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Dr. Alka Srivastava
Agrocraft Distributors,
Tajpur Road, Samastipur,
Bihar, India

Economic and socio-economic features of small-scale coastal fishing societies and prospects of alleviating poverty and empowerment

Dr. Alka Srivastava

Abstract

This manuscript reviews the main SSF (small scale fishing) problems in a variety of identified advanced nations, regions of the country in order to match related issues of interest to SSFs in developed and emerging nations and also to analyze whether anything can be gained from the distinction. Many of the research reported have shown that SSFs are typically productive. However, several of the surveys often find out that this would not imply that income from fishing alone is adequate to support families with children above the poverty threshold and above the basic wage level of countries. Research has discovered that, notably during poor fishing periods and low captures, communities are quite dependent on remittances from non-fishing operations as well as on government aid.

Keywords: Small scale fishing, poverty elevation, empowerment and critical identification

Introduction

The study gives an assessment of the problem faced by small-scale fishermen in countries in terms of: business and monetary success of fisheries businesses; weaknesses and income inequality; adjustments to the evolving environment, namely weather instability and start changing; and access to information, infrastructure, financial development and social security schemes. Also, it pays proper emphasis to the importance of women empowerment in small-scale fisheries (SSFs) (Saha 2011)^[1]. This paper reviews the main SSF problems in a variety of identified advanced nations, regions of the country in order to match related issues of interest to SSFs in developed and emerging nations and also to analyze whether anything can be gained from the distinction. Many of the research reported have shown that SSFs are typically productive. However, several of the surveys often find out that this would not imply that income from fishing alone is adequate to support families with children above the poverty threshold and above the basic wage level of countries (Das *et al.*, 2013)^[1]. Research has discovered that, notably during poor fishing periods and low captures, communities are quite dependent on remittances from non-fishing operations as well as on government aid.

In addition, further new research have also shown that small-scale fishing activities take place in an area whereby fishery supplies either are extensively fished or overfished, and where marine as well as riparian environments are increasingly deteriorating. Experiments also recognize that, in several areas, that there were no effective fishery management programs in place. Under certain terms, the survival and financial feasibility of SSFs are at significant risk. Research shows a need for an ambitious ecosystem-based fisheries and coastal zone management strategy and long-term management strategies that promote economic and environmental viability (Directorate of Fisheries, Government of Tripura, 2015 – Unpublished)

Women take a significant part throughout the SSFs, especially mostly in post-harvesting and pre-harvesting sectors, including as fisheries benefactors. Even so, globalization and regional integration of trade appear to endanger their role in the market research of fish in the some parts of the world. Women often play a significant role in fish processing, especially in lakes and nearshore zones, as well as in wetland fishing, with many family or community representatives. These also are interested throughout the processing of crustaceans and even in the propagation of many other marine species in marine resources including fisheries (Sheikh and Goswami 2013)^[12].

Corresponding Author:
Dr. Alka Srivastava
Agrocraft Distributors,
Tajpur Road, Samastipur,
Bihar, India

The obstacles and challenges towards reducing poverty and development of small-scale fishermen found can be listed together as described in the following: environmental problems; difficulties related to the regulation, management and protection of fisheries as well as other natural wealth; challenges raised by the creation and enhancement of fishing technology and operations; challenges inherent throughout the modern use of fisheries and marine environment (Pandey and Upadhyay 2012) ^[10]. The challenges and barriers to poverty alleviation and empowerment of small-scale fishers identified can be grouped as follows: environmental challenges; challenges related to governance, management and conservation of fisheries and other natural resources; challenges posed by acquiring and improving fishing technologies and operations; challenges inherent in the present use of fishery and aquatic resources. For example, how they will be treated, stored or sold, in the current mode of advertising and use of fishery goods and in the current socio-economic status of fishers (Singh 2003) ^[13]. The literature further discusses a variety of ways to address these obstacles. While several researches has been performed on SSFs, in specific on socio-economic aspects as demonstrated by this study, there will be a need for evidenced based research in the following fields, among many others:

- Effect of shifts in conservation and management frameworks on the living standards of small-scale fisherfolk and on insecurity and instability.
- Effect of property-and sea-based human activities on ecosystems, evolutionary history and food chains of animals fished by SSFs;
- Economic evaluation of marine and riparian habitats housing SSFs;
- Literature review on effective career diversifying of small-scale fishermen's living standards.
- Methods for measuring the equilibrium among, on the one hand, fishing campaigns and, from the other side, preservation of food and poverty reduction.

General characteristics and description of small-scale fisheries, according the Food and agriculture organization Glossary1, small-scale or artisanal fisheries are: conventional fisheries including smallholder farmers (as opposed to business ventures), using comparatively small quantities of resources and resources, pretty small fishing vessels (if any), make short fishing journeys, near to coastline, mostly for regional use. In fact, that meaning ranges from country to country, e.g. gleaning or canoeing in poor developed nations to even more than 20-m. Trawlers, hisses, or long liners in formed versions. Artisanal fisheries may be subsistence or industrial fisheries, allowing for local or export use. Often they are referred to it as small-scale fisheries. As a consequence of these variations, it is widely accepted that it is not acceptable to develop a concept that is globally relevant to the sector as competitive and complex as small-scale fisheries (SSFs) (Hussain, *et al.* 2009) ^[6].

Small-scale and artisanal fisheries make a major contribution to jobs. More than ninety per cent of the fishermen engaged in fishing are engaged in small-scale / artisanal fishing. In 2012, the last year for which FAO statistics are valid, that overall amount of fishers registered was 39 412 000 (FAO, 2014). Therefore, this can be concluded that there were 35,470,800 small-scale fishermen in 2012 (Hussain, *et al.* 2009) ^[6]. Several fisheries resources

include different climatic cycles of availability or access. Most fishermen engage in many other economic practices throughout these times and are called part-time fishermen. As per the FAO, full-time fishermen earn at least 90 per cent of their living standards from fishing or devote at least 90 per cent of the working hours in that profession. Part-time fishermen earn at least 30 per cent but far less than 90 per cent of their living standards from fishing or probably spend 30 per cent and less than 90 per cent of their work time in that profession. Infrequent fishermen earn less than 30 per cent of their income from fishing or spend less than 30 per cent of their working hours in that profession (FAO, 1996a; Hussain, *et al.* 2009; Singh 2003 and Pandey and Upadhyay 2012) ^[6, 13, 10].

Fishermen can change their fishing methods and equipment all year round in order to follow a series of different species with different cycles of occurrence. Small-scale fishing is normally part of a subsistence. The family / life methods aim to blend different ways of making a living. The other most complex livelihood strategies should focus mostly on widest possible variety of approaches and available resources, while minimising risks posed by natural or market vicissitudes. (Singh 2003 and Pandey and Upadhyay 2012) ^[13, 10].

The benefits of small-scale / artisan fisheries involve lower labour rates and reduced fuel usage. Small-scale fisheries strive to maximise human resources and minimise cost of fuel by using more passive gear and techniques including such handlining, based on current market, netting, fishing nets and reduced-intensity lighting attract. (FAO, 1996a; Hussain, *et al.* 2009) ^[6]. They often typically have a smaller ecological effect than large-scale and commercial fisheries; although, this should not indicate that they might not overpopulate the limited supplies accessible. Becoming more labour-intensive than large-scale and commercial agriculture, SSFs generate opportunities across both developed and developing countries for the farming, refining and trading of fish and fishery goods.

In several nations, SSFs still are evolving, economies are growing, particularly export industries, and technological advances are being introduced, including such advanced fishing equipment, echo sounders, satellite navigation systems, Transmitter radios and maritime protection equipment. An example of this is the introduction of longlining for large pelagic species intended for export industries by small-scale longlining ships in the Eastern Caribbean (Berry and Tietze, 2012a, p. 51), whereby small-scale fishermen conduct number of co-day boat trips and supply export markets.

Even so, SSFs are facing problems in several other nations. In specific, the sector is not given special importance in the country's phase of modernisation and growth. Artisanal fisheries are sometimes considered to be outdated, often due to lack of evidence and awareness of real patterns and socio-economic impacts. Two big developments are impacting SSFs: decentralisation and globalization as per Census 2011 (Government of Tripura 2014) ^[4]. In the one hand, continuing decentralisation mechanisms provide SSFs with opportunities to monitor their own growth through modes of community-based management or professional and non-management, but also with a shortage of ability to completely enforce certain incentives. In another hand, globalisation as well as its economic and political implications impact the lives of small-scale fishermen and

their populations, such as by levels of immigration of inexpensive packaged and refined fish from international capture fishing and strict food safety laws restricting entry to profitable markets (Khatun, S. *et al.*, 2013)^[8].

Many challenges to both the living standards of small-scale fishers include a multitude of marine activities that cause water contamination, the loss of fish populations, growing populations and immigration to coastal regions, and intensified competition and inflated costs for maritime property. Environmental damage impacts human health and welfare, as well as the availability of fish and the consistency of fishery products. The loss of protective mangrove forests and other coastal ecosystems adversely affects fishery resources, especially during the most fragile life stages of many species (Nandeesh, M. 2008)^[9]. Also it resulted in an imminent threat to coastal areas due to their heavy vulnerability to hurricanes and flooding.

Historic and contemporary attempts to resolve poverty reduction and food protection in small-scale fisheries The FAO World Conference on Fisheries planning and governance of 1984 (FAO, 1984) recognized the role and significance of the SSF industry. The plan for fisheries management and sustainability implemented at the meeting centered on offering aid to SSFs with such an emphasis on alleviating poverty, food production, sustainable fisheries performance and environmental protection.

Subsequent to both the meeting, substantial resources were distributed to investor and technology transfer organisations and also state governments for national and regional programmes, as well as research in support of SSFs and a greater understanding of the function and requirements of the field. Explanations include the FAO Bay of Bengal Program (BOBP) for both the planning and improvement of Fisheries, the Program for the Coordinated Production of Artisanal Fisheries in West Africa (IDAF) and the FAO / DFID Prosperous wellbeing opportunities.

Following the conference, considerable resources were allocated by donor and technical assistance agencies as well as national governments for regional and national projects as well as studies in support of SSFs and a better understanding of the working and needs of the sector (Khan, M. 1986)^[7]. Examples are the FAO Bay of Bengal Programme (BOBP) for Fisheries Development and Management, the Programme for Integrated Development of Artisanal Fisheries in West Africa (IDAF), and the FAO/DFID Sustainable Livelihoods Programme, along with national programmes initiated in the 1980s, 1990s and the turn of the millennium.

These programmes and initiatives facilitated the coordinated production and management of SSFs and broadened the reach of previous technical assistance initiatives beyond mere technology transfer to incorporate social, economic and environmental dimensions. The socio-economic and educational needs of fishing communities have been established and addressed by: Design and delivery of fisheries extension services; non-formal education and literacy programmes; promotion of alternative/additional income-generating practices with a particular emphasis on women; empowerment of women by community recruitment and training; incorporation of coastal fishing communities into current national rural development programmes; advancement and deployment of innovative fisheries, Aquaculture and postharvest handling technology and methodologies; develop and introduction of novel

marine lending and microcredit initiatives; and promote the involvement of fishing groups in community-based marine and coastal region performance management (Singh 2003 and Pandey and Upadhyay 2012)^[13, 10].

These and many other initiatives are planned and implemented in close partnership with global and subnational institutions and organizations and with the full participation of the fishing communities and fishermen involved. Even so, amid these efforts and many successes, the lack of technological ability to involve the small-scale market in many regional and national growth policies tends to impede the business's future participation. After 2003, the FAO Committee on Fisheries (COFI) has also encouraged initiatives to further enhance the visibility and awareness of the threats and prospects confronting small-scale fishing societies in inland and coastal waters.

The International Conferences on Small-scale Fisheries – Maintaining Sustainable Small-scale Fisheries: Putting Responsible Fisheries and Social Growth together, Bangkok, Thailand, 13–17 October 2008 (FAO, 2009) identified a range of crucial ways forward to ensure sustainable SSFs that combine ecological, cultural and economic progress, resolve resource access and human rights problems. It indicated a need for a systematic and organized policy to protect and extend the capacities and liberties exercised by fishing industry and native communities, namely democratic and political rights, to engage meaningfully in processes that decide their lives. The conference stressed the importance of human rights in promoting the sustainable development goals.

In 2011, COFI recommended the development of international voluntary guidelines to complement the Code of Conduct for Responsible Fisheries (the Code) as well as other international instruments with similar purposes. In 2011–12, consultations were widely held at the regional and national levels on the content of the guidelines, which culminated into two sessions of the FAO Technical Consultation in May 2013 and February 2014 to agree on the final text. In June 2014, the Thirty-first Session of COFI endorsed the Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines).² The implementation of the SSF Guidelines is expected to contribute to policy development and have considerable impact on securing SSFs and creating benefits, especially in terms of food security and poverty reduction (FAO, 1996a; Hussain, *et al.* 2009; Singh 2003 and Pandey and Upadhyay 2012)^[6, 13, 10]. The SSF Guidelines aim to promote good governance, including transparency and accountability, participation and inclusiveness, social responsibility and solidarity, a human rights approach to development, gender equality, and respect and involvement of all stakeholders (FAO, 2012, p. 17).

The Thirty-eighth Session of the FAO Conference held in Rome, 15–22 June 2013, reviewed FAO's Strategic Framework and identified FAO's five Strategic Objectives (SOs): (i) the eradication of hunger, food insecurity and malnutrition; (ii) the provision of goods and services from agriculture, forestry and fisheries in a sustainable manner; (iii) the reduction of rural poverty; (iv) more inclusive and efficient food systems at local, national and international levels; and (v) the resilience of livelihoods to threats and crises (FAO, 2013a). These objectives will guide the work of the organization until 2019.

Without a sustainable and resilient SSF sector, it will not be possible to fully achieve the SOs. The information and recommendations contained in this document aim to provide guidance as to how the SSFs sector can play a meaningful role, contribute to, and benefit from, the achievement of the SOs.

Conclusion

Writing conclusions based on the findings of the reviewed studies in this publication, likely to cooperate obstacles and difficulties to alleviating poverty and empowering of small-scale fishermen and make adjustments to overcome such obstacles and difficulties so that small-scale fishermen and their communities can overcome poverty, food shortages and susceptibility and participate on an equal footing. Most of the studies analysed for this paper indicate that SSFs are relatively efficient and produce enough gross sales to meet their running costs and earn some dividends. However, this does not mean that fishing revenue alone is adequate to support households at a level above the poverty line or at or above the country's minimum wage amount. Especially during poor fishing seasons and low catches, households are very dependent on income from non-fishing activities. In addition, small-scale fishing activities take place in an area where fishery supplies are either extensively fished or overfished and where marine and riparian environments are increasingly deteriorating. In certain cases, there are no effective fisheries protection systems in operation. Under these terms, the survival and economic feasibility of SSFs are at significant risk. There is a need for an integrated ecosystem-based fisheries and coastal zone management strategy and for the long term management policies aimed at promoting environmental and economic performance.

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