THE MEANING OF SMALL

Diverse values of small-scale fisheries
mall-scale fisheries are part of the land - and seascape that many people are familiar with, mostly because of their presence in, and proximity to, places where tourism and recreational activities take place. Yet, unless one grows up in a fishing village, or comes from a fishing family, it is hard to fully appreciate the real meaning of small-scale fisheries. Small-scale fisheries are certainly not just a part of history, culture, and heritage that needs to be preserved like some people may think. Their values go beyond providing food, income, jobs, and livelihoods. What makes small-scale fisheries unique are the diverse values and meanings that are inherent to them, as well as those that they bring to society.

What makes small-scale fisheries unique?

Our knowledge about the values of small-scale fisheries is very limited, partly because some of these values are non-monetary. Thus, small-scale fisheries are often regarded as insignificant. This photo e-book aims to change such a worldview by presenting the meaning, values, and importance of small-scale fisheries in various locations around the world, from the perspective of the people working closely with them. As we study values, we gain appreciation for what matters to people and what is desirable to the society. Ultimately, a comprehensive understanding of the diverse values of small-scale fisheries can lead to an improved management and governance of the fisheries resources and the ecosystems.
The photo e-book is an initiative of the Too Big To Ignore - Global Partnership for Small-Scale Fisheries Research (TBTI; toobigtoignore.net). Working with researchers and practitioners in partnership with fishers’ associations, community-based organizations, environmental groups, and governments, TBTI examines small-scale fisheries in local, national and global contexts. The goal of TBTI is to identify key concerns affecting small-scale fisheries, stimulate a concerted research effort to address them, and direct policy attention to this vital sector in order to raise its profile. ‘The Meaning of Small - Diverse Values in Small-Scale Fisheries’ photo e-book is another step in that direction.

Through this publication, the TBTI network aims to advance the understanding about the diverse values of small-scale fisheries and engage the wider public in the conversation about the multifaceted meanings of small-scale fisheries. The photo e-book poses the question: what is the breadth of contributions for which small-scale fisheries are valued in their communities across the globe? We portray the plethora of these core values by using visual stimuli such as infographics and photos as a way to convey what small-scale fisheries mean in particular places.
The information contained in this photo e-book is a product of a close collaboration amongst TBTI members, partners and supporters of small-scale fisheries. They contributed their knowledge and experience about fishers, communities, and places that they are familiar with. They did so by identifying, through a rapid assessment survey, the range of values associated with a small-scale fishing community that they know, as well as the ecological, social and economic contexts of small-scale fisheries in each location.

The 48 contributors to the e-book are experts in the field of small-scale fisheries research and practice, and have an average of 10 years of experience in this topic. They are affiliated with 32 different institutions, which can be roughly divided into universities (67%), research institutes (15%), non-governmental organizations (NGOs) (12%), fishers’ associations (4%), and government (2%).
Contributors were asked to rank 15 value types (based on Song and Chuenpagdee 2015) associated with small-scale fisheries, on a scale of zero to five, with zero meaning that the particular type of value is not important for small-scale fisheries in that location, and five indicating that the value presents a very high importance in terms of the contribution to small-scale fisheries. They also provided a photo and a story that best represent the meaning of small-scale fisheries in their location.

15 value types that represent the meaning and contribution of small-scale fisheries

Ecological conservation
Conflict resolution
Sense of freedom
Enhanced knowledge
Wellbeing and material wealth
Enjoyment and pleasure
Livelihood security
Sufficient catch and lifestyle
Sense of pride

Responsible governing system
Community cohesion
Recruitment of youth
Compliance of rules and regulations
Gender equity
Fair distribution of benefits

The 15 value types based on Song and Chuenpagdee (2015)*

The photo e-book includes a total of 32 case studies describing the values of small-scale fisheries in 21 countries located across five regions. About 34% of these case studies originate from Asia and Oceania, followed by Latin America with 28%, and Africa, Europe and North America accounting for almost 13% of the total number. The specific case studies come from the following countries and locations: Bangladesh (Meghna River Estuary), Brazil (Teotônio Waterfall, Pernambuco, Ubatuba and Pontal do Paraná), Canada (Lake Winnipeg and Bay de Verde), Costa Rica (Playa Lagarto), Ecuador (Mainland and Galapagos Islands), Finland (Merikarvia), Greece (Skala Kalloniis Bay), India (Gir Somnath), Indonesia (Southwestern Kei Islands and Flores Island), Japan (Kamakura Bay and Suruga Bay), Madagascar (Sainte Luce), Maldives (Laamu Atoll and Fuvahmulah), Mexico (Holbox Island), Mozambique (Sofala Bank), Philippines (Aklan and San Mariano), Portugal (Azores), Republic of Kiribati (Tarawa Island), South Africa (Struisbaai), Spain (Cabo de Palos), Tanzania (Busekera Village), and USA (Sitka and Cook Inlet).
How to navigate through 'The Meaning of Small' photo e-book

The photo e-book is divided into five parts, presenting the diverse values of small-scale fisheries by region: (I) Latin America, (II) North America, (III) Asia and Oceania, (IV) Africa, and (V) Europe. Each part contains a collection of case studies depicting the importance of small-scale fisheries based on the rating of the value types, accompanied by a photo and a caption that highlights the meaning of small-scale fisheries in a particular place, community, or fishery. Each case study also contains the key characteristics of small-scale fisheries, such as the ecosystem type, main gear, target species, vessel type, number of vessels, and number of fishers.
The photo e-book is a rich composite of stories about the people and the aquatic environment, of the intricate interrelationship, and of the complex values associated with small-scale fisheries. It is an attempt to make explicit the values of small-scale fisheries, which are either unnoticed or under-appreciated. It is hoped that this type of knowledge gets incorporated into the design of appropriate institutions, daily decision-making, as well as in broader considerations of governance. Through this work, the TBTI partnership and its members aspire to further the understanding of the diverse values of small-scale fisheries, and share it with the general public, raising therefore the visibility of this vital sector.

If you are keen to tell the world about the small-scale fisheries that you are familiar with, please complete the rapid assessment survey at http://toobigtoignore.net/researchcluster/diverse-ssf-values/. Your case study will be included in the 2nd edition of the photo e-book publication, which will be disseminated at the 3rd World Small-Scale Fisheries Congress, to be held in Chiang Mai, Thailand, in October this year https://toobigtoignore.wixsite.com/3wsfcongress.

Editors: Mirella de Oliveira Leis  
Ratana Chuenpagdee
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PART I

The meaning of small in Latin America
Small-scale fisheries of Cachoeira do Teotônio, Porto Velho, Brazil

Carolina Rodrigues da Costa Doria
Federal University of Rondônia

"The small-scale artisanal fishing in the Teotônio Waterfall had been practiced for a hundred years in a very peculiar way. The fishermen built wooden piers above the rocks, from where they used to catch big catfishes (> 1m) during their migration, using harpoon. This region was recently flooded by the Santo Antônio hydroelectric plant reservoir, which caused the communities to be relocated upstream and this type of fishing technique to end, giving place to wooden boats."

SMALL-SCALE FISHERIES CHARACTERISTICS

- **Ecosystem type**: freshwater, waterfall
- **Main gear**: harpoon
- **Target species**: catfish; piramutaba; dorada
- **Vessel type**: no vessel
- **Number of small-scale fishers**: 102
- **Number of small-scale fishing vessels**: 0

DIVERSE SMALL-SCALE FISHERIES VALUES

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<tr>
<th>Level of Importance</th>
<th>Ecological conservation</th>
<th>Conflict resolution</th>
<th>Sense of freedom</th>
<th>Enhanced knowledge</th>
<th>Livelihood security</th>
<th>Enjoyment and pleasure</th>
<th>Sufficient catch and lifestyle</th>
<th>Sense of pride</th>
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<th>Community cohesion</th>
<th>Recruitment of youth</th>
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</table>

Clam and shellfish fishery, Pernambuco State, Northeast Brazil

Sérgio Macedo Gomes de Mattos
Ministry of Planning, Brazil

"Fisherwomen proudly fish for clam and shellfish in Pernambuco State's estuaries, located in the Northeast region of Brazil. Wooden rowboats are used mainly for transportation to and from the clam fishery areas. Children usually help their mothers by starting to fish from childhood."

SMALL-SCALE FISHERIES CHARACTERISTICS

<table>
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<th>brackish</th>
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<tbody>
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<td>Target species</td>
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<td>Vessel type</td>
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<td>Number of small-scale fishers</td>
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<td>Number of small-scale fishing vessels</td>
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DIVERSE SMALL-SCALE FISHERIES VALUES

‘The waves wash our problems away’ - Caiçara community in Ubatuba, Southeastern Brazil
Marta Leite & Derek Johnson
University of Manitoba

"A fisher pauses to contemplate the sunset as he navigates back home. Artisanal Caiçara fishers from Ubatuba, Brazil, describe the pleasure of being at sea as essential for their emotional resilience. According to them, it offers a source of relief from day-to-day struggles and provides stress reduction and hedonic pleasure."

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**SMALL-SCALE FISHERIES CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>marine</th>
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<tbody>
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<td>Main gear</td>
<td>gillnet; hook and line; trawl</td>
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<tr>
<td>Target species</td>
<td>croaker; mackerel; shrimp; squid; others</td>
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<tr>
<td>Vessel type</td>
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<tr>
<td>Number of small-scale fishers</td>
<td>48</td>
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<td>Number of small-scale fishing vessels</td>
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**DIVERSE SMALL-SCALE FISHERIES VALUES**

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<th>Value</th>
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</table>

- Ecological conservation
- Conflict resolution
- Sense of freedom
- Enhanced knowledge
- Wellbeing and material wealth
- Livelihood security
- Enjoyment and pleasure
- Sufficient catch and lifestyle
- Sense of pride
- Responsible governing system
- Community cohesion
- Recruitment of youth
- Compliance of rules and regulations
- Gender equity
- Fair distribution of benefits

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‘Faith in God, my family and my boat, what else could I ask for?’ - Caiçara community in Ubatuba, Southeastern Brazil

Marta Leite & Derek Johnson

University of Manitoba

"A fishing boat in procession to celebrate São Pedro Fisher’s day in Ubatuba, Brazil. Faith in God, family togetherness, and fishing compose central elements of what locals call ‘the simple life’, which in turn, is a core value in Caiçara fishers’ identity."

**SMALL-SCALE FISHERIES CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>Marine</th>
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<td>Main gear</td>
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<td>Target species</td>
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<td>Vessel type</td>
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<tr>
<td>Number of small-scale fishers</td>
<td>48</td>
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<tr>
<td>Number of small-scale fishing vessels</td>
<td>43</td>
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**DIVERSE SMALL-SCALE FISHERIES VALUES**

"Seu Jair learned how to fish from his father at the age of ten. Fishing has been part of the family tradition and passed down for generations. It is in the spirit of what Seu Jair's sons have proudly become - fishers. To them, artisanal fisheries is part of their daily lives, and is what connects them as a 'big coastal family'."

Mirella de Oliveira Leis
Memorial University of Newfoundland

Small-scale fisheries of Playa Lagarto, North Pacific, Costa Rica

Helven Naranjo-Madrigal

"In order to obtain subsistence catch to take home, people from the community help fishers to take boats to the beach, equipment to warehouses and with other landing’s tasks. Other social interactions are reinforced through the landing activity. This kind of social interactions reinforce the socio-cultural values of small-scale fisheries in Latin America."

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**SMALL-SCALE FISHERIES CHARACTERISTICS**

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<th>Ecosystem type</th>
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<tbody>
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<td>Main gear</td>
<td>harpoon; hook and line; hookah</td>
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<td>Target species</td>
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<td>Number of small-scale fishing vessels</td>
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**DIVERSE SMALL-SCALE FISHERIES VALUES**

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<tr>
<th>Level of Importance</th>
<th>Ecological conservation</th>
<th>Conflict resolution</th>
<th>Sense of freedom</th>
<th>Enhanced knowledge</th>
<th>Wellbeing and material wealth</th>
<th>Livelihood security</th>
<th>Enjoyment and pleasure</th>
<th>Sufficient catch and lifestyle</th>
<th>Sense of pride</th>
<th>Responsible governing system</th>
<th>Community cohesion</th>
<th>Recruitment of youth</th>
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<th>Fair distribution of benefits</th>
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</table>
Small-scale fisheries in Galapagos Islands, Ecuador

Maria José Barragán-Paladines

University Leibniz Centre for Tropical Marine Research (ZMT)

"In the late 1980s, small-scale fisheries became an important activity in Galapagos Islands. From then onwards, the involvement of the local population with the fisheries sector has gained relevance at the social and economic realms. Since its boom, many thousands of migrants from the Ecuador mainland arrived to the islands to start a new life. After a couple of decades, however, the tourism industry within the islands has increased, with more fishers shifting to tourism-related jobs."

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**SMALL-SCALE FISHERIES CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>marine; archipelago</th>
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<tbody>
<tr>
<td>Main gear</td>
<td>vertical long liner</td>
</tr>
<tr>
<td>Target species</td>
<td>yellow-fin tuna; Galapagos grouper</td>
</tr>
<tr>
<td>Vessel type</td>
<td>fiberglass vessel</td>
</tr>
</tbody>
</table>

| Number of small-scale fishers | 1000 |
| Number of small-scale fishing vessels | 400 |

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**DIVERSE SMALL-SCALE FISHERIES VALUES**

- Ecological conservation
- Conflict resolution
- Sense of freedom
- Enhanced knowledge
- Wellbeing and material wealth
- Livelihood security
- Enjoyment and pleasure
- Sufficient catch and lifestyle
- Sense of pride
- Responsible governing system
- Community cohesion
- Recruitment of youth
- Compliance of rules and regulations
- Gender equality
- Fair distribution of benefits

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Small-scale fisheries in Puerto Lopez, Manabi Province, Ecuador

Maria José Barragán-Paladines
University Leibniz Centre for Tropical Marine Research (ZMT)

"Fishing activities have been playing a critical role within Ecuadorian coastal communities since at least 4,000 B.C. Livelihood provision used to be the most important aim of small-scale fisheries until the late 1960s, when commercial fishing activities gained relevance as an economic engine for the local fishing villages. Currently, in spite of threats to small-scale fisheries sustainability and the fishing communities' viability, small-scale fisheries are still a key element in the local economy as a relevant source of income and a social bonding element."

SMALL-SCALE FISHERIES CHARACTERISTICS

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<th>Ecosystem type</th>
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<tbody>
<tr>
<td>Main gear</td>
<td>gillnet; long liner</td>
</tr>
<tr>
<td>Target species</td>
<td>sword fish; mahi mahi; wahoo</td>
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<tr>
<td>Vessel type</td>
<td>fiberglass vessel</td>
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<tr>
<td>Number of small-scale fishers</td>
<td>&gt; 70,000</td>
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<tr>
<td>Number of small-scale fishing vessels</td>
<td>&gt; 15,000</td>
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DIVERSE SMALL-SCALE FISHERIES VALUES

Small-scale fisheries at Holbox Island, Mexico

Nadia T. Rubio-Cisneros, M. Moreno-Baez, A. Sáenz-Arroyo, J. Glover, & D. Rissolo
Centro de Investigación y de Estudios Avanzados; University of New England; El Colegio de la Frontera Sur; Georgia State University; University of California

"Julio Zapata proudly acknowledges his fishing heritage. His dad Miguel Zapata is descendant from the early mestizos and Europeans that settled at the island in late 1800's. Julio's ancestors practiced fishing the 'tough way' with simple gears, wooden sailboats, and lots of free diving. Julio successfully accomplished a college degree, but he prefers fishing. Every afternoon after filleting the fish from the 'catch of the day' he shares the leftovers!"
PART II

The meaning of small in North America
The tragedy of commercial fishing quotas in Lake Winnipeg, Canada

Durdana Islam & Fikret Berkes
University of Manitoba

"Commercial small-scale fishing in Lake Winnipeg is regulated by quotas on the three main economically profitable species. Fishers may bring 20 tubs of quota fish per day; over-quota harvests cannot be sold. Other species are low-value by-catch, where shipping costs exceed revenue. Consequently, the fisher is faced with a dilemma: either bring in over-quota fish and by-catch at his/her own expense (and risk), or 'feed the fish to the eagles'. Many choose to bring in the fish to share with the community."

SMALL-SCALE FISHERIES CHARACTERISTICS

<table>
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<th>Ecosystem type</th>
<th>freshwater</th>
</tr>
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<tbody>
<tr>
<td>Main gear</td>
<td>gillnet</td>
</tr>
<tr>
<td>Target species</td>
<td>walleye; lake whitefish; sauger</td>
</tr>
<tr>
<td>Vessel type</td>
<td>fiberglass; 240HP</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>150</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>50</td>
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</tbody>
</table>

DIVERSE SMALL-SCALE FISHERIES VALUES

"Inshore fishers in Bay de Verde have been fishing cod for over 300 years. Atlantic cod has been a source of social formation and inspiration for cultural life but also deeply embedded into local socioeconomic settings. The Cod Moratorium in 1992 brought big changes in Bay de Verde and other small fishing communities in Newfoundland. Today the men in Bay de Verde are amazed how codfish has returned, and are astonished that they are still fishing in late November."

Sustainable fisheries in Sitka, Alaska, United States of America

Linda Behnken & Alyssa Russell

The Alaska Longline Fishermen’s Association (ALFA)

"Alaska’s coastal communities depend on access to healthy, abundant fisheries. The Alaska Longline Fishermen’s Association (ALFA) was formed in 1978 to safeguard this access and the health of coastal fisheries. ALFA promotes sustainable fisheries and thriving fishing communities through policy advocacy, collaborative research, and innovative programs to support young fishermen. ALFA is run by fishermen for fishermen."

The Alaska Longline Fishermen’s Association (ALFA)

© ASMI/Josh Roper Photography

SMALL-SCALE FISHERIES CHARACTERISTICS

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>Marine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>Hook and line; seine net; gillnet</td>
</tr>
<tr>
<td>Target species</td>
<td>Halibut; sablefish; rockfish; salmon</td>
</tr>
<tr>
<td>Vessel type</td>
<td>Longline; troll; seine; 120-450HP</td>
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<tr>
<td>Number of small-scale fishers</td>
<td>1000</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>650</td>
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SMALL-SCALE FISHERIES VALUES

<table>
<thead>
<tr>
<th>Level of Importance</th>
<th>Ecological conservation</th>
<th>Conflict resolution</th>
<th>Sense of freedom</th>
<th>Enhanced knowledge</th>
<th>Well being and material wealth</th>
<th>Livelihood security</th>
<th>Enjoyment and pleasure</th>
<th>Sufficient catch and lifestyle</th>
<th>Sense of pride</th>
<th>Responsible governing system</th>
<th>Community cohesion</th>
<th>Recruitment of youth</th>
<th>Compliance of rules and regulations</th>
<th>Gender equity</th>
<th>Fair distribution of benefits</th>
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</tr>
</tbody>
</table>
"Set-netters test the waters off the eastern Kenai Peninsula. On this opening day in 2012, the salmon were not yet running at full force, giving these newcomers a chance to learn how to operate their gear. Alaska’s Upper Cook Inlet (UCI) and Kenai Peninsula are well known for their abundant salmon runs, which support commercial, sport, personal-use, and subsistence fisheries."

**SMALL-SCALE FISHERIES CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>marine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>gillnet</td>
</tr>
<tr>
<td>Target species</td>
<td>sockeye salmon</td>
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<tr>
<td>Vessel type</td>
<td>aluminum skiff; 24.30'; 90HP</td>
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<tr>
<td>Number of small-scale  fishers</td>
<td>600</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>120</td>
</tr>
</tbody>
</table>

**DIVERSE SMALL-SCALE FISHERIES VALUES**

PART III

The meaning of small in Asia & Oceania
"The Bede or nomadic communities spend their lives on houseboats and traveling throughout the river ways in Bangladesh. Being mostly illiterate and extremely poor, nomadic fishers depend on small-scale fishery for their employment and income. For the fishing nomad, the hilsa (Tenualosa ilisha) fishery brings material success, which further leads to multiple relational and subjective benefits."

**Nomadic fishers in the Meghna River Estuary, Bangladesh**

Mohammad Mahmudul Islam

Sylhet Agricultural University

---

**SMALL-SCALE FISHERIES CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>freshwater; brackish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>gillnet; bait and hook</td>
</tr>
<tr>
<td>Target species</td>
<td>hilsa; catfish</td>
</tr>
<tr>
<td>Vessel type</td>
<td>wooden; &lt;15m</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>32</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>8</td>
</tr>
</tbody>
</table>

---

**SMALL-SCALE FISHERIES VALUES**

- Ecological conservation
- Conflict resolution
- Sense of freedom
- Enhanced knowledge
- Wellbeing and material wealth
- Livelihood security
- Enjoyment and pleasure
- Sufficient catch and lifestyle
- Sense of pride
- Responsible governing system
- Community cohesion
- Recruitment of youth
- Compliance of rules and regulations
- Gender equity
- Fair distribution of benefits

---

Small-scale bag net fisheries of Gir Somnath, Gujarat State, India

Rajib Biswal
University of Manitoba

"Fishing is much more than just harvesting. The bag net fishery at the Arabian Sea coast of Gujarat entails multiple interactions among people from different age, gender, class and caste."

**SMALL-SCALE FISHERIES CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>marine; coastal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>bag net; hook and line</td>
</tr>
<tr>
<td>Target species</td>
<td>Bombay duck; giant catfish; prawn</td>
</tr>
<tr>
<td>Vessel type</td>
<td>inboard engine; 15-25HP</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>2500</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>450</td>
</tr>
</tbody>
</table>

**DIVERSE SMALL-SCALE FISHERIES VALUES**

Small-scale flying fish roe fishery, Southwestern Kei Islands, Indonesia

Dirk J. Steenbergen
Charles Darwin University

"Anchored off Nuhuta Island, in Southeast Maluku district, this crew member rests in between roe harvest fishing trips; drying palm-leaf-floats for next deployment. Depending on extent of spawning activity by flying fish, boats may be continually at sea for up to two weeks before returning to land for supplies."

SMALL-SCALE FISHERIES CHARACTERISTICS

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>marine; pelagic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>spawning aggregating devices</td>
</tr>
<tr>
<td>Target species</td>
<td>roe of flying fish</td>
</tr>
<tr>
<td>'bugis' and 'butonese'; SGT</td>
<td></td>
</tr>
<tr>
<td>Vessel type</td>
<td>Ridge</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>400</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>100</td>
</tr>
</tbody>
</table>

DIVERSE SMALL-SCALE FISHERIES VALUES

Small-scale purse seine fishery, Wuring, Flores Island, Indonesia

Frances Every
Charles Darwin University

"The purse seine fishery is the primary livelihood for Bajo in Wuring Laut who work as crew and fish traders. Before the purse seine's arrival in the 1970's, Bajo relied on canoe fishing and reef gleaning. Now due to historical, biological and economic factors they are reliant on the purse seine fishery for their livelihoods."

### SMALL-SCALE FISHERIES CHARACTERISTICS

- **Ecosystem type**: marine
- **Main gear**: seine net; surrounding net
- **Target species**: scad; sardine; mackerel; skipjack
- **Vessel type**: purse seiner; 24HP
- **Number of small-scale fishers**: 364
- **Number of small-scale fishing vessels**: 60

### DIVERSE SMALL-SCALE FISHERIES VALUES

- Ecological conservation
- Conflict resolution
- Sense of freedom
- Enhanced knowledge
- Wellbeing and material wealth
- Livelihood security
- Enjoyment and pleasure
- Sufficient catch and lifestyle
- Sense of pride
- Responsible governing system
- Community cohesion
- Recruitment of youth
- Compliance of rules and regulations
- Gender equity
- Fair distribution of benefits

Small-scale fisheries of Kamakura Bay, Japan
Tamano Namikawa
The Japanese Institute of Fisheries Infrastructure and Communities

"A fishing boat setting off from the beach in one winter morning. They often sell their catch on the beach. Through this 'Beach Market', people in Kamakura can enjoy the bounty of the Kamakura Bay."

SMALL-SCALE FISHERIES CHARACTERISTICS

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>marine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>gillnet; gleaning; harpoon</td>
</tr>
<tr>
<td>Target species</td>
<td>shirasu; turban shell; abalone; lobster</td>
</tr>
<tr>
<td>Vessel type</td>
<td>outboard</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>54</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>46</td>
</tr>
</tbody>
</table>

DIVERSE SMALL-SCALE FISHERIES VALUES

Sakura shrimp small-scale fishery in Suruga Bay, Japan

Yinji Li
Tokai University

"Fishing operation of Sakura shrimp (Sergia lucens) fishery during fall fishing season of 2016, in Suruga Bay, Shizuoka prefecture, Japan. Two boats usually work together in Sakura shrimp fishery, and there are two fishing seasons in a year, spring and fall. During day time, the shrimp live 200 meters below the surface, rising to 50 meters at night time, which is when this fishery usually takes place."

Lagoon fisheries of Tarawa Island, Republic of Kiribati
Brooke Campbell, Aurélie Delisle and Quentin Hanich
University of Wollongong

"A man and his family fish in TađaIJa lagoon, Republic of Kiđibati. The urban capital of South Tarawa and rural North Tarawa share the lagoon’s fisheries for daily food and livelihoods. In a country of low-lying islands and limited land area, 1-Kiribati people are at home in the ocean."

**SMALL-SCALE FISHERIES CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>marine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>cast net; gillnet; gleaning; other</td>
</tr>
<tr>
<td>Target species</td>
<td>Anadara clam; bonefish; snappers; silverbiddles; other</td>
</tr>
<tr>
<td>Vessel type</td>
<td>wooden outrigger canoe; wooden or aluminium boat &lt;7m</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>&gt;7000</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>unknown</td>
</tr>
</tbody>
</table>

**DIVERSE SMALL-SCALE FISHERIES VALUES**

"Pole-and-line fishing is woven into the fabric of the Maldivian culture. These coastal communities have practiced this sustainable method for centuries; one hook, one line, one fish at a time. This is a way of life, upon which the fishers and the local communities depend."
"The fishermen in the Fuvahmulah leave before dawn to reach rich fishing grounds south of the Maldivian island in the Indian Ocean. Day breaks to reveal over fifty dhonis fishing, using only hook and line to catch skipjack tuna by hand. By midday, the fishers return to harbour with their small holds full to sell their catch to markets waiting for them. This is the daily tuna run, upon which the fishers and the local communities depend."
Artisanal fishing in Batan Estuary, Aklan Province, Philippines

Alice Joan Ferrer, L. Araneta, G. Defiesta, C. Parcon, H. J. Mediodia, J. Hopanda, S. Ishikawa

Division of Social Sciences, University of the Philippines; University of the Philippines Visayas Foundation, Inc.; Research Institute for Humanity and Nature

"Artisanal fishing in Batan Estuary in Aklan Province, Philippines contributes to nutrition, with fish as the main source of protein, and food security in the area. The two fishers on a non-motorized boat endure the heat of the sun using gillnet to catch fish providing food for their families."

SMALL-SCALE FISHERIES CHARACTERISTICS

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>freshwater; brackish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>castnet; gillnet; liftnet; traps; others</td>
</tr>
<tr>
<td>Target species</td>
<td>mudcrab; mullet; sardine; others</td>
</tr>
<tr>
<td>Vessel type</td>
<td>wooden; &lt;3GRT; 4-6HP</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>5371</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>1551</td>
</tr>
</tbody>
</table>

SMALL-SCALE FISHERIES VALUES

DIVERSE SMALL-SCALE FISHERIES VALUES

Freshwater fish sanctuaries, municipality of San Mariano, Philippines

Jan van der Ploeg
WorldFish and Mabuwaya Foundation

"Rural communities in the Philippines often depend heavily on freshwater fish as a source of food. However, the role of these small-scale fisheries in safeguarding the food security of poor households is usually undervalued. Further, freshwater ecosystems are severely threatened in the Philippines. In 2005, 13 barangays (villages) in the municipality of San Mariano proclaimed a fish sanctuary, which has played an important role in conserving critically endangered species."

**SMALL-SCALE FISHERIES CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>freshwater</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>castnet; gillnet; liftnet; traps; others</td>
</tr>
<tr>
<td>Target species</td>
<td>Nile tilapia</td>
</tr>
<tr>
<td>Vessel type</td>
<td>no vessels</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>5000</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>no vessels</td>
</tr>
</tbody>
</table>

**DIVERSE SMALL-SCALE FISHERIES VALUES**

- Ecological conservation
- Conflict resolution
- Sense of freedom
- Enhanced knowledge
- Wellbeing and material wealth
- Livelihood security
- Employment and pleasure
- Sufficient catch and lifestyle
- Sense of pride
- Responsible governing system
- Community cohesion
- Recruitment of youth
- Compliance of rules and regulations
- Gender equity
- Fair distribution of benefits

PART IV

The meaning of small in Africa
Sainte Luce lobster fishery, Madagascar

Stephen Long

University College London and SEED Madagascar

"Fishermen in Sainte Luce prepare to depart in the half light of dawn. Paddling on round trips of up to 30km the fishers will check pots deployed overnight, set new pots and return with lobster to be sold to collectors on the beach, destined for global markets."

---

**SMALL-SCALE FISHERIES CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>marine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>traps</td>
</tr>
<tr>
<td>Target species</td>
<td>spiny lobster</td>
</tr>
<tr>
<td>Vessel type</td>
<td>wooden canoes (pirogues); no engine</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>350</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>80</td>
</tr>
</tbody>
</table>

---

**DIVERSE SMALL-SCALE FISHERIES VALUES**

- Ecological conservation: 0
- Conflict resolution: 0
- Sense of freedom: 0
- Enhanced knowledge: 0
- Wellbeing and material wealth: 0
- Livelihood security: 0
- Enjoyment and pleasure: 0
- Sufficient catch and lifestyle: 0
- Sense of pride: 0
- Responsible governing system: 0
- Community cohesion: 0
- Recruitment of youth: 0
- Compliance of rules and regulations: 0
- Gender equity: 0
- Fair distribution of benefits: 0

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**Zalala Beach small-scale fishery, Sofala Bank, Mozambique**

Jessica Blythe  
WorldFish & ARC Centre of Excellence for Coral Reef Studies, James Cook University

"Zalala Beach lies along the productive Sofala Bank on Mozambique’s central coast. The small-scale fishery is characterized by high occupational pride. Fishers move from all over the country to fish at Zalala Beach, form the economic backbone of their community, and are widely respected for providing a ‘good life’ for their families. However, the fishery is challenged by declining catch, limited regulations, and conflict between local and migrant fishing crews."

### SMALL-SCALE FISHERIES CHARACTERISTICS

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>marine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>gillnet; seine net</td>
</tr>
<tr>
<td>Target species</td>
<td>small pelagics; tsiwakhini paste shrimp</td>
</tr>
<tr>
<td>Vessel type</td>
<td>wooden boat &lt;10m; paddle/sail</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>~1000</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>405</td>
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### DIVERSE SMALL-SCALE FISHERIES VALUES

<table>
<thead>
<tr>
<th>Level of Importance</th>
<th>Ecological conservation</th>
<th>Conflict resolution</th>
<th>Sense of freedom</th>
<th>Enhanced knowledge</th>
<th>Livelihood security</th>
<th>Enjoyment and pleasure</th>
<th>Sufficient catch and lifestyle</th>
<th>Sense of pride</th>
<th>Responsible governance</th>
<th>Community cohesion</th>
<th>Recruitment of youth</th>
<th>Compliance of rules and regulations</th>
<th>Gender equity</th>
<th>Fair distribution of benefits</th>
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<tr>
<td>5</td>
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</tbody>
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Small-scale fisheries of Struisbaai, Western Cape, South Africa
Kashiefa Parker & Stuart du Plessis

International Ocean Institute - African Region

"Struisbaai fishers are one of the last remaining traditional line fishing communities in the country to utilize the colourful traditional wooden deckboats called ‘chukkies’. Today their chukkies are a bittersweet struggle between tradition and modernity. Here fishers ceremoniously take pride in painting and restoring their boats during the off season."

SMALL-SCALE FISHERIES CHARACTERISTICS

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>marine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>hook and line</td>
</tr>
<tr>
<td>Target species</td>
<td>yellowtail; Cape salmon; kob; others</td>
</tr>
<tr>
<td>Vessel type</td>
<td>traditional wooden chukkie; ski-boat</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>~57</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>10</td>
</tr>
</tbody>
</table>

DIVERSE SMALL-SCALE FISHERIES VALUES

Dagaa fishery in Busekera village, Lake Victoria, Tanzania

Joseph Luomba

Tanzania Fisheries Research Institute (TAFIRI)

"Dagaa *Rastrineobola argentea* is the main fishery at Busekera village. The fishery is a major source of livelihood to the indigenous 'jita' tribe and immigrants that have settled in this village. Majority of those engaged in the fishery are women with some either divorced or widowed. In addition, many businesses within the village depends on the dagaa fishery."

**SMALL-SCALE FISHERIES CHARACTERISTICS**

- **Ecosystem type**: freshwater
- **Main gear**: small-seine
- **Target species**: dagaa
- **Vessel type**: wooden canoes; <12m
- **Number of small-scale fishers**: 474
- **Number of small-scale fishing vessels**: 104

**DIVERSE SMALL-SCALE FISHERIES VALUES**

- Ecological conservation
- Conflict resolution
- Sense of freedom
- Enhanced knowledge
- Wellbeing and material wealth
- Livelihood security
- Enjoyment and pleasure
- Sufficient catch and lifestyle
- Sense of pride
- Responsible governing system
- Community cohesion
- Recruitment of youth
- Compliance of rules and regulations
- Gender equity
- Fair distribution of benefits

PART V
The meaning of small in Europe
Small-scale fisheries of Merikarvia, Finland

Pekka Salmi
Natural Resources Institute Finland

"The Finnish coastal fishery is small-scale and family-based activity. Although the economic significance of commercial fisheries has generally decreased, the fishing livelihood is still highly valued in traditional fishing villages such as Merikarvia. The couple Seppo and Katja Laine, process their Baltic herring catches into smoked, salted and marinated herring products. They sell these added-value artisanal products directly to consumers in autumn during numerous fish marketing events arranged in larger cities."

SMALL-SCALE FISHERIES CHARACTERISTICS

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>brackish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>gillnet; traps</td>
</tr>
<tr>
<td>Target species</td>
<td>Baltic herring/salmon; whitefish; perch</td>
</tr>
<tr>
<td>Vessel type</td>
<td>fiberglass boats; &lt;8m; 40-50HP</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>35</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>70</td>
</tr>
</tbody>
</table>

DIVERSE SMALL-SCALE FISHERIES VALUES

[Graph showing levels of importance for various aspects such as ecological conservation, conflict resolution, sense of freedom, enhanced knowledge, wellbeing and material wealth, livelihood security, enjoyment and pleasure, sufficient catch and lifestyle, sense of pride, responsible governing system, community cohesion, recruitment of youth, compliance of rules and regulations, gender equity, and fair distribution of benefits.]

© Pekka Salmi
Small-scale fishery of Skala Kallonis, Kalloni Bay, Lesvos, Greece

Eirini Ioanna Vlachopoulou & Seishiro Sakita
University of the Aegean; Nagoya University

"Countless generations of small-scale fishers, passing down their knowledge and passion, have kept the fire of the Greek maritime tradition alive through the millennia and have given life to a focal point of the Greek culture: its connection to the sea. On their handmade boat, Sotiris and his brother keep the traditions alive to this day."

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**SMALL-SCALE FISHERIES CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>Marine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>Dredge; cast net; gillnet; longlines</td>
</tr>
<tr>
<td>Target species</td>
<td>Sardine; mullet; mulus; scallop; mussel</td>
</tr>
<tr>
<td>Vessel type</td>
<td>Wooden boat; &lt;9m</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>132</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>66</td>
</tr>
</tbody>
</table>

---

**DIVERSE SMALL-SCALE FISHERIES VALUES**

- Ecological conservation
- Conflict resolution
- Sense of freedom
- Enhanced knowledge
- Wellbeing and material wealth
- Livelihood security
- Enjoyment and pleasure
- Sufficient catch and lifestyle
- Sense of pride
- Responsible governing system
- Community cohesion
- Recruitment of youth
- Compliance of rules and regulations
- Gender equity
- Fair distribution of benefits

---

Artisanal fishing community, Azores, Portugal

Alison Neilson & Rita São Marcos
Centre for Social Studies, University of Coimbra

"Artisanal fishing occurs in all nine of the Azorean Islands, Portugal, located in the mid-Atlantic Ocean. Differences exist between the islands related to the role of women in fishing; from financial management of the boats to preparing the gear or even going to sea. Associations such as Ilhas em Rede, with members from all nine islands, and AMPA - Association of Wives of Fishers and Boat Owners of Terceira Island, work to understand and improve the role and visibility of women in fishing."

SMALL-SCALE FISHERIES CHARACTERISTICS

<table>
<thead>
<tr>
<th>Ecosystem type</th>
<th>marine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear</td>
<td>hook and line; traps; 'gamelas'</td>
</tr>
<tr>
<td>Target species</td>
<td>tuna; red seabream</td>
</tr>
<tr>
<td>Vessel type</td>
<td>fiberglass, 7m</td>
</tr>
<tr>
<td>Number of small-scale fishers</td>
<td>3222</td>
</tr>
<tr>
<td>Number of small-scale fishing vessels</td>
<td>599</td>
</tr>
</tbody>
</table>

DIVERSE SMALL-SCALE FISHERIES VALUES
Small-scale fisheries of Cabo de Palos, Islas Hormigas MPA, Spain

Miguel Lorenzi
Memorial University of Newfoundland

"Artisanal fishers have been working on the coastlines of the Spanish Mediterranean Sea for thousands of years. Traditionally a family business, these men and women have shaped our coasts and created our traditions. Julio’s grandfather was a fisherman and one of the pioneers of the village of Cabo de Palos, south Spain. He built the Virgen del Carmen, a 5m long wooden boat in 1909 and since then, it is the way of life of three family generations."

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**SMALL-SCALE FISHERIES CHARACTERISTICS**

- **Ecosystem type**: marine; coastal
- **Main gear**: gillnet; bottom longline; traps
- **Target species**: red mullet; grouper
- **Vessel type**: fiberglass/wooden <15m
- **Number of small-scale fishers**: 20
- **Number of small-scale fishing vessels**: 8

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**DIVERSE SMALL-SCALE FISHERIES VALUES**

- **Ecological conservation**: 5
- **Conflict resolution**: 5
- **Sense of freedom**: 3
- **Enhanced knowledge**: 2
- **Wellbeing and material wealth**: 2
- **Enjoyment and pleasure**: 2
- **Livelihood security**: 2
- **Sufficient catch and lifestyle**: 2
- **Sense of pride**: 2
- **Responsible governing system**: 2
- **Community cohesion**: 2
- **Recruitment of youth**: 2
- **Compliance of rules and regulations**: 2
- **Gender equity**: 2
- **Fair distribution of benefits**: 2

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small-scale fisheries contribute to society in many ways, including income, food security, sense of place, and ecological knowledge. This is a value proposition that deserves explicit recognition and consideration. TBTI is working towards a more comprehensive understanding of the diverse values of small-scale fisheries, especially through its research cluster ‘Diverse Small-Scale Fisheries Values’ coordinated by Derek Johnson, Alan White, Julian Idrobo, and TBTI project director Ratana Chuenpagdee. The ‘Diverse Values’ cluster fosters critical reflections on the reasons for which small-scale fisheries are either valued or overlooked. The cluster creates the space to build theoretically and methodologically sound, policy-relevant arguments for the values of small-scale fisheries at multiple scales and in diverse places while also recognizing the significant challenges they face. This photo e-book, and the larger study on diverse small-scale fisheries values it derives from, represents an initial step in understanding their range and significance in relative terms at a global scale.

The photo e-book speaks to the question about the reasons why small-scale fisheries are valued and illustrates the types of contributions they make across the globe. Each chapter shows the breadth of values attributed to the small-scale fisheries in a location, reinforcing the importance of small-scale fisheries to millions of people who directly and indirectly depend on them.
Small-scale fisheries are not only ‘too big to ignore,’ but are also ‘too important to fail’

Through this photo e-book, the 32 case studies portray both the commonalities and differences in what small-scale fisheries mean from place to place. This is a simple message that emphasizes the need for more effort in highlighting the value of small-scale fisheries, especially through an in-depth exploration of what these values mean and how they contribute to fisheries resource governance and to societal well-being. It is the diversity and richness of the small-scale fisheries values that invite researchers, practitioners, policy makers and fishers to work together on improving their governance. ‘The Meaning of Small’ shows that small-scale fisheries are not only ‘too big to ignore,’ but are also ‘too important to fail.’
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