Report on enhancing stewardship in small-scale fisheries through ecosystem approaches and other means

Too Big To Ignore (TBTI) Latin America and the Caribbean joint workshop with Working Group 4, 6-9 August 2013, Curitiba, Paraná, Brazil

We are working towards the future they deserve

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"**Enhancing Stewardship in Small-Scale Fisheries through Ecosystem Approaches and Other Means**"

Too Big to Ignore Latin America and the Caribbean joint workshop with Working Group 4
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1 Introduction

Concerns about the oceans, and especially fisheries, have motivated people to work together in order to address the global "fisheries crisis." Small-scale fisheries (SSF), and the uncertainties about how they affect or are affected by changes in ecological and social system dynamics, are among the key issues that require immediate attention.

Too Big to Ignore (TBTI) (http://toobigtoignore.net/) is a global research network and knowledge mobilization partnership on SSF. The main goal of TBTI is to enhance the understanding of the real contribution of small-scale fisheries to food security, nutrition, sustaining livelihoods, poverty alleviation, wealth generation and trade, as well as the impacts and implications of global change processes such as urbanization, globalization, migration, climate change, aquaculture, and communication technology on small-scale fisheries. TBTI is also concerned with the lack of understanding about both the impacts of SSF on ecosystem and the contribution of SSF to stewardship and conservation.

TBTI is organized around regions and research conducted by thematic working groups (WG). This workshop was jointly organized by the Latin America and the Caribbean (LAC) region leaders and WG4 which has the theme of *Enhancing the Stewardship*. The workshop was limited to 35 participants (Appendix 1), but was potentially open to anyone interested in SSF in LAC within the workshop theme. We encouraged participation of TBTI members and partners, SSF researchers and others from various agencies or networks, fisheries managers and fisher folk leaders involved in decision making, and graduate students whose research was related to LAC and WG4.

Financial and administrative support for the workshop was provided mainly by TBTI based at Memorial University of Newfoundland (MUN) through funding from the Social Sciences and Humanities Research Council of Canada. The Universidade Federal do Paraná (UFPR) was the main host and contributor of in-kind support. TBTI LAC coordinators from the Universidade de São Paulo (USP), Brazil, and Unidad Mérida del Centro de Investigación y de Estudios Avanzados (CINVESTAV), Mexico, and the WG4 coordinator at the University of the West Indies (UWI) assisted as part of the organizing committee. Several participants received partial funding from TBTI while others were sponsored by their own organisations.

The workshop programme (Appendix 2) reflects the diversity of issues and participants. The workshop was conducted in English, Portuguese and Spanish. UFPR graduate students and others assisted with personal translations. We met and were accommodated in Curitiba at the Slaviero Slim Alto da XV, where the workshop was held. Some sessions during the field trip day were held at the Instituto Federal do Paraná, in Paranaguá city, and others at the fishers' organization in Matinhos beach.

This report describes the workshop proceedings in summary. Further details were available to participants through sharing of presentations and other products. Others interested in details of the workshop or in the follow-up activities are advised to contact TBTI coordinators and workshop participants or visit TBTI web pages on the home site (http://toobigtoignore.net/), on the CERMES-UWI page for WG4 (http://www.cavehill.uwi.edu/cermes/tbti.htm),and the workshop's UFPR web site (http://www.cem.ufpr.br, only in Portuguese). The sections below follow the order of the workshop programme.

2 Opening Session - Don't miss the boat: Small-scale fisheries (SSF) and the need to work together

Welcome remarks

Rodrigo Medeiros, on behalf of Luiz Mafra Jr., representing UFPR, opened the workshop with brief welcoming remarks. He indicated the importance of the workshop to the UFPR Centre for Marine Studies (CEM) and wished participants well in their work while hoping they would enjoy the beauty of Brazil.

Introductions and objectives

Mary Gasalla, as TBTI regional coordinator in Brazil, welcomed participants to the meeting, thanked the host university for the logistic support, and explained workshop's "why, who, and how". She mentioned that organizers were inspired to bring a significant regional perspective to the workshop, in terms of Latin America and Caribbean participants, and that it was the first TBTI meeting in South America. She wished the meeting to promote dialogue and form a bridge between the global research partnership and some local realities, being an embryo to strengthen a LAC partnership on SSF. The principles of the workshop were said to be participative, inclusive, open, and constructive among participants, which represented the core philosophy of the LAC team and identity. She led participants in a round of introductions, encouraging informal interaction in the need to work together.

Workshop participants came from more than 10 countries of Latin America and the Caribbean, including Argentina, Barbados, Bolivia, Brazil, Chile, Costa Rica, Ecuador, Nicaragua, México and Venezuela as well as from the USA and Canada. Within Brazil alone, the diverse locations included Brasilia, Campinas, Curitiba, Fortaleza, Maringá, Recife, Rio de Janeiro, Rio Grande, Santos, and São Paulo. All participants' localities are mapped (in red), and the locations of regional members that could not attend the workshop (in yellow).

She explained that the workshop aim was to facilitate dialogue among people in LAC on issues concerning SSF in the region. While other topics would be covered during the project, the workshop had a specific focus on the goals related to WG4.

The workshop objectives were:

1. To introduce participants to the research and practical aspects of TBTI WG4 and LAC;
2. To engage fisheries researchers and others actively interested in SSF in a discussion about tools, methods and good practices used to assess and monitor SSF impacts, and to enhance stewardship;
3. To enhance SSF research collaboration and networking in Brazil and elsewhere in the LAC region;
4. To build capacities based on the knowledge and experience of all participants; and
5. To discuss other aspects of research on SSF in the LAC region and to develop plan of actions.

A major output of the workshop was expected to be a networked programme for TBTI that enhances existing and planned compatible SSF initiatives in Brazil, and in the LAC region. The discussions that participants would have on SSF issues in the region, along with the ways to address them, could form the basis of publications on the LAC region and WG4 topics. Regional collaboration should be enhanced through the workshop.

Overview of SSF worldwide and TBTI global

Silvia Salas introduced the overview of SSF worldwide and the global scope of TBTI. The information was previously compiled into a presentation by Ratana Chuenpagdee, Project Director of TBTI and all is available in more detail on the TBTI home web site. In summary, TBTI is a six-year project (March 2012 - Feb 2018), with CAD$2.5 million in funding from the Social Sciences and Humanities Research Council of Canada and CAD $2.5 million in matching contributions. The TBTI team comprises 62 scientists from 27 countries, partnering with 15 organizations.

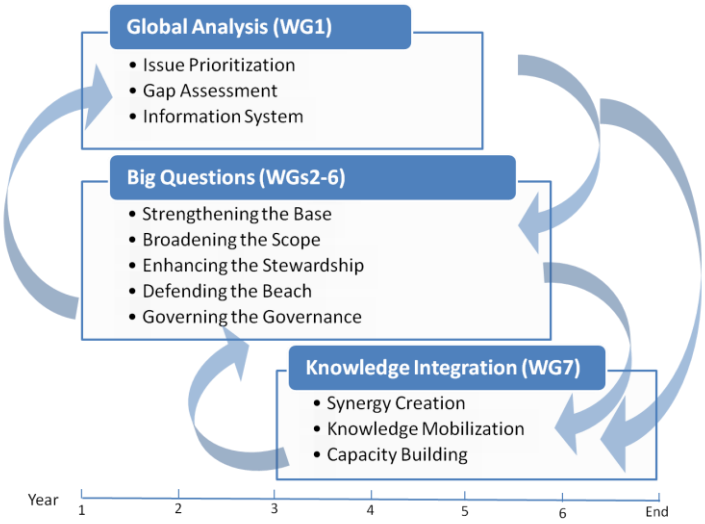
TBTI aims to: (i) Elevate the profile of small-scale fisheries; (ii) argue against their marginalization in national and international policies, and (iii) develop research to address global food security and sustainability challenges in fisheries policy. Five big questions are tackled by research working groups, supported by information and capacity development:

- 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 fisheries?

Persons interested in TBTI could:

- Join TBTI Listserv to receive news and update -- Send request to: toobigtoignore@mun.ca
- Become collaborators by contributing case studies
- Help to build the information system. See *Who's Who in SSF Research* (link via www.toobigtoignore.net)

Project structure and work flow



Overview of SSF LAC and TBTI LAC

Silvia Salas also provided an overview of SSF in LAC and of the TBTI project in LAC. She answered the question of what TBTI offers to the LAC with the following suggestions:

- Network (Fisheries scientists, NGOs, Decision Makers, Fishers)
- Collaboration (Creation of a regional LAC network; Learn about fisheries in our region; Share information and initiatives; Coordinate actions; Work together)
- Getting Creative (Generation of frameworks; Transdisciplinary work; New generation of fisheries scientists, decision makers, etc.)

She identified affiliated individuals and groups, then described the LAC Approach:

- Participative approach – Promote collaboration for research and management and promote better governance of SSF.
- Learn from others – Best practices; successful stories.
- Make a contribution – Minimize environmental impact, promote sustainable livelihood for coastal communities, promote stewardship.

There was an extensive list of research issues in the LAC region including valuation of SSF, vulnerabilities and threats, access (informal) control rules, fishers knowledge, fishers self-organization, informing policy makers, value chains, governance, institutional fits, ecosystem effects and approaches and climate change adaptation.

Interaction would occur at several meetings. Expected products from TBTI LAC included:

1. Meta-analysis: Selected issues (by country or by theme)
2. Collaboration on research of common interest and generation of proposals.
3. Integration of papers, reports, approaches from the region to share.
4. Training materials

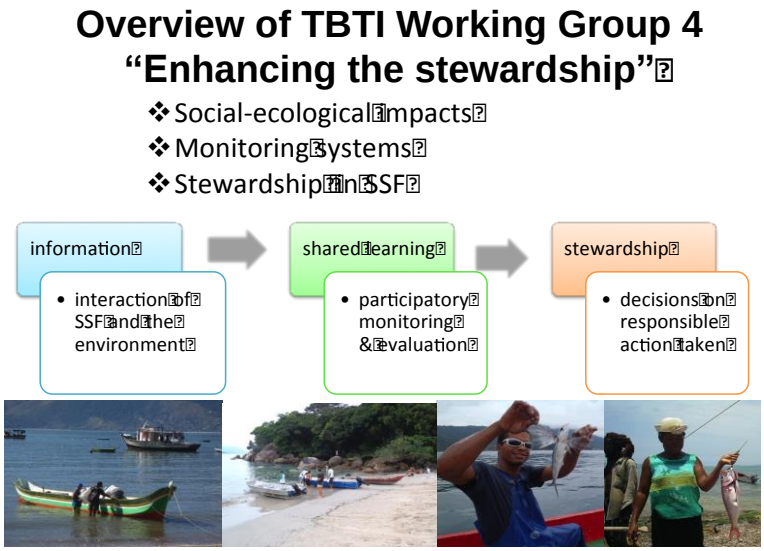
Overview of TBTI Working Group 4

Rodrigo Medeiros provided an overview of TBTI Working Group 4. For LAC, one of the key themes that TBTI addresses in the first phase of the project is "Enhancing the Stewardship," which is the focus of WG4. It has three components each associated with a guiding question.

The WG4 guiding questions and concepts were presented in detail later, in the first panel.

Events and activities include:

- Linking existing compatible initiatives
- Conference panels and presentations
- Graduate student research projects
- Collaboration in capacity development
- Communication products and outreach
- E-book for the 2nd WSFC in Merida 2014
- Special issue of a peer-reviewed journal



WG4 also has a web page at UWI-CERMES (www.cavehill.uwi.edu/cermes/tbti.htm).

Some Brazilian perspectives on TBTI

Mary Gasalla and Rodrigo Medeiros shared some Brazilian perspectives on TBTI. The aim was to have an initial engagement with participants at the meeting, looking at it like an embryo to grow and encourage further dialogue. Examples of areas of interest listed were:

- Project's Big Questions
- Comparative analysis
- Fisheries profiles
- Compilation of SSF entities
- Methods and approaches
- Research questions
- Experiences exchange
- Knowledge sharing
- Networking
- Work plan for LAC
- Work plan for WG4
- Various other products

Questions to provoke debate included:

- How is Brazil dealing with the WG4 issues (Impact – Monitoring – Stewardship)?
- Who is engaged (potentially) and could be a WG4 partner?
- Which would be the priority actions and how could we be connected? Through networks, projects and actions, formal organizations?

Questions for clarification

Questions for clarification on all of the opening session presentations followed. Matters discussed included the financial limitations of TBTI, and the need to enhance and amplify

connections or networks, considering that other people and institutions (that were also working with SSF in LAC) could not come to the workshop or could not be funded. In this sense, some clarifications on how to 'bring this workshop back home' were made such as using Dropbox to share comments, articles, photos or other information. Other topic raised by some participants concerned the need to discuss a translation of "stewardship". How were people from LAC translating stewardship into Spanish and Portuguese? Proposals were made using English language equivalents such as property management, social-environmental responsibility, proactive agency, management and care. There was no definitive conclusion on this.

3 Let's talk about it: discussion based on the opening session

Silvia Salas assumed her role as chairperson for the day and guided the discussion and panels. There was now time for broader discussion on the opening session as well as points that the participants wanted to bring to the workshop. This started by sharing their expectations:

- Leave with some defined lines of work/responsibilities/short-term questions
- To have the clearness of our importance in connecting and being connected
- To make feasible new actions/articulations from scientific planned events
- To gather information to measure how big SSF are
- How to develop good indicators (e.g. cost-benefit)
- Increase collaboration and knowledge sharing
- Research and the application of research results
- People (young students) excited to engage in fisheries
- What are the other networks in LAC?
- Find ways to combine information
- To attract funding (or to be attractive for funders)
- To make some communication laces/networks
- How does the market affect management?
- How to explore in detail some indicators?
- To measure to what extent research is applied
- To develop specific questions to answer in each WG in short time
- To start with a few priority questions and themes well defined
- To quantify artisanal fisheries: "how big are they?"

The expectations, many of which overlapped with each other and with the workshop's formal objectives were noted to be kept in mind and to be referred to as the workshop proceeded. All participants agreed that they had a role in ensuring their expectations were met.

4 Panel session 1: Living the change in ecosystems and fisheries

Introducing the topic

Rodrigo Medeiros introduced the topic for this and subsequent panels with questions about what do we know, and what we don't know about impacts, and about how fisheries systems, resilience and adaptive capacity are affected. The presentations were said to be triggers… all participant experiences were important. After the discussions what will be the directions that you choose? How can we continue to be engaged in this process that we are exploring now?

More questions, specific to the panel topic were:

- How and to what extent do or will SSF and the aquatic environment impact upon each other?
- Which impacts and what are their magnitudes? What do we know? What we don't know? What are the trends?
- How can the system merge within the changes and recovers from the impacts: social capital, economic wealth?
- How are fishery systems resilience and adaptive capacity affected by the impacts?

Social-ecological system concepts and issues

Patrick McConney explained social-ecological system concepts and issues. He described the storyline of WG4 as:

1) Social-ecological impacts challenge the adaptive capacity and resilience of SSF systems and inform us about them;
2) Monitoring systems systematically measure impacts and changes (both quantitatively and qualitatively) and if monitoring is participatory it promotes shared learning;
3) Stewardship, an aspect of governance, incorporates our learning about impacts and changes into decision-making so that groups and individuals can take informed action to improve the resilience of SSF.

Social-ecological impacts had the guiding question: How, and to what extent, do or will small-scale fisheries and aquatic environments impact upon each other? This involved consideration of social-ecological systems (SES), scale, ecosystem approach to fisheries (EAF), adaptive capacity and management, resilience, transformation and thresholds.

Monitoring systems had the guiding question: What integrated practical systems for monitoring and evaluation exist, or need to be developed, to address the impacts of small-scale fisheries on aquatic environments and the reverse? Issues were biophysical, socioeconomic, governance, uncertainty and system dynamics, participatory monitoring and evaluation.

Stewardship had the guiding question: What institutional arrangements for stewardship exist, or need to be developed, to allow small-scale fisheries to be responsible, adaptive and resilient social-ecological systems? Considerations were multi-level governance, stakeholders, collective action and group dynamics, decision-making and leadership, fisher folk organizations.

Impacts of lobster diving on the Caribbean Coast of Nicaragua

Miguel Gonzalez addressed the human-related impacts for Miskitu men that were derived from lobster diving along the Caribbean Coast of Nicaragua. Driven by external market pressure, commercial lobster fishing through diving has become an extremely dangerous activity due to the inadequate equipment used by indigenous divers, the precarious working conditions under which they operate, and the long-term environmental impact to the resource base produced by this particular fishery. His paper drew on primary and secondary research through which he was able to document the health-related and socio-cultural implications of lobster diving.

Against the backdrop of relatively recent and progressive domestic legislation, which promised to prohibit lobster fishing, current policy debates were delaying meaningful action to protect Miskitu divers and the livelihoods in coastal communities that depend on fisheries. He argued that the governance and viability of small-scale fisheries, and lobster diving in particular, would be better served through a combined strategy of law enforcement mechanisms, human rights protection, responsible labour-capital practices, and the careful consideration of the feasible alternatives that are available to fishing communities that exist close to or in poverty. Miguel also stressed the effect of external demand on the incentives to remain diving despite the risks, hence he suggest that a multilevel effort to face challenges with international intervention are required.

Questions after the presentation enquired about the feasible livelihood options for those communities. One option is to explore community-based tourism. Another is to move beyond exploiting mainly lobster, but alternative target species yield lower economic returns. These species include queen conch and sea cucumber that also have management problems and required new investment. For now, improving short-term economic gains was paramount. Miguel advised that more consistent support could achieve more. Labour rights and decent work were key issues.

Caribbean Large Marine Ecosystem Information Management System (IMS) Implementation and Overview

Alejandro Acosta emphasised that successful stewardship of marine resources requires effective management, sharing of, and access to, scientific information. This encompasses fisheries ecology, socio-economics, governance and geospatial information. Caribbean data are currently housed in many different agencies and databases that use different standards for quality control and varying formats and spatial-temporal resolutions. This heterogeneity hinders agencies' abilities to collaborate and communicate effectively in their planning and permitting work. It also presents significant problems for conducting increasingly comprehensive marine and coastal ecosystem-based management, which requires sharing and integrating databases, as well as displaying the data in publicly accessible formats to support decision-making processes.

The Caribbean Large Marine Ecosystem (CLME) Information Management System (IMS at www.clmeims.gcfi.org), combined with the proposed Regional Environmental Monitoring Program (REMP), will facilitate the uptake of lessons learnt, and of the results of monitoring and research in (sub)regional and national science-policy processes through dedicated data and information products (including indicators) and services. The increased access to information through the IMS metadata would improve our understanding of our environment, enable more comprehensive and transparent planning, and help to engage stakeholders in decision-making processes. There is a need to regionally harmonize information, strengthen management information, and achieve regional agreement on data policy. Information includes links, information about the data, and a map, in English and Spanish.

Questions afterwards focused on the use of the IMS and its indicators by decision makers. Alejandro pointed out that the IMS was in its early stages and had not really been used yet. Decision support systems still needed to be put in place and linked to marine policy-making institutions.

Overlapping SSF territories and MPA: a vulnerability and resilience thinking approach

Luiz Faraco spoke of the vulnerability of small-scale fisherfolk in the north coast of Paraná State, Southern Brazil, which has been increasing due to a decline in catches and problems of access to and management of coastal natural resources, which have already been forcing fishers to develop coping and adaptation strategies. Living in an area of high biodiversity, their livelihoods are also restricted by the presence of no-take protected areas. It is expected that the effects of climate change will represent an additional source of disturbance, especially due to the further decline in catches that is predicted to affect tropical and subtropical fisheries as a result of global warming. Results of a study conducted at the household-level, in nine villages, show that vulnerability varies among villages and even households in the same village, mainly due to differences in the level of reliance on fisheries as a source of income, and in distribution of physical and social capital. The adoption of livelihood diversification strategies, to include non-fisheries activities, was more frequent in households with higher adaptive capacity.

Protected areas were shown to have a double negative effect on more vulnerable households, by restricting their access to mangrove resources in the present, and by limiting the viability of their favoured adaptation strategy for the future - oyster cultivation. These results are potentially useful for the development of biodiversity conservation, fisheries management and climate change adaptation policies that are adequate to the local level and contribute to build resilience both of fisherfolk and the coastal ecosystems they rely on, helping them to persist, develop and evolve in a scenario of climate change.

Discussion after the presentation addressed the relationship between the research, climate change, SSF data overlapping, and MPAs. Discussion about levels of adaptive capacity of members of different communities and community benefits when MPAs can be different, for instance tourism can be favored, diversification within the fisheries could also occur. Luis stated that MPAs have a double effect on the most vulnerable groups. Others issues discussed dealt with the use of biological indicators such as catch decline, for assessing community vulnerability.

5 Panel session 2: Monitoring the change: strategies and methodologies to assess and to monitor the change

Introducing the topic

Rodrigo Medeiros again posed provocative questions to introduce the topic:

- What integrated practical systems for monitoring and evaluation exist, or need to be developed, to address the impacts of SSF on aquatic environment and the reverse?
- Beyond a conventional approach to monitoring (not only target species or ecology; human dimensions). Can fishers be part of the monitoring system?
- To monitor the system (SES) with participation. How?
- Can fishers be part of the monitoring system?

SocMon and other methods for monitoring

Peter Edwards posed the question: How do we know what impacts MPAs and other coastal management tools are having on the lives of people who live nearby? This information is critical for management decisions, but often lacking. The Global Socioeconomic Monitoring Initiative for Coastal Management (SocMon) works through regional and local partners to

conduct community-based socioeconomic monitoring. Partners collect household and community level data about dependence on coral reef resources, perceptions of resource conditions, threats to marine and coastal resources, and support for strategies such as marine protected areas. The presentation discussed the SocMon approach and a few other methods for collecting human dimension data as part of coastal resource management.

SocMon is a global initiative for establishing site level socio-economic and marine monitoring programs with guidelines on how to do socio-economic monitoring useful for fisheries and coastal management at the site level. The guidelines are used with the *Socio-economic Monitoring Manual for Coral Reef Management* that contains field methods. Six regions are successfully conducting SocMon (English-speaking Caribbean, Central America, Western Indian Ocean, South Asia, Micronesia/Pacific). Having participated in a two-day SocMon introductory workshop at CEM in Pontal do Sul he was optimistic that a node for coordinating and supporting the use of SocMon would soon be established in Brazil. Benefits derived from socio-economic monitoring include:

- Understanding the socio-economic contexts of coastal resource use by various stakeholders
- Assessing, predicting and managing coastal resource use over time
- Improving decision-making, including assessment of trade-offs
- Assisting social and institutional learning and decisions that develop adaptive capacity and resilience, reduce vulnerability

Discussion after the presentation confirmed that SocMon was used more for SSF than industrial fisheries, and more in LAC than in the US. Edwards added that SocMon guidelines were available in Spanish English and Portuguese depending on the region. When asked how often you should monitor he responded that it depends on the factors you want to analyze.
Peter made emphasis that improve management in coastal areas is not just about leading with resources but also with people, so the capacity of coastal management can be increased while monitoring the whole system. The goal is to collect info over long time and achieve stakeholder engagement, understanding the context, and assisting to build capacity. Survey fatigue was identified as a hazard, reinforcing the need to pay attention to existing information.

Intensive monitoring system of small-scale fisheries in the estuary area of Manabí, Ecuador: In the search of co-management arrangements

Juan Carlos Murillo stated that fisheries co-management has shown to be successful in several regions around the world, including Galapagos Islands, in Ecuador. Despite of this experience, limited knowledge about the small-scale fisheries that land in the continental area of the Ecuador exists. This context limits the implementation of management schemes such as Co-management in those fisheries. Under these conditions, the sub-ministry of fisheries in Ecuador requested a study to characterize the fishery in the estuary Río Cojimíes, Manabí. This study was undertaken by researchers from the Santa Elena University. The study required an intensive monitoring system as the request demanded to submit a report in short time. The strategy developed was based on monitoring experience gained in Galapagos Island by the director of the project and with the help of key fishers in the study area.

The data collection involved four sources: a) on board monitoring system including observer on the small boats to collect data on species composition in the catch, amount of total catch, and fishing areas; this observers sometimes comprised hired fishers from the area, trained for the task, b) to record the dynamics of fishing effort, random observations were done on board

of a small boat moving along the whole estuary system where fishers from several fishing communities operate; information on the fishing activities was recorded, c) recording of catch composition and fishing effort of the boats that landed at several landing spots along the estuary area d) interviews with key informants and e) summary of official records of catch and effort from all boats that landed in the area.

The collected information allowed to: i) estimate the revues derived from fishing trips for the most important species; ii) a record of all the species captured by area and time and its relationship with environmental parameters recorded at the same time that the observers were in the boat; iii) a record of species that fall on the UICN Red List from those captured in the area, iv) the spatial distribution of fishing effort and how is this allocated among the fishing communities that fish in the estuary area; v) relevance of the fishery in different coastal communities (market, jobs, etc.); and vi) knowledge about the main problems that fishers are facing in the zone. The information gathered allowed to integrate a report to be presented to fishers and managers to evaluate the feasibility of the implementation of a Co-management scheme on the small-scale fishery in Manabí, Ecuador. The work on this task is in progress, challenges are in the way, but the potential for this type of institutional arrangements is high. The advantage of working with fishers in data collection for fisheries assessment is stressed in this study; it increases the amount of information and makes fishers open for alternative forms to operate.

After the presentation it was noted that the fishermen had asked for fisheries regulations, and for studies and research. Technical aspects and equipment used for monitoring vessels was debated. Most discussion focused on the management systems, including effectiveness after implementation. Murillo stressed that discussions with fishermen were very important, with their participation necessary to reach consensus. Monitoring needed to be institutionalized into co-management.

Academic research and outreach programs and networks related to SSF in coastal Brazil

Cristiana Seixas said that the idea behind her presentation was to outline current efforts in monitoring, understanding, and supporting SSF in coastal Brazil, particularly on the South and Southeastern coasts. During this TBTI workshop participants should aim to identify other efforts as well. The overall aim is to identify existing effort, key contact persons, and major outputs as a way to mobilize knowledge and human resources regarding SSF. Networks of research supporting SSF in Brazil include:

- Rede ATER pesca
- Rede Solidária da Pesca
- ICSF - Brasil
- Rede TransForMar
- Observatório do Litoral Catarinense
- Rede Meros do Brasil
- Red Ibero-Americana em Áreas Protegidas e Dimensões Humanas das Mudanças Climáticas
- Rede Mangue Mar do Brasil
- Rede Puxirão (povos tradicionais)
- Ouvidoria do Mar

Fisher folk networks included the Movimento dos Pescadores e Pescadoras artesanais (Artisanal fishermen and fisherwomen national organization) and Recopades. She asked: Do we need more research or do we need to mobilize human and other resources? In addition the Rede TransForMar (Transformar network) was a transdisciplinary network of education in participatory management for conservation and development of marine and terrestrial

territories. It comprised 18 study cases, 20 students of graduate programmes, and newsletters on the internet. Its analytical frameworks covered Social-ecological systems (artisanal fisheries, protected areas, local development); Adaptive co-management; Sustainable territorial development; Drivers of change; Self-organization processes; Governance; and Monitoring and learning.

A comment after the presentation pointed out that in all of the networks listed there was little participation from the north and northeastern parts of Brazil. Seixas explained limitations due to various restrictions imposed by the funding agencies. Also, it was noted that beyond the mentioned networks, there is a lot of research on monitoring, understanding, and supporting SSF in coastal Brazil, as part of the huge efforts of Brazilian universities and institutes. Another comment concerned who is really doing monitoring, and this sparked a discussion on the nature of monitoring going beyond ecological or harvest sector indicators. Discussion about how to deal with poor data and how to use all available info generated by available networks was also presented. A participant said that he really liked Socmon because of the engagement of communities, and because we have to start looking to what is available and affordable. Our aim is to find what is there and to start doing something after that.

6 Let's talk about it: discussion based on panel sessions 1 and 2

After the presentations, participants discussed how SSF monitoring could be improved. Some emphasized the importance of having a sound starting point and the need to take advantage of traditional knowledge. There was a worry that fishers get engaged in monitoring systems that are imposed upon them and do not respect their knowledge. This leads to problems. There is a need to address building capacity for getting or exchanging information. Most participants agreed that it may take years to establish trust and generate information from collaboration with fisherfolk, but this depends on the institutional environment and capacity for exchange.

It was also a moment to share more experiences. Carolina Minte-Vera spoke of an experience in which fishers got engaged in monitoring after building some trust and generating some outcomes that people found useful. It was a case study of the Marine Extractive Reserve of Corumbau (Bahia State, northeast of Brazil). They used the monitoring system as a way to first build capacity, engaging youngsters to record their own catches with innovative ways to identify resources. Even after external financial resources ended, fisherfolk continued the monitoring and used all the information they had to discuss public polices for the place. They showed the state government that fisherfolk and resources could not sustain the size of the investment the government wanted to make, building ports and factories. They worried about proposed development in the context of their own evidence from monitoring.

Going back to the broader social-ecological concept of 'monitoring' used in WG4, not talking only about fishing data, participants stressed the importance of collaborative networks as a good way to proceed. Also, sometimes political issues undermine coastal and fisheries monitoring, but it is impossible to talk about SSF without talking about politics. The discussion also explored aspects of political engagement and skills of those engaged and how theses aspect could influence monitoring outputs. Fisherfolk and scientists need to be part of political processes and how this happens or not also requires monitoring so both can learn together. The richness of having these networks is that it says that we already have something, some data, and something is being done.

The issue of how to do participatory monitoring, considering that all monitoring systems cannot be the same, was also addressed. There are several options to monitoring and detailed

design can be decided depending on the context; something might work in one country the same as another, or maybe not. Monitoring must be adaptive.

The importance of considering the need to collect more data versus making more use of better-organized existing data was the final debate. It was mentioned that some communities were over studied, and maybe it is not always necessary to do more research, but to compile the available information. This was one of the big challenges raised for WG4: the idea of bridging different types of knowledge and synthesising them to make a more useful product rather than accumulating additional under-utilised data that seldom resulted in new knowledge.

7 Panel session 3: Enhancing the stewardship – sharing and learning by experiences

Workshop participants travelled by bus from Curitiba to the Instituto Federal do Paraná in Paranaguá city, where the two panel sessions and lunch took place. Allan Krelling, professor at the institute, welcomed participants and Mary Gasalla chaired the proceedings for the day.

Introducing the topic

To start panel session 3, Rodrigo Medeiros posed the WG4 question:

- "What institutional arrangements for stewardship exist, or need to be developed, to allow SSF to be responsible, adaptive and resilient social-ecological systems?"

To provoke the debate, more questions were raised, e.g. how to translate 'ecosystem stewardship'? What were the strategies and actions for stewardship, with what responses? What were the challenges for building current/new strategies? Rodrigo also posed questions related to how people in the workshop could share their experiences and empower others. He asked how they could conduct research/outreach on the topic of stewardship.

Artisanal benthic fisheries in Chile: Towards increased capacity for stewardship of coastal social-ecological systems

Stefan Gelcich explored the implications of the governance transformation in Chile that had resulted in a revolutionary national system for allocating exclusive territorial user rights (TURFs) to artisanal fisher associations. There are about 707 TURFs, 40000 fishers and an area of 1117 km^2. His presentation addressed the question: "is there evidence of increased capacity for stewardship of coastal social-ecological systems through the implementation of TURFs?" Stewardship capacity was empirically assessed in an interdisciplinary manner by exploring a range of ecosystem services (provisioning, regulating, supporting and cultural) and investigated the generation of an ethic that embodies responsible management of coastal zones in Chile. The initiative included greater stakeholder participation and organization linked to greater concern for the environment. Results showed that although problems with implementation and day-to-day management of TURFs were common, increased coastal stewardship capacity provides an opportunity to identify new development pathways for Chilean artisanal benthic fisheries. Participants asked about the role of universities in the implementation of the TURF system. Stephan stated that universities had an important role in the implementation but currently is on the hands of biologist consultants. In the end he pointed out that the TURFs are not a panacea and that there are no recipes to enhance stewardship, all small-scale fisheries must be innovative to develop their own strategies.

Small-scale fishery stewardship in Costa Rica: successes and challenges concerning community-managed strategies

Andy Bystrom said that unfortunately Costa Rica has also not been immune to worldwide catch trends that hit their high point in 2000. Total Pacific coast SSF landings declined by 9,000 tons between 2001 and 2007, and the national total catch continues to decline. Despite this, there were a number of promising projects underway representing positive trends in Costa Rica to better manage local fish stocks, reduce marine ecosystem impacts, address gender inequality, and create new economic opportunities. In particular, concerned about increasing social, environmental, and economic problems in rural coastal communities in Costa Rica, researchers, NGOs, government officials, and fishing association members are working together to improve the way small-scale fisheries are managed. Examples of increasing stewardship among SFF association members, included fisher led data collection programs, MPA development campaigns, and product certifications that drive market reform. Industrial fisheries continue to bring impediments to community-managed strategies. He also mentioned on the country's recent "Ley de Territorios Costeros", with is a legal regulation that assures fishing territories.
Questions about the generation of some alternatives for fishers given stringent conditions were in place. Andy indicated that aquaculture could be an option for fishers, like juvenile of tuna to growth and sell for sushi. The problem is that the waste goes to other areas that affect the environment; hence he indicated that there is a need to develop a sustainable way to improve conditions for fishers without affecting the environment.

The experience of the Fishery Solidarity Network (Rede Solidária da Pesca) in strengthening the artisanal fishery in Brazil

[This Panel 3 presentation was made next day. It is placed in its original spot for continuity]

Felipe Addor talked about "Rede Solidária da Pesca", an articulation of people, projects and institutions aiming to fortify, politically and economically, small-scale fisheries and artisanal aquaculture in Brazil. The network originated in 2006 and involves fishermen and their representative institutions, local and national government, universities, non-governmental organizations, cooperative enterprises and community organizations. National coordination is localized in four regions in Brazil (Alto Amazonas, Baixo Amazonas, Alto-Médio São Francisco and litoral fluminense). The conceptual strategies of the network are co-management of natural resources and solidarity economy. The strategies of action, in turn, include the empowerment of the fishing workers about the fishery productive chain, use of participatory methodologies and capacity building for fisher workers. Decision-making in the network is done in seminars or assemblies (councils) based on a sharing principle between technical and community people, at the national and local levels of coordination. In the last two years the network has been losing strength. The new strategy for the future is to consolidate a net of networks and forums to support artisanal fisheries and reconnect the partnership with national government.

A new tool to enhance the stewardship of the Mexican small-scale fisheries in the Gulf of Mexico

Lourdes Badillo emphasized that most of the fisheries in México are small-scale, which face every day the decline of fisheries resources and their earnings. Fishing regulations, rules and management strategies are scarce and insufficient. The minimum necessary information to support resource management is dispersed and scarce, being concentrated on a few species or

localities, and in some cases it is not available for decision-making. A group of interested people designed the Small-Scale Fisheries Geographic Information System with the objective to have a system with the available environmental, biological, ecological, economic, social, cultural and geopolitical information on coastal fisheries. This was to facilitate the work of the authorities, scientists, students and stakeholders in the management of the resources. The methodological strategy was to (i) define components, and survey authorities and academics about the necessities of information, meeting with the work group, presenting strong ideas; (ii) design the conceptual model; (iii) design the structure of the database and relationships; (iv) create the data dictionary; (v) integrate the GIS with available information; (vi) consult authorities, researchers and fishermen to modify until adequate; and (vii) evaluate practical functionality, the opinions of users, and handle queries. Lourdes also stated that the tool can help to better understand small-scale fisheries complexity, identification of information gaps, evaluating the effect of the decision-making and much more. This system was designed to improve according to the necessities demanded and to be in continuous update. The main outputs are maps, tables, graphs and photos.

8 Panel session 4: From sharing to caring – diverse perspectives from the LAC region

This final panel bridged the presentations focused upon the three components of WG4 and the more general issues of the LAC region. It continued smoothly on from Panel 3.

Local trajectories of marine conservation in Chile

Francisco Araos stated that the establishment of marine protected areas has been intensified worldwide, highlighting the tension between the expansion of fishery production and the conservation of biodiversity in South America. Recent experiences have shown some local alternatives for marine conservation which are able to conciliate the use and protection of natural resources. He spoke of the development of a local environmental arena for marine conservation in Chile, discussing the institutional trajectory of exploration and management of small-scale fisheries in Cardenal Caro Province. The first step of this trajectory was the identification of the social problem: The exploitation of algae, from *aganache* (open access) to *parcelas* (traditional management), reflecting a social conflict related to resources access and scarcity; local rules and organizations. Then, in a second period, that he calls "becoming politic", there was top down implementation of fisheries co-management policy known as "Management and Exploitation Areas for Benthic Resources" (TURFs/MEABR), which brought territorial rights, but also new conflicts and more social and political complexity.
Francisco stated that the allocation of the TURFs created new social conflicts. From one moved to three federations of artisanal fishers as the allocation of TURFS allowed fishers to select their areas, there was a trade-off for management and that allowed more social actors in the context. In a third period, came MPA emergence, with the institutionalization of a municipal initiative of marine conservation, with multiples actors, and an attempt to combine no-take with other marine managed areas. The results pointed out that the implementation of a MPA in the studied region is part of an institutional framework based on sustainable use of fisheries, social relations of conflict and cooperation, and construction of a municipal environmental arena. He stressed that stewardship (agency) emerges between institutional trajectories and actors' experience.

One of the participants asked how these types of initiatives fit within the global conservation agenda and tools. The speaker indicated that changes in institutional arrangements and local

participation are necessary and it has to be acknowledged that the process takes time in order some results can be seen.

Bolivia's Northern Amazon: opportunities and challenges for stewardship and livelihoods development in emerging fisheries

Allison Macnaughton spoke of the northern Bolivian Amazon, where fisheries resources appear to be relatively under-exploited. The commercial fisheries, until recently, were low-intensity and focused on small native species. The main key-drivers of change listed for the area include habitat modification (hydro-electric dams); transportation access (highways); and species introduction (Arapaima gigas, also called paiche). The introduced paiche is having different effects on local and regional economies and on men and women who depend on fishery resources. It has quickly become the most important species for commercial fisheries in the region. The main challenges are (i) data-poor situation, (ii) low public recognition of fisheries, (iii) contributions to economy, food security, (iv) limited capacity and engagement of public actor, (v) limited incentives for management, (vi) conflicts between users (vii) access rights still in question and also (viii) there is no current fisheries legislation for native or introduced species. Possibilities for a stewardship model of territorial rights and traditional use of aquatic resources could be improved by integration of resource management areas and national parks (focus on conservation and stewardship) and in indigenous lands – 'Territórios Comunitarios de Origin' (TCO) (focus on traditional use, cultural preservation).

To face the challenges, they are collecting baseline information (about food security, fisheries participation and production, fleet data, value chains, vulnerability and adaptation, gender analysis), doing participatory stock assessment (e.g. paiche counting), value added product development, dialogue on management perspectives., learning from examples from Brazil and beyond, developing new management models that promote sustainable family-based enterprise, protect food security, studying paiche biology and distribution life histories, improving the value chain: building trust and improving quality in hygiene and processing, strengthening local organizations (FEUPICOPINAB) and contributing to regional regulation and national legislation (indigenous access to commercial fisheries).

Questions about the acceptance of species introduced like paiche were asked. Allison indicated that the species is abundant in the area and there is market and it has been well accepted by people. It was however been recognize that ecological and market changes also had changed the way people are involved in the fisheries, new patterns of engagement in fishery search for catch income have been developed, as well as changes in gender roles.

Strategic alliances for strengthening institutional partnerships and visibility of artisanal Fisheries

Marta Piñeiro is a member of the Association of Artisanal Fishermen of Puerto Madryn (APAPM). The organization was created in 1993 as an institutional tool in the face of a major resource crisis, and the possibility that fishermen would lose access to fish resources in the process of filing for Peninsula Valdes as Natural Heritage of Humanity (UNESCO). It was the first maritime fishing Association legally established in Argentina. APAPM's work on the revaluation of artisanal fisheries, the dissemination of information on the activity and the strengthening of the fishers' identity has gained recognition and provided access to different levels of participation in environmental, social, economic and political spaces. Piñeiro presented a timeline of some important achievements from 1996 to 2013, including the

participation in the RECOPADES network. Examples of accomplishments were the fisheries families' gastronomic businesses that generated employment for approximately 150 people. The gastronomy is considered a powerful alliance. A dish can transmit the culture of artisanal fishers and their relationship with the environment. Educational alliances are also the aim of APAPM. They produced educational material for teachers of elementary schools; "Letters for the future" developed by Argentinean and Spanish teenagers of middle schools; talks at Universities (in Resource Management and Fisheries Engineering classes) and visits of university students to the fishers' processing plant. Institutional strengthening strategies implemented with support from academic institutions have been important for the visibility of activities, the sustainable management, and actual improvements in the value chain.
Questions arose about how to be successful for long time. Martha indicated that education is critical, they had to seek for advice with universities They also had look for legal advice when needed and helped other organizations to build capacity. To promote their activities they got support from academics and the press at different levels (national and international). She ended indicating that they are always open to learn something new.

9 Let's talk about it: discussion based on panel sessions 3 and 4

Major points raised mainly concerned clarification of matters raised in the presentations and some elaboration of the major themes. Mary Gasalla pushed for comments on the importance of fisherfolk organization and collective action enhancing stewardship. What would help to improve stewardship? What else can we learn from diverse LAC perspectives?

Juan Carlos Murillo indicated that there are several types of management approaches, but sometimes they may not take actions at all, then is when self-management can play an important role, he explain the case of fisheries in Galapagos Island, Ecuador. Capacity building with fishers and their wives was part of the process. Generation of alternatives to reduce fishing pressure is necessary. He also stated the role of universities in research, education and capacity building.

Constanza Ribot indicated that COBI an NGO that works in Mexico has been able to implement no-take zones, but it has been key to identify the problems in each case, learn about preferences of users and involve them into the process. Andy agreed and added that leadership is also an important element in this type of processes and that women play an important role.

There was a discussion about how the top-down approach was restricted to welfare assistance, which has been more negative than positive. Changes in government authorities can also affect continuity or in some cases generated conflicts. The role of networks was also mentioned as means to build bridges among government and local initiatives coming from fishers. Social capital in communities is basic to build capacities.

Mary Gasalla started a discussion on how fisherfolk organizations were doing in Brazil. René Scharer talked about the role of ICSF in the negotiation and implementation of the FAO guidelines for SSF, and in the support of several social movements increasingly dealing with fisheries in Brazil, such as the Movimento dos Pescadores e Pescadoras Artesanais (Artisanal fishermen and fisherwomen organization) and the Campanha Nacional para os Territórios Pesqueiros (National Campaign for Fisheries Territories). Beatriz Mesquita commented on the constraints of governmental processes, but she reported that Brazil had a positive position in the international arena in regard to the decisions of the last FAO COFI. In terms of the achievements, there was no consensus that they would have been really effective, with the exception of the accomplishment of the Brazilian maritime extractive reserves and fishing

agreements. It was clearly important for genuine fisherfolk organizations, working together with academics, NGOs and government to improve ecosystem stewardship.

Lively discussion continued over lunch prior to heading out to meet with the fisherfolk at Matinhos beach.

10 Field trip: Pulling it all together and experiencing the stewardship

The field trip was to Matinhos, a town on the coast of Paraná State. The main goal of the trip was interaction with Matinhos fisheries and fisherfolk while discussing interdisciplinary and transdisciplinary approaches from identifying, monitoring and evaluating social-ecological impacts, to enhancing the stewardship through networks, organizations and collective action.

The visit started with an explanation, by Paulo de Tarso Chaves from UFPR, of recent local technical initiatives to adapt gillnets – Matinhos' main fishing gear – through innovative modification to float design. It was followed by a tour of the municipal fish market guided by the fishers and the manager of the market. The director of the market gave information about how it operates, who is involved and how it is managed. People do not need to pay a fee to have a spot in the market, those spots were allocated based on the fishers population existing at that time, more people entering now is not possible. They do not receive products from other fishers if they do not come from the Colonia (the town). There is not a fishing cooperative operating in the area, but people follow the regulations established for the market. Currently they have their products at view without ice, but they need to comply with some sanitary regulations, so they are making adaptations to do so.

Workshop participants could understand how fishers organize themselves to commercialize their production and market their catches. Discussion in the market with the fish vendors allowed better understanding of postharvest practices. The fishers also took participants to observe the hauled out fishing vessels and their gears. The participants took the opportunity to ask questions and share experiences from their areas.

The interaction with Matinhos fishers concluded with participants sharing their photos of Latin American and Caribbean fisheries in an informal slide show. This was done while sitting in a talking circle where participants explained their photographs and took questions

and comments from the fisherfolk in return. The fishers appreciated seeing examples of different types of fisheries, some with familiar features and some with common difficulties.

The discussion expanded to the role of women in SSF. An honoured guest was a female head of a fisherfolk group, Cleonice Nascimento. She was an example of the growing importance of women in leadership, being a vocal representative of artisanal fishermen and fisherwomen in the national fisherfolk organization of Brazil.

Following an email to Rodrigo Medeiros, Cleonice gave feedback on her first impressions of the workshop group, which clearly emphasizes the role of TBTI as well as the need for the commitment of (TBTI) to SSF issues. She said (translated from Portuguese):

> *"I would like to say thanks for the photo sharing and the invitation to be surrounded by so many people from different countries and languages joined, however, by the same objective. I am reflecting on many aspects, although it was for a short time. I would like to receive more information about this organization [TBTI] since I got pretty happy to know that there are other 'crazy people' hopeful for a fair world where greed is not part of our universe, that we don't need much to be happy and that money is not everything. Ultimately, that a fisherman's and fisherwoman's life is God's gift.*

Cleonice's testimony is a synthesis of the main discussions and reflections from some other fisherfolk there who said:

> *It was amazing to figure out how different we are from several aspects, and how close we are from others.*
>
> *It is good to realize that we are not alone.*

These quotes from fisher's speeches described some of the main impressions coming from them. For example, the similarities of some boats from the Caribbean islands surprised them since similar designs were also used in the past in some local fishing villages. Other questions came up considering matters such as:

- Boat characteristics: type of material (fiberglass or wooden boats), size and engine
- Fishing gears and strategies: gear dimensions (mesh size, total size, type of material), fishing ground, target fishes
- Fishing resources: popular name, type of uses, prices, size of the fish
- Management: regulations, conflicts, participation of fishers in decision-making

Participants were open to answer the questions which contributed to the flow of the discussion. Also, the sharing process (e.g. between women from Argentina and Brazil, first photo above) suggested how a regional network and partnership might help to promote stewardship by direct exchange. It also highlighted the importance of cross-disciplinary and bridging knowledge approach to better comprehend SSF issues in Latin America and the Caribbean. The participants left Matinhos late in the evening to return to Curitiba.

11 Riding the WG 4 wave: planning strategies for WG4 and Final session focused on WG4: Let's move together

Patrick McConney was chairman on this day. After a brief reflection on the workshop thus far, and especially the field trip, he and Rodrigo Medeiros reviewed the work plan for WG4 in the LAC region. Guidance notes for the working group sessions were provided. The participants then divided themselves into three small groups, according to their own interest in the three components of WG4, to develop WG4 plans on social-ecological system impacts, monitoring and stewardship for Brazil/LAC. Each group had the same major assignments:

Assignment 1

- The first task, after confirming shared understanding of the question and the group assignment, was to list up to ten (10) research or outreach actions related to the topic
- We are not seeking additional conceptual academic research questions, although you can suggest some if you wish. What we seek are your suggestions for actions within applied research or outreach to fishery stakeholders that promote learning-by-doing
- Examples could be new approaches to interdisciplinary applied research, or sharing and testing particular ideas and outputs with fishery stakeholders or researchers
- You can make individual lists and then compare them, or collectively brainstorm a list
- Prioritize the list of research or outreach actions after some discussion by ranking each a with number, and for each state if you think the scope should be LAC or world
- The template for the output table is provided in a PowerPoint slide for convenience of recording and reporting, but it looks as shown below. Put the rows of actions in order of their rank. Use the rank number as a key for jotting any explanatory notes for the actions on a separate following slide

Assignment 2

- Copy the ranked list of research or outreach actions from the previous table and for each one identify the existing projects, initiatives, organizations that you know of and would recommend that WG4 could be networked to in order to answer its questions.

The results of each group's work for both assignments are shown below.

Social-ecological system impacts

Assignment 1

Research or outreach actions related to WG4 topic	Rank	LAC/World
1 - Develop basic: "types of needs for economic data" in monitoring to inform value chain analysis aimed at SSF needs.		LAC
2 - Impacts beyond fisheries (e.g. poverty, drugs).		LAC
3 - Impacts of management and conservation policies over SSF social ecological systems		LAC
4 - Decent/dignified work		LAC
5 - Vulnerabilities in SSF		LAC
6 - Global trade impacts over ecosystems		LAC
7 - Fisheries and Food security		LAC

Assignment 2

Research or outreach actions related to topic	Existing projects etc. for WG4 to network to
1 Develop basic: "types of needs for economic data" in monitoring to inform value chain analysis aimed at SSF needs.	Review existing methods of participatory economic analysis in SSF Simplified approaches for poor data Impacts of
2 Impacts beyond fisheries (e.g. poverty, drugs).	Poverty fish as a reference
3 Impacts of management and conservation policies over SSF social ecological systems	Ostrom framework and comparative studies (qualitative - quantitative).
4 Decent/dignified work	Revision of innovations in labour, fisheries sector laws
5 Vulnerabilities	Include vulnerability and ecological variables in SocMon; Sustainable livelihoods framework; POVFISH
6 Global trade impacts over ecosystems	Positive/negative
7 Fisheries and Food security	CIFSRF- create an alliance for a new proposal

Monitoring

Assignment 1

Research or outreach actions related to WG4 topic	Rank	LAC/World
Identify demands for monitoring from resource users, governance perspective, conservation perspective	1	
Take advantage what is already available: assessment of the existing monitoring system and information	2	
To develop a framework for construction of a shared model of the dynamics socioecological system by stakeholders of dynamics of the social system in order to choose the attributes for monitoring	3	
To incorporate capacity building with the stakeholders (including local communities) in order to build a shared understanding of what monitoring is for, why it is important and how to do it	4	LAC/World
To produce a monitoring system with minimum requirements so it can be self-maintained and attain long term objective and where Research and official fisheries statistics should go together and Decision of what to monitor should be adaptive	5	
To develop a mechanism to evaluate and have a quality control of the monitoring system	6	

To develop communication strategies to share the information generated by the monitoring system by (communication specialist) to reach the different stakeholder.	7	
To expand monitoring systems beyond the fisheries itself to include local concerns about livelihoods and other externalities	8	
To build a database that allows for comparisons on several levels.	9	

Assignment 2

Research or outreach actions related to topic	Existing projects etc. for WG4 to network to
1. Identify demands for monitoring from resource users, governance perspective, conservation perspective	All
2. Take advantage what is already available: assessment of the existing monitoring system and information	CLME: Caribbean Large Marine Ecosystem; Lourdes Jiménez; FAUNAGUA; FAO guidelines; Transformar Network; POPA – Uruguai; Itaipu reservoir fisheries monitoring system; ReefCheck; REBYC II – LAC reduction of bycatch (FAO Kalikoski & Surone); Networks: Abrolhos, Meros, Manguemar, Solidária da Pesca, ATER, ICSF
3. To develop a framework for construction of a shared model of the dynamics of socio-ecological system by stakeholders of dynamics of the social system in order to choose the attributes for monitoring	Chile Ecuador Barbados SocMon
4. To incorporate capacity building with the stakeholders (including local communities) in order to build a shared understanding of what monitoring is for, why it is important and how to do it	SocMon Local universities
5. To produce a monitoring system with minimum requirements so it can be self-maintained and attain long- term objective and where Research and official fisheries statistics should go together and Decision of what to monitor should be adaptive	(=number 2)
6. To develop a mechanism to evaluate and have a quality control of the monitoring system	Assignment 3

Research or outreach actions related to topic	Existing projects etc. for WG4 to network to
7. To develop communication strategies to share the information generated by the monitoring system by (communication specialist) to reach the different stakeholder.	UNEP – United Nation Environmental Program CI-Brazil Communication teams (Isabela Teixeira) and other NGOs.
8. To expand monitoring systems beyond the fisheries itself to include local concerns about livelihoods and other externalities	(Naína Pierri UFPR). Outreach and health monitoring projects from UNICAMP. MPA World Fisheries Trust
9. To build a database that allows for comparisons on several levels.	Assignment 3

Stewardship

Assignment 1

Research or outreach actions related to WG4 topic	Rank	LAC/World
Promote new, local management systems to larger, existing frameworks (authorities, researchers, fishing associations)		
Facilitate community buy-in		
Map existing management systems (fisheries laws—wording and practicality of implementation) and identify success stories and failures on national, regional, and local levels, including possible impediments	1	
Analyze new tools for SSF administration and identify areas where additional alternative management systems might fit	3	
Identify leaders, capacity needs, possible stakeholder organizations		
Awareness building for government agencies		
Share information regarding success stories, lessons learned, and how TBTI can assist in the creation of SSF stewardship	2	

Assignment 2

Research or outreach actions related to topic	Existing projects etc. for WG4 to network to
1 - Map existing management systems (fisheries laws—wording and practicality of implementation) and identify success stories and failures on national, regional, and local levels, including possible impediments	Co-management in Galapagos and Manabi (Ecuador) TURFS (Chile) Project Varzea (Brazil) Resex, RDS (Ucs) (Brazil) Project kanan kay (Mexico)
2 - Share information regarding success stories, lessons learned, and how TBTI can assist in the creation of SSF stewardship	Tarcoles y Pavones (Costa Rica) Navidad y Amcodes (Chile) Fishing cooperative Cozumel e Isla Natividad, "Mujeres Experimentando" (Mexico); APAPM Puerto Madryn (Argentina); Acuerdos de Pesca and Red de Turismo Comunitario-TUCUM, redes do Brazil (Brazil); RECOPADES
3 - Analyze new tools for SSF administration and identify areas where additional alternative management systems might fit	GIS Gulf of Mexico IUU fishing alert system (Mexico) Co-management (participation and reference points); GCFI

12 Who's doing what, what has been done, and what's next for SSF research in LAC

In this session some participants gave speed presentations (about 5 minutes each) on their work. The aim was to improve opportunities for collaboration by sharing what they were doing and what most interested them about SSF. Presenters and their topics included:

- Alejandro Acosta (Gulf and Caribbean Fisheries Institute) described the results of acoustic tagging of mutton snapper in the Dry Tortugas of the Florida Keys that clearly demonstrated consistent migration timing and site fidelity to a specific spawning aggregation. This type of information is invaluable for conservation while also better defining in space and time the areas and periods that could potentially be left open to fishing.

- Costanza Ribot (Community and Biodiversity Civil Association, Mexico) showed how the NGO promotes schemes for community participation in marine conservation. This includes fish refuges and no-take zones. They give tools to fishers to improve the management of their resources. This involves capacity building and evaluating both the state of the resources and the fishers. Livelihood diversification and interaction with other economic sectors also play important roles in promoting sustainability.

- Carolina Minte-Vera (State University of Maringá/Inter-American Tropical Tuna Commission) shared the participatory fisheries monitoring program in Extractive Reserves (Corumbau, Canavieiras and Cassurubá) at Bahia, Brazil, around a no-take

National Park, with the concrete engagement of fishers' communities in research, capacity building and outreach. She also described the importance of developing SSF indicators and reference points that would be also of use to oceanic fisheries commissions, such as the IATTC. Some of the bycatch species in the tuna fisheries are shared by SSF. She presented the IATCC Eastern Pacific Ocean (EPO) working plan which seems to be of particular relevance to the development of SSF indicators. The work may be applied to other species relevant in SSF worldwide.

- Matheus O. Freitas (UFPR PhD student) presented accomplishments of a project in support of co-management of the Abrolhos Bank Marine Protected Areas (MPAs) network, Brazil, focusing his talk on groupers, snappers and scarids. They gathered and disseminated information from fish landing surveys, habitat mapping, and underwater assessments with strong participation of community members engaged from research to policy-making (www.peixesrecifais.org / www.abrolhos.org).

- Paulo de Tarso Chaves (UFPR) talked about his work as a professor and commented on recent SSF research dealing with technological innovation through modification of float design in gillnets to improve the reduction of ghost fishing, which is an important issue in the region.

- Sérgio Mattos (Brazilian Ministry of Fisheries and Aquaculture) talked about how fisheries management in Brazil straddles the legal and institutional frameworks of the Ministry of Fisheries and Aquaculture and the Ministry of Environment. He summarized the National Fishing Policy covering small-scale fisheries, noting the need to define *decent work* and to establish institutional partnerships with local small-scale fisheries communities. The national government seems agreeable to developing co-management, Ecosystem Based Fisheries Management, an Ecosystem Approach to Fisheries and Participatory Monitoring and Evaluation.

- Deborah Prado (UNICAMP, Brazil) talked about her MSc research on Resilience and Adaptive Capacity with emphasis on a caiçara coastal community, Aventureiro, on Ilha Grande, an island located off the coast of Rio de Janeiro state in southeastern Brazil. More work on livelihood resilience and adaptive capacity seems to be essential if the prospects for sustainable SSF are to improve given the increasing number of threats that they face.

- Rodrigo P. Medeiros (UFPR, Brazil) talked about studies and action research at NESPAMP, the Fisheries Systems and MPA Studies Center. Underscoring the very active student team, he said that NESPAMP focuses on identity-building in research and outreach. They are involved, for example, in the empowerment of fisherfolk organizations, MPA management and governance and by-catch reduction.

- Beatriz Mesquita (Fundaj/ICSF, Brazil) presented on the ICSF-Brazil engagement in developing the FAO SSF Guidelines as a civil society organization in the voluntary guidelines process. Consultations in Brazil concerned the defense of fishing territories through fisheries reserves (RESEX), gender issues and the role of women, lack of knowledge and good practices exchanges, poor representation of fishers and for fisheries statistics to show the real importance of fisheries. She shared news of the SSF negotiations, where only Brazil, African and Caribbean countries, Indonesia and Norway were nations in favour of the SSF Guidelines as drafted through consultation.

- Patricia Abdallah Raggi (Institute of Economics, Federal University of Rio Grande, Brazil) talked on current research projects and courses given at the UPEC, the Coastal Economics Research Unit, in Rio Grande. She concentrated on the Patos Lagoon, addressing research on issues such as climate change and variability, fishery resource utilization and value, and econometric models. In the South/Southeast Brazil, she is presently involved in a project on socioeconomic viability indicators of fishing fleets.

- René Schärer (Terramar/ICSF, Brazil), showed work done in Prainha do Canto Verde, Ceará (www.prainhadocantoverde.org) since there was fisher community leadership in 1928. In the 1970s land grabbers set their sights on the land of the community and it took the fishers 30 years of struggle to finally win a landmark victory in the Superior Court of Justice. Prainha became a Marine Extractive Reserve (RESEX) in 2009. Seminars on Responsible Fisheries held in 1997 and 2006 brought together over 400 fishers, academics, managers and the public to discuss fisheries problems in a participatory process. The next such event is planned be held in 2014.

- Silvia Salas (CINVESTAV) introduced herself as a professional happy for her job working with fishing communities in Mexico. She has been involved in several projects and also in the coordination of the graduate program on Marine Sciences at her institution.

The brief presentations were a rich exchange of current initiatives in LAC and a good overview of the participants' knowledge, types of institutions they work with, research topics for potential collaboration, and also progress and challenges with case studies, projects and networks. The complexities of problems faced by fisheries and the commonalities in some case studies were interesting.

13 Fishing for solutions: definitions and meanings of SSF and EAF

Two main presentations featuring the LAC region leaders followed the speed presentations.

Classification of SSF in the LAC region and conflicting definitions

Silvia Salas started by presenting some definitions of SSF. She said that the term "artisanal or small-scale fisheries" encompasses a wide spectrum, from coastal gathering to inshore fleets. There are many definitions; however it is hard to find one that fits all. The concept "small-scale fisheries" depends on the context; a fishing boat that would be considered small-scale in one place could be considered large-scale elsewhere. SSF have a wide range of occupational types, ranging from self-employed single operators through informal micro-enterprises to formal sector businesses. It is not a homogenous sector within and across countries or regions. Definitions have been based on characteristics such as:

i) Low productivity, low catch, low income;
ii) Small size of the boats with limited technology;
iii) Mobility and autonomy of the boats limited;
iv) Levels of organizations of the groups diverse (Cooperatives, "Cofradias", other organizations or free fishers);
v) Commercialization and distribution of the products local (fresh or frozen);
vi) Lifestyle of fishers- traditions, cultural and social standards

Other characteristics of SSF were pointed out, creating a very long list of possible features. In conclusion she noted that the Code of Conduct for Responsible Fisheries (CCRF) stresses the importance of SSF as a source of food and income, hence the importance of protecting SSF fishers and the areas where they fish. Considering that over half of the catch in developing countries is produced by the small-scale sector, and 90-95 % of SSF landings are destined for human consumption, the sector contributes immensely to food security. Silvia also addressed harvest and postharvest employment. Noting that about half the total workforce comprises women, and all these factors highlight the importance of SSF.

It was discussed how different countries define SSF officially, and some conflicting definitions found even within a country, which undermines the total official statistics records in respect to SSF catch information and magnitude. It was mentioned that in order to promote the improvement of SSF records in statistics and monitoring, a contextualization of SSF definitions in regional scales is important, especially when the region is characterized by a predomination of industrial fisheries.

What an "ecosystem approach to SSF" really means?

Mary Gasalla linked section 14 (Who's doing what, what has been done, and what's next) to this one, mentioning her engagement as a fisheries scientist in "ecosystem approach to fisheries" research. She said that since the beginning of her carreer, she took seriously the "complexity"of fisheries as social-ecological systems, by dedicating herself to study models that translate biodiversity and whole ecosystem relationships with emphasis on the fisheries, as well as fishers' behaviour, attitudes, and discourse on the environment they use. This led her to study fisher's knowledge in combination with models, the reform of fisheries management worldwide, and more social sciences, including economics. Her work at university allowed her interacting with international scientists and agencies, as well as with interdisciplinary teams. She is presently leading the Fisheries Ecosystems Laboratory at the Oceanographic Institute of the University of São Paulo, Brazil, where she lectures, supervise students, and conduct research and extension activities in a broad range of topics of fisheries. She emphasised it is common to see different meanings of EAF in different organizations, management systems, and policy groups, ranging e.g. from a process of involving all the actors/stakeholders of a fisheries ecosystem, to the sole consideration of by-catch reduction initiatives, to the application of ecosystem models and data integration on the biophysical-human system related to fisheries. Sometimes the term also became "empty" and misused. She examined the different characteristics of an ecosystem approach to fisheries management with broad objectives and in relation to SSF, where a definition of the ecosystem is key to delineate fishing territories issues. She showed a very brief overview of what have been proposed in her lab on that subject, including the incorporation of fisher's perceptions, mentioning she is presently working in a review on the concept. She invited interested workshop participants and TBTI colleagues to join her in the EAF? Paper, since a comparative evaluation on the different meanings and ways of implementing it or not in the LAC countries may be useful. Mary also mentioned the benefits for governments and agencies of taking advantage of local scientific capacities to better define and implement the EAF in the real world, reinforcing the view that it should clearly incorporate human wellbeing issues.

Due time restrictions, the discussion was limited, but some comments were made on the importance of this review. Stefan Gelcich, for example, was a strong supporter of the need of critical thinking concerning EAF definitions.

Participants stayed on to view a film, introduced by Miguel Gonzalez, which addressed the human perils for Miskitu men, their households and their communities that were derived from lobster diving along the Caribbean Coast of Nicaragua under very dangerous working conditions. It graphically underscored several of the elements of his earlier presentation and the need for decent working conditions as part of the SSF Guidelines.

A representative of the Brazilian Ministry of Work (Evelyn Albizu) was invited by René Scharer to watch the film since similarities were expected between the divers for lobsters in Nicaragua and Brazil, and accident prevention work is needed especially since illegal fisheries are in place. It was agreed that the film should be further shared and watched in NE Brazil.

14 LAC: Putting together our capacities for building knowledge and Planning actions and LAC and WG4 integrating and closing: Let's move together

This was the session for planning LAC action, in coordination with WG4, including products, communications, timelines, and mobilization of resources to move forward, and implement. The contribution of LAC members to the 2nd World Small-Scale Fisheries Congress was focused on building themes for development as papers to be prepared to present at the 2WSSF in 2014. The same themes may also serve as substantial and practical projects to strengthen the presentations and products for 2WSSF 2014.

Using the previously determined priorities linked to WG4 and based on the themes that were observed of common interest for LAC region as a start, the participants fleshed out areas for action and assigned themselves to the themes with the leaders clearly identified. The suggested themes/working groups are set out below. For each theme leaders/proposers took the responsibility of producing a 1-2 page concept paper that could be circulated in order to attract small working groups for each. It was agreed that leaders or proposers could invite other people that did not attend the workshop to get involved in the development of the paper/work. The summary of potential products will also be sent to TBTI LAC members that were not able to attend to invite them to join a group if wish. Agreements on the strategies, actions and format to follow up of work developed by the groups will be discussed by organizers and the people will be informed.

Theme for development of paper	**Leader/Proposer**	**Participants**
Participatory value chain analysis in SSF	Patricia Abdallah Raggi, Brazil Allison Macnaughton, Bolivia/Canada	Felipe Addor, Mary Gasalla, Silvia Salas (Joachim Carolsfeld) Canada, Brazil, Bolivia, México
Social protection systems in small-scale fisheries	Miguel Gonzalez, Nicaragua/Canada	Stefan Gelcich, Oswaldo Huchim Chile, México
Identification of indicators of fishing pressure in small-scale fisheries	Silvia Salas, México	Alejandro Acosta, Lourdes Jimenez, Sergio Matos, Carolina Minte-Vera, Mary Gasalla, Constanza Ribot, Ivan

Theme for development of paper	Leader/Proposer	Participants
		Velazquéz México, Brasil, Venezuela, USA
Ecosystem approach to small-scale fisheries?	Mary Gasalla, Brazil	Francisco Arreguín México, Brazil
Fisheries organizations networks	René Scharer (ICSF, Brazil)	Rede Solidaria da Pesca (Sidney Lianza, Brazil) Ouvidoria do Mar (Leopoldo Cavalieri, Brazil) Cristiana Seixas (Brazil) Fabricio Gandini (Brazil) Mary Gasalla (Brazil) To be confirmed: Beatriz Mesquita, Julia Fraga (TBTI Member) (Brazil, Mexico)
Assessment of monitoring systems for small-scale fisheries (to be confirmed)	Carolina Minte-Vera, Brazil	Cristiana Simão Seixas, Brazil
Socio-economic monitoring system for small-scale fisheries	Patrick McConney, Barbados	Sergio Mattos, Peter Edwards, Rodrigo Pereira Brazil, USA
Spatial operations of small-scale fishers: mapping conflicts (to be confirmed)	Francisco Araos, Brazil, Chile	Juan Carlos Murillo, Lourdes Jiménez Ecuador, México
Institutional and legal framework for small-scale fisheries in LAC	Sérgio Mattos, Brazil (Michelly de Mattos)	Alison Macnaughton Canada, Bolivia
SSF, food security, livelihoods	Alison Macnaughton, (Joachim Carolsfeld) Canada, Bolivia	Fernando Carvajal-Vallejos Stefan Gelcich Patricia Raggi (to be confirmed) Bolivia, Chile, Brazil
Application of the Ostrom's social ecological systems framework to analyse the impact of biodiversity conservation on SSF in LAC.	Stefan Gelcich, Chile	Mary Gasalla, Fabricio Gandini Brazil

Theme for development of paper	Leader/Proposer	Participants
A summary of the ecological impacts, monitoring, and stewardship in LAC SSF based on ~30 fisheries represented by workshop participants focal experiences	Mary Gasalla and organizers	All (to be confirmed)

However, it is expected that the above working groups move forward once confirmed and that leaders/proposers communicate with coordinators in reference to their advances. Related papers on the topics above may be part of a TBTI-LAC edited volume (part of TBTI book series) where other topics may well be added as the work continues. Contributors to the volume will be encouraged and financially supported to attend the Merida Congress and present their work, provided that they are able to deliver the 'draft' chapter before the Congress. The Congress is then another opportunity for the LAC regional meeting, which the volume will be one of the focus.

In respect to the submitted abstracts and papers presented in Curitiba, participants were invited to contribute to a joint LAC-WG4 Special Issue on "Enhancing stewardship in LAC small-scale fisheries", which is obviously subjected to the confirmation of a minimum number of contributions. The call for contributions will be sent separately, and participants should indicate their preference (Brazilian or International Journal). Guest editors are expected to be Silvia Salas, Maria Gasalla, Patrick McConney, and Ratana Chuengpagdee. An additional WG4 call will still circulate.

15 Closing remarks

Prior to closing the participants briefly reviewed their stated expectations from the first day. In a light-hearted application of the "applause meter" method of determining collective approval they clapped more or less loudly as the expectations were read out. Overall they agreed that the workshop had met the majority of their expectations.

The organizers offered very brief closing remarks, emphasizing that the real work was yet to begin. The logistics and translation team behind the scenes, mainly UFPR and other graduate students led by Rodrigo Medeiros, were acknowledged for their invaluable contribution to the workshop. This fashion the workshop came to a close with promises to remain networked.

16 Appendices

16.1 List of participants

#	Name	Affiliation	Country	E-mail
1	Alejandro Acosta	Gulf and Caribbean Fisheries Institute (GCFI)	USA	Alejandro.Acosta@myfwc.com
2	Felipe Addor	Universidade Federal do Rio de Janeiro/SOLTEC	Brazil	faddor@gmail.com
3	Maíra Almeida	Universidade Federal do Rio Grande (FURG)	Brazil	maira.oceanologia@yahoo.com.br
4	Francisco Araos	Environmental Studies and Research Centre (NEPAM) and State University of Campinas (UNICAMP), Brazil	Brazil	franciscoaraos@gmail.com
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6	Carlos Alberto Borzone	Federal University of Paraná	Brazil	capborza@ufpr.br
7	Andy Bystrom	Asociacion Red Costariquense para el Ambiente y la Educación/ Universidad Estatal a Distancia (UNED)	Costa Rica	a.bystrom@arcae.org
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10	Ana Carolina Esteves Dias	State University of Campinas (UNICAMP), Brazil	Brazil	dias.ac09@gmail.com
11	Peter Edwards	National Oceanic and Atmospheric Administration (NOAA)	USA	peter.edwards@noaa.gov
12	Francisco Faraco	Chico Mendes Institute for Biodiversity Conservation –	Brazil	xicofaraco@yahoo.com

#	Name	Affiliation	Country	E-mail
		Brazilian Ministry for the Environment (ICMBio)		
13	Matheus Oliveira Freitas	Federal University of Paraná / Meros of Brazil Institute	Brazil	serranidae@gmail.com
14	Maria A. Gasalla	Fisheries Ecosystems Laboratory, Oceanographic Institute, University of Sao Paulo	Brazil	mgasalla@usp.br
15	Stefan Gelcich	Pontificia Universidad Catolica de Chile	Chile	sgelcich@bio.puc.cl
16	Mirella Leis	Federal University of Paraná	Brazil	mimileis@gmail.com
17	Alison Macnaughton	World Fisheries Trust	Bolivia/ Canada	alison@worldfish.org
18	Sérgio Mattos	Ministry of Fisheries and Aquaculture	Brazil	sergio.mattos@mpa.gov.br
19	Patrick McConney	University of the West Indies	Barbados	patrick.mcconney@gmail.com
20	Rodrigo P. Medeiros	Federal University of Paraná	Brazil	rodrigo.medeiros@ufpr.br
21	Beatriz Mesquita (ICSF Brasil)	International Collective in Support of Fishworkers (ICSF) / Fundação Joaquim Nabuco, Pernambuco	Brazil	beatriz.mesquita@fundaj.gov.br
22	Carolina Minte-Vera	Universidade Estadual de Maringá / Inter – American Tropical Tuna Comission	Brazil	cminte@nupelia.uem.br
23	Juan Carlos Murillo	Universidad Estatal Península de Santa Elena/ Centro de Transferencia y Desarrollo Tecnológico, Ecuador; y, Consejo de Gobierno de Galápagos	Ecuador	juanmurilloposada123@hotmail.com
24	Jose Miguel Gonzalez Perez	York University, Canada	Nicaragua /Canada	migon@yorku.ca
25	Marta Piñeiro	Asoc.Pescadores Artesanales de Puerto Madryn- Patagonia Argentina (APAPM) y Red de Comunidades	Argentina	martapineiro2@gmail.com; martapineiro@yahoo.com.ar

#	Name	Affiliation	Country	E-mail
		de Pesca Artesanal por el Desarrollo Sostenible (RECOPADES)		
26	Deborah Prado	State University of Campinas (UNICAMP), Brazil	Brazil	deborah.stprado@yahoo.com.br
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	Costanza Ribot	Comunidad Y Biodiversidad (COBI)	Mexico	cribot@cobi.org.mx
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30	Cristiana Simão Seixas	Environmental Studies and Research Centre (NEPAM) and State University of Campinas (UNICAMP), Brazil	Brazil	cristiana.seixas@gmail.com
31	Thiago Zagonel Serafini	Universidade Federal do Parana	Brazil	thiagoserafini@hotmail.com

16.2 Workshop programme

Tue 6 Aug	Activity
08:30 – 09:00 09:00 – 10:30	Registration and distribution of workshop documents Opening Session; Master of Ceremonies: R. Medeiros Don't miss the boat: Small-scale fisheries (SSF) and the need to work together • Welcome remarks: Luiz Mafra Jr., Representative of UFPR-CEM • Introductions and objectives – M. Gasalla and P. McConney • Overview of SSF worldwide and TBTI global – R. Chuenpagdee (remote) • Overview of SSF LAC and TBTI LAC – S. Salas • Overview of TBTI Working Group 4 – P. McConney • Some Brazilian perspectives on TBTI – M. Gasalla and R. Medeiros • Questions for clarification

Tue 6 Aug	Activity
10:30 – 11:00	Coffee break
11:00 – 12:30	Let's talk about it • Participant expectations, first impressions, potential and real connections – people, projects, institutions, networks – how to meet objectives and expectations.
12:30 – 13:30	Lunch
13:30 – 15:00	Panel session 1: Living the change in ecosystems and fisheries (SSF) • Introducing the topic – R. Medeiros • Social-ecological system concepts and issues – P. McConney • Impacts of lobster diving on the Caribbean Coast of Nicaragua – M. Gonzalez • Overlapping SSF territories and MPA: a vulnerability and resilience thinking approach – L. Faraco • Caribbean Large Marine Ecosystem Information Management System (IMS) Implementation and Overview – A. Acosta
15:00 - 15:30	Coffee break (flexible timing)
15:30 – 18:00	Panel session 2: Monitoring the change: strategies and methodologies to assess and to monitor the change • Introducing the topic – R. Medeiros • SocMon and other methods for monitoring – P. Edwards • Experience with monitoring SSF in Ecuador – JC. Murillo • Experience with monitoring SSF in Brazil – C. Seixas Let's talk about it • How fisheries are changing ecosystems, and how ecosystems are changing fisheries … Who or what is causing change or being impacted by change? Which of the impacts are negative or positive? Why? Do the impacts change over time? How? What do we know about measuring change? How can we learn together by participatory monitoring and evaluation (PM&E)?
19:00	"Fishing for caipirinhas": exploring ideas and opportunities to work together

Wed 7 Aug	Activity
07:00 – 08:30	Bus trip from Curitiba via Instituto Federal do Paraná (sessions, lunch venue) to Matinhos
08:30 – 09:00	Reflections on Day One and burning issues

Wed 7 Aug	Activity
09:00 – 10:30	Panel session 3: Enhancing the stewardship – sharing and learning by experiences • Introducing the topic – R. Medeiros • Artisanal benthic fisheries in Chile: Towards increased capacity for stewardship of coastal social-ecological systems – S. Gelcich • Small-scale fishery stewardship in Costa Rica: successes and challenges concerning community-managed strategies – A. Bystrom • A new tool to enhance the stewardship of the Mexican small-scale fisheries in the Gulf of Mexico – L. Badillo
10:30 – 11:00	Coffee break
11:00 – 12:30	Panel session 4: From sharing to caring – diverse perspectives from the LAC region • Local trajectories of marine conservation in Chile – F. Araos • The experience of Fishery Solidarity Network (Rede Solidária da Pesca) in strengthening the artisanal fishery in Brazil– F. Addor • Strategic value for strengthening snstitutional partnerships and visibility of artisanal Fisheries – M. Piñeiro Let's talk about it • How are fisherfolk organizing and collective action enhancing stewardship? What would help to improve stewardship? What else can we learn from diverse LAC perspectives? [discussion can be continued during the field trip to Matinhos]
12:30 – 13:30	Lunch
13:30 – 16:30	Field trip: Pulling it all together and experiencing the stewardship • Interaction with Matinhos fisheries and fisherfolk while discussing interdisciplinary and transdisciplinary approaches from identifying, monitoring and evaluating impacts, to enhancing the stewardship through networks, organizations and collective action
16:30 – 18:00	Bus trip from Matinhos to Curitiba with informal review of learning

Thu 8 Aug	Activity
08:30 – 09:00	Reflections on Day Two and burning issues

Thu 8 Aug	Activity
09:00 – 10:30	Discussion Forum Riding the WG 4 wave: planning strategies for WG4 • Outline work plan for WG4 in the LAC region (P. McConney and R. Medeiros) • Participant small groups develop WG4 plans (all 3 components) for Brazil/LAC
10:30 – 11:00	Coffee break
11:00 – 12:30	Discussion Forum Final session focused on WG4: Let's move together • Participants present the draft plans and discussion follows on how to integrate the plans with each other and with other initiatives • Decisions on leadership, responsibilities, communication, timelines and mobilization of resources to move towards implementation
12:30 – 13:30	Lunch
13:30 – 15:00	Who's doing what, what has been done, and what's next for SSF research in LAC • Speed presentations (5-min) from participants about their work • Brainstorming and discussion about key issues that need research and the kind of research that need to take place in order to address them
15:00 – 15:30	Coffee break (flexible timing)
15:30 – 16.30	Fishing for solutions: definitions and meanings of SSF and EAF • Presentation 1. Classification of SSF in the LAC region and conflicting definitions (S. Salas) ○ Discussion on how to promote the improvement of SSF records in official statistics and monitoring. • Presentation 2. What an "ecosystem approach to SSF" really means? (M. Gasalla) • Open discussion
16:30 – 18:00	LAC: Putting together our capacities for building knowledge • Panel presentation: Reflection and feedback from partners and collaborators • Open discussion

Fri 9 Aug	Activity
09:00 – 10:30	LAC: Planning actions • Planning strategies, in coordination with WG4, including products, communications, timelines, and mobilization of resources to move forward, and implementation • Contribution of LAC members to the 2nd World Small-Scale Fisheries Congress
10:30 – 11:00	Coffee break
11:00 – 12:30	LAC and WG4 integrating and closing: Let's move together • Determine the key areas for integration and networking among regions, groups, participants and others • Final considerations Closing remarks – R. Chuenpagdee, TBTI Project Director (Remote)
12:30 – 13:30	Lunch and departures