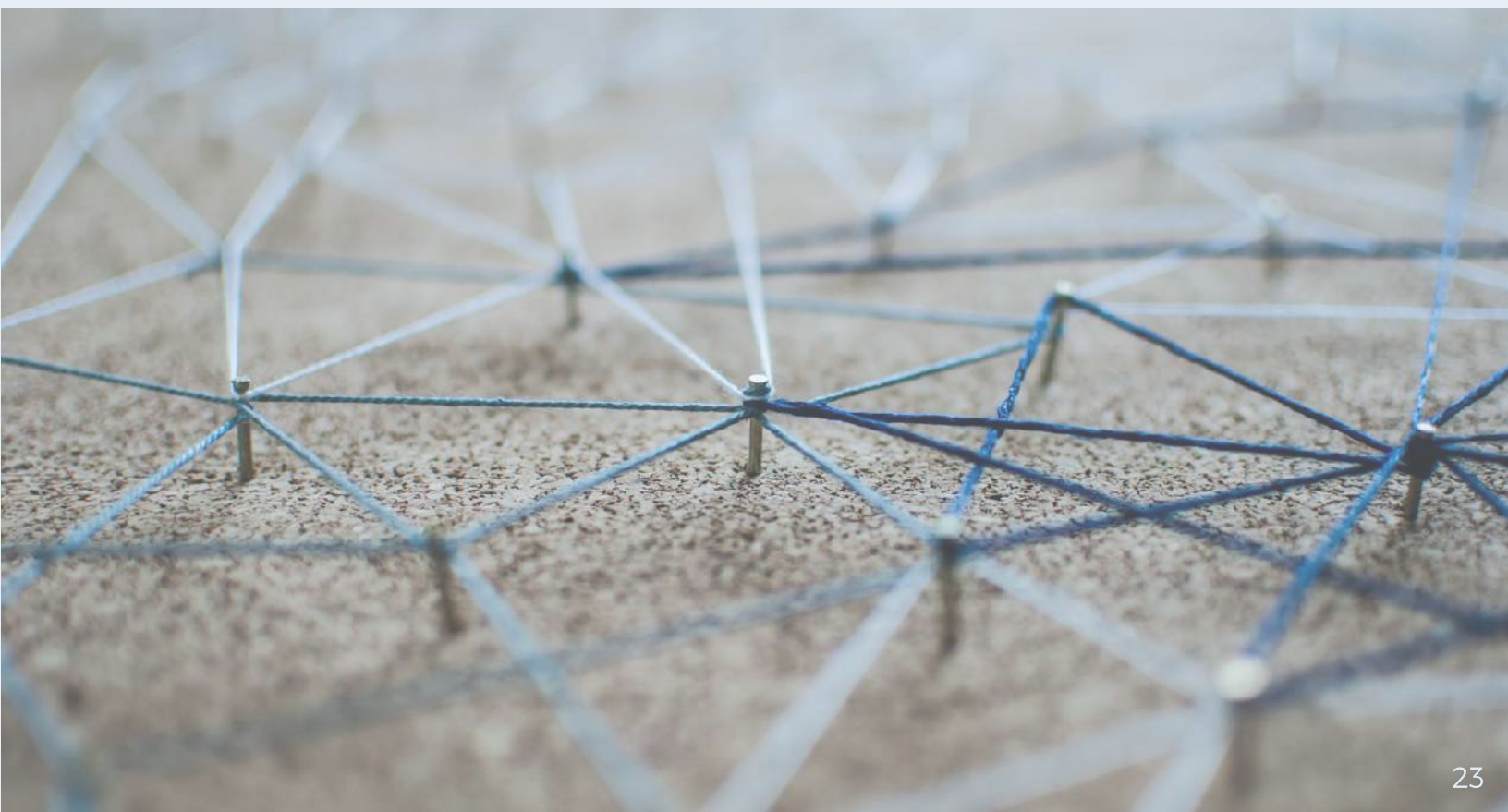
Boots on the ground: an interpretation of a TD work in a fisheries sector

Shannon Bower
Infinity

Some of the most important TD personal traits are empathy, humility and respect. TD practitioners also possess a need for innovation and willingness to engage with dynamic and complex contexts, together with the commitment to apply a transdisciplinary approach to achieving sustainability. But how do we go about developing these skills on our path towards knowledge co-creation? How can a researcher transition into the action space and achieve project goals at the community level?



Check out the video and the online forum in which our resident expert shares her personal journey and discusses issues that you'll likely encounter on your own TD journey.





Appraising TD & knowledge co-production in fisheries

Milena Arias-Schreiber

Gothenburg University

Many of us have that question and wonder whether TD is being practiced or applied in fisheries research, management and governance. While TD is not a new concept, the application to fisheries is fairly new. Importantly, it may be practiced but not referred to as such. After all, the boundary between interdisciplinary and transdisciplinary is somewhat fuzzy.



Find out what Dr. Arias-Schreiber has done to investigate this.



Socio-environmental regimes & local visions - TD experiences in Latin America

Minerva Arce-Ibarra, ECOSUR

Manuel Roberto Parra Vázquez, ECOSUR

Eduardo Bello Baltazar, ECOSUR

Luciana Gomes de Araujo, University of São Paulo



Meet the co-editors of a new book titled 'Socio-environmental regimes & local visions - TD experiences in Latin America', which has been published in 2020. In their video presentation, the editors have shared the challenges they faced in assembling the 19 case studies for the book. These are valuable lessons for all TD practitioners.

Exercise #3 - Big Question Formulation

A Transdisciplinary Problem Orientation



This assignment brings together participants to select, refine, and contextualize their big questions posed in Module 1. Inspired by a transdisciplinary process (Nicolescu 2007), the groups will: (a) seek one another's perspectives about big questions, (b) transform big questions using the SSF Guidelines, (c) reflect on the nature of big question and its related challenges for a transdisciplinary research.

Before the group work starts, the **course facilitator** should create 2 tables. **Table 1:** divide course participants into groups, making sure that each groups brings together participants from different regions/countries. The table should have 3 columns: a) Group name, b) Group members, and c) Member locations. **Table 2:** includes list of Big Question Themes, gathered and summarized from Exercise #1 in Module 1.

TIP: group exercise can be replaced by individual exercise, focusing on matching the big questions with the SSF Guidelines.

The aim of this assignment is to introduce the SSF Guidelines as instrument to clarify sustainability problems for SSF. Consensus on wicked problems recognition and definition is difficult because people hold different images for SSF, draw on different training experiences, and have various cultural backgrounds (Said et al. 2019).

The SSF Guidelines are an internationally endorsed policy instrument that can be used to find consensus around the problem (see [FAO 2015](#)). TBTI collaborators have led exciting research on the SSF Guidelines. Key contributions reveal that transdisciplinarity is necessary to re-orient efforts to implement the SSF Guidelines ([Jentoft and Chuenpagdee 2017](#)). This assignment leverages the power of transdisciplinarity and the SSF Guidelines to ask big questions for the future of SSF. **Big questions reflect research and policy problems for SSF.**

Step 1. Transdisciplinary Group Formation: The first step is to get to know one another, considering group members' training backgrounds, current professional positions, and experiences with SSF cases. Getting to know one another is important, as groups need to negotiate and come to consensus to address the next steps of this assignment. In other words, group formation only starts here, and evolves throughout the assignment.

Step 2. Big Question Negotiation: As a group, participants identify one big question (Table 1). Negotiation is crucial, as participants have different interests and preferences for which and how big questions are posed for research. Dissent and compromise may occur. Sometimes dissent emerges in response to differences in perspectives, and common interest thinking about the nature and scope of the question may be needed to consensus. To guide question negotiation and selection consider the extent to which a big question has: (a) the biggest potential impact for the sustainability of SSF, (b) the necessity for a transdisciplinary approach, and (c) interesting and novel wicked problems that implied by the question.

Exercise #3



continued

Step 3. Transdisciplinary re-orientation: in Module 1 (Exercise #1), participants provided a range of big questions that course facilitators situated in relation to the SSF Guidelines (Table 2). Based on the summary from Exercise #1, the facilitator should indicate which five SSF Guidelines were identified as the least important (or not important at all).

In Step 3, each group will use one of these five SSF Guidelines to re-orient the nature and scope of its big question. Further, each group will reflect on and contextualize the re-oriented question using the SSF cases with which group participants are familiar. Then, the group will identify perspectives needed to ask and better understand the re-oriented question in a research setting related to the natural, social, and governance dimensions implied in the question.

Step 4. Group Reflection: As a group, discuss the following questions and write up a succinct response that combines answers to the following questions. The response should first list both the initial big question theme, and the re-oriented question based on the SSF Guideline the group has chosen:

1. Why is the re-oriented question important to SSF sustainability, relevant to transdisciplinarity, and novel generally?
2. Which examples from participants' experiences help better understand the question and its implications for wicked problems?
3. In what ways are the group participants' training backgrounds, current professional positions, and SSF experiences relate to the question?
4. What additional perspectives are needed to better understand the question (and strengthen the transdisciplinary group)?
5. What dissenting opinions were posed (e.g., rejected questions, examples, etc.) and how were they negotiated? Did you actually come to a full consensus?

Step 5. Individual Reflection: Each member of the group should write a short answer to the following questions and append them to the group's one-page response.

1. What challenges did you experience throughout the steps in the assignment?
2. Was the assigned the SSF guideline ideal? If yes, why? If no, how did you respond/adapt?
3. How did reflection on examples and perspectives shape your lens for the future?
4. In light of these reflections, what tools and methods could you bring to a research proposal that better understand (or even answer) the re-oriented question?

Skills - How to conduct a global literature review?



Derek Johnson & Eric Thrift, University of Manitoba



Any good study starts from a 'taking stock' exercise, which involves reviewing of literature, existing documents and web-based resources, in order to have a full picture about what is known, and what the gaps may be. This will also help avoid repetition or duplication. An example presented here is the global review of dried fish, which reveals the social and economic values of this important protein source.

Enjoy this three-part series of presentation and learn how to use Zotero for global literature review. The presentation is brought to you by Drs. Derek Johnson and Eric Thrift of the '[Dried Fish Matter: Mapping the social economy of dried fish in South and Southeast Asia for enhanced wellbeing and nutrition](#)' Project. The project is a great reminder that not only fresh, but also dried fish that contribute significantly to food and nutritional security.

Using Zotero to structure a global literature review on dried fish

Zotero and literature reviews

DFM's analysis of the global literature on dried fish

A photograph of a harbor filled with numerous small, colorful fishing boats. In the foreground, a man in a blue shirt and dark shorts is standing on a boat, looking down at a large, tangled fishing net. A large, circular metal wheel, part of a boat's winch system, is visible on the right side of the foreground boat. The background shows a coastal town with buildings and a hillside under a clear blue sky.

MODULE 3

Unpacking governance & governing systems

ABOUT MODULE 3

The SSF Guidelines are based on internationally accepted human rights standards and are to be interpreted and implemented in accordance with those standards and by using a human rights-based approach (HRBA). This approach seeks to ensure the participation of small-scale fishing communities in non-discriminatory, transparent and accountable decision-making processes by putting particular emphasis on the needs of vulnerable and marginalized groups and on gender equality.

The SSF Guidelines are the most comprehensive instruments designed to support and promote sustainable SSF. They contain key principles that speak to the nature and the characteristics of SSF. With human rights-based approach as foundation, the SSF Guidelines call on governments and related stakeholders to look at SSF issues along the entire fish chain, including those related to tenure rights, gender equality, involvement of fishers in management, social development, labour rights and capacity development. The challenge for all governments is about how to operationalize and implement the SSF Guidelines. In this module, we will examine the governance system, analyze the different types of institutions (formal and informal), and their functionality, identify principles currently employed and explore how to adjust the existing legal and policy frameworks so that they are in better alignment with the vision and principles in the SSF Guidelines. This is also an opportunity to think about how to situate and integrate SSF in the broader conversation about Sustainable Development Goals, especially SDG 14. After all, SSF are not only about life below water, but much to do with 'Life Above Water.'

Key topics, concepts and theories

Topics

- SSF Guidelines
- Legal & policy frameworks
- Ecosystem-based management
- Marine Spatial Planning
- Fishers behaviour

Concept & theories

- Governance system
- Governability
- Social institutions

Recommended reading

- Jentoft, S. (2004). Institutions in fisheries: what they are, what they do, and how they change. Marine Policy 28 (2004) 137-149. [This paper provides an excellent background to understand institutions, and it accompanies well his presentation.]
- Chuenpagdee, R. and Jentoft, S. (2018) Transforming the governance of small-scale fisheries. Maritime Studies 17(1): 101-115 [This second paper draws from recent research in TBTI that applied interactive governance theory to small-scale fisheries. It reveals an interesting trend in many countries around the world in the thinking about governance. * The paper is published in Maritime Studies, and the final publication is available at link.springer.com (<https://link.springer.com/article/10.1007/s40152-018-0087-7>).Jentoft, S. (2018).]
- Life Above Water. TBTI Global Publication Series. [This is an easy-reading book that contains essays written by Professor Jentoft, covering topics of his scholarly work, and touching on various aspects of small-scale fisheries, especially in the modern day governance. Perhaps you have guessed already why the title!]



Social institutions - conceptual clarification

Svein Jentoft

The Arctic University of Norway

Institutions are important elements in any governance system. There are various types of institutions, serving different roles. Learning about what institutions are, why they are established and for what purpose is an essential first step to understand their performance and function. This understanding will also help reveal what needs to be done to improve governability, if it is indeed the governing system that creates a problem.



Watch the video by Prof. Jentoft to get the basic understanding about institutions.



readme

Read a short essay by Prof. Jentoft about social institutions.

Introduction to unlocking legal & policy frameworks for SSF

Julia Nakamura

University of Strathclyde

One of the most important questions about fisheries is about how they are governed from the legal perspective. Fisheries laws and legislations are key elements of the governing systems but they are generally understudied. As part of the TD process, we need to pay attention to legal and policy instruments used in governance. But they can be complex and not easy to understand. This is why we develop a template with guiding questions to help unpack the legal and policy frameworks. The template is also used to examine the extent to which the current legislation and policies align with the principles and topics addressed in the SSF Guidelines.



Watch the explanation by Julia Nakamura, a legal expert, about why we need to look at the legal frameworks, and complete the template as part of the country assignment.

Exercise #4 - Unlocking legal and policy frameworks



GROUP EXERCISE

NOTE: To see the full template, visit [TBTI website](#).

Since the SSF Guidelines have been endorsed in 2014, many countries have been working toward their implementation. It remains unclear, however, how the existing legal and policy frameworks in each country can support the SSF Guidelines and what countries need to do to meet the recommendations in the SSF Guidelines.

The template 'Unlocking national legal and policy frameworks' is developed for a step-by-step examination of the legal and policy frameworks, and evaluate them against the SSF Guidelines.

The exercise should be done at a country level and thus participants from the same country should work together to see what they can do to answer the questions in the template.

It is not expected that the participants will have the answer, but at the minimum they should think about how and where they can find the information. Note, however, that **Part III questions of the template are mandatory**. Do your best!



Ecosystem-based management

Alida Bundy

DFO

Ecosystem-based management (EBM) is one of the holistic management approaches, considered more suitable for achieving sustainability fisheries than the traditional management approach that relies on species-based assessment. EBM, and its variations, is not easy to implement, however, as it requires comprehensive knowledge of the fisheries ecosystem, about its natural and human components, how they interact and function, as well as their dynamism. There are many tools that can help enhance our understanding about the ecosystem, including through engaging with non-scientific experts. Dr. Bundy, a research scientist working with Fisheries and Ocean Canada is one of the leading experts in EBM.



Watch this video to hear her explanation about it. You will then learn that it is not as daunting as it sounds once we understand the basic concepts and the underlying principles.

Paving the way for fisheries in marine spatial planning: geo-technology and power

Brice Trouillet

University of Nantes

Marine spatial planning (MSP) is a hot new tool that has been introduced to help achieve ocean sustainability. But is it really the case?



Watch the presentation by Prof. Trouillet, at Institut de Géographie et d'Aménagement (IGARUN), Nantes, France in which he examines three questions about MSP with him: (i) what type of planning are we talking about, (ii) are fisheries included in marine plans, and (iii) how deal with potential misalignment of fisheries?



Fisher behaviour and its implication for the governability of inshore fisheries

Evan Andrews
Memorial University

A question that many of us has is about how to apply a theory in practice. Can a complex theoretical framework like interactive governance really be used to study something, and how? Evan Andrews explains this in the video presentation about his case study research in Newfoundland, Canada about fishers behaviour and implications on governance and governability.



As you watch the video, think about where fishers' behaviour fit in the theory and why we want to understand it.



Bonus material



Examples from around the world: Kerezi et al. (Eds). (2021). Unlocking Legal and Policy Frameworks for Small-Scale Fisheries: Global Illustrations. TBTI Global Publication Series, St. John's, NL, Canada.



Discussion about legal and policy frameworks, SSF Guidelines, institutions & governability: 'Using Transdisciplinarity for Fisheries Policies and SSF Guidelines Implementation' - Report from a virtual workshop for governments and policy-makers [p. 23-36]



Article: Bringing 'Deep Knowledge' of Fisheries into Marine Spatial Planning' by Said, A. & Trouillet, B. (2020). Maritime Studies, Vol. 19, 347-357



Webinar: From words to actions: Using the SSF Guidelines and human rights for sustainable small-scale fisheries (2020).

A person wearing a grey cap and an orange shirt is using a hand saw to cut a piece of wood. The ground is covered in wood shavings and various wooden planks. In the background, the blue and green hull of a boat is visible.

MODULE 4

Broadening the scope

ABOUT MODULE 4

SSF are not an isolated sector, and they face many threats and challenges, including climate change, globalization, competition from industrial fisheries, rapid market shifts, and coastal and ocean development, some of which are part of the Blue Growth/Blue Economy initiatives, that might result in displacement and further marginalization of SSF. The Covid-19 pandemic adds the stress and vulnerability to many SSF around the world, with the full consequences yet unknown. This calls for a broadening of discussion about SSF in order to achieve, not only SDG14, but many other SDGs. This is also why it is important to look at gender in the broad context, not only about women involving in fisheries along, but also the different gender roles in the community and the society. Finally, returning to the threats from Blue Growth/Blue Economy, it is imperative to bring principles related to social justice and equity to the discussion. “Blue Justice” is a useful concept that can help critically examine the rhetoric about sustainable development, and to help change the conversation from SSF as a problem to as a solution!



Gender perspectives in fisheries and fishing communities

Katia Frangoudes, University of Brest

Siri Gerrard, The Arctic University of Norway

Gender equality and equity is increasingly recognized around the world as an important goal that we should strive for. This is why the Sustainable Development Goals prioritizes it as one of the key goals. It is also why the SSF Guidelines put a strong emphasis on. In fisheries, especially in SSF, women have played instrumental role from pre-harvest, harvest and post-harvest parts of the fish chain. But they are often invisible and ignored.



Watch the presentation and learn why and how to look at gender in fisheries.



Gender in Caribbean SSF: The Gender in Fisheries Team (GIFT) initiative

Maria Pena
CERMES

Including gender in our work is a serious effort that requires thoughtful consideration and planning, along with sensible and respectful processes. A team or network approach brings several advantages to gender studies since it offers opportunities for co-learning and co-production of knowledge; and thus TD!



Maria Pena of UWI-CERMES in Barbados is sharing her experience on the topic with the GIFT initiative. Enjoy the video!



Small-scale fisheries and SDGs

SSF exemplify the focus of the Sustainable Development Goals' (SDGs) aim to “leave no one behind”. Yet, while the SDGs have been described as the most comprehensive vision for development that the world has ever seen, discussions on fisheries and oceans are mostly focused on just the one goal - SDG 14: Life Below Water. Achieving the SDGs is a complex process, as the goals are interlinked, in turn creating synergies and trade-offs. Ultimately, SDGs have to be achieved through a holistic, equitable and inclusive process.



For further information about this topic, check the panel on 'Small-scale fisheries and SDGs nexus'.

Blue Justice

Blue Justice reflects a critical examination of how coastal communities and SSF may be affected by blue economy and “blue growth” initiatives that are being undertaken globally to promote sustainable ocean development. Blue Justice acknowledges the historical rights of small-scale fishing communities to marine and inland resources, and coastal space, as traditional users for thousands of years in some cases. Thus, as a concept, it seeks to investigate pressures on SSF, from other ocean uses, including industrial fisheries and coastal/marine tourism, aquaculture or energy production, promoted in the blue economy and blue growth development agenda, and how it may compromise the rights and the wellbeing of SSF and their communities.



[For further information about the concept, check the Wikipedia entry on Blue Justice.](#)



Read a short essay by Dr. Jentoft about the Blue Justice.

Exercise #5 - Case study analysis



The main objective of this exercise is to introduce the participants to a 'transdisciplinary' concept using a case study approach in addressing fisheries problem, keeping in mind the context of the SSF and the role that SSF Guidelines can play in addressing the problems. Participants will work in the TD online platform in groups for this exercise.

GROUP WORK

First, participants should read the background document, 'Rio Lagartos case study description' along with viewing the video presentation by Prof. Silvia Salas.



S. Salas: Marine fisheries in the Ria Lagartos Biosphere Reserve, Yucatan, Mexico

Check also the general overview of SSF in the Yucatan Peninsula, Mexico, 'Yucatan Peninsula case study background' by Dr. Eva Coronado.



E. Coronado: TD assessment of SSF: Mapping the value chain for the octopus Mexican fishery

Once you have done that, work in your group on each exercise. Each exercise forms a section in your group written assignment. There is no page limit to the write-up but please keep it succinct. Don't forget to download the exercise file in the TD platform so that you know what to do.

Bonus material



Examples of Blue Justice stories from around the world: Kerezi et al. (Eds). (2020). Blue Justice for Small-Scale Fisheries- A Global Scan. TBTI Global Publication Series, St. John's, NL, Canada.



Discussion on broadening the scope - Implementing the SSF Guidelines & the SDG: 'Using Transdisciplinarity for Fisheries Policies and SSF Guidelines Implementation' - Report from a virtual workshop for governments and policy-makers [**p. 33-39**]

Glossary

Interactive governance

Interactive governance is a theory and practice guides assessment of all the interactions in society that are aimed at solving societal problems or creating opportunities in SSF, including among individuals, groups, and agencies, and elements of governance (e.g., knowledge, principles, institutions, and management systems) [1].

I) Interactions can be actor-centered and structural

- a) Actor-centered interactions are inter-personal and inter-organizational exchanges such as conflicts over rights, or the development and implementation of elements in governance.
- b) Structural interactions can reflect interplay among elements in governance such as contradictory principles or coherence among rules within social, economic, political, and cultural aspects in society.

II) Orders are different levels of decision-making that help us sort out who is involved in decisions, their authority, and the impact of decisions. There are three orders:

- a) 1st order – the everyday behaviours and events that shape immediate observations of activities in social and physical environments;
- b) 2nd order – the institutional setting that advances meta-order aspects through rules and desired behaviours in the first order; and
- c) 3rd (meta) order – the development and implementation of principles, norms, and objectives that shape governance at other orders.

III) Governability refers to the overall capacity and ability to govern and the quality of governance with respect to how governance and to what extent, its outcomes reflect agreed upon principles and values.

Glossary

SSF Guidelines

Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) were adopted in 2014 by the FAO Committee on Fisheries (COFI) [2]. The SSF Guidelines are the first ever international instrument specifically designed for small-scale fisheries sustainability, taking into consideration their nature, concerns, and potentials. Through human-rights based approach and several key guiding principles, the SSF Guidelines have been developed to support the visibility, recognition and enhancement of the already important role of SSF, fishers, fishworkers and related activities.

Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) are 17 goals designed as a "blueprint to achieve a better and more sustainable future for all". [3] Developed in 2015, they are intended to be achieved by the year 2030, as outlined in the UN Resolution 2030 Agenda. The SDGs are a means towards ending poverty and hunger everywhere; combating inequalities within and among countries; building peaceful, just and inclusive societies; protecting human rights and promoting gender equality and the empowerment of women and girls; and ensuring the lasting protection of the planet and its natural resources. They are also mean to facilitate the creation of conditions for sustainable, inclusive and sustained economic growth, shared prosperity and decent work for all, taking into account different levels of national development and capacities. [4].

Glossary

Transdisciplinarity (TD)

TD is a process to build, share, and use knowledge from working across, among, and beyond academic disciplines in collaboration with people that hold different perspectives [5].

Wicked Problems

Problems are wicked when they are difficult to define and delineate from other and bigger problems and when they are not solved once and for all but tend to reappear. Wicked problems have no technical solution and it is not clear when they are solved. Rather, definitions and alternatives to wicked problems reflect a collective judgement across diverse perspectives in a process that is experiential, interactive, and deliberative, such as TD [6].

References

1. Kooiman, J. 2003. Governing as Governance. SAGE Publications Ltd
2. Food and Agriculture Organization of the United Nations (FAO). 2015. Voluntary guidelines for securing sustainable small-scale fisheries in the context of food security and poverty eradication. Rome
3. United Nations (2017) Resolution adopted by the General Assembly on 6 July 2017, Work of the Statistical Commission pertaining to the 2030 Agenda for Sustainable Development (A/RES/71/313)
4. United Nations. 2015. Transforming our World: The 2030 Agenda for Sustainable Development.
5. Nicolescu, B. (2007). Transdisciplinarity: Basarab Nicolescu talks with Russ Volckmann. Integral Review 4: 73-90.
6. Jentoft, S., and Chuenpagdee, R. (2009) Fisheries and coastal governance as a wicked problem. Marine Policy 33: 553-560.

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