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Improving livelihoods in fishing communities of West Sumatra: More than just boats and machines

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ABSTRACT

Despite a raft of livelihood programs designed to help Indonesian small-scale fishers there are concerns that the needs of the poor are still not being addressed. This study examines this concern through a two-pronged approach. Firstly, through a broad-scale series of interviews with fishers, community leaders and government employees in 25 fishing villages in the province of West Sumatra to identify which sectors of the fishing industry the poor operate in and the types of livelihood initiatives targeted at helping them. Secondly, by using three case studies of livelihood development projects and identifying the social, economic and institutional lessons learned that point both to best and worst practice. Three groups of poor fishers were identified; a large group of non-boat owning “labourers”, a group of “small-scale boat owners” and a small group of “processors and sellers”. Empowerment programs by the Department for Fisheries between 2005 and 2009 emphasised improving *physical capital* through providing fishing gear, motorisation and processing equipment. These initiatives could potentially help small-boat owners but would not benefit non-boat owning labourers. The new livelihood improvement programme GPEMP had non-fishing alternative livelihoods that could help labourers, but still demonstrated an ongoing bias towards *physical capital* interventions. The three case studies demonstrated that aspects of leadership, trust, advocacy, administration, accountability and ongoing institutional support are key elements of empowering coastal communities towards livelihood improvement. Human and social capital components need prioritisation in future poverty alleviation policy and programs in Indonesia, particularly for the large marginalised group of labourers.

1. Introduction

1.1. Small scale fisheries and poverty; human and social capital in livelihood development

Historically, the emphasis of fishing development in both South-East Asia and globally has been on the physical capitalisation of the industry [1–3]. The logic was that bigger boats, more fishing gear and better infrastructure were keys to increased productivity which would lead to improved welfare through job creation, increased incomes, exports and improved food security [4]. Many of these goals proved mutually antagonistic. In Indonesia in the 1970s, US$59 million of aid was used to develop the tuna fishing industry with a view to developing exports, although only 3400 jobs were created [5]. In south India, the effect of over-capitalisation was even more drastic, with fleet modernisation reducing incomes of traditional fishers by 50% and reducing local food security [6].

Because the finite nature of the resource makes modernising the fleet a strategy susceptible to overfishing one response to “too many fishers chasing too few fish make too little income” [7] was to continue to emphasise fleet modernisation in order to maximise revenue which is then redistributed in a pro-poor way [8,9]. Besides the difficulty of collecting and redistributing the rent [10], particularly in a nation such as Indonesia where corruption is rife [11], this narrative reduces “poverty alleviation programmes in fisheries to an economic (rent capture) and fishing right issue and to a direct relationship between income and level of catch” [12] and fails to capture the social security elements that small-scale fisheries provide. For the landless poor or those facing structural poverty, small scale fisheries, as a common pool resource has the capacity to absorb labour [4] or act as a short-term safety net [13]. While the economic rent model has value in contexts of strong governance such as Norway, many developing nations need a welfare model for small scale fisheries that incorporates a broader understanding of poverty and its causes.

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While in the 1960s poverty was understood as a lack of income [14], it is now understood with reference to entitlement [15], empowerment [16,17], vulnerability [18], participation [19] and dignity and self-esteem [20,21].

For natural resource dependent communities the causes of poverty may extend much wider than biological overexploitation alone [22–24]. In Bangladesh, for example, entitlement failure restricted access to the resource by the poorest households [25,26] so that even when stocks where enhanced those benefits failed to accrue to the poorest families [14]. In order to capture a broader, multi-disciplinary understanding of poverty the Sustainable Livelihoods Approach was developed and has subsequently been applied to small-scale fisheries [27,28]. While the former small-scale fisheries development paradigm emphasised improving physical and financial assets through fleet modernisation and infrastructure projects, the SLA recognises that natural, human and social capital are important components of livelihoods too.

While the state of natural capital has long been recognised as crucial and underpins traditional fisheries stock assessment it is only relatively recently that there have been calls for a social-ecological systems approach [29–31] which incorporates the human and social components of livelihoods as well [32,33]. Social capital "lowers the transaction costs of working together, and facilitates cooperation" [34]. It reduces the costs of monitoring and enforcement through building confidence and trust in the belief that by working together all will mutually benefit. Social capital has been the basis for hundreds of thousands of resource management and micro-finance groups [34]. Women's self help groups (SHGs) in Andhra Pradesh, India, is one such example [35]. Since 1979 more than 4.8 million poor women have been mobilised into SHGs. These SHGs as well as providing financial credit, build human and social capital through leadership training and development, providing a voice to the voiceless and through the groups themselves building a political platform through which institutions can be influenced. In their review of 130 global case studies of fisheries collective management, Gutiérrez et al. [36] found that strong community leadership and social cohesion were critical components of success. Similarly, in both Marine Protected Area management [37] and fisheries cooperatives [38] good governance, social capital and conflict resolution are all needed to ensure sustainability. Whether originating from a poverty alleviation viewpoint [35] or from a more general resource management perspective [36], the same principles of social cohesion, trust and leadership are pertinent to both. Financial credit and physical capital are necessary parts of livelihood development, but without strong natural, human and social capital foundations, they are unlikely to lead to sustainable resource management and livelihood improvement.

1.2. An Indonesian response

The Indonesian Government's approach to poverty has mirrored the evolution described above. Programs prior to the 1990s tended to ignore the complexity of poverty, which was the result of poor *human resources*, lack of *social infrastructure* and problems in *natural resource* management [39]. But contemporary approaches recognise the importance of social capital in the development process, with community empowerment being one of the three main clusters of poverty alleviation programs [40]. Translating these concepts from policy into implementation has not always been easy. In 1993 a new empowerment approach was introduced that was designed to tackle inequalities by improving human capacity through universal basic education, health care and social protection. A classic example of this approach was the programme IDT (*Inpres Desa Tertinggal*), which encouraged the formation of SHGs to manage grants to improve economic opportunities for the poor [39]. Sadly, it was undermined by village leaders dominating the process and by the SHGs being formed only for the project and failing once the money dried up. Similarly, in a US$50 million ADB project conducted from 1998 to 2006 designed to safeguard natural resources and alleviate poverty, the project exceeded their target of forming groups, but in the majority of cases these groups did not translate into poverty alleviation [41]. In 2006 the National Community Empowerment Program (*Program Nasional Pemberdayaan Masyarakat—PNPM*) was introduced [42]. This ongoing successful programme recognises the importance of social capital and aims to alleviate poverty through the mutually reinforcing goals of improved socio-economic conditions and improved community-level governance.

Despite encouraging signs including the Poverty Reduction Strategy Paper framework [39] and a reduction of households in poverty, there are still "a large group of vulnerable households" who, facing small shocks, are likely to fall into poverty again [43]. Also of concern are the ongoing challenges of regional autonomy, multiple programs and levels of governance, and a variety of government departments that have engendered a lack of co-ordination between poverty alleviation programs [42].

In response to these concerns, the Governor of West Sumatra, in January 2012, announced a new 4 years initiative; the "Economic and Welfare Movement of Coastal Communities" (GPEMP: *Gerakan Pensejahteraan Ekonomi Masyarakat Pesisir*). GPEMP is targeted at the poorest households regardless of their primary source of income. Fourteen government departments would work together at national, regional and local levels under the coordination of the lead agency, the Department for Fisheries and Oceans (DKP), to

- Strengthen existing technology and human capacity of coastal residents.
- Develop supplementary fisheries and aquaculture based livelihoods.
- Develop the processing and "down-stream" aspects of fisheries.
- Develop supplementary livelihoods outside of fisheries and aquaculture.

In light of this evolving understanding of poverty, the aim of this research was to evaluate whether current livelihood improvement programs are targeting the needs and constraints of the coastal poor in one province of Indonesia, West Sumatra. To assess this

(1) Sectors of the fishing industry that poor households operate in were identified.
(2) Government Interventions targeted at improving livelihoods and alleviating poverty were described and analysed.
(3) Three case studies were used to illustrate the social and human capital factors that influence the success or failure of livelihood improvement initiatives in fishers groups.

2. Methods

2.1. Identifying the sectors of the fishing industry that the poor operate in

Areas of high fishing poverty were identified from 2008 poverty data [44]. Preliminary interviews with field extension officers and office-based staff in the Department of Fisheries and Oceans (DKP) identified key informants in the fishing villages. These initial contacts led to further interviewees through "snowballing" [45]. Semi-structured interviews were conducted with these individuals and small groups of fishers and their wives in 25 fishing villages (Fig. 1) in the province of West Sumatra in order to explore; (1) the livelihood portfolios of poor fishing households, (2) the nature, history and causes of poverty and (3) perceived