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# Collective action and co-management initiatives in post-disaster Aceh, Indonesia

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## Abstract

Studies of post-disaster rehabilitation tend to focus on the immediate vulnerabilities of those who survive. Far less is written on the efforts focused on important longer term human capacity development and organisational innovations needed to secure a sustainable future for them. This study, set against the background of the 2004 Asian tsunami deals with the latter. It narrates the initiative of a development assistance program in Aceh Province of Indonesia which was a collaborative effort of the Food and Agriculture Organisations of the United Nations (FAO) and the American Red Cross (ARC). It describes the strategy adopted in negotiating collective action to foster a new co-management initiative aimed at reviving a small-scale fishery and coastal communities, that were socio-politically isolated and bound by customary practices, to collaborate with state and civil society. The study examines in some detail the process adopted, its achievements and failures, the lesson learnt, as well as its hopes for the future.

**Keywords:** Collective action, Co-management, Custom, Small-scale fisheries, Organisations, Coastal community

## Introduction

The natural disasters which struck the Asian Region over the past decades remind us of the severity and scale of post-disaster vulnerabilities wrought on coastal communities that are already economically and socially insecure. Important studies undertaken following the disasters focus on the short-term, immediate physical and socio-economic vulnerabilities of those who survived these tragedies as they recuperated and put together their lives and livelihoods (Flint and Goyder, 2006; UNEP 2009; Jayasuriya and McCawley, 2010; ADB 2013) Less is written about the collective action, human capacity development and negotiation of post-disaster organisational innovations undertaken with a mix of strong community involvement, revival of customary practices, re-orienting state bureaucracies and instituting new legal procedures. (Birkmann et al. 2010; Birkland 1997, 2001).

This study is set against the background of the 2004 Asian tsunami. The tsunami further exacerbated the collective and individual multi-faceted vulnerability of those who survived in the coastal areas. These include: the loss of loved ones, particularly women, children and the elderly; the resulting demographic conundrums and loss of sense of community; the destruction of occupational assets and the consequent uncertainty of livelihood options; the loss of housing and the associated fall in living

standards and health; the psychological trauma of having survived the disaster and the fears of not being able to cope.

The study narrates the initiative of a development assistance program along four districts of the west coast of Aceh Province, Indonesia situated on the northern end of Sumatra island (see Fig. 1) between 2007 and 2010, which was a collaborative effort of the Food and Agriculture Organisations of the United Nations (FAO) and the American Red Cross (ARC) – hereafter referred to as ‘the Program’.

The study describes how the Program attempted to facilitate collective action by various constituents in the disaster-affected small-scale fishing villages representing the community, state and civil society. The focus of the collective action was to bring together these constituents for negotiating a co-managed organisational innovation. Each partner would have a spectrum of rights and responsibilities in reviving a damaged fishery, addressing issues of livelihood enhancement and fostering capability development for building greater resilience against future vulnerability.

**The entities studied**

The focus of this study is on a group of five organisational entities, facilitated by the Program, which commenced functioning in the west coast of Aceh Province of



**Fig. 1** Map of Aceh Province, Indonesia

Indonesia after 2008. These entities were not envisaged as conventional fisher organisations of the type well-known around the world – associations, cooperatives, unions and so forth. Instead, they were based on the principle of co-management of fishery resources for sustainable livelihoods by multiple interest groups – importantly the active fishers, the youth and women in the coastal community, civil society and the representatives of the state. The entities were envisioned as an effort to ‘build back better’, given the physical and socio-political complexities prevailing in the post-disaster context.

The study is based on the first hand knowledge of the author, who was a team member of the Program and responsible for the co-management activities facilitating the process of creating these entities between 2007 and 2010. The author re-visited the Province in 2012 and 2013 to assess the post-Program fate of the entities. The material used for the study includes the process notes maintained by the author (Kurien 2010), secondary data (DKP Aceh, 2012) and extensive field discussions conducted during the visits in 2012 and 2013. This study should be viewed as an ‘insider’ account of the organisational innovation process and its development. It is thus marked by the merits, demerits and biases of such accounts. However, a conscious effort has been made to examine the evolving dynamics of the entities from as ‘detached’ a perspective as possible.

The main purpose of this study is to provide a brief diachronic analysis and analytical description of the entire collective action process focusing on the dilemmas and prospects of organisational innovations premised on co-management and their relevance in post-disaster contexts.

### **The basis of collective action and understanding of co-management**

The literature on collective action is premised substantially on the early work of Olson (Olson 1967) which arises from an individualist oriented society where individual self interest is taken to be the norm. In such a context, it is assumed that if coercion or selective incentives are not offered, members of a large group will tend to act in a calculative and self interested manner and will not pursue the collective good. Olson suggests that members will tend to ‘free ride’ off the interest of those who support collective action.

The basis of collective action which was attempted to be fostered and negotiated by the Program was not premised on these Olsonian assumptions. In the fallout of the common and collective tragedy which beset the coastal communities of Aceh as a result of the tsunami, those who were spared the wrath of nature developed a strong interpersonal commitment to work together. This is what Gilbert (Gilbert 2006) calls “joint commitment” or Searle (Searle 2002) refers to as the “we intention” or “collective intentionality”. This sense of “community” among the people of Aceh was also created by the special socio-political history of the Province which we will describe below.

By co-management we are referring to arrangements of power sharing for resource management between sections of the resource users/ beneficiaries and different governance levels of the state. We envisage the process of co-management as a dynamic context of organisational innovation involving wide ranging discussions, capacity building and collective learning in which rights and responsibilities are jointly crafted. Following on Jentoft et al. we consider co-management to be “about the communicative and collaborative process through which rules are formed: who

participates, how debates are structured, how knowledge is employed, how conflicts of interest are addressed, and how agreements are reached" (Jentoft et al., 1998).

When a commitment for collective action is innate in the fabric of the society for a variety of reasons which are both proximate and historical, then efforts to negotiate institutional arrangements based on joint or co-management do have greater chances of success. However, this does not do away with the possibility of individual ambitions and perspectives getting the upper hand at times and introducing the 'prisoner's dilemma' into these efforts. This could, in a large multi-interest group, result in individual preferences trumping joint commitments as suggested by Olson.

## **Contextualising post-disaster Aceh**

### **Aceh after the tsunami**

Aceh Province grabbed world attention after Christmas Day of 2004.

On the morning of 26 December 2004, a gigantic and unprecedented earthquake with a magnitude of 9.0 on the Modified Mercalli scale struck. It was followed shortly by one of the largest tsunamis recorded in human history. These events took human lives by the hundred thousands and severely damaged property as well as livelihoods, valued at several billions of US dollars.

It has been estimated that in Aceh as a whole, between 15 and 20% of the total number of fishers died in the tsunami, meaning about 14,100-18,800 individuals. A significant share of the fishing vessels were destroyed and a major part of the fishery infrastructure was also partially damaged and often beyond repair.

However, what is less well-known is that the tsunami radically altered Aceh's political and social context.

Aceh Province and its people had been experiencing a long-drawn, low-intensity, socio-political conflict between the popular *Gerakan Aceh Merdeka* (GAM) – Free Aceh Movement – the Indonesian central government and its armed forces for nearly three decades (Reid 2006). This had led to political isolation of the province from the mainstream development processes in Indonesia. Despite the wealth of natural resources (land, oil, natural gas, forests, fish), Aceh was considered a poor province of Indonesia. Finally, in October 2004, a peace and autonomy agreement was carefully brokered between the Indonesian Government and the GAM, with the former President of Finland (Martti Ahtisaari) playing the role of arbitrator. It was the devastation of the tsunami, 2 months later, which finally brought both parties together to demonstrate that they meant business. A peace accord called the Helsinki Agreement was signed on 15 August 2005, 7 months after the tsunami (Kurien, 2007).

One significant provision in the Helsinki Agreement was that Aceh would have greater control over the management of all its natural resources. This freedom was incorporated into the Law on Governance of Aceh (LOGA) passed in 2006 by the Central Parliament of Indonesia giving the Province of Aceh the rights to manage and utilize all its natural resources – importantly, oil, gas, forests and fish – for the benefit of its people. This implied not only control over revenues, but also freedom to make innovative and new institutional and organisational arrangements. Herein lay the opportunity for the Program to foster collective action and experiment with new organisational innovations in marine fisheries.

### **Post-tsunami fishery aid**

There have been few disasters in the world where marine fishing communities were so totally devastated. The hallmark of the aid operations was the significant importance given to the fishery and the coastal community. Aid agencies responded mainly by making immediate arrangements for distribution of boats, which was seen as the most obvious asset needed for survivors to make their livelihood from the sea.

However, in many villages the boats distributed were inappropriate for use at sea and remained unused. A large number that were poorly constructed were also quickly damaged at sea. Boats were in surfeit, while nets and other fishing gear were in short supply. This prompted individuals to invest in not-so-expensive nets, such as mini-trawls, just to make a living. These non-selective nets initially yielded high levels of fish catch, which resulted in their rapid diffusion. Their negative consequences on the coastal eco-system were ignored in the initial fervour of re-establishing livelihoods.

Individuals who were not customarily involved in fishing but lost their livelihoods as a result of salinization of their land by the tsunami seawater, began to appear as labour on the boats operating the mini-trawls. Fishing was not their forte. The traders who financed the nets and boats hardly cared to make distinctions between good fishing gear and gear that was destructive of the ecosystem, as long as they caught fish.

Gradually, tensions began to develop between the customary small-scale fishers who were using passive, selective fishing gears governed by numerous customary norms and those who used mini-trawls in total disregard of custom and the damaging effects of such fishing on the eco-system.

### **Post-tsunami fishery**

The fishery of Aceh was a beach-based, small-scale fishery before the tsunami and continued to remain so after. According to the *Dinas Kelautan dan Perikanan* (Department of Ocean and Fishery – DKP for short), in 2001 there were 11,288 fishing boats. Of this total, 88% were small-scale – i.e. non-motorised, fitted with an outboard motor or below 5 gross-tonne capacity. As of 2004, the year of the tsunami, the number of boats had increased to 15,576. However, by 2008 the number increased further to 17,584 reflecting the largesse of the development assistance and the larger-scale boats increased from 12 to 20%. However, in 2011, after all the aid agencies which supported post-tsunami technical assistance in fisheries had left, the number of boats in Aceh numbered dropped back to 15,995. This decline was significantly the result of the ‘mortality’ and ‘disuse’ of the poor quality and inappropriate tsunami boats. Of this total, the smaller boats accounted again for 86% signalling that Aceh remained a small-scale fishery.

### **Custom and the fishery**

The fishery of Aceh was dominated by customary practices for many centuries. The head of the customary institution in the fishery was called the ‘*Panglima Laot*’, which roughly translates as the ‘Sea Commander’. It is important to note that the individual and the customary institution are known by the same name.

The Panglima Laot was an institution set up by the ruling Sultan of the erstwhile Kingdom of Aceh about 400 years ago. Its prime function at that time was that of a decentralized navy, intended for coastal protection. In more recent times, when the

naval function lost its relevance, the individual Panglima Laot became the elected leader of the fishing skippers or *pawang*s of each of the coastal settlements.

Each Panglima Laot controls a territory called a *lhok*. The lhok is a socio-ecological spatial unit composed of sea and coastal land. In its original structure, the Panglima Laot (the institution) can be compared to a necklace. The beads are the lhok. The string is the *Hukom Adat Laot*, the Customary Law of the Sea.

The Hukom Adat Laot contains norms and rules regarding access and allocation of coastal resources. It also deals with the important issue of conflict resolution over these resources. The rules are not written down but passed down from generation to generation by word of mouth and praxis. One of the tragedies of the tsunami was the death of several of these customary leaders – many of whom were vanquished by the monster wave while they assisted others in the community to seek safety. The coastal community members who survived the tsunami almost immediately elected new Panglima Laot. The new leaders were often either very young and inexperienced or old and unprepared to take on the onerous responsibility. Given the circumstances, many who were not full-time fishing skippers got elected. This was an exceptional situation following the tsunami, only done to ensure the survival of this social institution.

It is important to note that during the decades of political isolation of Aceh from the Indonesian mainstream, this customary context give the small-scale fishery a sense of cohesion, identity and autonomy. In the post-tsunami context this was a major factor in promoting collective action towards co-management.

### **Preparing the ground for fisheries co-management**

It was against this background that the Program set to initiate its organisational innovation efforts using the new approach of co-management activities. The focus was on bringing together youth from the coastal communities, fishers and the officials of the DKP in the four western districts of Aceh most affected by the tsunami.

The process of negotiating co-management initially involved a three-fold strategy: (1) awareness creation, (2) capacity building and (3) field action. Those who participated as the key interest groups included: young men and women from the coastal community, the members of the Panglima Laot and the representatives of the state (primarily staff of the fishery departments (DKP) of the districts and the province).

As many as 400 individuals from the above mentioned groups, representing four districts of the western coast of Aceh, were directly involved in all aspects of the strategy for over a period of 3 years (2007–2010). Some of the important details of the different awareness raising, capacity building and field action programs initiated are described as they were the foundation for fostering collective action to create the new organisational innovation based on co-management. The initial field activities of co-management were rejuvenation and conservation of marine resources destroyed by the tsunami as well as livelihood restoration of coastal communities.

#### **Awareness**

##### ***Foundations for co-management***

In 2007, awareness creation products were widely disseminated in the coastal areas to highlight the meaning and relevance of co-management. These included posters,

brochures and calendars using idiomatic expressions found in Acehese culture and Islamic teachings to sensitise people about the need to work together to 'Sustain the Sea' – or '*Peujroh Laot*' in Acehese. The services of the Panglima Laot network were ensured for dissemination of these products through the *kadai kopi* (coffee shop) in each lhok and also during the community meal after breaking of the fast during the holy month of Ramadan.

Following this awareness campaign, the issue of a training course for young men and women of the communities was mooted in all of the four districts. The key leaders of the village – customary, religious and official – were contacted. The criteria for selection were mutually agreed upon. This ensured collective support for the selection and a moral obligation for the youth to serve the lhok after the training.

### **Capacity building**

#### ***Youth for responsible fisheries***

The training course lasted 3 weeks and focussed on skills for community organisation and technical and social aspects of fisheries co-management. It was composed of knowledge inputs and a learning-by-doing process involving a participatory pedagogy. A cadre of 164 youth (33 women) who were enthused and committed to the cause of community action for fisheries co-management was formed. These youth went back to their villages to play the role of 'creative irritants' in the formation of the new co-management organisational entities. They were named Motivator Masyarakat (Community Motivators) or MM for short.

#### ***Fishers for co-management***

At the Panglima Laot Provincial Convention in December 2007, the author made a presentation titled "Fisheries Co-management: Is it Relevant for Aceh Today?" This was the first occasion when this concept was discussed by fishers in Aceh. Capacity building of the fishers later took the form of meetings and workshops at the provincial and district levels.

The Panglima Laot had been largely in an 'adversarial' position vis-à-vis the state during the three decades prior to the tsunami. The idea of collaborating with the state was hence not readily acceptable to many of the individual Panglima Laot. As custom provided the coastal community with an 'identity', it was important to foster customary practices which helped to assert the rights of the coastal community over the fishery resources. Most important was the role of conflict resolution on matters relating to the fishery for which the Panglima Laot authority was accepted by the police, navy and the civil administration.

#### ***Re-orienting the officers***

Many of the staff of the DKP had no earlier fishery education or training. Consequently, many of them were reluctant to visit the coastal areas, shy of exposing their ignorance to the community and the Panglima Laot.

First, a small group of key officers from the districts and the provincial level were selected for a study tour of Malaysia to expose them to the fisheries management approach of that country. The choice of Malaysia for the study tour ensured that there were no inconveniences from the point of view of language, food habits, and religious practices. This ensured that the participants could focus full attention on the lessons to be learnt. The trip exposed the officers to a wide range of management practices and

convinced them about the need for greater resource management and conservation in Acehese fisheries and the significance of coastal community participation in these.

Short duration fisheries co-management courses were offered focussing on officers at the district level. The pedagogy focussed on a process of 'group discovery of realms of ignorance' to prevent any 'loss of face' by individuals officers. The use of role play, case studies and games made the process of overcoming one's ignorance and lack of knowledge an enjoyable endeavour. The training focused on the significance of small-scale fisheries and the four components of management, including conservation, regulation, allocation and rejuvenation. The role and challenges of multi-stakeholder fishery governance in the new Aceh political context was also debated.

The training was intentionally devised to also highlight that inter-district coordination is more important for managing a fugitive resource like fish than it is for land-based activities. The personal rapport developed between the officers of the districts was a significant factor towards fostering future cooperation. In addition, the rapport that they developed with the Program staff greatly helped the latter when facilitating the co-management initiatives.

### **Field action**

#### ***Fisheries co-management in action***

The first step towards putting fisheries co-management into action was taken in September 2008 by an informally constituted co-management forum in each district. The lead role in putting together this initiative was taken by the cadre of enthusiastic MMs in each district.

The forum became a vehicle for getting on board the PL members, DKP staff and also the authorities involved with general administration and governance of the district and villages. They discussed the nitty-gritty details of putting co-management into action. The main outcome was that five fishery co-management entities were initiated in different parts of the west coast of Aceh between late 2008 and early 2010.

#### ***Legal framework for governance***

The legal framework for constitution of the entities was the *Surat Keputusan* (SK), which is a decree of the *Bupati* (District Head). Although the SK had a very lowly position as a legal instrument, it served as authorization "*for exercising rights over a designated space, by a defined group of persons, for the good of society.*"

### **Dynamics of the co-management entities**

The plans for action made by the new co-management entities (see Table 1 below) and the concrete dynamics of their functioning were not always in tandem. This was due to a host of specific social situations and political happenings in Aceh from which the entities could not be insulated. What follows is a brief enumeration of events and processes in the five entities between 2008 and 2013.

#### **Aceh Besar District**

Aceh Besar District is the northern most district of Aceh Province. It surrounds Banda Aceh, the capital city of Aceh Province. Co-management action was initiated in Lhok Lampuuk by the keen interest of Panglima Laot Pak Daud. The MMs, who were young

**Table 1** Indicators on the five co-management entities (in geographic order from north to south along the west coast)

Name of entity (Date of start)	Villages; Fishers; Coastline length	Number of Facilitators (PL = Panglima Laot MM = Community Motivators DKP = Fisheries Staff)	Planned activities
KAWASAN BINA BAHARI (August 2009)	5	1 PL	Foster multi-stakeholder interests in the sea and coastal ecosystem in a peri-urban setting; fishing; tourism; livestock rearing; coastal afforestation; industry
	70 2 km	3 MM 2 DKP	
KAWASAN PEUDHIET LAOT (November 2009)	10	1 PL	Map and protect small islands; create a fish sanctuary; replant corals; protect small island ecosystems; plant mangroves
	171 25 km	7 MM 2 DKP	
KAWASAN RAMAH LINGKUNGAN (October 2008)	5	2 PL	Map and protect the bay; create a fish sanctuary; replant corals; plant mangroves; regulate fishing; develop women's supporting activities
	378 9 km	5 MM 2 DKP	
KAWASAN PEUJROH LAOT (August 2009)	8	2 PL	Propagate merits of selective fishing; take political and moral initiative against mini-trawling; foster more gender balance to support responsible fisheries
	1031 8 km	4 MM 4 DKP	
KAWASAN BEUJROH LAOT (July 2009)	10	5 PL	Develop active community surveillance against illegal fishing; move towards small-scale selective fishing; coastal afforestation
	445 35 km	10 MM 4 DKP	

fishers, helped to create wider linkages with the community. Some senior officers of the District DPK who had visited Malaysia, were committed to experimenting with the idea of co-management. Together they worked towards formation of the legal entity called Kawasan Bina Bahari (KABARI).

#### ***Kawasan Bina Bahari (KABARI)***

The aim of the KABARI was to promote safe, legal and responsible fishing practices; link up with the tourism industry on the beach to protect the coastal zone resources both on the land and sea; and promote safe and responsible domestic tourism.

The persistent efforts of the Executive Body of the KABARI convinced tourist entrepreneurs about the benefits of collective regulation of their activities. In 2012, an association of 39 *ikan bakar* (fish grill) stalls on the beach was formed. Together they were able to ensure the beach's cleanliness by getting as many as 15 persons to invest in pay-and-use shower and toilet kiosks on the beach.

The fishers of KABARI, a total of 70 individuals, owned 25 boats and sold most of their reef fish to the fish grill stalls at remunerative prices. They also shared four large FAO constructed fibre-glass boats. When not fishing, the boats were rented out as tug-boats to entrepreneurs who had started joy rides in the bay. An arrangement was made wherein one share of the earnings from the use of the boats was given to the Panglima Laot welfare fund for fishers.

The DKP provided KABARI with over IDR193 Million (US\$18,300) for conservation initiatives in coral reef and turtle conservation. The Department of Forestry provided saplings and training for coastal afforestation. The Department of Tourism funded a stage on the beach where music performances could be held and trained 100 KABARI

sponsored community members in the etiquette and practices of community-oriented tourism resulting in greater sense of participation of the whole community in tourism.

KABARI linked up with a local Acehnese student NGO called Coalition for Advocacy of Aceh's Sea. This committed group of university students took the initiative for turtle protection. With the support of the District DKP, they constructed an olive ridley turtle 'grow out' tank. The Aceh Conservation Board undertook training for 45 persons on various aspects of coastal conservation.

The MM team in KABARI became the key 'networker' among the different stakeholders.

The continuity in the top leadership of DKP was an important factor in sustaining the state's executive interest in the initiative. This happened despite the changes of the Bupati in the District.

KABARI conducted quarterly meetings of its Executive Board. They discussed management and governance issues more frequently on an informal basis. One weaknesses of this informality was the lack of records and hence institutional memory – a lacuna they became aware of when requested to submit their official records for audit as a prelude to obtaining more state assistance.

Pak Daud understood the close and concrete inter-linkages between forest conservation in the nearby hills and the productivity of the sea. This was one of his chief concerns. His moral leadership in the initiative was crucial in maintaining and consolidating the spirit of the KABARI –while also highlighting it as an eco-system linking initiative.

The co-management entity flourished and grew due to strong leadership, the fishers having a major stake in it, committed support of the state and enthusiastic participation by the local business community. Factors such as proximity to the capital, the growing popularity of Lhok Lampuuk as a local tourist spot and several unintended fortuitous circumstances like links with good NGOs also greatly contributed to success.

### **Aceh Jaya District**

Aceh Jaya District lies south of Aceh Besar district. Two co-management entities were instituted there.

#### ***Kawasan Ramah Lingkungan (KRL)***

The Kawasan Ramah Lingkungan (KRL) of Aceh Jaya was the first co-management entity started in October 2008. A large bay near Calang, the capital of Aceh Jaya, was chosen as the site for the initiative by an MM from Lhok Rigah. The Program chose a Community Organizer to reside with the community to facilitate getting the stakeholders to work together.

Training for coral replantation and scuba diving was organized. The Department of Tourism provided scuba diving gear to the trainees. The training and the gear together it gave a boost to conservation of corals destroyed by the tsunami. There was huge community participation for coral mapping and replantation with perceptible increase in fish life in the bay and hence giving the initiative strong support from the fishers.

The DKP staff provided proactive and keen leadership. Exciting results were visible in 3 months. The Bupati came personally to Lhok Rigah and took a boat ride to observe the quick rejuvenation of biomass and growth of corals.

The Secretary of DKP Aceh Jaya and two officers involved with the Program ensured that co-management was fully integrated into the thinking, the policy making and the actual financial planning of the DKP. They were proactive in getting support of the Province DKP as well as from the Ministry of Marine Affairs and Fisheries (MMAF) in Jakarta to further the idea of co-management as a form of governance of fishery resources.

Financial support from DKP and the Aceh Jaya parliament (through the Aceh autonomy funds) amounted to about IDR950 million (US\$86,000). Until 2010, the funds were utilized for, inter alia, construction of small office facilities, purchase of diving gear, site mapping, funds for creation of a master plan for the district, funding of seminars and community awareness events to publicize the concept of collective conservation. The budget for 2013 included allocation for providing training for diving and purchasing a small monitoring and surveillance vessel.

Fishing in the KRL area was strictly controlled and monitored. The use of selective fishing gear was mandatory. The number of full-time fishers did not increase between the years 2008-2012 and remained at about 370 persons. It was reported that catches in the bay area were higher than before. However, no statistics were maintained at the KRL.

A women's group was formed by the Community Organizer and the two young women MMs of the area. The women (mainly wives of the fishers) were very enthusiastic and availed of special training to manage their savings and credit union. They called their group *Kelompok Amal Usaha Mandiri* (KAUM) – meaning Group for Undertaking Independent Business.

The history and the data obtained from the KAUM was impressive. Their objective was to facilitate the small-scale enterprise initiatives. They were an integral part of the discussions on sustainable fishing and the benefits of co-management and acutely aware of the credit crunch of their husbands who wished to purchase selective fishing gears required. They started with 35 members in 2009 and their own savings of IDR30 Million (US\$2700). By 2013, they had enrolled 85 members. They negotiated a grant from an NGO of IDR60 million (US\$5500). A large share of the credit was offered to their husbands to buy fishing gear. By the end of 2012, circulating the initial capital, they had disbursed 234 loans valued at IDR663 million (US\$60,000), of which 65% was for purchasing fishing equipment. The remainder was utilized for small enterprises such as setting up retail stores and coffee shops; capital for cake making; and for educational purposes.

The DKP of Aceh Jaya established links with the Fisheries Faculty of the local university. Though this link, students spent time in Lhok Rigah as part of their community-interaction curriculum. Over 75 students participated in this program during 2011-12.

In 2012, the Province DKP invited MMAF in Jakarta to visit Aceh Jaya to study and evaluate the co-management and conservation achievements in Lhok Rigah. Based on this evaluation, the Bupati re-issued the SK incorporating more provisions to strengthen the co-management and conservation procedures in the KRL area, including special demarcation of 'no-go' zones with buoys and further extension. The MMAF also allotted funds for further support to KRL activities.

In early 2013, a series of socio-political events, created an unexpected turn of events. These events led to the MM departing from the village and the DKP Chief losing his job. The newly appointed Chief had no fisheries background and little interest in resource conservation or management. As part of his own reorganisation process, staff

who were strong supporters of co-management and also DKP representatives on the EB of KRL were transferred out to other departments.

Concurrently, a businessman, after negotiating with the Chair of KRL (who also served as the Village Head of Rigah) in his official capacity as *Keuchik*, set up a *kadai kopi* and stalls for people to relax on the bay-front. This resulted in *ipso facto* privatization of the bay-front. Though the Village Head had the authority to grant this permission, he had violated the collective spirit and the SK provisions of KRL that he headed. This fact was not lost on the people. However, they did not question the Head on the conflict of interests, due to the problematic fact that he held two posts, one as Village Head and the other as Chair of KRL.

The unexpected decline of this co-management entity was as rapid as its rise. The growing differentiation in the socio-economic and political realities of Aceh was taking its toll on the nascent organisational innovation.

#### ***Kawasan Peudhiet Laot (KPL)***

The co-management entity in the northern end of Aceh Jaya was called Kawasan Peudhiet Laot (KPL) and started in 2010 just when the Program was winding up. The realm of KPL consisted of a panoramic bay and numerous small islands where illegal and destructive fishing by fishers from other lhok was the seemingly irresolvable problem. The completion of the Program and the relative physical isolation of KPL provided the entity with its own merits and risks. Though it forced people to be more self-reliant and innovative, it could also sap enthusiasm. Given these challenges, the post 2010 initiatives of KPL were impressive.

The DKP attempted to compensate for its 'distance' by providing the KPL entity with an office building costing IDR115 million (US\$10,500) and by ensuring the speedy mapping of the site, making official pronouncements of its existence and informing MMAF in Jakarta.

The KPL established its own patrolling squad to keep away illegal fishers and those using bombs. At times, the squad was questioned by the illegal fishers (and also sometimes by the police) about their legitimacy and authority to take such conservation measures in the open access realm of the sea. This did not deter them but rather made KPL more determined to further develop their conservation area and for it to be recognized by the government.

Collecting their own funds, the KPL under the leadership of knowledgeable fishers, took measures to erect a gate to enclose the natural nursery in the reefs between the small islands. However, the gate was destroyed by the strong waves. This did not deter the spirit of the community. The DKP quickly stepped in and provided IDR90 million (US\$8200) and technical assistance to solve the problem.

Completion of the USAID road to Banda Aceh brought the urban market of Banda Aceh closer to them. This prompted the 170 fishers in the KPL to organize new measures to get the best price for their lobster catches. Prices increased on average from IDR170,000 per kg in 2011 to IDR220,000 per kg in 2013 (about US\$15 to US\$20 per kg) during the season. They also set up a lobster 'grow out' habitat in the estuary using their own understanding of lobster biology. The fishers also made a conscious shift to use more species-specific and season-specific gillnets and driftnets. The pay-off for this transition was significant, as fishers perceived their harvests to be of larger-sized lobster which

secured higher prices. No greater incentive was required to enhance this trend towards selective fishing. Women played a significant role in sustaining it as they took the initiative of repairing and maintaining the delicate gillnets for their husbands.

There was an increase in the number of fishers from the original 170 to 200, with the KPL Chief mentioning four important factors that contributed to the rise. The most important was the fact that there were no other jobs in the area, so going back to fishing (many stopped after the tsunami out of fear of the sea) seemed the most logical option. Secondly, the market for fish had improved following the completion of the road to Banda Aceh. Thirdly, there was much more fish as a result of the conservation activities of the KPL, in particular the protection of juveniles. Finally, the fishers used tsunami-aid, non-motorized boats since the fishing grounds are very close and this resulted in very small operating costs associated with the work.

Though the support of the DKP was physically visible in the area (e.g. the office, the maps, the fisher ID cards) and also appreciated by the KPL members, they lamented the fact that the support of DKP was not appropriate to their *real* needs, which included more fishing gear as well as more technical and infrastructure support for conservation of the natural nursery and lobster growing.

Recent changes in the Panglima Laot created new tensions. The newly elected person was not a fisher or skipper. He functioned more as a political middleman for one of the provincial political parties of Aceh. The fishers of KPL did not want him to have a role in their initiative.

What started as a bright potential for co-management was devolving to become more a 'community-alone' managed realm with state patronage.

### **Aceh Barat District**

Aceh Barat District is situated south of Aceh Jaya. The continental shelf of the district is marked by a sandy bottom and devoid of any large coral reefs. The capital, Meulaboh, was a historically important town known for its maritime contacts with the Indian sub-continent. It was a major fishing port before the tsunami wiped out the whole town.

### ***Kawasan Peujroh Laot (KPeUL)***

In September 2008, the Program received a request from the DKP in Aceh Barat to attend a meeting to discuss the menace of mini-trawling in the district. This debate surrounded the issue of whether or not mini-trawling was damaging the near-shore resources and ecosystem. The meeting left no doubt about the highly contentious and politically sensitive nature of the issue with high financial stakes and the interests of the fish trader lobby on the block.

Soon, political pressure (not related to the mini-trawl issue) led to the DKP Chief being transferred. His successor, a woman officer, was very clear-headed about the need for a mini trawl-ban and requested the Program for assistance in making a study. All of the MMs in the district (about 60 of them) were mobilized to make an assessment of the ecosystem damage wrought by mini-trawls and the economic and employment implications of a ban.

By early 2009, the study was complete and the investment to replace the mini-trawls with more selective fishing gear was estimated. The DKP staff, encouraged by their new

woman Chief, supported the idea of forming a co-management entity and conservation area in their district. This was realized in August 2009, when the Bupati proclaimed the SK authorizing its formation in Ujong Drien village, which had taken a collective decision to using only selective fishing gear and not to adopt the mini-trawls. The entity was named Kawasan Peujroh Laot (KPeuL).

The DKP and the Bupati finally took a strong stand against mini-trawls. However, there was delay in stopping the trawls due to lack of clarity on whether the DKP had powers of arrest. This wavering was interpreted by the fishing communities as a sign of retreat and prompted them to organise street demonstrations against trawls sending a clear message to the DKP, the district parliament and the Bupati to act.

Partly in response to popular sentiment, the parliament financially supported a gear-swap offer made by DKP on the advice of the Program: those who turned in their mini-trawls would be given other legally permissible gear in exchange. A sum of IDR850 million (US\$77,000) was allotted for the purpose.

The Bupati also organized a “mini-trawl burning ceremony” at his office premises with attendance of officials from MMAF, the Province Water Police and other relevant department heads in attendance with a large participation from the local coastal population. At the suggestion of the Program, the Bupati also took the initiative of calling the first inter-district fisheries meet to discuss coordination issues in fisheries management, which resulted in the Meulaboh Declaration spelling out an approach for responsible fisheries in west Aceh.

With popular support, strict enforcement, and use of rewards and punishment, mini-trawls disappeared in Aceh Barat district. Many of them initially moved to the neighbouring district of Nagan Raya, where they were subsequently banned from operating by the Panglima Laot.

The success of the mini-trawl ban in Aceh Barat attracted nation-wide attention. The DKP Chief of Aceh Barat was invited to many workshops where she took pride in showing an amateur documentary on the process.

The lack of adequate funding for the DKP scheme for gear-exchange brought an end to the initiative. Many mini-trawl owners could not get replacements and their mini-trawls remained elusive and hidden. The merchants who financed the mini-trawls orchestrated a protest claiming that many fishers were suffering due to the incomplete transition program. They demanded immediate gear exchange or designated areas where mini-trawl could be operated.

The KPL resisted these moves. In 2011, they proposed a 2-mile “no fishing zone for all” and a zone between 2 miles to 4 miles as a “no trawl zone”. Unfortunately, the Panglima Laot could not unite on these demands and it became clear that for some, the *hukom adat* was becoming a hindrance to their own economic interests in the mini-trawl.

Amidst this stalemate, the District of Aceh Barat received a Charter of Honour from the President of Indonesia for the initiatives taken in the fisheries sector. The award was for the people of the entire district and received by the Bupati, who at that time was in the thick of his campaign for re-election. There was a lot of cynicism among the coastal communities about this award as they noticed that the Bupati had gradually begun making compromises with the mini-trawl operators and the merchants. He turned a blind eye to the creeping return of the mini-trawls, now even with the backing of the district police force which also began getting a slice of the illegal pie.

In the district elections of 2012, the current Bupati was defeated. This was clearly the electoral handiwork of the vociferous coastal community who felt slighted by his betrayal of the struggle for sustainable fishing. The new Bupati's views on the issue were not yet openly known.

The DKP Chief who led the mini-trawl campaign was removed from her position by the new Bupati. An officer who had spearheaded the co-management initiatives was also transferred.

The coastal community was in a state of mild confusion with the open split in the ranks of the Panglima Laot on the issue of mini-trawls. A class divide was emerging among Panglima Laot, with lhok level PL leaders opposing the mini-trawl whereas district and regional level PL representatives, who were not real fishers, favouring it.

The KAUM in KPeuL started well in Ujong Drien village in 2010 with 25 members. Most of the members were wives of the fishers of KPeuL and they were keen to help their husbands to purchase selective fishing gear. They decided to appoint the wife of a military man in the village as their President, given her higher level of education and public relations ability. These attributes were certainly useful to initiate the activities and maintain the records. The capital of the KAUM reached a modest IDR35 million by 2012 (US\$3200). At this juncture, the President of the KAUM shifted residence from Ujong Drien and took the capital of the KAUM along with her. After a long series of negotiations, the women in Ujong Drien finally managed to get it back in 2013 and hoped to revive their efforts after the embarrassing setback.

What prevailed is a rather demoralizing situation. Money power prevailed with the state and fisher representatives compromised on the principle of responsible fisheries. Many of the MMs in the forefront of the anti-trawl movement became disillusioned. Happily, most of them were able to find small jobs which they attribute in large measure to the training and exposure which they received from the Program. Some MMs, who were fishers, continued to believe that a new future could be envisioned.

The power of politics and money seemed to have overwhelming uprooted this co-management entity.

#### **Nagan Raya District**

Nagan Raya, a newly formed district, was the southern most district where the Program undertook co-management activities. The district focused on plantation agriculture such as oil palm. Its long sandy coastline is marked by extensive lush coastal forests and a sparse coastal population residing away from the shoreline. One distinctive feature of the district was the above-average quality of the MMs that participated in the Program.

Being a newly formed district the bureaucracy did not consist of very experienced officers. Additionally, the departmental offices were situated in the newly constructed district capital far away from the coast making contact with fishers and interest in marine affairs slight.

There was no representation from among the fishery officers of Nagan Raya in the Program exposure trip to Malaysia and just two attended the co-management training.

#### ***Kawasan Beujorh Laot (KBL)***

The motivation for co-management activities came from the active group of MMs. They wanted to match up with their MM colleagues in other districts. There was also a

relatively strong contingent of lhok level Panglima Laot – all genuine, small-scale fishers. Together they approached the Bupati with the proposal for creating the co-management entity.

The DKP of Nagan Raya was initially reluctant to support the move. The pressure to 'engage' came after the banned mini-trawls from Aceh Barat moved into the waters of Nagan Raya, causing outrage among the local fishers. At this juncture the DKP supported the initiative to form the Kawasan Beujroh Laot (KBL).

Compared to the co-management entities in the other districts, the KBL had the largest coverage of coastline, totalling 35 km. Their main focus of activities were to be community participation in surveillance of illegal fishing, primarily the mini-trawls. They aimed to move towards small-scale, selective fishing and undertake a major program for coastal afforestation. Attempts to get the Nagan Raya parliament to allot funds for a gear exchange program were not successful. Good beginnings were made for the coastal afforestation scheme with involvement of the Department of Forestry. The Panglima Laot at the lhok levels and the MMs took strong initiative for these initial steps.

The KBL undertook no fishery activities due to the disinterest and inability of the DKP to engage proactively with the Panglima Laot and the MMs. A junior officer, who had shown some interest in the Program activities, was transferred to another department. In this context, the MMs were also disillusioned. As they were adequately educated, some of the young men obtained jobs in government schools. Some of the young women among the MMs got married and became focused on raising their families.

The fishers on their own could not effectively block the mini-trawls coming from Aceh Barat without support from the DKP and the Water Police. The Kawasan Beujroh Laot (KBL) as an organisational structure remained an empty shell from the very start.

### **Assessing the co-management experience**

Given the varied experiences, the ups and downs in the organisational dynamics, the flourishing and the near demise of the entities, it was proposed to have a meeting of the representatives of the five co-management entities in November 2013 in Aceh Jaya. This review was sponsored by FAO and facilitated by the International Collective in Support of Fishworkers (ICSF) as part of the preparatory initiatives for drafting of the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines).

At the meeting there was consensus that the entities provided a fresh set of institutional initiatives within the context of the post-disaster vulnerabilities and the new emerging challenges of the socio-political situation in Aceh after the Province attained autonomy. The aggregate data on the coverage of the five co-management entities was adequate proof of what was achieved by 2010. (See Table 2).

They also agreed that, against the background of the tsunami event, collective action by communities and the state to rejuvenate resources and revive livelihoods gave coastal people confidence and revived hopes for a better and sustainable future. There was also the view that greater, structured networking between the entities would have yielded mutual aid, particularly in times of organisational crisis.

**Table 2** Aggregate data on the five fisheries co-management entities and their coverage (as on 2010)

	Lhoks	Coastal villages	Coast length (km)	Population	Fishers	Craft
Total in five co-management entities	11	38	79	26,899	2095	388
Total for the four coastal districts	33	160	310	82,048	10,900	1092
Coverage (%)	33	24	25	33	19	36

In the discussion which followed, two significant conclusions emerged about the core objective and the organisational future of the entities.

Firstly, given amorphous membership and lack of rigid organisational form, it was felt that there could only be a generalized articulation of the core objective of the entities. After some discussions between the participants, this core objective was spelt out as follows:

*The overarching core objective is to collectively create the enabling conditions in nature and society to facilitate peaceful and sustainable livelihoods for coastal communities.*

Secondly, it was accepted that the functioning of the entities as co-management initiatives (with community, fishers and state involved as equal partners) was overtly and covertly influenced both by the form of district governance under the decentralization policies of the central government and the dynamics of the new political processes within Aceh and Indonesia.

The specific mention of 'peaceful' in the core objective alludes to the memories of the long period of violence and conflict which the Acehnese people had experienced between 1980 and 2004. And yet it also expresses the hope that their organisational initiatives will contribute to generating and sustaining peace, which is a prerequisite for building sustainable livelihoods.

The fluidity of new politics in Aceh had already begun to take its toll on institutions, which the people have considered as the bedrock of their era of isolation. The fissiparous tendencies in the Panglima Laot point to this painful reality. While local face-to-face communities had strong moorings in custom (*adat*), creating new forms of governance involving different interest groups became a major challenge. The default option was always to revert back to the comfort-zone of the immediate local community.

True parliamentary democracy in Indonesia is only just 15 years old. The Province of Aceh as an experiment in autonomy within the federal context of Indonesia is just a decade old. And the initiative at co-management of fisheries along the west coast of Aceh has been functioning for less than 7 years. Instituting the co-management initiative would not have been possible without the autonomy of Aceh and that in turn would not have materialized without Indonesia having turned democratic.

For the proper functioning of democracy, autonomy and co-management, it becomes imperative that a system of rights and responsibilities, exercised with transparency and accountability, by the various interest groups who constitute the institutions, becomes a stable reality. This process takes more time than has currently been available for the country, province or entity. Assessing achievements of the co-management entities at the lowest end of this hierarchy can only be indicative and will not be a guide to future possibilities.

There has been no formal assessment of the material changes that have been achieved as a result of the initiative. It will therefore be inappropriate to make any strong statements about the outcomes and impacts it has made on improving assets, incomes or food and nutrition security.

During the period when the entities functioned effectively – largely between 2008 and 2013 – the entities could be seen as ‘facilitators’ that created the enabling conditions for any member of the community, whether it be youth, women, and men, particularly fishers, to take actions that assisted them in pursuing livelihood options of their choice. Such actions could be individual or collective. Our analysis of the initiatives within the entities make it clear that such facilitation was possible only because of their ‘legal entity’ status, combined with the active or tacit support of the state.

The entities had, in varying degrees, asserted their legal rights over space and resources and ensured that sustainable and responsible fisheries were undertaken. These actions led to, even if only temporarily in some locations, improved income possibilities. However, the impact of their actions on conservation of coastal resources (coastal forests, mangroves, coral reefs, coastal waters) had been more pervasive, and more importantly, had led to the community *believing* that protecting and rejuvenating nature was possible by collective efforts with the participation of different interest groups. This was a small but important step towards the community ‘doing conservation as a matter of routine’, rather than as a special action.

The entities have also shown that co-managed and less rigidly structured organisations can foster collective action between different interest groups to achieve common goals. However, sustainable continuity of the entities depends, *inter alia*, on appropriate moral leadership and some degree of continuity in the political and executive arms of the state.

### **Post-disaster organisational innovations: Lessons learnt**

The decision of the Program to go for a non-conventional, organisational structure, involving multi-stakeholder interests, was consciously taken to set out the collective action possibilities for introducing co-management into new organisational innovations in a free and autonomous Aceh Province.

The above review and analysis reveals both the prospects and the dilemmas at the present and into the future for such co-managed organisations.

Firstly, in a human context, for these communities, which survived political isolation and a huge natural disaster, the entities provided the material basis for collective action to enthusiastically revive their relationship with the sea and its resources. Non-conventional, co-managed organisational structures, based on collective action that integrates the familiar and the new, can have therapeutic effects on traumatized, vulnerable coastal societies.

Secondly, the preparatory human capacity building actions – for youth, fishers and government officers – need to be viewed as a major investment in human capital for which dividends go far beyond the immediate scope, activities and survival of the co-management entities. Returns on human capital development to society take a longer period though benefits to the concerned individuals may be more immediate. Channelizing the human capital for the specific purpose for which it was intended is the challenge to be addressed by the coastal communities that benefited.

Thirdly, a system of networking between the entities should have been made an integral part of the organisational design. Given the low-cost information and communication technology (ICT) possibilities available, this would not have been difficult to design or implement. Networking of new, co-managed organisational initiatives must be made part of the initial design and formation process – particularly because it strengthens collective action. Networking should not be left as the final act after the individual entities are put in place.

Fourthly, from the review of the experience of the entities it is extremely clear that the sudden termination of the ‘facilitation process’ (due to the closure of the Program) was an important element in the faltering of some of the entities. Clearly then, exit policies of international assistance programs must envision and provide support for some minimal, follow-up, post-exit activities.

Fifthly, the amorphous nature of such co-managed organisations made informality and familiarity take precedence over the need for structure and institutional memory. Striking the right balance is imperative for organisational longevity.

Sixthly, the mainstreaming of women into the governance of the entities did not take the priority it deemed. Though youth – men and women – from the communities were credibly engaged, this could not substitute the essential involvement of the wives of fishers into the core of the collective action needed to stabilise co-management activities. Women, particularly wives of fishers, should be granted more than just a support role if these new organisations are to bring stable benefits for fishing communities.

Seventhly, in the entities where the product market (for fish) was vibrant and expanding, the enthusiasm for conservation became ‘part of routine behaviour’. It laid the basis for developing conservation-friendly markets. Sourcing and finding such product markets, which place a premium on fair, social and environment friendly trade, are realms where the involvement of civil society and state can be sought.

Eighthly, involvement of state in co-management can only be ensured if officers will adopt a mindset that allows fishers and the community to be creatively involved in the decisions which affect their lives. There is also a need for a modicum of long-term tenure for officers. The permanence of community and the temporariness of the state functionaries can make sustained collective action for co-management untenable.

Ninthly, moral leadership is an essential condition for such new organisational initiatives. For an initiative that is marked with informality and an initial lack of form, there must be an amalgam of personal and social characteristics to ensure success. Key to this is leadership that can enthuse, create trust and goad people to collectively achieve goals. Identifying and cultivating such leaders is imperative for organisational sustainability.

Finally, such co-managed organisations can be more prone to easy disbanding following initial, small failures. Success and failures must never be viewed as events of finality. These must be considered as part of an organisational building trajectory with lessons to be learnt and internalized.

## **Conclusions**

The primary purpose of this diachronic analytical description and reflective narrative was to provide insights into the prospects and dilemmas of fostering collective action in establishing new co-managed forms of organisational innovations in the small-scale

marine fisheries sector. The post-disaster and post-conflict situation in Aceh, into which this intervention was initiated, made its circumstance very unique.

Between 2004 and 2014 however, there have been numerous events around the world where similar circumstances, individually or in combination, have struck coastal fishing communities, including Chile, Sri Lanka, Myanmar, Haiti, Japan and the Philippines to name but a few. In all of these countries, one of the significant challenges with regard to coastal community rehabilitation has been related to the post-event choice of institutional and organisational design. There has been increasing recognition that sustainability of relief and rehabilitation efforts ultimately rests on the success of collective action for the organisational innovations which are created to move coastal communities towards re-establishing their normal livelihoods with dignity and self-reliance. At times, it can also provide local and sub-national sovereignty if the co-management arrangements are accompanied by secure legal and dedicated governance frameworks.

It is in such contexts that organisational innovations based on co-management, which draw upon the lessons of the past while creating a more participatory and multi-interest group future, come to have increasing relevance. Collective action to create such endeavors is an important therapy for coastal communities recovering from the trauma of disaster and/or conflict. These post-event scenarios also provide the possibilities for establishing new relationships between people and the resources of the sea.

The crucial ingredients for initiating such organisational experiments include: identifying good leadership among the people; en-skilling youth with appropriate capacity; orienting the state machinery and personnel towards more openness for involving communities in decision making; ensuring some element of long-term tenure of positions for state officials; setting up a minimal 'process facilitation'; getting wives of fishers to take a central role in the governance of these organisations; making resource rejuvenation and conservation a central element of livelihood pursuits; finding new markets for fishery products and opportunities for new vocations which base themselves on the 'existence' rather than the 'use' values of the coastal resources.

The study also illustrates how the initial and evolving socio-cultural and political nexus of the context in which an organisation is situated greatly conditions its sustainability. This is particularly true for new co-managed organisations, which are yet to be bounded by a welter of socially acceptable recognition.

For this very reason, multilateral development agencies, development donors, and the state apparatus should be willing to take risks and provide support to those who experiment with collective action initiatives to create such new forms of organisational options for coastal communities and small-scale fishers. They need to learn from the few examples such as the one in this case study.

Notwithstanding such support, in the final analysis, it is the sustained enthusiasm, responsibility and determined self-reliance of the different interest groups initiating collective action to form such new organisation innovations that provides the bedrock for sustainability.

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