

# Innovation in Small-Scale Fisheries Contributions from the research community

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*“Small-Scale Fisheries in the South” Workshop, Brest, France , 25-26 june 2018*





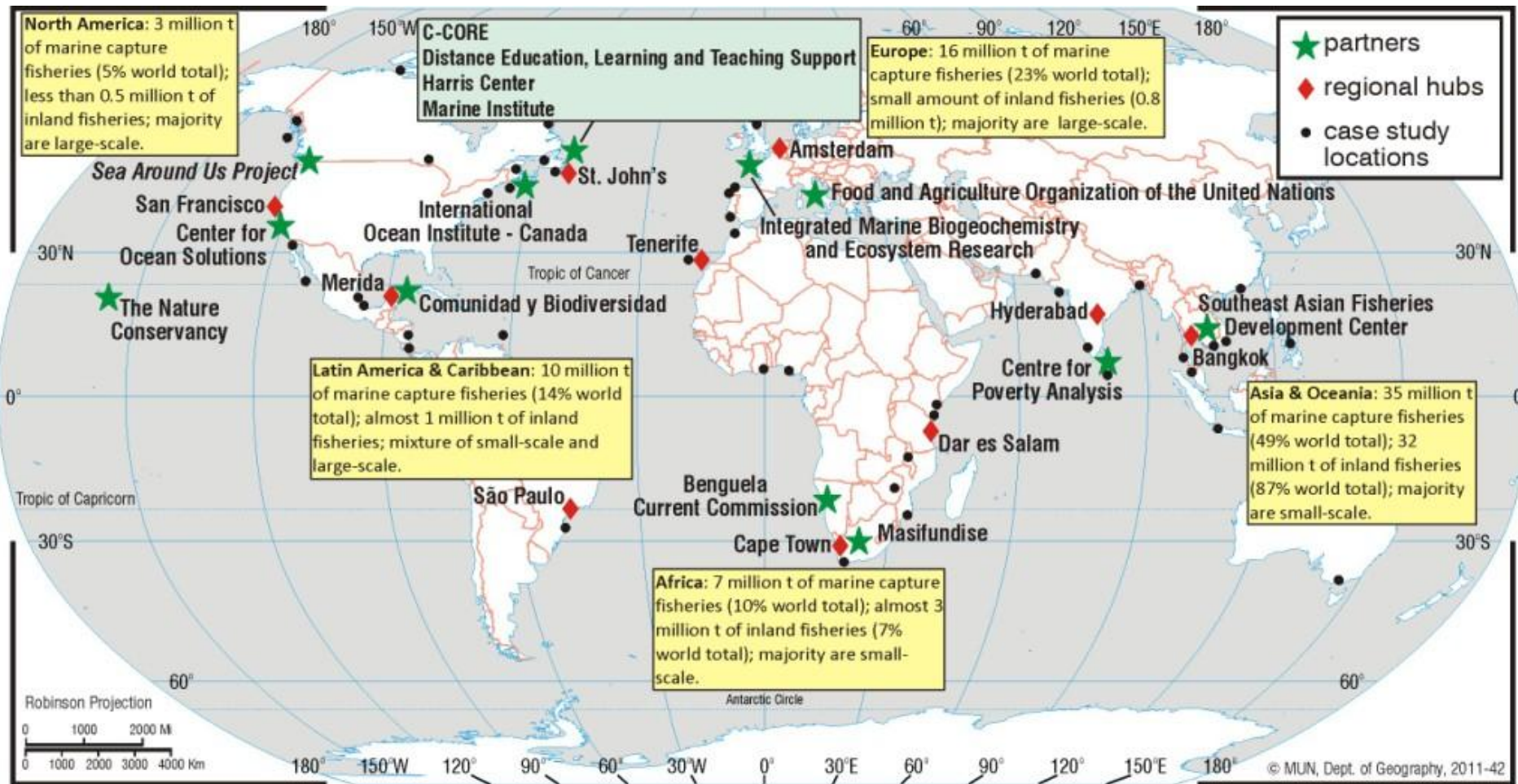
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Drawn at the Climate Change Conference in Washington DC (May'18) during P. Nayak's talk

# Knowledge about fisheries is imbalanced

- More information about industrial fisheries, but not small-scale; thus ‘**priority imbalance**’
- Scientific research has been oriented mostly towards understanding the biological and physical aspects, but not social; thus ‘**research imbalance**’
- Decisions are made based mostly on these scientific inputs and economic considerations; thus ‘**policy imbalance**’





Too Big To Ignore: a global research network and knowledge mobilization partnership, with > 400 researchers and 20 organizations from ~ 45 countries, working together to elevate the profile of small-scale fisheries, argue against their marginalization, reduce their vulnerability, and address key concerns affecting their sustainability.



# TBTI big five research questions

- **Strengthening the Base:** What options exist for improving economic viability of small-scale fisheries and increasing their resilience to large-scale processes of change?
- **Broadening the Scope:** What aspects of small-scale fisheries need to be accounted for and emphasized in order to increase awareness of their actual and potential social contributions and their overall societal importance?
- **Enhancing the Stewardship:** What alternatives are available for minimizing environmental impacts and fostering stewardship within small-scale fisheries?
- **Defending the Beach:** What mechanisms are required to secure livelihoods, physical space and rights for small-scale fishing people?
- **Governing the Governance:** What institutions and principles are suitable for the governance of small-scale fisheries?

# TBTI research clusters covering multiple aspects of SSF



# Research highlights and key contributions

- Innovative information system
- Multiple cases, comparative research
- Transdisciplinary capacity building







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# Key contribution # 1

## Local information, global knowledge

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<http://toobigtoignore.net>

**RESEARCH**

**POLICY**

**MOBILIZATION**

# What do we want/need to know about small-scale fisheries?

For a given place  
(ex. village, community, country)



**Experiences,  
threats,  
concerns**



**Studies, research,  
reports**

**SSF organizations and  
scientists**



**Fishing people  
and their  
contribution**



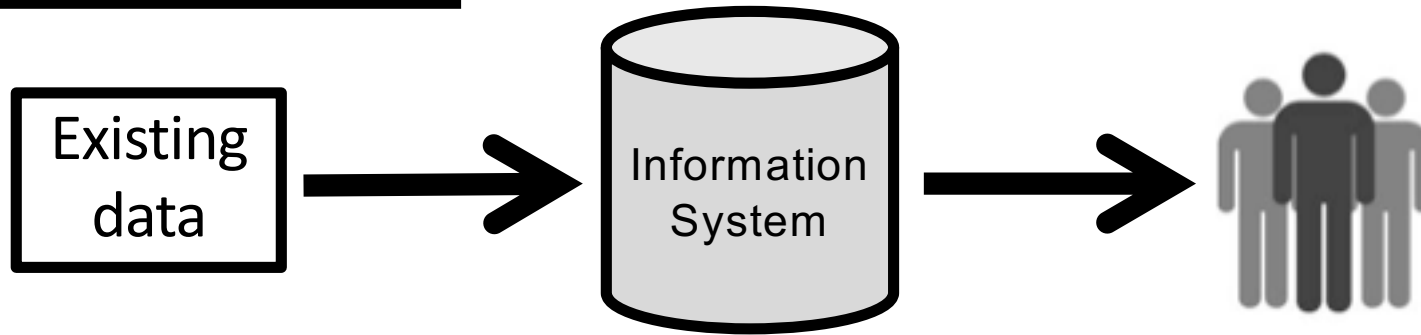
**SSF characteristics  
(fishers, boats, gears,  
species, economics,  
cultural, etc.)**

**SSF governance**

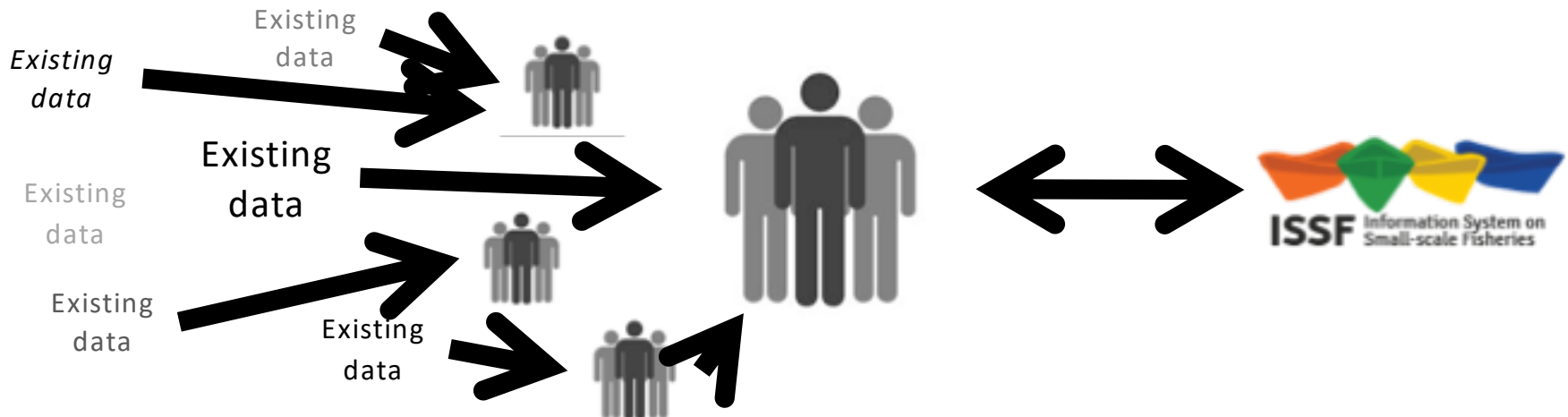


# From traditional to unconventional

## Traditional information systems



## Crowdsourced information systems



# Information System on Small-Scale Fisheries (ISSF)

*Open, web-based, interactive, crowd-sourced data platform*

The screenshot displays the ISSF web interface. At the top left is the ISSF logo (Information System on Small-scale Fisheries). The top navigation bar includes a language selector, 'Login | Sign up | HELP' (labeled as Support), and a 'Contribute' button. Below the navigation bar are 'Map' and 'Table' view toggles. The main content area features a world map with orange circular data points, each containing a number. A 'Record details' popup is visible over the map, showing information for 'Easter Island Artisanal Fishery, Chile' with a 53% completion rate. A 'Basemaps' control is located in the bottom left of the map area. On the right side, a vertical toolbar contains icons for 'Datasets selection' and other map functions. At the bottom, there is a 'Basic search' input field with a 'Search' button and an 'Export Data' button. Below the search bar, it indicates 'Current Search Terms: None (showing all 2720 records)'. An 'Advanced search' link is located at the very bottom.

# Table view



Map



Table

Show 10 records

Record Type	Content Summary	Edited Date
	<b>Percent completed:</b> 78%	
SSF Profile	<b>Fishery name:</b> Greater Massawa Area, Southern Red Sea Region Fishery, Eritrea <b>Timeframe:</b> 2014 <b>Percent completed:</b> 84%	2016-07-12
SSF Profile	<b>Fishery name:</b> Hinatuan Bay Fishery, Philippines <b>Timeframe:</b> 1996 <b>Percent completed:</b> 81%	2016-06-30
SSF Profile	<b>Fishery name:</b> Ormos Marathokambou small scale fishery, Greece <b>Timeframe:</b> 2011 <b>Percent completed:</b> 75%	2016-06-24
SSF Profile	<b>Fishery name:</b> Artisanal fishery, Piriápolis, Uruguay <b>Timeframe:</b> 2015 <b>Percent completed:</b> 75%	2016-06-14
SSF Profile	<b>Fishery name:</b> Fourni small-scale fishery, Greece <b>Timeframe:</b> 2011 <b>Percent completed:</b> 75%	2016-06-14
SSF Profile	<b>Fishery name:</b> Autaprok Community Fisheries, Cambodia <b>Timeframe:</b> 2010 <b>Percent completed:</b> 78%	2016-06-13

Showing 31 to 40 of 165 records

Previous

1

2

3

4

5

...

17

Next

## 20 Questions in SSF profile

**Economic**

### Ecological

#3 Ecosystem (97%)

#5 Gears (95%)

#6a Vessel types (89%)

#9 Species (88%)

#8 Households (37%)

#10a Income from SSF (27%)

#10b Post-harvest activities (75%)

#11 GDP (20%)

#12 Non-fishing activities (82%)

#1 SSF type (97%)

#13 Market channels (78%)

#2 Geography (100%)

#20 Issues (94%)

#4a Terms to define SSF (96%)

#7a Number of fishers (71%)

#7c **Women in SSF (29%)**

#14 History (84%)

#15 Fishers status (66%)

#16 Governance modes (88%)

#17 Fishers rights (75%)

#18 Management tools (90%)

#19 Organizations (62%)

**Governance**

### Socio-cultural

(% are data completion based on 150 cases)

# Kaimana mud crab fishery, Indonesia

## AT-A-GLANCE

Indonesia, Indonesia



Ecosystem type(s)	Brackish
Ecosystem detailed type(s)	Estuary, Mangrove
SSF type(s)	Indigenous, Commercial
Main SSF vessel type(s)	Wooden
Main gear type(s)	Traps
Time period	2015
Total number of SS fishers	200

## SSF DEFINITION

Fishers using vessel &lt; 5GT

## DISTRIBUTION CHANNELS



## KEY SPECIES & LANDINGS

**Mud Crab /Mangrove Crab**  
36 t

## MAJOR ISSUES

Ecosystem health

Livelihoods

Markets

Poor governance

## KEY RULES & REGULATIONS

- Catch limit
- Seasonal closure
- Community-based rights systems
- Marine protected areas

## HOUSEHOLD INCOME FROM SSF

**80%**

## NON-FISHING LIVELIHOOD ACTIVITIES

Farming/cultivation



## GOVERNANCE

- Co-management/co-governance

Contributor:

Wiro Wirand (Wiro Wirand)

Date created:

Feb. 22, 2016

For complete information about the profile, please visit:

<https://dory.creat.mun.ca/details/profile/2516/>
[toobigtoignore.net](http://toobigtoignore.net)

**STATE OF THE ART**

The 'State of the Art' project is a comprehensive literature review of research on **small-scale fisheries** taken place around the world. It is developed as part of an online **Information System on Small-Scale Fisheries** (ISSF; [issf.toobigtoignore.net](http://issf.toobigtoignore.net)), which aims at enhancing knowledge and importance of small-scale fisheries worldwide.

**Data sources:**

- 156 peer-reviewed papers, book chapters, theses, newsletters and conference proceedings.
- Publication year ranging from 1973 to 2014.

**TECHNICAL ASPECTS**

**RESEARCH SETTING**

The majority of publications in this region focused on research problems at a **sub-national scale**.

Communication and planning at a local level however, is increasingly being documented as a fundamental step toward effective fisheries management.

**MARKET CHAIN**



- The increasing wealth of East and South Asia continues to create a **stronger demand** for the marine resources of the South Pacific.
- The capture and sale of **ornamental species** for the aquarium trade is unique to this regions small-scale fisheries.

**RESEARCH EMPHASIS TO DATE**

- Target Species:** Tuna, prawn, groupers, crab
- Gear Types:** Hook and lines, entangling nets
- Countries:** India, Philippines, Thailand
- Ecosystems:** Coral reef, lake



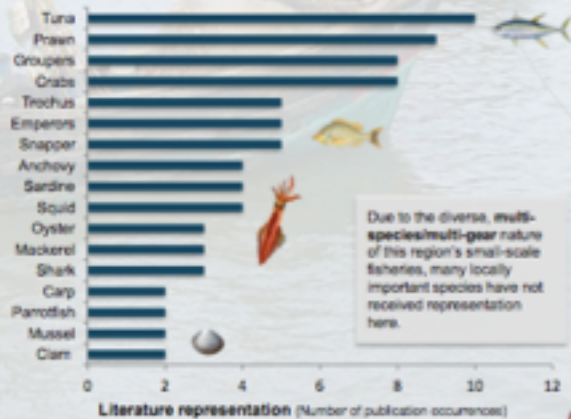
**HOW ARE SMALL-SCALE FISHERIES REFERRED TO IN THIS REGION?**  
67 publications use **small-scale**, 36 use **artisanal**, 34 use **subsistence**

**COUNTRY COVERAGE**

(Number Of publications per country)



**SPECIES COMPOSITION**



**GOVERNANCE**



Participatory forms of governance such as co-operative and community-based governance, are well represented.

**MANAGEMENT INSTRUMENTS**

This region has not made the transition from classic to rights-based management approaches seen elsewhere.

Management Instrument	Number of Publication occurrences
<b>Rights-based:</b> Transferable quota systems	2
<b>Rights-based:</b> Territorial user-rights fisheries	0
<b>Classic:</b> Gear and vessel restrictions	11
<b>Classic:</b> Marine protected areas	11
<b>Classic:</b> Closures	7
<b>Classic:</b> Access control through permits	6

**TOP 5 RESEARCH THEMES**

- Sustainable/best practices
- Poverty and vulnerability
- Livelihood dependence on fisheries
- Fisheries impacts on the ecosystem
- Community-based management systems

**RESEARCH HIGHLIGHTS**

- Ecological, governance, and social themes have increased at a similar rate since the early 2000s.
- Governance themes have emphasized the emerging role of **community-based management systems**, often in response to poor compliance and enforcement.
- Social themes have explored **poverty and vulnerability** among small-scale fishers as well as livelihood dependence and potential alternatives.
- Economic themes have been largely limited to financial analyses of struggling small-scale fisheries fleets.

**GEOGRAPHIC EMPHASIS**

- East Asia:** Diversifying fisheries into tourism as an alternate livelihood.
- South Asia:** Community involvement in fisheries management and resilience in the wake of natural disasters.
- Oceania:** Evolution of the artisanal fisher.

**RESEARCH GAPS**

- Countries:** Middle-East, East Asia
- Ecosystem:** Open ocean
- Fishery Type:** Recreational, aquaculture
- Thematic:** Market chain, Life and/or job satisfaction, Pollution





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# Key contribution # 2

## Local studies, global comparison

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<http://toobigtoignore.net>

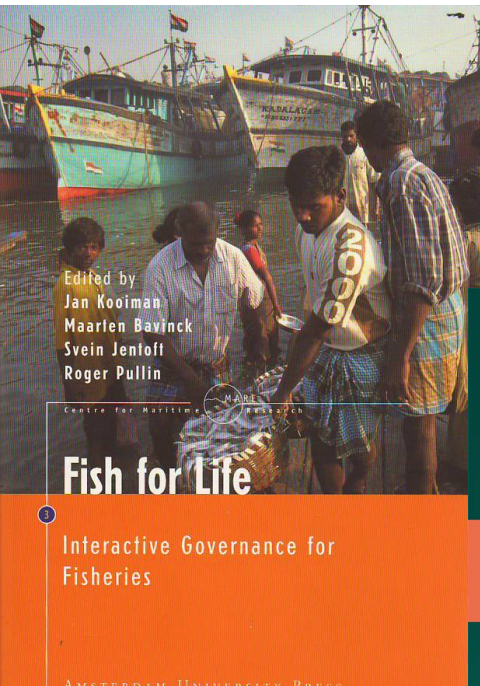
**RESEARCH**

**POLICY**

**MOBILIZATION**

# Building on existing knowledge

*Empirical evidence, novel theory,  
“thick” description, and system analysis*



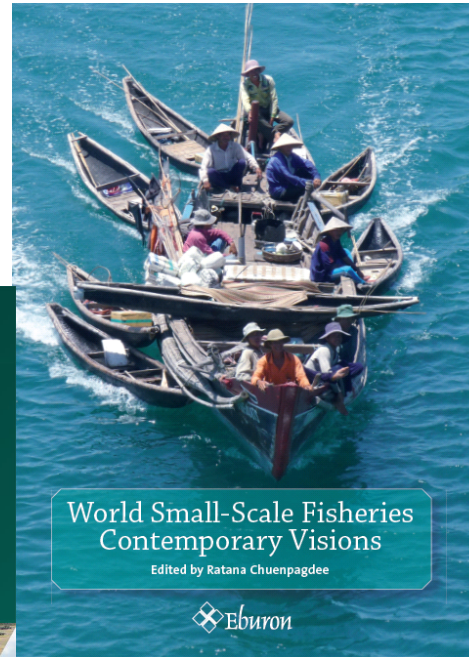
(2005)

Svein Jenoff · Arne Eide *Editors*

## Poverty Mosaics: Realities and Prospects in Small-Scale Fisheries



Springer



(2011)



Governability of Fisheries and Aquaculture

## Governability of Fisheries and Aquaculture

Theory and Applications

Centre for Maritime Research

Springer

(2013)

MARE

13

Jentoft · Chuenpagdee  
Eds.

MARE Publication Series 13

Svein Jentoft  
Ratana Chuenpagdee *Editors*



Interactive Governance for Small-Scale  
Fisheries

# Interactive Governance for Small-Scale Fisheries

Global Reflections

Centre for Maritime



 Springer

**TBTI research  
on SSF governance  
– a large scale and  
unique study!**

*An edited volume of 34 case studies about SSF in 34 countries around the world, by 68 authors, using a common theoretical framework, Interactive Governance.*

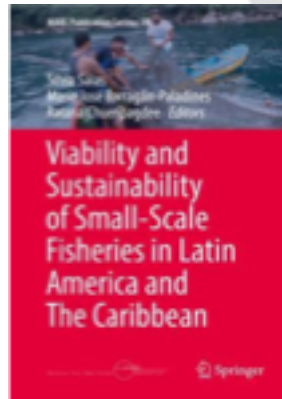
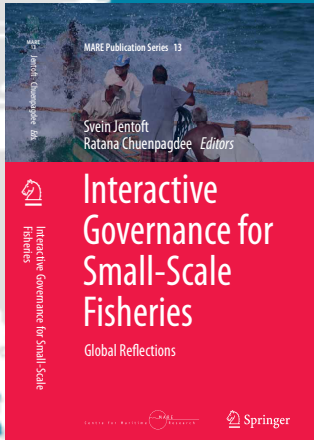
Svein Jentoft  
Ratana Chuenpagdee  
María José Barragán-Paladines  
Nicole Franz *Editors*

# The Small-Scale Fisheries Guidelines

Global Implementation

**Another large-scale, and timely study on SSF governance!**

*An edited volume of 32 case studies about what it will take to implement the SSF Guidelines and what can be learned from those that have already started the process.*



Too Big To Ignore Publication

Number E-01/2017



## Inter-Sectoral Governance of Inland Fisheries

E-book edited by  
Andrew Song, Shannon Bower, Paul Onyango, Steven Cooke, Ratana Chuenpagdee

[toobigtoignore.net](http://toobigtoignore.net)

RESEARCH

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# Key contribution # 3

## Local capacity, global impact

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<http://toobigtoignore.net>

**RESEARCH**

**POLICY**

**MOBILIZATION**

MARE  
21  
Chuenpagdee · Jentoft  
Eds

MARE Publication Series 21

Ratana Chuenpagdee  
Svein Jentoft *Editors*



Transdisciplinarity for  
Small-Scale Fisheries Governance

# Transdisciplinarity for Small-Scale Fisheries Governance

Analysis and Practice





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# Reflections

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**RESEARCH**

**POLICY**

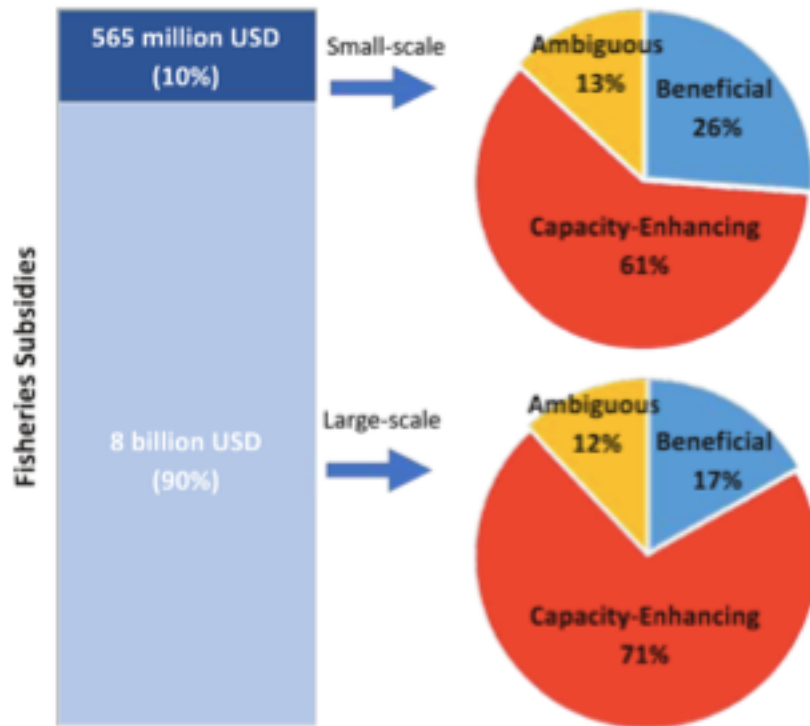
**MOBILIZATION**

Title	Editors	Publisher	# of case study countries by region				
			ASO	AFR	EUR	LAC	NA M
Enhancing Stewardship in Small-Scale Fisheries: Practices and Perspectives	McConney, Medeiros & Pena (2014)	E-book: TBTI and CERMES	1	1	1	7	1
Interactive Governance for Small-Scale Fisheries: Global Reflections	Jentoft & Chuenpagdee (2015)	Springer MARE Publication Series	9	5	6	11	2
Inter-Sectoral Governance of Inland Fisheries	Song, Bower, Onyango, Cooke & Chuenpagdee (2016)	TBTI Publication Series (E-book)	5	2	2	0	0
The Small-Scale Fisheries Guidelines: Global Implementation	Jentoft, Chuenpagdee, Barragán-Paladines & Franz (2017)	Springer MARE Publication Series	9	7	7	9	1
Social wellbeing and the values of small-scale fisheries	Johnson, Acott, Stacey & Urquhart (2018)	Springer MARE Publication Series	5	0	1	1	0
Viability and Sustainability of Small-Scale Fisheries in Latin America and Caribbean	Salas, Barragán-Paladines & Chuenpagdee (2018)	Springer MARE Publication Series	0	0	0	14	0
The Meaning of Small: Diverse Values of Small-Scale Fisheries	Leis & Chuenpagdee (2018)	TBTI Publication Series (E-book)	7	4	4	4	2
<b>TOTAL</b>			<b>36</b>	<b>19</b>	<b>21</b>	<b>56</b>	<b>6</b>

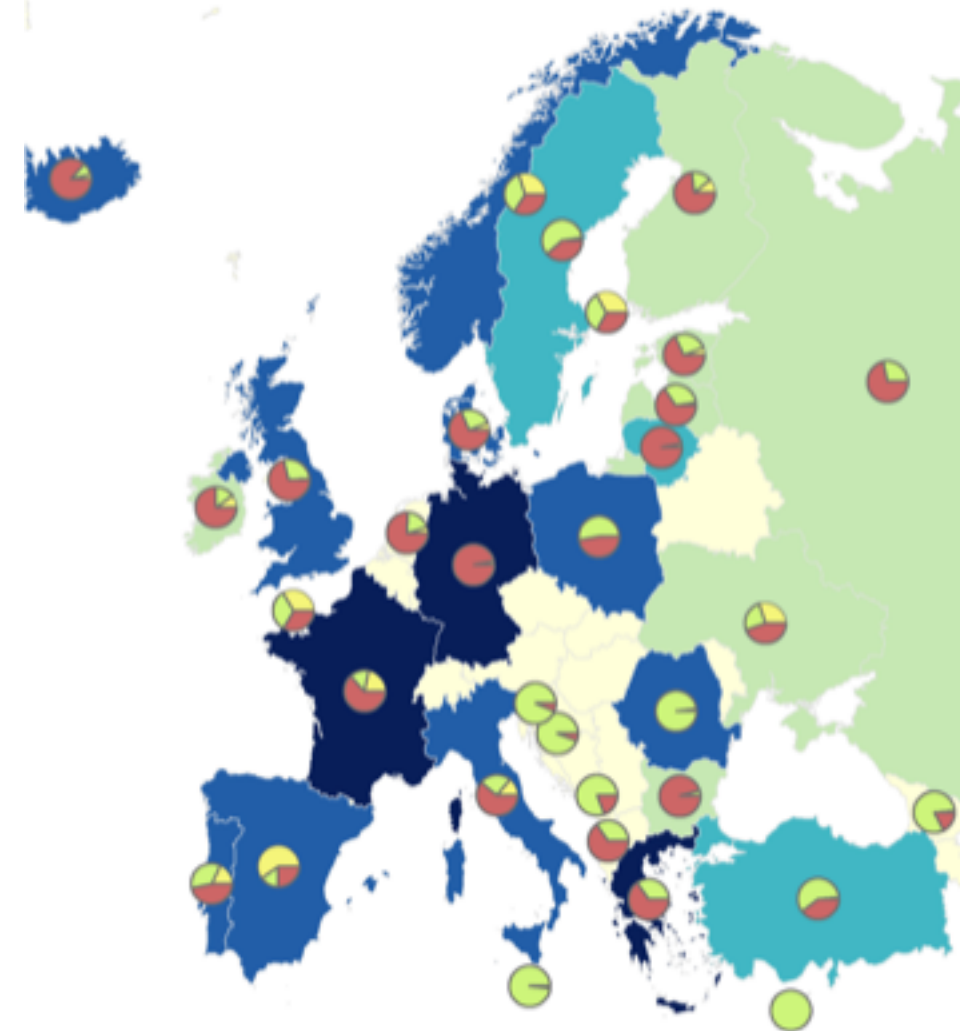
# Have we answered the big five questions?

- **Strengthening the Base:** What options exist for improving economic viability of small-scale fisheries and increasing their resilience to large-scale processes of change?
- **Broadening the Scope:** What aspects of small-scale fisheries need to be accounted for and emphasized in order to increase awareness of their actual and potential social contributions and their overall societal importance?
- **Enhancing the Stewardship:** What alternatives are available for minimizing environmental impacts and fostering stewardship within small-scale fisheries?
- **Defending the Beach:** What mechanisms are required to secure livelihoods, physical space and rights for small-scale fishing people?
- **Governing the Governance:** What institutions and principles are suitable for the governance of small-scale fisheries?

# Strengthening the Base – SSF are not as viable because of skewed subsidies



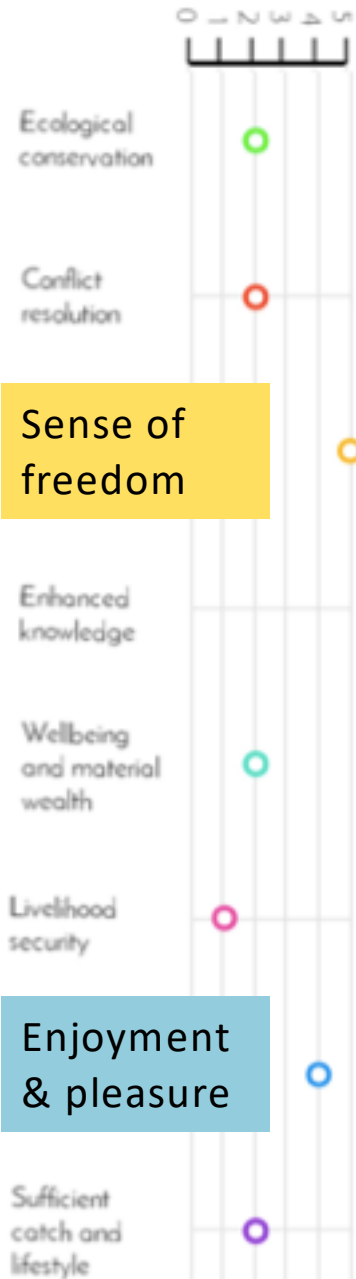
Subsidies to SSF compared to LSF in Europe by categories



How subsidies affect the economic viability of small-scale fisheries

Anna Schuhbauer, Ratana Chuenpagdee, William Cheung, Krista Greer, U. Rashid Sumaila, *Marine Policy* (2017)

# Broadening the Scope – SSF are highly diverse



## The ‘values’ of Nomadic fisheries in the Meghna River Estuary, Bangladesh

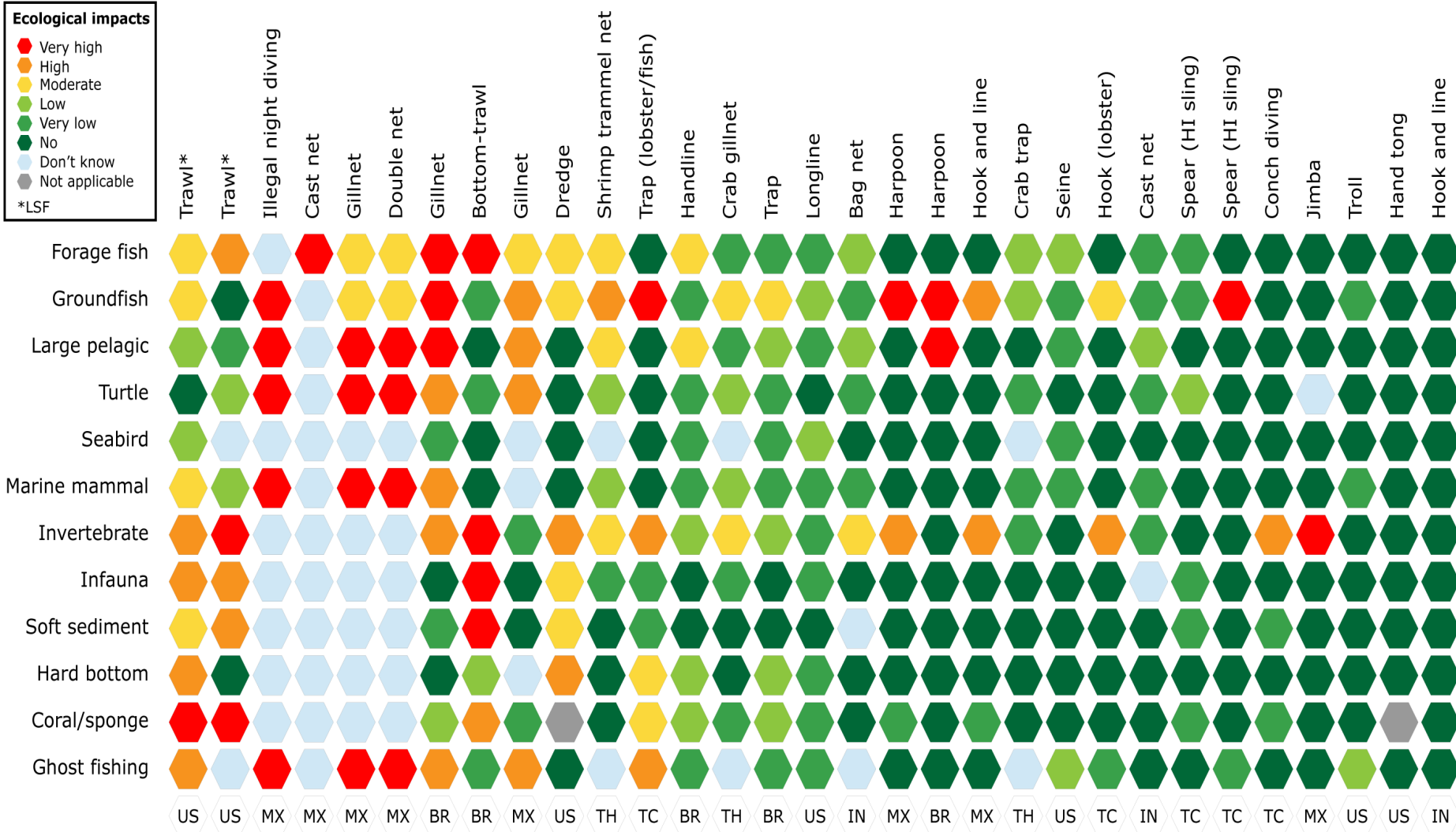
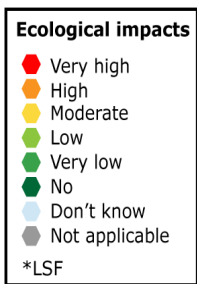
- Hilsa fishery is much more than food and income!



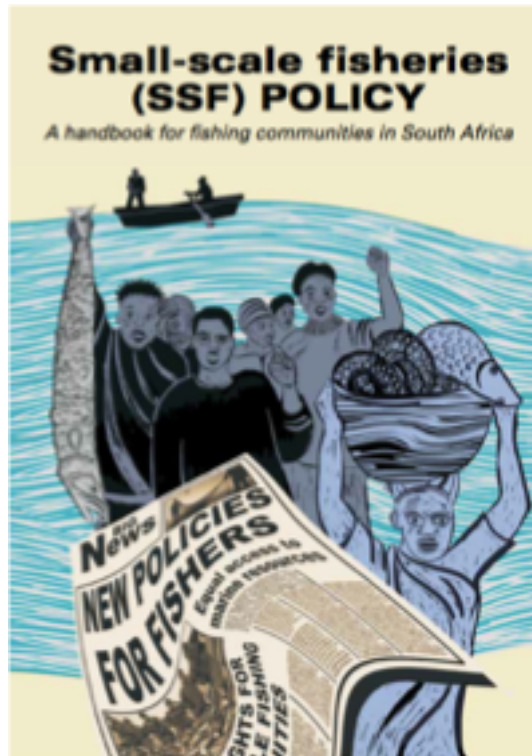
Islam (2017) in Leis and Chuenpagdee, “The Meaning of Small” TBTI E-Publication



# Enhancing the Stewardship – SSF are low impact



# Defending the Beach – Securing rights is an uphill battle



Handbook produced by Masifundise Development Trust, Institute for Poverty, Land and Agrarian Studies (PLAAS) and Too Big To Ignore



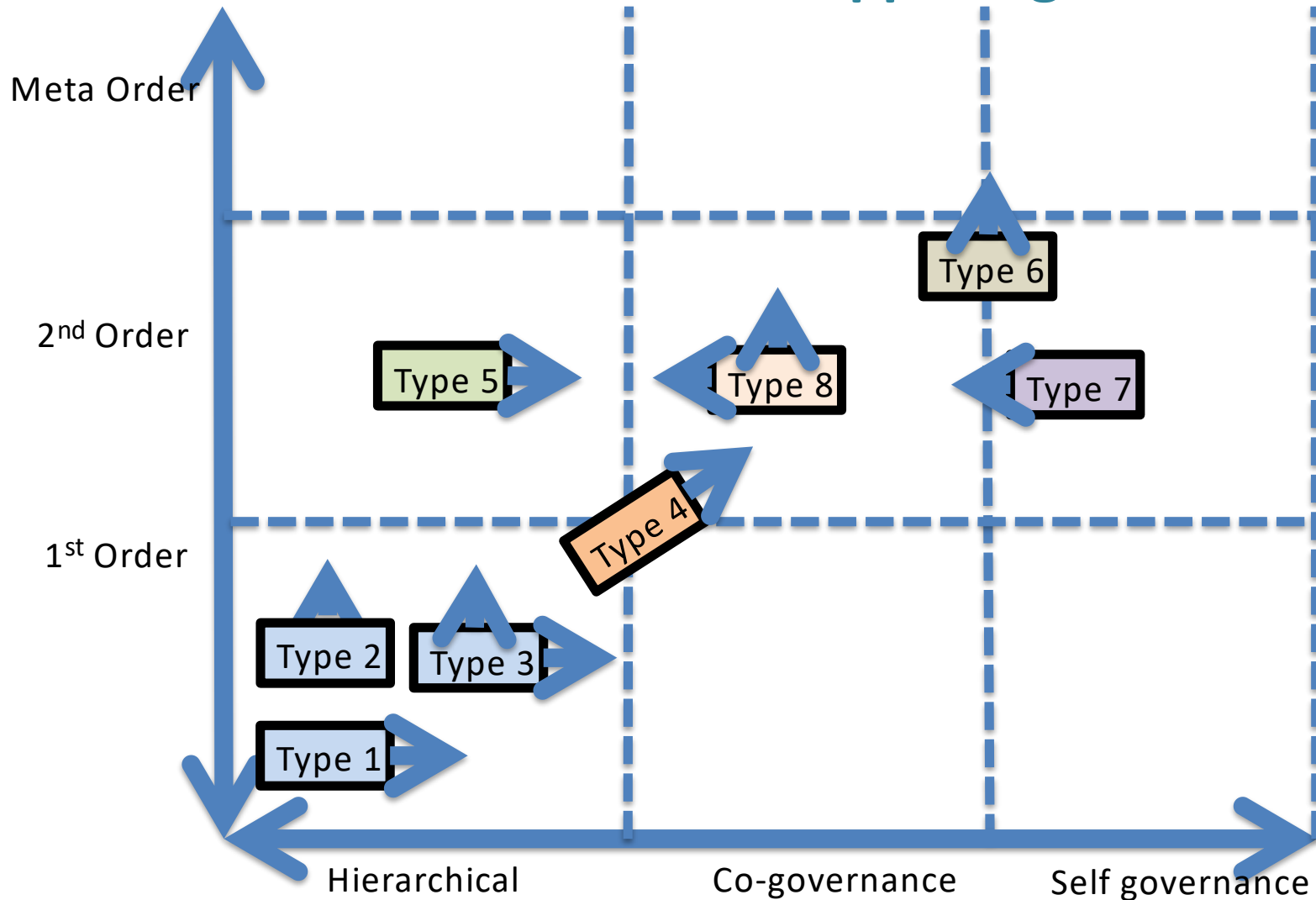
## *Neoliberalism and global small-scale fisheries*

Marine Policy, Vol. 80, p. 1-176

Edited by: Evelyn Pinkerton, TBTI 'SSF Rights' cluster coordinator

This special issue, global in scope, builds on a previous TBTI [Special Section/Issue in the November 2015 issue of Marine Policy](#), which addressed the effect of neoliberalism on North American small-scale fisheries (SSF). This new issue addresses a question of whether anything has changed notably since the 2015 publication. Is neoliberalism even more ascendant or is it encountering more resistance? And is this fully reflected in the experience of SSF?

# Governing the Governance – Reform and transformation are happening



Type 1 - Enhancing Participation; Type 2 - Rearranging Institutions; Type 3 - Step-wise Navigation; Type 4 - Diagonal Navigation; Type 5 - Legitimizing Institutions; Type 6 - Articulating Values; Type 7 - Realigning Governance; Type 8 - Rethinking Governance (Chuenpagdee and Jentoft 2018)





FAO HQ, Rome, June 2017

Have we made any impacts or influenced policy and governance?



MARE Conference Amsterdam, July 2017



Senate launch, Mexico City, August 2017

# Small-scale fisheries (SSF) POLICY

*A handbook for fishing communities in South Africa*



Have we made impact locally, at community and grassroots levels?





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# What's next?

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**RESEARCH**

**POLICY**

**MOBILIZATION**



Food and Agriculture  
Organization of the  
United Nations

## Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries

in the Context of Food Security  
and Poverty Eradication



# WSFC

3<sup>rd</sup> World Small-Scale Fisheries Congress  
Chiang Mai, Thailand | October 22-26, 2018

Transdisciplinarity

Transformation

The Future of Small-Scale Fisheries



**Don't miss!**

Science symposium  
Policy forum  
Community roundtables  
Storytelling & talk circles  
Cultural exhibition  
Field excursion

**SAVE THE DATE!**

**October 22-26, 2018  
Chiang Mai, Thailand**

# Thank you!

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[toobigtoignore@mun.ca](mailto:toobigtoignore@mun.ca)

[tbtinetwork](#)



Twitter

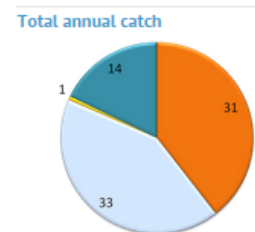
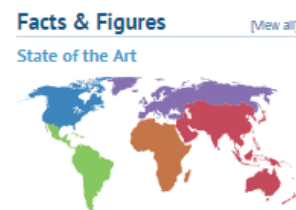


Facebook

**Mission**

Too Big To Ignore is a research network and knowledge mobilization partnership established to elevate the profile of small-scale fisheries (SSF), to argue against their marginalization in national and international policies, and to develop research and governance capacity to address global fisheries challenges

- Research Instruments** [View all]
- Concept note: Governing the Governance
  - Framework: Assessing the economic viability of small-scale fisheries
  - Framework: Social and cultural contributions of SSF



Source: World Bank/FAO/WorldFish (2010)

- Research Highlights** [View all]
- GAP recommendations on SSF Guidelines
  - Special volume on "Enhancing ecosystem stewardship in small-scale fisheries"
  - An article on implementation of the international voluntary guidelines for small-scale fisheries
  - E-book: Enhancing Stewardship in Small-Scale Fisheries: Practices and Perspectives
  - Community handbook: Small-scale fisheries policy

**Member of the Week** [View all]

**Rashid Sumaila**

Dr. Rashid Sumaila is Professor and Director, Fisheries Economics Research Unit, Fisheries Centre, the University of British Columbia. He specializes in bioeconomics, marine ecosystem valuation and the analysis of global issues such as fisheries subsidies, illegal fishing, impact of oil spills and marine pollution, and the economics of high and deep seas fisheries. [read more]

## Acknowledgements:

- Contributors of ISSF and TBTI publications
- TBTI partners
- TBTI research team
- TBTI manager: Vesna Kerezi



Social Sciences and Humanities Research Council of Canada