



# Transformation of small-scale fisheries – critical transdisciplinary challenges and possibilities

Fred P Saunders<sup>1</sup>, Gloria L Gallardo-Fernández<sup>2</sup>,  
Truong Van Tuyen<sup>3</sup>, Serge Raemaekers<sup>4</sup>,  
Boguslaw Marciniak<sup>5</sup> and Rodrigo Díaz Plá<sup>6</sup>

One way to confront the global marginalisation of small-scale fisheries (SSF) is to support a sustainable transformation of these coastal communities. In 2014/15, a network of researchers and SSF communities from four countries cooperated in a transdisciplinary research approach to examine governance shifts, fish stock collapses, power structures, future visions and transformation strategies. We combined a political ecology approach with transformation theory to: (i) consider how local context is affected by structural changes and (ii) identify place-based transformational strategies for each case. The global emergence of large-scale fisheries and associated free markets appeared as key factors negatively affecting SSF and coastal sustainability. Through envisioning exercises and context dependent analysis, SSF communities articulated possible and actual strategies towards sustainability that will require ongoing support.

## Addresses

<sup>1</sup> School of Natural Sciences, Technology and Environmental Studies, Södertörn University, Sweden

<sup>2</sup> Centre for Sustainable Development, Uppsala University, Sweden

<sup>3</sup> Hue University of Agriculture and Forestry, Viet Nam

<sup>4</sup> Department of Environmental and Geographical Sciences, University of Cape Town, South Africa

<sup>5</sup> Freelance Researcher, Poland

<sup>6</sup> Grupo de Investigación de la Pesca Artesanal, Universidad Academia de Humanismo Cristiano, Chile

Corresponding author: Saunders, Fred P. ([fred.saunders@sh.se](mailto:fred.saunders@sh.se))

Current Opinion in Environmental Sustainability 2016, 20:26–31

This review comes from a themed issue on **Transformations and co-design**

Edited by **Susanne C Moser**

Received: 28-10-2015; Revised: 11-4-2016; Accepted: 27-4-2016

<http://dx.doi.org/10.1016/j.cosust.2016.04.005>

1877-3435/© 2016 Elsevier B.V. All rights reserved.

## Introduction

This paper develops a transdisciplinary research approach with small scale fisheries (SSF) from around the world to generate new knowledge and solutions for transformation

to coastal sustainability. It presents co-design work undertaken by the JUSTMAR Network (Global Marine Governance Network-Co-constructing a Sustainable Fisheries Future), which includes researchers and fishers working collaboratively in different settings to understand, identify and enact transformation sustainability pathways. The work of the project described here was part of the ISSC Transformations to Sustainability Program's seed grant phase. It focussed on enriching correlations between researchers and fishers in different settings, identifying SSF problems and preliminary mapping of envisioned futures and pathways to realise these futures.

The paper is structured in the following way. First, a review is presented of SSF that describes the multi-dimensional character and magnitude of sustainability challenges that is facing this fishing sub-sector. We then introduce SSF communities in Poland, Chile, South Africa and Vietnam and present evidence that shows why these communities are well placed to participate in transdisciplinary approaches for sustainability. Next we outline the co-design process conducted with fishers that informed the preliminary mapping of historical and current problems as well as future visioning. Finally, we conclude with reflections on this initial research phase and the next steps required to deepen and extend the transformation for SSF sustainability approach presented here.

## Review

### Sustainability problem

Despite SSF contributing 66% of global catch for direct human consumption, they have become increasingly marginalised and vulnerable across the world [1,2,3\*]. Due to globalization, SSF have been subjected to the internationalisation of the food system [2,4] with the implication that fishers at the local level are now exposed to globalized market competition [5]. Since the 1960s, industrialisation of fisheries has altered the human–nature relationship with new technologies, long-range fleets and incorporation of previously unexploited waters [2,6–8]. In this process local coastal resources have become high-value export commodities, which has resulted in adverse effects for many local communities and the larger population through acts that have been labelled global ‘ocean grabbing’ [9,10,11\*]. At the same time, around 40%

of the world oceans have become severely affected by pollution, depleted fisheries, and loss of coastal habitats [12].

Over 90% of the fishing vessels and approx. 22 million fishers are considered small scale. Being mostly embedded within local communities, SSF play a key role as an 'employer of last resort' [3<sup>\*</sup>]. SSF also represent inexpensive protein, food security, and poverty relief for many, playing an important role in the fisheries sector as a whole [13], and in development more generally [14]. Among the complex challenges that characterize SSF are poor economic output, leakage of economic value, high levels of poverty, substandard governance, deficient management and lack of participation in decision-making processes [3<sup>\*</sup>,15,16].

Post-economic renovation Vietnam, post-Pinochet Chile, post-Apartheid South Africa and post-communist Poland have all adopted a neo-liberal economic model, subjecting SSF to the forces of globalization [17]. In Vietnam, export aquaculture generated resource pressure and conflicts [18–21]. In Chile, the export boom led to a benthic fisheries crisis [22<sup>\*</sup>,23]. In South Africa, SSF's increasing dissatisfaction with the pace of change, post-apartheid, was linked with commercial inshore fisheries quota allocations, which prompted the SSF to sue the fisheries authority in 2004 [24,25]. In Poland, after economic liberalisation, SSF's concerns were directed towards protecting the local fisheries and overseeing fishing access, and establishing rules and practices to avoid overexploitation [26,27].

### Case-study material

Against this global background of transition to neoliberalism and its concomitant effects, all of our case study countries, except Poland, have adopted Territorial Use Rights for Fisheries (TURFs). While the performance of TURFs in practice has been mixed [28–32], and its (current) applicability is limited to coastal areas inhabited by high-value sedentary species, this model offers a hopeful venue to regain control over fisheries, helping to secure fishers' livelihoods [33,22<sup>\*</sup>,34–37]. TURFs have the potential to redress key SSF challenges in the case studies examined in this article by (1) reasserting common property rights (Vietnam/Chile/South Africa); (2) enhancing women's participation in fisheries (Chile/South Africa/Vietnam), and (3) adding value through local distribution/direct sale (South Africa/Poland/Chile). Together, the four countries offer the possibility to engage in research across a number of different dimensions that are important for the sustainability of SSF and in doing so exchange transdisciplinary experiences across continents. While all of the SSF communities we include face unique sustainability concerns due to their varying historical, institutional and geographical contexts, the challenges

they confront resonate strongly with transformation for sustainability challenges found more widely in SSF.

### Theory

Given the enormity of the SSF challenges discussed above, a radical transformation approach was adopted for the research as a means to consider structural, agency, ecological and material dimensions of the different fishing settings [38–41,42,43,44<sup>\*\*</sup>]. Transformative institutional redesign must also be able to counteract the likelihood of unexpected adverse effects working unobtrusively to reinforce existing power structures [45,46]. To meet these challenges, we drew heavily on two approaches: (i) Wright's transformation theory of 'Real Utopias' to deal with social justice and institutional redesign [44<sup>\*\*</sup>,47], and (ii) political ecology to analyse social power over access to, and control over resources [48,49<sup>\*\*</sup>,50–52].

Wright's transformational strategies are: (i) ruptural (i.e., create new institutions through disruptive changes of existing structures); (ii) interstitial (i.e., build new — or rebuild old — institutions in the capitalist society's margins); and (iii) symbiotic (i.e., enable cooperation with the state and/or market) [44<sup>\*\*</sup>,47]. We focus on symbiotic and interstitial strategies as ways to support SSF's transformation to sustainability. Enhancement of social power through both of these strategies can convert into increased power over resource allocation and control over production and distribution [44<sup>\*\*</sup>,47].

Transformative research needs to be praxis-based. A transformative learning dynamic needs to inculcate new ways of being and becoming [53,54]. It [55] 'involves a dynamic interplay between reflection and action, between knowing and doing; between research and praxis (p. 887). Within a sustainability framework, this research advances the political standpoints and material welfare of SSF groups as a marginalised actor in fisheries and society. This necessarily involves challenging existing contingent power relations that work to constrain the existing conditions of SSF to contribute to sustainability in our different case study settings.

### Methodology

Our selected case studies offer a diverse array of transformational dimensions to conduct insightful analyses of how global and regional scale forces interact. The challenges faced by these SSF communities make them ideal empirical cases to negotiate the complexity of applying Wright's criteria for situated transformation trajectories [44<sup>\*\*</sup>,47] (Table 1).

The transdisciplinary approach adopted in this research maximises the possibilities of synergies between the more general and formalised scientific knowledge of academia with the experiential, context-based knowledge of fishers, in the pursuit of scientifically informed but

Download English Version:

<https://daneshyari.com/en/article/1051306>

Download Persian Version:

<https://daneshyari.com/article/1051306>

[Daneshyari.com](https://daneshyari.com)