Chapter 16
The Role of a Women's Collective in Rebuilding Livelihoods After a Disaster: Case Study of Salam Village, Yogyakarta

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Abstract The May 2006 earthquake caused widespread damage and loss of life throughout the Yogyakarta Special Region. As international aid flowed into the region in the preceding months, numerous first-response, rehabilitation and longer-term recovery projects proliferated. Given the sheer number and scale of disasters that impact Indonesia annually, the disaster risk management community often has limited time and resources to evaluate the performance of responses and improve future practice. Drawing on a case study from Salam village, on the outskirts of Yogyakarta, this chapter seeks to contribute to the limited documentation of the successes and ongoing challenges of long-term livelihood recovery efforts following a large-scale disaster.

This study, undertaken in July 2015, uses a sustainable development lens to assess the performance of a Caritas-funded disaster recovery project in Salam village. This disaster recovery project aimed to assist affected women to rebuild their livelihoods and enhance their long-term financial resilience following the 2006 earthquake. Drawing on focus group discussions with a number of the women (n = 9) involved in the recovery project, it was perceived overall as high benefit and low risk; however, a number of weaknesses also emerged that have restricted the potential growth and long-term sustainability of the project. Comprehensive studies analyzing the performance of these recovery projects are often absent from disaster studies. This is an oversight given that we must learn from these interventions to: assure optimal performance; guarantee that donor assistance is deployed in ways that create the most value; and ensure that livelihoods are rebuilt and transformed so that their vulnerability is reduced.

Keywords Collective • Livelihoods • Sustainable development • Women • Yogyakarta

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16.1 Introduction

Indonesia is the fourth largest democratic country in the world with a rapidly increasing population of 255.9 million as of July 2015 (CIA World Fact Book 2016). Development is a key national concern with a growing population and persistent poverty levels (11.3% of the population is under national poverty lines; World Bank 2014). The ability for Indonesia to alleviate poverty and improve livelihoods is partly affected by its position in the Pacific Ring of Fire; a location that causes the country to endure more than 130 hazards including volcanic eruptions, tsunamis and earthquakes annually (Asian Development Bank 2010; UNDP 2010; Lavigne et al. 2008). This exposure to various different hazards, in conjunction with other factors, such as poverty, education, political instability, inequity and environmental degradation, contributes to people's underlying vulnerability to hazards (see Ribot 2014, 2009).

Over the past 12 years Indonesia has experienced a number of major hazards that have resulted in significant disasters, including the 2004 Indian Ocean tsunami in Aceh, the 2006 earthquake in Yogyakarta and the 2010 volcanic eruption of Mount Merapi (see Mulyasari and Shaw 2013; Hadi 2008). From the destruction and damage to community infrastructure, to the loss of critical livelihood assets, disasters affect the conditions necessary for future development (Gaillard and Texier 2010; Rodriguez-Oreggia et al. 2008). Disasters can also perpetuate a state of chronic poverty due to the exacerbation of economic stresses prior to, during and after a disaster (Ahrens and Rudolph 2006). They also result in thousands of fatalities, with many others left injured or homeless, highlighting the need for effective policy and program intervention (Abhas and Stanton-Geddes 2013).

There are numerous disaster risk-related policies and programs that have been implemented in Indonesia in response to the high exposure of communities to hazards. The 2004 Indian Ocean tsunami, for example, prompted the Indonesian Government to sanction the Law on Disaster Management, which redefined the national disaster risk reduction system (Abhas and Stanton-Geddes 2013). This legislative change facilitated a shift from disaster response to disaster risk reduction and disaster preparation (Ophiyandri 2011). Moreover, this law acknowledges that integration between various stakeholders is imperative for the successful implementation of disaster risk reduction plans (Shaw and Izumi 2014). Despite the necessity for these national-level laws, policies, support and financing for disaster risk reduction, it is also increasingly recognized that top-down approaches are not as effective as locally-grounded approaches (Shaw and Izumi 2014; Abhas and Stanton-Geddes 2013; Kusumasari and Alam 2012).

Looking at the local level, many initiatives targeted to reduce or manage disaster risk attempt to: bridge Indigenous knowledge with modern technologies; ensure the adoption of participatory, all-inclusive processes; and rebuild social structures alongside physical structures (see Abhas and Kusumasari and Alam 2012; Mercer et al. 2012; Ophiyandri 2011). According to Lassa et al. (2011), community-based programs are more effective as they promote the involvement of all local community

members and can be adapted to suit the values, beliefs and behaviors of that community. Gaillard and Mercer (2013) assert that a lack of public participation promotes failure across programs to manage disaster risk as attempted strategy implementations often become socially or culturally inappropriate. The importance of considering local, cultural values is highlighted by the continued residence of over 60% of Indonesia's population near 16 of the 130 active volcanoes, despite being aware of the associated dangers (Donovan 2010). This reflects the ability of local and cultural connections (in this case to volcanoes) to significantly influence risky decision-making and the actions individuals take, regardless of knowledge of risks and dangers. Indonesian Government agencies attempting to implement disaster risk management strategies devoid of an appreciation of local and cultural contexts will continue to endure complications (see Gaillard and Texier 2010).

16.2 Study Aim and Site

This chapter endeavors to summarize the results of a study on the performance of a livelihood recovery project in Salam village, located south of Yogyakarta. Salam village, located within the Gunung Kidul District, is made up of six smaller villages (known as sub-villages) within a 1,485.36 square kilometer area (Fig. 16.1) (Fujiwara et al. 2011). Gunung Kidul has the lowest income per capita of all districts within the Yogyakarta province, highlighting its heightened vulnerability and the associated need for projects to reduce and manage disaster risk (Hoen 2010).

The district's vulnerability to hazards is evident through the impacts of the May, 2006 earthquake which destroyed houses and community infrastructure including freshwater wells in Salam village (Lingkar Association 2010). In response, a livelihood recovery project was implemented in all six sub-villages (Baran, Gunung Manuk, Ngasemayu, Salam, Trosari and Waduk) of Salam village through funding from Caritas-Switzerland and management by a local non-governmental organization called Lingkar. This recovery project ran from September 2008 until January 2010 and focused on three core project deliverables: integrated dry land agriculture and farming system training including demonstration plots; clean water supply systems and water resource management; and food processing and the development of local resource-based home industries.

The focus of this chapter is on the latter component of this recovery project – that of food processing and home industries. To achieve this, women's collectives were established in all six sub-villages to become a platform by which to diversify livelihoods in the hope of reducing income vulnerability, increasing the value of pre-existing agricultural commodities, and enhancing people's resilience to respond to future hazards (Lingkar Association 2010). Livelihood diversification within this project involved the production and sale of cassava chips, and more recently banana chips. Prior to this project, the women helped on their husbands farms or collected grass for cattle. The production and sale of cassava chips as opposed to simpler forms of the cassava vegetable ensured an increased value of the cassava plant per

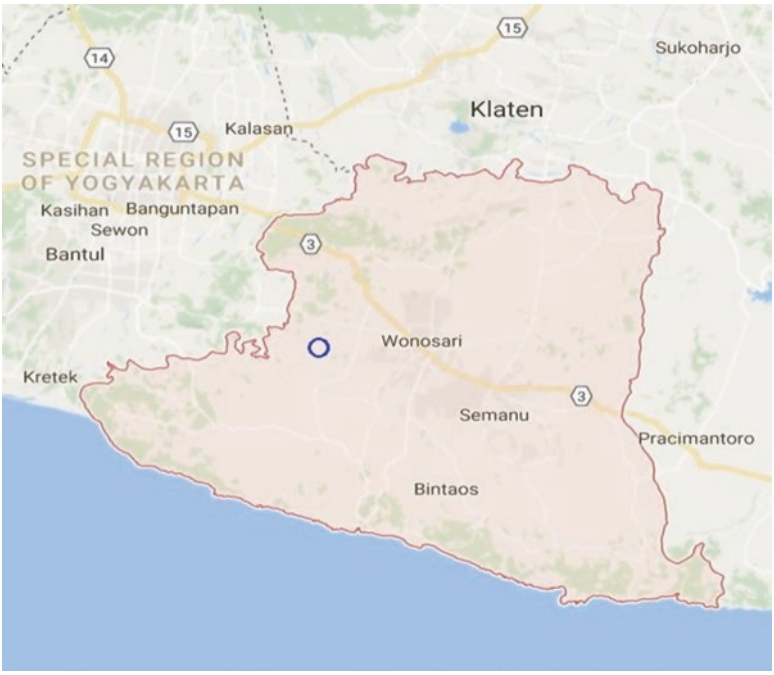

Fig. 16.1 Location of Salam village (*blue circle*) within Gunung Kidul district (in *red*), Yogyakarta Province (Source: Google maps, 2016)

kilogram (Lingkar Association 2010). Although initially implemented in all six sub-villages of Salam village, the project remains (as of July 2015) operating in solely the sub-village of Gunung Manuk due to a multitude of reasons, such as project financial resource deficiencies. The fact that only one-sixth of the original project is still functioning (in Gunung Manuk sub-village) speaks volumes to the overall sustainability of the project, however, the aim of this study was to understand how and why is has been maintained in Gunung Manuk and learn lessons from this. We did attempt to speak with members of the five non-functional women's collectives in the other sub-villages but Lingkar no longer had contact with these women and as such it was not possible to contact them to participate in this study. This chapter therefore evaluates the performance of the remaining livelihood recovery project in Gunung Manuk.

16.3 Methods

To gain a better understanding of the Caritas-funded livelihood recovery project, qualitative data was collected in Salam village. Two focus group discussions were conducted over 2 days (7th and 9th July, 2015) with members of the women's

collective in Gunung Manuk sub-village. These focus groups were organised through Lingkar, who assisted the researchers gain entry to the sub-village. The main purpose of these discussions was to examine stakeholders' perspectives on the performance (using a sustainable development lens) of Lingkar's project in safeguarding and sustaining livelihoods. Focus groups were chosen by the researchers independently for this study. Gathering information in a group setting rather than individual interviews allows participants to reflect on the views and experiences of others, thereby potentially encouraging deeper discussions (Ritchie et al. 2014).

A total of nine women from the women's collective participated in the focus group discussions that were conducted by a large number of facilitators. The large number of facilitators was unavoidable given the nature of this study which was also a key learning exercise as part of a field course in Indonesia. The facilitators consisted of five students from the University of Queensland (UQ; all chapter co-authors) as well as three Universitas Gadjah Mada (UGM) students and a Lingkar representative. The UQ students were each allocated specific roles such as: explaining the overall purpose of the focus group discussions; running specific activities; note-taking and writing up results on large sheets of paper during activities; as well as providing a brief introduction and conclusion to each session. The UGM students and the Lingkar representative assisted with the activities and translation; an aspect that is acknowledged as a potential limitation due to the possibility of misunderstandings and miscommunications. With the consent of the participants involved, a digital recorder was also used to document discussions. According to Bryman (2012), focus group sessions work most efficiently when they are recorded and subsequently transcribed as note-taking alone cannot capture the dynamics of the group conversation and activities.

Prior to the first focus group discussion, data collection in the form of participatory observation was ascertained. This process involved a walk-through demonstration of the key stages in the cassava chip-making process as well as the opportunity for researchers to understand the stages through hands-on experience (from planting to cooking to packaging). This process aided the establishment of rapport and a comfortable atmosphere for subsequent focus group discussions. It further created a better understanding of the time and effort involved in the project which set the context for the focus groups.

Following the demonstration, questions and activities (as part of one big focus group discussion) commenced, which lasted for four hours in total (spread over 2 days) in the communal building. This is where the women undertake the majority of the cassava chip-making process. This arrangement ensured familiarity and created a relaxed setting that allowed the women to feel more comfortable in sharing their thoughts and opinions. Kitzinger (1995) argues that focus groups should always be conducted in a comfortable setting and preferably in a circle to establish the right atmosphere. Both of these tips were applied in this study: participants sat in a circle on the floor. During the focus groups, key questions were asked (which were developed by the researchers prior to fieldwork) to create a visual demonstration of the project and stimulate conversation on how the project has evolved over time.

Activities involved participants drawing a map of their village and indicating key locations such as cassava growing areas and the homes of the women involved in the project. Cost-benefit and risk-benefit exercises were also undertaken to derive the women's perceptions on the overall performance of the project and sense of reduced vulnerability. It is imperative to note that in the initial stages of the first focus group discussion, two authoritative male figures were present and observing discussions. This may have presented limitations to the depth of discussions and accuracy of collected data (Scheyvens et al. 2014). However, these men soon left the room and discussions appeared to flow more freely thereafter. A sustainability analysis activity was also a key activity undertaken in the focus group. This involved deducing perspectives on the overall successes and challenges of the project from a social, economic and environmental standpoint. A sheet of paper for strengths and a separate paper for weaknesses were used for noting key aspects of discussions. On each piece of paper, three columns were drawn to organize the key points under the three pillars of sustainable development. This was a time-intensive activity as it involved asking detailed questions on the advantages and disadvantages of the project, which led to questions about how it has progressed over time and how it could be improved. The results of this sustainability analysis activity form the basis for this chapter, and in particular the section to follow.

16.4 Evaluating Project Outcomes Through a Sustainable Development Lens

Drawing from the perspectives of members of the women's collective, this section explores the overall performance of the project, as well as specific successes and challenges using a sustainable development (social, economic and environmental) lens. The women's collective unanimously indicated the high benefit of the project, due to a multitude of social and economic gains that surpass associated costs. Overall, the project was considered positive in this one sub-village, particularly due to the perceived resilience of the cassava plants against local fluctuations in environmental conditions which helps to ensure reasonably reliable yields. It is however important to note that this success is only relevant to this sub-village; the program has ceased in adjacent sub-villages likely due to a lack of participation and funding. This is comparable to a multitude of similar projects in developing countries that, as a result of resource and management pitfalls, endure slow progress or are terminated entirely (e.g. Salayo et al. 2012; Salkeld 2007). The following sections explore the social, economic and environmental dimensions of the project in Gunung Manuk sub-village.

16.4.1 Social Dimension Successes: Education, Relationships and Pride

A significant success of the project included the educational by-products – a broadened knowledge on processing and marketing strategies as well as practices. There are numerous advantages to this as enhanced knowledge increases productivity, income and gainful employment (e.g. Salkeld 2007). Ongoing education is often considered indispensable for project success as well as for maintaining agricultural productivity and income (see Zamroni and Yamao 2011). Although instigation of the educational process can be attributed to Lingkar's provision of an initial training session, it is imperative to note that the planned schedule of workshops and consultation visits were not entirely fulfilled for this collective. This may have been a result of resource and organisational limitations as seen in similar projects (e.g Salkeld 2007). This lack of training provision combined with the collective's determination for continued growth of the business fostered a culture of self-training through trial and error as well as adaptation which enabled the improvement of knowledge and activities surrounding marketing and food processing. This continued knowledge building, despite the lack of fulfillment in proposed continued assistance by field staff and consultation visits to improve knowledge and practices, highlights the self-motivation and determination of the women's collective to attain new knowledge and skills. Furthermore, this ability to self-educate has inspired confidence and respect within the collective; an indirect outcome that will foster further benefits of enhanced resilience and project success (e.g. Ferris et al. 2010).

Another key success of the project includes its capacity to encourage and enhance relationships amongst the women within the community. This success has occurred as a result of the collective's organisational structure that encompasses a system of communally owned and managed land. The communal land tenure provides a platform for interaction which creates friendships and familial relationships that subsequently enhances solidarity (Diaswati and Barnes 2015; Kusumasari and Alam 2012). The sustainability of land tenure systems such as these, however, have been frequently contested with issues such as the 'tragedy of the commons' which highlights how the interaction of self-maximizing individuals and shared natural resources will result in overexploitation (McCay and Acheson 1987; Hardin 1968). As McCay and Acheson (1987) highlight however, contextual factors can invalidate underlying assumptions of this notion. The individualistic bias and assumption that self-maximizing individuals are unrestricted by social norms may, for example, be undermined by *gotong royong*; a Javanese social organization founded on cooperation, reciprocal assistance that involves community collaboration to achieve common goals (Diaswati and Barnes 2015; Bowen 1986). *Gotong royong* and its associated social norms stem from a village-scale logic that outlines the necessity of cooperation for fostering development and stability, and can apply to a multitude of contexts such as politics, village maintenance of infrastructure or post-disaster recovery (Diaswati and Barnes 2015; McCay and Acheson 1987). As a disaster generates an atmosphere of collectively shared risk, disruption and loss, the communal culture of

gotong royong habitually emerges in local recovery processes. Within Gunung Manuk's recovery and adaptation, *gotong royong's* structure and its associated norms that ensure cooperation and care for others may have offset any individualistic or self-maximizing characteristics that encourage the overexploitation of communal property (McCay and Acheson 1987). Moreover, the individualistic bias of the tragedy of the commons notion is also undermined by the nature of the project as a business for the collective whereby all women cooperate to produce the product and thereby share the revenue. This successfully implemented communal structure also supports the recovery process by enhancing project efficiency, sustainability and resilience through facilitating coordinated action, the spreading of risks and its potential role as a 'social bridge' to manage conflicts (Kapucu 2006; Martaamidjaja and Rikhana 1996). Moreover, the long-term viability and effectiveness of this risk reduction project is furthered by the capacity of group activities to foster greater commitment and willingness to fulfill key tasks and goals (McCay and Acheson 1987).

The collective also unanimously agreed that the project's accomplishments inspire pride and elevate morale; characteristics identified by the collective as imperative for driving long-term sustainability of the project. This ability of pride and morale to drive projects has also been observed in similar livelihood diversification projects in South Sulawesi and the Philippines, where pride associated with achievements perpetuate participation and project continuity (see Zamroni and Yamao 2011; Pollnac and Pomeroy 2005). An elevation of pride is also present through the revival of a former culture in cassava consumption. This is a unique project outcome due to the common trend of fading cultural practices as markets expand. This cultural revival may be considered an important success to government bodies in particular as it fulfils cultural preservation objectives in the National Middle-Term Development Plan (2010–2014). Moreover, the project's aforementioned use of *gotong royong* also contributes to the continued salience of Indonesian traditions.

16.4.2 Economic Dimension Successes: Infrastructure and Income

The clustered arrangement of requisite infrastructure in Salam village has significantly enhanced the project's economic success by improving efficiency. The close proximity of necessary infrastructure has facilitated an efficient lifecycle by enhancing ease of access between homes and the processing location which promotes limited travel time and reduces time spent on arduous tasks (Schwarze and Zeller 2005). This situation improves project efficiency and productivity by providing a social space that complements the women's other responsibilities. Working women habitually acquire greater workloads than working men as traditional social structures designate additional domestic duties to women (Loh and Dahesihsari 2013). Clustered infrastructure and its ability to promote accessibility enables women to

balance these competing aspects and allocate adequate time and resources towards improving efficiency and productivity of the project. This ability of infrastructure proximity to enrich efficiency and productivity is also indispensable for elevating income and enhancing resilience to shocks.

As an attribute that is highly valued by Lingkar and the women's collective, performance of the project in the context of income is notable. The collective perceived this aspect as a success with the level of income typically being high and the hierarchical structure of revenue distribution considered reasonable. Income is particularly enhanced by the high quality of cassava in the area which ensures reduced revenue loss and consistent sales. Maintenance of this high cassava quality and its influence on income is indispensable for positive income growth and reduced vulnerability to future disaster threats (Viverita et al. 2014; Lingkar Association 2010). A disadvantage however is that income, due to the seasonal nature of agricultural occupations, is inconsistent, thereby reducing resilience and security during lower-income periods (e.g. Salayo et al. 2012). However, this is somewhat countered as the collective further developed their occupational multiplicity (in livestock, banana chips as well as selling grass) in the event cassava production stalls. This practice ensures income continuity and financial resilience through its ability to spread risks against agricultural production or market failures (FAO 2013). The development of further income alternatives outside project activities and goals highlights how this project has successfully empowered the collective to self-help and independently implements strategies for resilience.

16.4.3 Environmental Dimension Successes: Limited Waste and Transport

Due to the nature of agricultural occupations and the fundamental role of the environment for productivity, income and sustaining livelihoods, environmental performance merits significant importance (Turner et al. 2003). This is supported by a host of reports and plans – the Sendai Framework for Disaster Risk Reduction 2015–2030 (UNISDR 2015) and the National Middle-Term Development Plan (BAPPENAS 2010) – that highlight the important contribution of ecosystem management in disaster risk reduction. The project in Salam village demonstrated two key successes and no notable challenges in this area, highlighting its alignment with these policy documents that recognize the importance of environmental management. Dependency on cassava as the central component of the project has limited waste as unused parts of the final product (such as the leaves) can be used for compost or integrated into home-made recipes for cakes, soups and alcohol. Furthermore, any cassava plants categorized as poor quality are utilized for compost or fed to livestock which further supports the limited waste output. This diversion of organic waste can, through the reduction of waste quantities, assist in extending landfill life and reducing associated air and water emissions (e.g. Seng et al. 2013). Using waste

for natural compost products as an alternative to chemical fertilizers also reduces greenhouse gas emissions and enhances soil quality by avoiding drastic changes in soil composition (e.g. Bedada et al. 2014). This maintenance of surrounding environmental health also contributes to productivity, thereby supporting the financial wellbeing of farmers (e.g. Schwarze and Zeller 2005). The collective's financial outcome is furthered by the benefits associated with avoiding disposal costs and the need to purchase fertilizers, feed as well as ingredients for home-made recipes (Hoornweg et al. 2000).

An additional environmental success is manifested in transportation as walking is key to maintaining this business. Transport between key infrastructures is predominantly undertaken by foot as a result of the aforementioned clustered infrastructure arrangement which thereby minimizes greenhouse gas contribution. Concomitant financial advantages through decreased transportation costs and health benefits through physical activity and limited air pollution also ensue (e.g. Woodcock et al. 2009). This aspect of the project can be considered a success due to its minimal carbon footprint and contribution to a healthier lifestyle.

16.4.4 Ongoing Challenges: Health, Gender Equality, Equipment, Demand and Competition

Although Gunung Manuk's livelihood project encompasses numerous successes across the three sustainability pillars, several challenges prevail and inhibit project growth and sustainability. Despite a healthier lifestyle being promoted through increased amounts of physical exercise, direct health risks from the cassava preparation process counteract these benefits to become a major ongoing challenge. These risks include smoke inhalation and burns which are exacerbated by the habitual use of economical cooking products such as wood rather than gas. Furthermore, as a result of poor disposal technology, plastic wrapping was consistently burned during the cooking process which, through the release of toxic emissions, intensifies risks of asthma, rashes and headaches (e.g. Forbid et al. 2011). The World Health Organization (2008) illustrates a causal relationship between structural determinants of health such as income and intermediary determinants such as workplace conditions. The purchase of riskier fuel products such as wood, for example, reflects the 'material circumstances' category of intermediary determinants; an aspect that involves poor consumption potential (as a result of low income) and the subsequent investment into poorer quality assets that create health-compromising conditions (WHO 2008; Solar and Irwin 2010). These health-related issues can impede project success by interrupting work productivity, leading to reduced income flows and potential impacts on domestic violence, malnutrition, among others, and as such should be prioritized for improvements in future initiatives.

An additional challenge that reflects the social domain involves the wider society's traditional norms and values surrounding gender equality and roles. In relation

to the aforementioned successes surrounding the enhancement of relationships, positive support from husbands was particularly emphasized as a valued aspect of the project by the women's collective. As similarly observed in livelihood diversification projects on Nias (Indonesia), this prerequisite for male validation may be attributed to the women's employment of male-dominated responsibilities such as asset management and decision-making throughout the cassava production process (Salkeld 2007). Although the husbands of Gunung Manuk women supported these novel responsibilities, the traditionally less powerful status of women within the community may not have evolved as the independence of women remains somewhat restricted. This was observed in the initial presence of men during focus group discussions with the collective. These gendered cultural narrations impose predicaments for women's professional development and may therefore be a key hindrance to maximizing project growth and promoting resilience. This challenge associated with gender equality also emerges in the context of transport as the women in Gunung Manuk lack access to and ownership of motorized vehicles. This can hinder the growth of this female-driven project as the collective's access to infrastructures that require longer travel distances, such as larger markets, are affected. In response to the challenges presented by gender inequalities, numerous policy documents such as the National Middle-Term Development Plan (BAPPENAS 2010) and the National Disaster Management Plan (BNPB 2010) have integrated gender considerations and promoted women's roles in disaster risk projects.

Ongoing challenges reflecting the economic pillar of sustainability also emerged. Although project productivity and efficiency are promoted by the aforementioned infrastructure arrangement, efficiency is conversely hindered by the use of poor-quality, labor intensive equipment. As observed in analogous projects, ownership of and access to adequate resources are a pre-condition for enhanced productivity and economic mobility (see Zamroni and Yamao 2011). Therefore, reliance on inefficient and poor-quality equipment hinders productivity and perpetuates the inability to realize potential commercialization (e.g. Martin et al. 2013). This then impedes the collective's ability to increase income levels and develop financial resilience against shocks. Similar observations have been made in diversification projects in South Sulawesi where a need for appropriate technology to improve the quality of products and subsequently increase market value was identified (Zamroni and Yamao 2011). These efficiency hindrances are most likely attributable to a lack of resources and funding which supports the frequently emphasized need for improved budget and resource management practices in disaster risk reduction, as well as disaster response and recovery (see BNPB 2014, 2012).

Project success is also significantly dependent on market demand (Salayo et al. 2012), an aspect that was perceived as high and growing. In order to reach demand and thereby promote project growth, the collective introduced varying packaging sizes (extra small, small and large) with accompanying varied prices. These marketing initiatives to meet demands however are ineffective due to the product's lack of enticing packaging. Local shops remain indisposed to selling products with plain packaging while also defining costly and challenging requirements such as a specified plastic thickness. These requirements and the associated inability of the collective

to meet them are a key hindrance to the project's growth while also affecting aspects such as income and productivity.

In relation to demand, competition also significantly affects project success. Although competition has been observed in some cases to aid pro-poor development, the unfair competition in the packaged food context of Salam village has hindered economic growth of the project and collective. As larger, wealthier businesses are able to afford appealing packaging that better meet the aforementioned shop requirements, these businesses also acquire enhanced abilities to market products and elevate sale prospects. This competitive advantage that wealthier businesses possess over smaller enterprises is also reflected in analogous projects such as in the Philippines where small-scale fish farmers were displaced by corporations who were more able to afford higher quality feeds and deal with market fluctuations (Salayo et al. 2012). A rich-poor dichotomy in the context of competition therefore emerges and reflects a system of advantage favoring financially affluent stakeholders. This lack of fair competition may consequently be a key hindrance to the growth of this smaller project.

16.5 Conclusion

In recent years, communities across Indonesia have endured several natural hazards and as a consequence livelihoods and ecosystems that support these livelihoods have been severely impacted. As climate-related hazards elevate in frequency and intensity, policies and programs aimed at assisting and reducing the risk of communities have become increasingly necessary for sustaining livelihoods. Although the number of projects aimed at increasing resilience and forging sustainable livelihoods has increased, the performance of these projects in fulfilling objectives often remains unevaluated. This study therefore intends to contribute to this limited documentation on the performance of disaster risk reduction projects, and can be provided to donors and relevant agencies in the hope of assisting in the improvement of future projects and practices. The findings of this project for instance have been provided to the implementing agency in the hope of improving project design, implementation and evaluation in the future.

This chapter has drawn on an evaluation of a livelihood recovery project in Salam village (specifically in Gunung Manuk sub-village) following the devastating May 2006 earthquake throughout the Yogyakarta Special Region. The recovery project was implemented by Lingkar, whose efforts focused on income diversification of women through the establishment of women's collectives. Focus group discussions were undertaken with several women from the collective to elucidate the successes and shortcomings of the project using a sustainable development lens. As a result of the numerous successes, the project was perceived as positive overall by the women. One of the most positive social aspects of the project involved the enhanced levels of self-esteem and confidence as a result of the ability to self-educate and the associated benefits that marketing and processing knowledge had for productivity and

income. The project's capacity to encourage and enhance relationships between the women and their families as well as elevate pride, morale and cultural revival were also deemed successes. From an economic perspective, the project was successful in its high efficiency and ability to produce income. This high level of income was particularly important for fulfilling the primary objective of the project; to increase the reliability and level of income in order to enhance financial resilience. The overall environmental performance of the project was also perceived as successful with low levels of waste and greenhouse gas emissions as well as the use of natural fertilizers for improved soil health.

Although the project has been financially successful thus far, many limitations to the expansion of the project were identified. These include the need for: improved working conditions to reduce workers' exposure to health hazards along with reducing environmental pollution; more efficient processing equipment; and improved packaging to better meet demands and remain competitive in the market. These aspects are associated with an overarching challenge surrounding budgetary and resource management limitations; an issue emphasized by the National Disaster Management Authority (see BNPB 2014, 2012). Gender inequality and the associated cultural behaviors and norms also emerged as a major challenge that presented complexities for project growth and sustainability, with several aspects such as transport being affected.

There is value in doing project evaluations: successes can be identified and maintained; shortcomings can also be identified and ameliorated; lessons and learning can be disseminated to stakeholders, donors and practitioners to make actionable changes and inform future practice. As this study has shown, this project evaluation has demonstrated a number of successes as well as challenges, which together highlight a host of lessons for the successful implementation and operation of future livelihood recovery activities following disaster events.

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