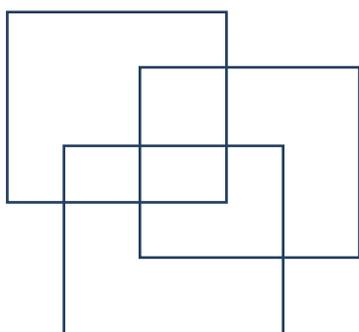




International
Labour
Organization

Employment-focused disaster risk management and reconstruction in Asia and the Pacific:

A comparative analysis of recent disasters in India, Japan, Nepal, and the Philippines



Copyright © International Labour Organization 2016

First published 2016

Publications of the International Labour Office enjoy copyright under Protocol 2 of the Universal Copyright Convention. Nevertheless, short excerpts from them may be reproduced without authorization, on condition that the source is indicated. For rights of reproduction or translation, application should be made to ILO Publications (Rights and Licensing), International Labour Office, CH-1211 Geneva 22, Switzerland, or by email: rights@ilo.org. The International Labour Office welcomes such applications.

Libraries, institutions and other users registered with a reproduction rights organization may make copies in accordance with the licences issued to them for this purpose. Visit www.ifrro.org to find the reproduction rights organization in your country.

Employment-focused disaster risk management and reconstruction in Asia and the Pacific: A comparative analysis of recent disasters in India, Japan, Nepal, and the Philippines / ILO Regional Office for Asia and the Pacific (Bangkok, ILO, 2016).

ISBN: 9789221307822; 9789221307839 (web pdf)

ILO Regional Office for Asia and the Pacific

natural disaster / risk management / employment / India / Japan / Nepal / Philippines

12.04.3

ILO Cataloguing in Publication Data

The designations employed in ILO publications, which are in conformity with United Nations practice, and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of the International Labour Office concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its frontiers.

The responsibility for opinions expressed in signed articles, studies and other contributions rests solely with their authors, and publication does not constitute an endorsement by the International Labour Office of the opinions expressed in them.

Reference to names of firms and commercial products and processes does not imply their endorsement by the International Labour Office, and any failure to mention a particular firm, commercial product or process is not a sign of disapproval,

ILO publications and digital products can be obtained through major booksellers and digital distribution platforms, or ordered directly from ilo@turpin-distribution.com. For more information, visit our website: www.ilo.org/publns or contact ilopubs@ilo.org.

Printed in Thailand

Foreword

Employment is indispensable if post-disaster recovery is to be sustainable. This paper aims to contribute to employment-led disaster response and recovery by bringing together practical and empirical findings derived from recent disaster recovery efforts in the Asia and Pacific region.

It examines how employment issues have or have not been mainstreamed in disaster risk management and recovery efforts, focusing on four case study countries; India, Japan, Nepal and the Philippines.

Through a comparative analysis of the four case studies the paper distils key lessons and good practices for enhancing employment-centred disaster risk management and recovery. It finds that countries with established employment schemes are well-equipped for swift recovery. Establishing a quick post-disaster employment recovery framework at an early stage supports longer-term recovery. The study also highlights current gaps and challenges in including employment perspectives in disaster risk reduction policies and operations.

The production of this comparative analysis and the background papers on the four case studies were made possible thanks to generous financial support by the Government of Japan.



Tomoko Nishimoto
Assistant Director-General and Regional Director
ILO Regional Office for Asia and the Pacific

Contents

Foreword	iii
Contents	iv
Acknowledgements	vi
Executive summary	vii
Acronyms	x
1. Introduction	1
1.1 Background	1
1.2 Objectives, methodology, and target audience	2
2. Employment and disaster issues: A review	3
2.1 Introduction	3
2.2 Disaster vulnerability and socio-economic resilience.....	4
2.3 Concept and parameters of vulnerable occupation	6
2.4 Indian Ocean tsunami: Key turning point in prevailing disaster risk reduction paradigm	8
2.5 Hyogo Framework for Action (HFA), and livelihood and employment issues ..	9
2.6 Sendai Framework for Disaster Risk Reduction (SFDRR) and its implications	11
3. Case study findings	13
3.1 Japan: East Japan Earthquake and Tsunami (2011)	13
3.2 Philippines: Typhoon Haiyan (2013)	18
3.3 India: Uttarakhand Floods (2013)	21
3.4 Nepal: Gorkha Earthquake (2015)	26
3.5 Comparative analysis	29
4. Key observations and future perspectives	34
4.1 Key issues relating to employment and disaster risk reduction	34
4.2 Future directions in employment promotion and occupational resilience.....	37
5. Conclusion	42
References	43
Boxes	
Box 1 Focus on slow-onset disasters	7
Box 2 Kesenuma experiences of emergency employment	17

Box 3	India's employment guarantee scheme	26
Box 4	Inclusive recovery: Concept to realization	38
Box 5	Labour statistics and local authority coordination	39
Figures		
Figure 1	Employment-based risk reduction: Identified goals	38
Tables		
Table 1	Comparative analysis of four case studies.....	29

Acknowledgements

Four case studies — India, Japan, Nepal, and the Philippines — provide the basis for this comparative analysis. The author wishes to thank all those who contributed to those studies. The author also wants to acknowledge the support and valuable input from the International Labour Organization (ILO) Regional Office for Asia and the Pacific.

Key highlights

- Having access to adequate labour/employment statistics before disaster strikes contributes much to immediate post-disaster responses as well as to short- and long-term recovery efforts.
- An inclusive recovery programme needs to incorporate the gender, disability, informal economy, and micro-enterprise dimensions of employment.
- An effective pre-disaster employment generation/guarantee scheme (including emergency employment and insurance) helps with immediate post-disaster recovery.

Disclaimer

This report does not necessarily reflect the views of the International Labour Organization-Decent Work Technical Support Team (DWT/CO-Bangkok) or those of the Governments they represent. ILO-DWT does not guarantee the accuracy of the data included in this work. The views expressed herein are those of the author only, and any substantial errors are the responsibility of the author.

Executive summary

Disasters adversely affect livelihoods and employment. Following recent major disasters in the Asia-Pacific region, the ILO commissioned case studies of the East Japan Earthquake and Tsunami (2011), Typhoon Haiyan in the Philippines (2013), the Uttarakhand Floods in India (2013), and the Gorkha Earthquake in Nepal (2015). Based on findings from these four studies, this comparative analysis proposes recommendations for future employment-based disaster risk reduction (DRR) measures across the region.

A review of the literature on employment and disaster issues indicates that stresses, or slow-onset disasters (see box 1, below), are more and more affecting such vulnerable occupational groups as agricultural labourers and small farmers; at the same time migration of such workers to urban areas increases pressure on the informal economy. For poor and vulnerable communities, social capital becomes an important part of informal livelihoods, and employment-based DRR needs to become a policy and planning priority.

Following the Indian Ocean tsunami, a number of countries in the region passed disaster-related laws, and this legislation needs to be examined in the search for effective employment-related options for the recovery process. While the Hyogo Framework for Action (HFA) 2005–2015 focuses more on livelihoods and employment in the framework, the new Sendai Framework for Disaster Risk Reduction (SFDRR) 2015–2030 makes no explicit mention of employment and livelihood issues. Nevertheless, the priority areas set out in SFDRR, together with the Sustainable Development Goals (SDGs), offer immense scope for promoting employment-based DRR.

The four country-level assessments suggest the following lessons:

- Having a well-developed national labour statistics bureau in place before a disaster strikes is useful for post-disaster relief operations, as well as for short- and long-term recovery efforts. The post-disaster needs assessment (PDNA), as illustrated in the Japan case study, needs to involve a national statistics bureau.
- Having an employment generation/guarantee policy in place before the disaster, as observed in the Japan and India case studies, helps with outreach to rural communities in remote areas in the post-disaster response and relief phase.
- Inclusive recovery efforts, as the Japan case study illustrated, must also focus on issues of gender and people with disabilities.
- PDNA, key to successful recoveries, therefore requires, as observed in both the Philippines and Nepal studies, a well-coordinated assessment involving the national government and donor agencies alike.
- The Philippines and Nepal studies suggested that, for some countries, PDNAs led by national economic or planning ministries, rather than by specifically disaster-

related ministries/organizations, appear more inclusive because of easy access of relevant data sets.

- Both the India and Philippines case studies indicated that an efficient recovery process depends on successful national-local and local government-donor relationships.
- Unpredictable factors such as the nuclear meltdowns in the aftermath of the East Japan Earthquake and Tsunami, or the conflicts over constitutional amendments in Nepal, are among post-disaster events that can inhibit recovery, especially recovery of livelihoods/employment.
- Public-private partnership (PPP) has proven an important element of effective employment recovery, as the India and Japan cases showed.
- Accurate and inclusive data sets on the informal economy, especially for micro-enterprises, are crucial to post-disaster recovery and, as the India, Nepal, and Philippines case studies showed, they need to feature prominently in PDNA exercises.
- The Nepal and Philippines studies suggest that country-level cluster coordination and links/liaison with local authorities are important for efficient recovery programme operations.

The following insights have been derived from a comparative analysis of the four case studies, and they should inform future approaches to employment-based DRR:

- Relative levels of national economic development, socio-economic growth patterns, and political will often influence both the recovery process in general and, more specifically employment/livelihoods recovery.
- PDNAs need to incorporate the capacity building potential of labour-statistic departments and core employment-related data.
- PDNA and compensation schemes need to be inclusive, which means addressing issues and needs related, for example, to gender, people with disabilities, and micro enterprises.
- Successful local authority relationships with donors and clusters are important for an effective employment recovery.
- Employment-based risk reduction needs to involve such non-traditional stakeholders as self-help and social groups.
- The four pillars of employment-based risk reduction include identifying respective occupational vulnerability, mitigating adverse impacts, reducing poverty, and promoting social stability and equity.
- With employment-based DRR, urban-rural linkages become important in addressing certain types of vulnerable occupation where coping mechanisms need to be improved.

- Women-driven small and micro enterprises are often vulnerable to disasters, and the recovery process often neglects them. The PDNA exercise should take account of this issue.
- Pre-disaster recovery planning for employment is an important measure, one where labour statistics departments need to collaborate with other agencies in developing situation-specific scenarios and related action planning before disasters strike.

Inclusive and rapid recovery requires pre-disaster training and capacity building in national labour- or employment-related statistical departments. Effective pre-disaster employment recovery planning needs to be based on extensive and accurate information regarding local situations. Smoothly functional links between national-level frameworks and local action are also critically important; success depends on a good governance system and efficacious centre-state relationship.

Acronyms

ADB	Asian Development Bank
BCP	business continuity planning
BPL	below poverty line
CCU	Cabinet Committee on Uttarakhand
COP	Conference of Parties
CRRP	Comprehensive Rehabilitation and Recovery Plan
CSERGE	Centre for Social and Economic Research on the Global Environment
CSO	civil society organization
CSR	corporate social responsibility
CSV	creating shared values
DA	Department of Agriculture (Philippines)
DILG	Department of Interior and Local Government (Philippines)
DND	Department of National Defense (Philippines)
DOLE	Department of Labor and Employment (Philippines)
DOST	Department of Science and Technology (Philippines)
DPWH	Department of Public Works and Highways (Philippines)
DRR	disaster risk reduction
DRRM	disaster risk reduction and management
DSWD	Department of Social Welfare and Development (Philippines)
DTI	Department of Trade and Industry (Philippines)
EAS	employment assurance scheme
EPDR	Employment Promotion in Disaster Response
ESIC	Employees' State Insurance Corporation (India)
FAO	Food and Agriculture Organization
FGD	focus group discussion
FY	fiscal year
GDP	gross domestic product
HFA	Hyogo Framework for Action

IDB	Inter-American Development Bank
IDEA	Institute of Environmental Studies (Columbia)
IGA	income generating activity
IIED	International Institute for Environment and Development (London, U.K.)
ILO	International Labour Organization
INR	Indian rupee (currency)
IOM	International Organization for Migration
KRA	Kesennuma Reconstruction Association (Japan)
LGU	local government unit
ME	micro-enterprise
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Act (India)
MIS	management information system
MORD	Ministry of Rural Development (India)
MOU	memorandum of understanding
MSME	micro, small and medium-sized enterprises enterprise
NDRF	National Disaster Response Force (India)
NDRRM	national disaster risk reduction and management (
NDRRMC	National Disaster Risk Reduction and Management Council (Philippines)
NEDA	National Economic Development Agency (Philippines)
NGO	non-governmental organization
NPC	National Planning Commission (Nepal)
NPO	non-profit organization
NRA	National Reconstruction Authority (Nepal)
OCD	Office of Civil Defense (Philippines)
PARR	Presidential Assistant for Rehabilitation and Recovery (Philippines)
PDNA	post-disaster needs assessment
PMEGP	Prime Minister's Employment Generation Programme (India)
PMNRF	Prime Minister's National Relief Fund (India)

PMRY	Prime Minister's Rozgar Yojana (India)
PPP	public-private partnership
R&D	research and development
RA	Republic Act (Philippines)
RSBY	Rashtriya Swasthya Bima Yojana (India)
SDGs	Sustainable Development Goals
SFDRR	Sendai Framework for Disaster Risk Reduction
SME	small and medium-sized enterprise
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commissioner for Refugees
UNISDR	United Nations International Strategy for Disaster Reduction
USAID	United States Agency for International Development
WCDRR	World Conference for Disaster Risk Reduction
WHR	Women for Human Rights

1. Introduction

This chapter focuses on the study's background, objectives, methodology, and target audience.

1.1 Background

Over the past several years, large-scale natural disasters including earthquakes, typhoons, floods, and landslides have hit the Asia and Pacific region, leaving in their wake devastation not only in terms of extensive human casualties and massive property damage, but also in terms of livelihoods and employment. Mitigating such disaster risks presents an acute challenge both in the region and beyond.

The Third United Nations World Conference on Disaster Risk Reduction (DRR) adopted the Sendai Framework for DRR (SFDRR). The Framework recognizes the devastating impacts of natural disasters on employment and livelihoods, and prioritizes issues related to livelihoods and sustainable businesses. The Framework calls for nations to develop strategies and implement risk reduction measures over the next 15 years, including those affecting livelihoods. The year 2015 also marked the launches of two other important global frameworks: (1) the Sustainable Development Goals (SDG), where Goal 8, promoting inclusive and sustainable economic growth, employment, and decent work for all, was established as an important SDG pillar; and (2) the United Nations Framework Convention on Climate Change (UNFCCC), was adopted at the Paris Conference of Parties (COP) 21.

The ILO is involved in DRR, particularly in the areas of livelihoods recovery and employment protection. To better assist its constituents in developing employment-focused risk mitigation strategies, however, ILO needs to better understand the challenges faced by specific countries – in particular, it needs more detailed information and analysis to determine the extent to which employment and livelihoods issues have been addressed in the disaster risk reduction cycle.

Thus the ILO Decent Work Team in Bangkok has launched a new technical cooperation project: Employment Promotion in Disaster Response; (hereafter the EPDR Project).¹ This assessment is part of a broader ILO technical cooperation initiative extending for one year (2015–16) and involving case studies of four disaster-prone countries in Asia and the Pacific: Japan, the Philippines, India, and Nepal.

¹ Details available at: http://www.ilo.org/asia/whatwedo/projects/WCMS_380360/lang--en/index.htm [accessed 9 Feb. 2016].

This paper examines the findings from these four studies, and presents a comparative analysis of the respective impacts, challenges, and opportunities related to employment-focused DRR.

1.2 Objectives, methodology, and target audience

This action-oriented empirical study aims to help to mitigate disaster risks affecting livelihoods and employment of people in disaster-prone countries by (1) analyzing employment issues in recent disasters, and (2) developing generic as well as specific issue- and policy-targeted recommendations based on a comparative analysis of the four country case studies.

These case studies focused on recent disasters in Japan – the East Japan Earthquake and Tsunami, in 2011 (ILO, 2015a); the Philippines – Typhoon Haiyan, in 2013 (ILO, 2015b); India – the Uttarakhand Floods, 2013 (ILO, 2015c); and Nepal – the Gorkha Earthquake, in 2015 (ILO, 2015d). These case studies included primary data collection, interviews, and policy analysis for each country. This report analyzes key findings from those studies, supported by a desktop review of some current literature regarding employment and disaster risk reduction.

The report findings are expected to contribute to the development of policy guidance and programmatic options in implementing employment-focused disaster risk management initiatives, with a special focus on post-reconstruction and pre-disaster livelihoods and employment recovery planning.

The target audience includes national and international practitioners and policy-makers in the fields of both employment and labour and DRR.

Chapter highlights

Disasters appear to be increasing in both frequency and magnitude, and their impacts on vulnerable communities are on the rise, exacerbating related employment and livelihood issues. The ILO Decent Work Technical Support Team in Bangkok has undertaken case studies in India, Japan, Nepal, and the Philippines following major disasters in each of those four countries. This comparative analysis draws lessons from the four case studies.

2. Employment and disaster issues: A review

This chapter reviews interrelationships between employment and disaster issues, and establishes a working concept of vulnerable occupations. It also presents an analysis of employment- and livelihood-related issues arising in the aftermath of the Indian Ocean tsunami of 2004, and in the context of the Hyogo Framework for Action (HFA) and Sendai Framework for Disaster Risk Reduction (SFDRR).

2.1 Introduction

Given the scale of the risk they pose to the poor in particular, these disasters are inseparably related to poverty issues (Satterthwaite et al., 2007). When disaster strikes, poor people often lose the assets upon which their survival depends. Their physical exposure and vulnerability are exacerbated by a deficit in adaptive capacity to cope with the effects of changing climate (McBean and Ajibade, 2009). At the same time, their limited resources, typically including lack of access to education and health services, can further increase their exposure to risk (UNISDR, 2009a; UN, 2012). Being poor predisposes one to being at risk, and this is intensified by population increases and urbanization, and yet further compounded by the effects of global climate change and environmental degradation. And developing countries are more exposed to disaster risks, since their inhabitants often lack the ability to cope with, or adapt to, such events, especially with recurring disasters.

Researchers and policy-makers have focused too little on safeguarding the interests of populations engaged in marginal occupations – the very people, arguably, who suffer most in an event of a disaster. In a country such as India, where 29.8 per cent of the population subsists below the national poverty line (World Bank, 2010), it becomes increasingly important to revive the earning capacities of those hit hardest. Aside from a few non-government organizations (NGOs), most stakeholders involved in the recovery process neglect this important impact of disasters. Neither is the damage limited only to prospects for economic recovery; it also extends to secondary social and environmental effects that can be so complex as to resist analysis. For example, climate-induced disasters such as famine and flood may cause poverty, which may in turn lead to increased drop-out rates from schools, especially among female students, ultimately disturbing the social balance of the whole region.

Most current disaster research concentrates on the “physical wave” (Bamdad, 2005), i.e. the loss of property and infrastructure, and the “medical wave”, i.e. provision of medical attention to those who need it during the emergency, while ignoring the “social wave”, i.e. the force that disrupts the structures and functions of a community’s social order. Organizational studies are largely restricted to determining the direct economic losses.

In fact, restoring or providing new physical infrastructure is needed in the post-disaster phase, and this directly or indirectly benefits one and all. At the same time, however, restoring livelihoods is also essential. A city or a village hit by a disaster can be more surely restored to normalcy if its citizens are provided with opportunities to earn incomes immediately after the disaster. Thus, recovery efforts must include an understanding of the respective factors that make given occupations vulnerable to disaster. The same parameters will also help to determine the factors that will make these occupations more resilient to disaster.

2.2 Disaster vulnerability and socio-economic resilience

The United Nations International Strategy for Disaster Reduction (UNISDR) defines vulnerability as “the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard” (UNISDR, 2009b). In other words, vulnerability is a function of physical exposure to hazards; sensitivity to the stresses they impose; capacity to adapt to these stresses; and susceptibility, fragility, and lack of resilience in socio-economic and physical infrastructures (Cardona et al., 2004; Adger et al., 2004). Vulnerability is determined by physical, social, economic, and environmental factors, including socio-economic inequalities and geographic disparities (McBean and Ajibade, 2009). It also depends on such factors as magnitude of the hazard; its timing and persistence; the reversibility of its impacts; and public perception of the risks (O’Brien and Heyd, 2009). Causes of vulnerability are related to the environmental threat as well as to the economic and institutional context. Indeed changes in the social causes of vulnerability often occur much more rapidly than some of the environmental changes.

The concept of vulnerability may be understood in a variety of ways, but researchers are unanimous in noting the emergence of two main perspectives on vulnerability (Cutter, 1996; Adger et al., 2004). The first of these treats it “as a pre-existing condition and focuses on potential exposure to hazards” (Rygel et al., 2006). This approach primarily assesses distribution of hazardous conditions, human inhabitation of the hazard zone, and extent of loss of life and property resulting from a particular event. The second perspective considers populations as part of socio-economic systems, assigning risks differentially to different sets of people and their respective patterns of loss.

Relative vulnerability also varies according to different coping capacities among those affected. Coping capacity has been described as the ability of people, organizations, and systems, using available skills and resources, to face and manage adverse conditions, emergencies, or disasters (UNISDR, 2009b). One observer identified the following as the main categories of vulnerability: livelihood vulnerability, self-protection, and social protection (Cannon, 1994). Later, the same researcher expanded the classification to five elements, including initial well-being, livelihood resilience, self-protection, societal protection, and social capital (Cannon, 2000).

Another study for the first time emphasized economic and social processes and structures as causes of vulnerability, rather than merely contributors to hazard mitigation. Prior to that, even social science analyses of hazards were primarily technocratic and prescriptive. Now the social context is also being taken into account in analyses of “natural” disasters (Hewittm, 1983). “Social vulnerability is the exposure of groups or individuals to stress as a result of social and environmental change, where stress refers to unexpected changes and disruption to livelihoods [Adger, 1998].” This approach emphasizes social dimensions of vulnerability as opposed to predominantly physical dimensions, assessing vulnerabilities already embedded in the social and political order. It makes people’s coping strategies and socio-economic structures the focus of evaluation and assessment. The approach also shifts policy-making away from macro-level causes of hazards, shock, and stresses towards more micro-level processes. This is important, since it brings to the fore the concept that vulnerability is socially differentiated, i.e. vulnerability varies among different populations living under salient environmental conditions or faced with distinctive and complex interactions of social norms, political institutions, and resource endowments, technologies, and inequalities (Adger, 1998). To clarify the scale and unit of analysis, social vulnerability can be disaggregated into the two distinct dimensions of individual and collective vulnerability:

- Individual vulnerability can be assessed in terms of poverty and risk to income sources as these are affected by extreme events.
- Changes in collective vulnerability may be indicated through changes in resource distribution within a population, and by changes in institutional and political structures even at local community levels (Adger, 1998).

The sensitivity of economies to climate-related hazards can be measured in terms of fluctuations in gross domestic product (GDP) and in growth rates among agricultural and non-agricultural sector products. An unreliable water supply or a surplus of water due to hydrological variability presents a substantial disincentive to investments in industry and services, slowing the diversification of economic activities. Frequent droughts and floods pose a systematic risk to national economies and populations heavily dependent on natural resources. Associated impacts on livelihoods are complex, so certain asset-based approaches were developed to analyze means of coping with natural disasters (Carter et al., 2007). This research examined two disaster-hit communities – one in Honduras (Hurricane Mitch), and the other in Ethiopia (a three-year drought) – for evidence that natural disasters acted as poverty traps. In both cases, this hypothesis was borne out, and the effect had longer-term implications for poorer households compared to their more affluent peers. Other research looked at Zimbabwean farmers, and found dissimilar responses to disaster shocks based on predicted degree of poverty (Hoddinott, 2006). While farmers above the poverty line coped through consumption smoothing (for example, selling off assets), farmers below the poverty line avoided asset smoothing (e.g. by decreasing consumption). The latter response bears a heavy human capital cost,

confirming the Ethiopia-Honduras study's finding that natural disasters acted as poverty traps.

2.3 Concept and parameters for of vulnerable occupation

The ILO defines the “vulnerable employment” indicator as the sum of own-account workers (workers who work on their own account or with one or more partners and who describe themselves as self-employed) and unpaid family workers as a percentage of total employment (ILO, 2010). “Vulnerable employment”, as used in the context of normal economic activities, needs to be redefined in the context of disaster risk management and reconstruction. It can also serve as a valuable indicator in determining vulnerable populations through the estimation of groups dependent on these occupations. Box 1, below, focuses on slow-onset disasters and highlights vulnerable occupation issues.

Vulnerable employment is often characterized by inadequate earnings, informal work arrangements, low productivity, poor working conditions, inadequate social security, and ineffective or no representation by trade unions and similar organizations. The total number of such vulnerable workers worldwide is estimated at between 1.48 and 1.59 billion (ILO, 2010). This estimate assumes a “normal” scenario, but, in the event of disaster, all economic activities become vulnerable. In addition, the common features of vulnerable employment listed above may be relative to geographical context and particular national economies and households. These characteristics also assume normal times, though different features might prove more helpful in determining occupational vulnerabilities in times of disaster. Where applicable, furthermore, the impact of disasters on urban poverty is often underestimated, with assessments of disaster impact generally neglecting the metrics that describe low-income groups (UNISDR, 2009a).

Box 1

Focus on slow-onset disasters

In most cases, it is the mega disasters known as “shocks” that win our attention. But we need to focus more on “stress”, or “slow-onset”, disasters – e.g. drought, soil or water salinity, sea-level rises – since these processes strongly affect rural livelihoods and add pressure on urban informal livelihoods.

The slow-onset, or “creeping”, disasters often affect rural livelihoods, especially agricultural jobs, the most affected being the land-less workers or small-landholder farmers. Once they can no longer cope with the creeping disasters, these people are generally forced to move to nearby towns or cities and look for alternate livelihoods. This issue appears increasingly prevalent in many developing countries under worsening conditions of climatic stress.

One study, referring to a detailed literature review and field analysis, has proposed three areas that strongly affect related employment issues in disaster situations:

- **migration** – loss of employment and/or productive assets, change in economic activity, decline in productivity, reduced income, decline in productivity;
- **the economy** – workforce participation, loss of working days, recovery time, reduced income, loss of employment and/or productive assets; and
- **social capital** – effect on social structure, loss of social respect, detachment from former community of residence, decline in productivity due to stress-related psychological factors.*

A delicate balance needs to be achieved among these three issues, which can be further sub-divided into nine key parameters in identifying or influencing vulnerable occupations: (1) loss of productive assets, (2) displacement, (3) loss of employment, (4) decline in productivity, (5) reduced income, (6) workforce participation, (7) change of occupation, (8) effect on social structure, and (9) recovery time. These parameters are applicable to climate-related hazards scenarios, and can be used to compare various occupations within a system, distinguishing the less vulnerable occupations from the more vulnerable ones.** This would be helpful in prioritizing sectors on which the local machinery should focus in the long term to reduce the vulnerability of identified occupations and revive the population engaged in them.

* Srivastava and Shaw (2014a)

** Ibid.

2.4 Indian Ocean tsunami: Key turning point in prevailing DRR paradigm

The Indian Ocean tsunami (26 December 2004), a massive disaster, affected people of many nationalities, killing more than 200,000 people, damaging the homes of more than 1 million people, and directly or indirectly affecting several million more. With its epicentre in the India Ocean near Aceh, Indonesia, a magnitude 9.1–9.3 earthquake gave rise to a tsunami that affected India, Indonesia, the Maldives, Sri Lanka, and Thailand. Most of the damage was to Bay of Bengal countries, but East African countries were also affected. Indonesia reported about 168,000 people dead, the greatest toll, followed by Sri Lanka with 35,000, India with 24,500, Thailand with 8,000, and the Maldives with about 100. Over 9,000 foreign tourists from more than 50 nationalities were killed in the disaster, making this the disaster affecting the greatest number of nationalities in history.

The tsunami was followed by the Second World Conference on Disaster Reduction in Kobe, Japan, in January 2005, which adopted the Hyogo Framework for Action (HFA) 2005–2015, the first global disaster framework with achievable goals. The disaster being a coastal one, the hardest-hit livelihoods were in fishing and related industries, followed by tourism. Different recovery programmes were adopted and implemented by national and local governments, bi- and multi-lateral donors, international agencies, and national and international NGOs. The private sector played important roles in different countries in restoring employment losses. One analytical study pointed out that many coastal communities in India and Sri Lanka relied on a limited and precarious livelihoods base (Shaw et al., 2007). Marine resources, the principal source of income for many households, were under pressure from over-fishing and ecosystem degradation. At the same time, options for alternative income-generating activities (IGAs) were constrained by poor infrastructure, low educational attainment, weak markets, and lack of finance. The lack of a strongly diversified livelihoods base intensifies dependence on fisheries, increasing vulnerability to shocks and income fluctuations, and further compromising the long-term sustainability of the natural resource base.

Over-dependence on fishery resources was a policy concern that pre-dated the tsunami by several years. But prior to 2005 few coordinated attempts had been made to address the problem. After the tsunami, however, substantial resources available for livelihoods reconstruction provided a rare opportunity to improve rather than restore the status quo, addressing underlying economic and social issues that had contributed to higher-than-average levels of poverty in tsunami-affected areas. All locations experienced an increase in livelihoods diversification, one measure of which was an expansion in the average number of income sources per household.

Access to secure poverty-clearing local income generating-activities (IGAs), however, remains insufficient. Employment growth has been concentrated at the low-value end of the income spectrum, in casual labouring work and marginal microenterprises, many of which are subsistence-based activities outside the cash economy. These IGAs are

characterized by underemployment, job insecurity, low productivity, poor working conditions, and below-poverty-line earnings.

The Swayam micro-credit tsunami recovery programme of SEEDS India² and Cap Solidarités (France), operating in the Andaman and Nicobar Islands after the tsunami, included compulsory insurance for all assets distributed through the programme. While Swayam supported the first years' premiums, further premiums had to be paid by the beneficiaries. The scheme targeted mainly individual micro-enterprises, which did not usually appear on the aid agency's radar. The programme worked with a partner insurance company, and provided training for beneficiaries in the importance of insurance for disaster reduction (SEEDS, 2005). The success of a micro-insurance programme depends heavily on diversification, volume, and client renewals.

Various innovations in livelihoods improvement appeared in the aftermath of the disaster, in terms of different products or institutional mechanisms and new partnership developments. The Indian Ocean tsunami may be described as a key turning point in risk reduction issues in Asia and globally, especially in terms of new disaster frameworks, institutionalizing disaster risk reduction at the national and local levels. Disaster management legislation was passed in a number of countries: India (2005), Pakistan (2006), Indonesia (2007), Bangladesh (2010), the Philippines (2011), the Lao People's Democratic Republic (2012), Viet Nam, and Myanmar (2014), and the institutional mechanisms specified in the various national laws may be considered key achievements in the post-Indian Ocean tsunami context.

2.5 Hyogo Framework for Action (HFA), livelihoods and employment issues

The ILO works with the UN and other multilateral agencies in disaster recovery situations, developing policies and programmes to promote decent employment opportunities as a central plank of efforts to reduce and eventually eradicate poverty. In this way, help for affected populations avoids making them dependent on relief aid, where they fall into a vicious circle of poverty aggravated by periodic shocks and crises.

HFA focuses on employment and vulnerable livelihoods through a variety of policies and programmes (UNISDR, 2009c):

- support for employment policies and social dialogue;
- rapid assessments of disaster impacts on employment and incomes;
- implementation and monitoring of livelihood risk reduction and recovery programmes;
- employment-intensive infrastructure programmes;
- targeted support to vulnerable groups and sectors;
- employability development and vocational training systems;

² Visit the SEEDS website at: <http://seedsindia.org> [accessed 9 Feb. 2016].

- support to SMEs and micro-enterprises;
- support to microfinance schemes;
- expansion of social security coverage and safety nets;
- local economic recovery programmes;
- establishment/consolidation of emergency employment services; and
- expert support for cash transfer programmes in the aftermath of disasters.

HFA emphasizes the following priority measures regarding employment and livelihood security in the DRR context.

Priority 1: Making disaster risk reduction a policy priority as part of institutional strengthening. Social dialogue at the enterprise, sectoral, and national levels represents the core institutional issue. In disaster settings, these elements are key to minimizing the effects on productive livelihoods of both disaster risks and after-effects. Substantial dialogue helps, on the one hand, to reduce the impact of a crisis; rebuild communities and social networks; and restart affected productive livelihoods on a sound development path. On the other hand, dialogue helps to ensure that livelihood risk management features as a priority in relevant policies and programmes.

Priority 2: Risk assessment and early warning systems. Rapid employment and livelihood impact assessments are core issues of livelihoods/employment-related risk assessment. A comprehensive livelihood impact assessment, combined with hazard mappings and vulnerability assessments, provides crucial information that helps decision-makers to assess what is needed to increase resilience and reduced disaster risk to livelihoods. This assessment also contributes to building baseline information on labour markets and the status of livelihoods in at-risk areas, which is essential to quantifying and suggesting needed recovery interventions and promoting monitoring of recovery programmes.

Priority 3: Education, information and public awareness. Dissemination of information on livelihood disaster risks reduction and recovery options is essential, especially when addressing workers' and employers' organizations in high-risk areas. In this way people can be both encouraged and enabled to reduce livelihood risks and build resilience to disaster shocks. It also promotes the establishment of networks among disaster and livelihoods experts, sharing knowledge of good practices, cost-effective livelihood risk reduction measures, and lessons learned in the field. All actors become involved in DRR through participation in global coordination platforms.

Priority 4: Reducing underlying risk factors. It is important to incorporate productive livelihoods risk reduction measures into planning policies and post-disaster recovery and rehabilitation processes. This maximizes opportunities to develop local capacities to reduce livelihood risks in the long term. It also promotes public-private partnerships (PPPs) to better engage the local private sector in livelihood risk reduction activities,

while encouraging all stakeholders to foster a culture of disaster prevention, putting greater emphasis on pre-DRR interventions.

Priority 5: Preparedness for effective response. Experience suggests that pre-disaster recovery planning is essential for quicker and better recoveries. With respect to livelihoods/employment, it helps governments and other constituents to anticipate vulnerabilities in productive livelihoods among people in at-risk areas; promote livelihood risk reduction measures; and increase livelihood recovery preparedness before disasters strike, in this way also contributing to the reduction of extreme poverty in those areas.

2.6 SFDRR and livelihood Issues

The Sendai Framework for Disaster Risk Reduction (SFDRR) was adopted at the Third World Conference on Disaster Risk Reduction (WCDRR) in Sendai, Japan, in March 2015. It is to serve as the risk reduction framework for the period 2015–2030. SFDRR targets the following outcomes:

“The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.”

SFDRR pursues the following four priorities:

- understanding disaster risk;
- strengthening disaster risk governance to manage disaster risk;
- investing in disaster risk reduction for resilience;
enhancing disaster preparedness for effective response; and
- “Building Back Better” in recovery, rehabilitation, and reconstruction.

Although “livelihood” is mentioned in the key broader goal of the framework, employment-related discussion features nowhere in the entire SFDRR document. Nevertheless, the four priority areas mentioned above link significantly with employment and livelihoods as the basic support for economic sustainability among individuals and communities. One important issue that emerged from the SFDRR document is the increasing emphasis on different stakeholders, especially those in science and technology, to support science-based decision making. Employment-based DRR needs a proper scientific grounding and an evidence-based approach to SFDRR implementation in future.

Chapter highlights

An analysis of key sources in the literature on vulnerability, employment/livelihoods, and disaster risk reduction produced the following points:

- Stresses (slow-onset disasters) are increasingly affecting vulnerable occupations such as agriculture labour and small farmers, spurring migration to urban areas that increases pressure on the informal economy.
- Social capital becomes an important part of informal livelihoods, and part of a new focus on employment-based DRR.
- Following the Indian Ocean tsunami, several countries in the region have passed disaster legislation. This needs further study in promoting effective employment-related options for the recovery process.
- While HFA (2005–2015) does focus more on livelihoods and employment, SFDRR (2015–2030) makes no explicit mention of employment and livelihood issues. However, the priority areas, along with the SDG, offer immense scope for promoting employment-based DRR.

3. Case study findings

This chapter presents brief summaries of the four case studies:

- Japan: East Japan Earthquake and Tsunami, 2011;
- The Philippines: Typhoon Haiyan, 2013;
- India: Uttarakhand Floods, 2013; and
- Nepal: Gorkha Earthquake, 2015.

A comparative analysis subsequently provides the key findings.

3.1 Japan: East Japan Earthquake and Tsunami (2011)

3.1.1 Background

The East Japan Earthquake and Tsunami of 11 March 2011 killed more than 19,000 people, and initially left more than 500,000 homeless. Even four years after the disaster, a significant percentage of affected people were still living in temporary housing, although the transition from temporary to reconstruction housing had started in several cities from early 2015.

The disaster had significant impacts on the region's primary industries, especially fisheries and agriculture, which under normal circumstances contribute more than 10 per cent of Japan's GDP. Employment losses were high from the outset, and it took significant time to recover from this. One additional factor was the nuclear meltdown in Fukushima, which led to the relocation (some temporarily, some permanently) of many people, even outside the prefecture. This added to the serious challenge of employment recovery.

3.1.2 Case study procedural overview

This case study (ILO, 2015d) focused on three Tohoku prefectures particularly affected by the earthquake: Iwate, Miyagi, and Fukushima. Against an account of the pre-2011 socio-economic situation in these areas, the study quantified the disaster's impact on society (human and physical damages), the economy, and labour issues. The project next reviewed the employment insurance system in Japan together with both public and private sector recovery initiatives. On the basis of this information, the study presented a situational analysis of the current status of the economy, including its industry, employment, and labour sectors, as well as the impact of the afore-mentioned recovery measures. Ten case studies in Iwate and Miyagi prefectures contributed to a more detailed account. Data collection, conducted from late June to early August 2013, was followed by the situational analysis from August to late September 2013. The case studies

and recommendations were prepared concurrently from mid-July through early October 2013.

3.1.3 Post-2011 institutional arrangements

The study provides a comprehensive overview of the institutional framework of recovery measures initiated by the Japanese Government. It begins by detailing pre-2011 earthquake employment policies and measures, helping readers to understand how existing measures were applied in the 2011 disaster response. Post-2011 earthquake policy measures are detailed next, and the “Japan as One” Work Project³ is analyzed in terms of its emergency, recovery, and reconstruction phases; implementation structure; and fund flows. Local-level employment policies and measures in Iwate, Miyagi, and Fukushima are then examined to show how reconstruction plans, employment policies, and disaster response measures were formulated, while also addressing issues of policy formulation. Lastly, the chapter details a new initiative by the Abe Administration to accelerate the reconstruction process, which began in December 2012. It concludes by noting that existing schemes for extreme-situation employment creation were well used (1) through a variety of measures in covering all affected people and (2) in introducing a human resource dispatch system for reconstruction. These schemes, as was the Japan as One project, were planned in phases, from emergency to recovery to reconstruction. It is worth noting that the eligibility requirements for employment measures (as listed under the “Japan as One” Work Project) were relaxed as well.

3.1.4 Employment recovery issues

This section summarizes contributions on the part of PPPs; social businesses; civil funds; private companies; and trilateral collaboration between industries, academic institutions, and the Government:

- PPP shared costs between the public and private sectors;
- social businesses promoted the inclusion of social issues within non-profit organizations (NPOs) and private company business models;
- civil funds eased individual investor accessibility to Internet-based disaster relief opportunities; and
- private companies expanded aid efforts from volunteerism to corporate social responsibility (CSR) to creating shared values (CSV).

The study found that recovery of the fishing industry was slowed by local factors such as reconstruction of infrastructure, which in turn reduced the number of available workers, in addition to the overall negative impact on the disaster on economic revival in that sector. Another contributing factor was the trend to employment mismatching, which

³ For details, refer to http://www.mhlw.go.jp/english/topics/2011eq/japan_as_one.html [accessed 9 Feb. 2016].

varied by sector, in all three prefectures. Those affected might also have been troubled by uncertain housing options in affected regions.

The study concludes that successful multiple assistance schemes enabled employers to plan recovery processes in step-by-step phases, and that reliable connections with resource institutions played a significant role in ensuring timely access to such public and private schemes. Inflexible regulations and excessive red tape when seeking public assistance often led to inefficient investments of time and funds by beneficiaries.

Innovative business development is necessary for further economic development in affected areas. The project recommends that the private sector should make business continuity planning (BCP) a priority for future disaster preparedness, and public assistance framework schemes should promote job creation among socially vulnerable groups.

3.1.5 Key direct lessons

Direct lessons emerged from the case study:

- Where companies had access to multiple financial resources, they could hedge financial risks in obtaining sufficient funds. This risk hedging made for faster and more efficient recovery of business operations. Good combinations of such assistance schemes also enabled employers to design effective multi-phase recovery processes.
- Groups of employers with good connections to resource institutions quickly acquired access to public and private assistance schemes. Such resources included local chambers of commerce, local branches of national economic organizations, municipal governments, banks, and local labour bureaus. In general, these organizations served as effective resources for assistance schemes in emergency situations.
- After the 2011 earthquake, PPP-directed research and development (R&D) was promoted as a new trend in recovery and reconstruction. The concept itself was not new, but it was only then entering the mainstream. Some assistance schemes supported R&D, while others promoted business recovery. A gap remained, however, between R&D and actual business applications. Between the two stages, companies normally conduct feasibility studies to confirm if new technologies are practicable for businesses using their own funds. The affected companies were still recovering after the 2011 earthquake, and could not yet afford to invest in such studies. Thus financial constraints impeded application of new technology to business.

- Many beneficiaries suffered from excessive rigidity in the operation of public assistance schemes, which were sometimes too regulated to adapt successfully to new realities related to the 2011 earthquake. Consequently, beneficiaries often had to spend extra (and essentially unnecessary) time and money at the proposal and implementation stages. The disasters caused a variety of damage and loss, and beneficiaries had to adjust project proposals to reflect prevailing realities in their localities. These adjustments, however, sometimes ran afoul of assistance scheme regulations.
- Master regional reconstruction plans are needed to efficiently rehabilitate communities in tsunami-affected areas. Such plans show how affected regions are to be reorganized, distinguishing, for example, between residential, industrial, and commercial areas. Given the number of local stakeholders involved in the planning phase with the 2011 earthquake, however, some plans were significantly delayed by the quest for stakeholder consensus. Since the master plan determined the siting and regulation of many projects, such delays presented serious challenges to post-earthquake recovery.
- Two and a half years after the 2011 earthquake, restoration and recovery efforts in the affected areas were fully operational. Businesses were also in recovery. There was therefore a great demand for labour. During the same period, however, the affected areas had experienced serious population outflows. As a result, research into employment and labour measures in the post-East Japan Earthquake recovery process found that the local labour market faced an excess of demand, rather than what had formerly been an excess in supply. Thus, lack of available labour also impeded recovery processes.

3.1.6 Implications for employment recovery

There follow some key implications for employment recovery:

- **Usefulness of pre-disaster data.** Post-disaster needs become a challenge in most cases, including with the damage estimates in the light of which recovery packages are designed. More useful estimates can be prepared when local governments are equipped with pre-disaster data on employment and livelihood issues.
- **Timing and inclusiveness of recovery framework and policy.** The timing of recovery policy is crucial, especially regarding employment- and livelihood-related issues. The earlier that policy and framework are announced, the sooner confusion at the ground level is reduced. The policy must be inclusive, as well, addressing both public and private enterprises, as well as small and micro

enterprises and individual businesses, which are often neglected in major disasters.

Box 2

The Kesennuma experience: Emergency employment support scheme

After the East Japan Earthquake and Tsunami, the city of Kesennuma, Miyagi Prefecture of Tohoku Region, asked the Kesennuma Reconstruction Association (KRA), a local non-profit group, to employ about 100 people under the government emergency employment generation scheme. (Following a disaster, local authorities were expected to implement this national government measure.) KRA hired around 100 volunteers who were trained by SEEDS Asia, a Kobe-based NGO with technical expertise in disaster recovery. They workers were then dispatched to temporary housing units to develop social relations among the new communities, something that was accomplished with tea parties where local residents were encouraged to discuss what they felt were relevant issues. The KRA volunteers were trained to pick up on these issues, and then, with the help of SEEDS Asia, analyse them before providing feedback to the local authorities. This presented a win-win situation for all: the affected people gained some temporary employment after the disaster; new communities were created in temporary housing areas; their grievances were communicated to the local authorities; and in light of this input an effective, case-specific recovery support system could be developed. This provides a good example of collaboration between local authorities and a local NGO.

- **Operations-related challenges and potentials.** Even where a good framework is in place at the national level, local-level efforts can experience significant operational challenges. Emerging issues with the 2011 earthquake included the following: (1) no employment insurance for private businesses was available; (2) emergency employment support from the city government was effective (box 2), but the balance between long-term employment and short-term emergency support employment remained a crucial issue, especially regarding the demand-supply ratio of labourers; (3) in some cities, relocation issues caused initial barriers for restoration of employment, since people needed to live away from their source of employment; (4) an emerging expansion of PPP generated new businesses, in several cases; and (5) fresh industrial policy by the new Government was effective in boosting the local economy in some ways.

3.2 The Philippines: Typhoon Haiyan (2013)

3.2.1 Background

The Category 5 Super Typhoon Haiyan (better known locally as “Yolanda”) hit the central southern islands of the Philippines in November of 2013, affecting nine of the country’s 17 administrative regions. Initial casualties numbered more than 10,000, and almost 3.4 million other people were adversely affected. The hardest-hit economic sectors were agriculture, fisheries, trade industries, and service sectors, at a total cost of close to US\$4 billion. In terms of employment, around 5 million people were affected, of which 40 per cent were female and 20 per cent were youth and children.

3.2.2 Case study procedural overview

This descriptive study (ILO 2015b) applied the case study methodology. Primary data collection applied a combination of key informant and group interviews. A desk review provided secondary data to further ground the study findings. The study covered four key government departments among those with mandates to implement post-disaster livelihood recovery and employment generation programmes and projects: i.e. Department of Social Welfare and Development (DSWD), Department of Labor and Employment (DOLE), Department of Agriculture (DA), and Department of Trade and Industry (DTI), as well as the two lead agencies of the Early Recovery and Livelihood Cluster and the lead agency for the agriculture and food security cluster under the Strategic Response Plan prepared by the UN-Philippines Humanitarian Country Team: i.e. the United Nations Development Programme (UNDP), ILO, and the Food and Agriculture Organization (FAO).

The employment creation/promotion schemes and livelihood strategies captured in this study include those practised by these agencies within the response and early recovery phases (16 months from the time the mega-disaster struck the country).

3.2.3 Institutional framework

The institutional framework for the country’s disaster risk management is provided under the Republic Act 10121 (RA 10121), otherwise known as the Philippine Disaster Risk Reduction and Management (DRRM) Act of 2010. The National Disaster Risk Reduction and Management Council (NDRRMC) is chaired by the Secretary of the Department of National Defense (DND), and is supported by the Office of Civil Defense (OCD) as its secretariat. NDRRMC activities are clustered in four thematic areas, each headed by a vice-chair: (1) disaster prevention and mitigation, Secretary of the Department of Science and Technology (DOST); (2) disaster preparedness, Secretary of the Department of Interior and Local Government (DILG); (3) disaster response, Secretary of the Department of Social Welfare and Development (DSWD); and (4) disaster

rehabilitation and recovery Director General of the National Economic and Development Authority (NEDA).

The NDRRM Plan outlines the key pre-Haiyan strategic actions specific to livelihoods under Thematic Area 1, Disaster Prevention and Mitigation, and Thematic Area 2, Disaster Preparedness. Under normal conditions, these strategic actions are pursued by the relevant government line agencies and local government units (LGUs) under their regular programmes. As for employment, pre-disaster strategies are incorporated in the Philippine Labor and Employment Plan 2011–2016.

3.2.4 Post-disaster recovery issues

The case study documents the following key recovery issues.

NEDA was tasked under RA 10121 with leading Thematic Area 4, rehabilitation and recovery. Despite this mandate, the President deemed it necessary, given the magnitude of Typhoon Haiyan's devastation, to create an ad hoc structure to focus exclusively on rehabilitation and recovery. On 6 December 2013, the President issued Memorandum Order No. 62 appointing a Presidential Assistant for Rehabilitation and Recovery (PARR) tasked with unifying efforts of the government and other institutions involved in post-Haiyan rehabilitation and recovery. With a mandate of two years, the PARR is directed to develop an overall strategy and integrated short-, medium-, and long-term recovery plans and programmes.

The PARR organized the concerned national government agencies within five clusters, each representing a sector heavily affected by Typhoon Haiyan: (1) infrastructure, chaired by the DPWH; (2) resettlement, chaired by the Housing and Urban Coordination Council; (3) social services, chaired by DSWD; (4) livelihoods, chaired by DTI; and (5) support services, chaired by NEDA. The Comprehensive Rehabilitation and Recovery Plan (CRRP) was generated to guide the PARR.

The main strategy is to expand the food and income base at the household and *barangay*⁴ levels. Interventions focus on three areas: (1) making nutritious food available in every home in the shortest time possible; (2) establishing viable farm enterprises through identification and coordinated production of marketable and profitable products; and (3) promoting the establishment of climate-resilient communities.

Livelihoods-cluster priorities under the CRRP have four sectors: (1) agriculture, (2) fisheries, and aquaculture; (3) industry and services; and (4) micro, small and medium-sized enterprises (MSMEs);

- Agriculture: The main strategy is to expand the food and income base at the household and barangay levels. Interventions are focused on three (3) areas:
 - i) make nutritious food available in every home in the shortest time possible;
 - ii) establish viable farm enterprises through identification and coordinated

⁴ The smallest administrative division in the Philippines.

production of marketable and profitable products; and iii) promote the establishment of climate resilient communities.

- **Fisheries and aquaculture.** The main strategy is ensuring sustainable fishing through science-based practices to develop climate resiliency.
- **Industry and services.** The main strategy adopts a value chain-based development approach that engages large enterprises as “anchor firms” for local MSMEs, focusing on four priority industries identified for mobilization in the most affected regions: (1) tourism and supporting industries; (2) construction and construction materials; (3) home furnishings and handicrafts; and (4) processed food.
- **MSMEs.** The main strategy involves two paths linking MSMEs to local and global value chains: (1) a short-term trajectory focusing mainly on enhancing the supply chain and rebuilding businesses through assistance to existing businesses, helping them to access raw materials, replace damaged equipment, and rebuild their damaged establishments; and (2) a longer-term trajectory that approaches sustainability by way of connecting small producers to large institutional markets along strategic value chains.

For increasing employability the strategies are two-pronged: i) Enhance the employability and livelihood capacity of the working age and affected population through skills training and facilitating access to start up resources and ii) Build the capacity of the local government units in re-establishing local government systems and support services for job creation.

Parallel strategies were employed by UN agencies: FAO (livelihood diversification; resilience building for rice and corn farmers; and building back better of fisheries and coastal communities); UNDP (economic resiliency for agri- and nonagri-based livelihoods; vocational training; and cash for livelihoods); the ILO (local resource-based approaches and community contracting; technical and vocational training; enterprise development; and promotion of social protection and decent work). Strategies employed by the private sector included livelihood seeding and provision of grants for micro-enterprises.

3.2.4 Key employment sector lessons

As it did with the Japan study, with the Philippines the ILO undertook a detailed study of the employment recovery issue after the Typhoon Haiyan (ILO, 2015b). Highlights from that study follow:

- **Timing of the disaster and conflict of assessment.** The disaster occurred at a time when the country had just adopted RA 10121, the new disaster legislation that mandated departments responsible for undertaking specific measures. The National Economic Development Agency (NEDA) conducted a quick damages estimate before the official PDNA. It identified specific sectors including fisheries, agriculture, trade industries, and service sectors. Two different assessments were

to cause confusion within government departments in the initial stage, since one of these assessments undertook different approaches. In addition, both assessments neglected proper focuses on micro-businesses.

- **Inter-institutional issues.** In the response phase, different agencies launched cash-for-work programmes. Livelihood and early recovery clusters attempted to establish a MOU among the various agencies, but each agency had set a different minimum rate for cash for work. Social protection coverage and accident insurance, which were mandatory after the disaster incurred high operational costs.
- **Institutional conflicts in the recovery phase.** The disaster law mandates the National Economic Development Agency (NEDA), the national government planning body, to address recovery issues related to employment. However, establishing an additional structure under the Presidential Office created confusion and inter-departmental conflict. This was in part responsible for the nine-month transition process after the disaster before the ad hoc mechanism became operational. This caused significant delays in the initial employment sector recovery.
- **Operational challenge.** A significant gap was observed between national policy and its community-level implementation in the agricultural sector recovery. Access to funding for micro and small enterprises was a key challenge. Local government, in most cases, had insufficient resources to undertake recovery programmes by itself, and needed to depend on what were often time-consuming national-level processes bound by bureaucratic red tape. Women and child workers, who suffered most from such delays, faced a number of associated challenges.

3.3 India: Uttarakhand Floods (2013)

3.3.1 Background

In June 2013, India's northern state of Uttarakhand was affected by torrential rains, which led to severe flooding as well as landslides in hilly districts. More than 4,000 people lost their lives and another 20,000 people and more were initially stranded in the affected areas, a major pilgrimage and tourist destination. Overall, nearly 200,000 people were affected, with the major economic sectors suffering the impact including agriculture, horticulture, animal husbandry, and tourism. Both the national and state governments, as well as governments from other states, provided initial support in the rescue and relief phase.

3.3.2 Case study procedural overview

Primary sources

A desk review of relevant primary documents including the following (ILO, 2015c):

- national strategies/policies on employment creation, livelihoods, social protection, and DRR, including recovery provisions;
- local and national policies on post-disaster recovery strategies;
- project documents on post-disaster recovery and reconstruction projects by UN and other development assistance agencies; and
- project documents of DRR projects by UN and other development assistance agencies.

Semi-structured interviews and consultations with key stakeholders, including the following officials from national and local labour institutions (e.g. ministries of Labour, Disaster Risk Reduction, and Social Protection, as well as the National Statistics Bureau):

- UN agencies, e.g. ILO, UNDP, FAO, and the United Nations High Commissioner for Refugees (UNHCR);
- development assistance agencies, i.e. World Bank, Asian Development Bank (ADB); and
- CSOs.

Secondary sources

A review of existing documentation included academic articles, publications, and reports. Dedicated questionnaires were developed to collect the field data. A semi-structured questionnaire was designed to interview key informants at the state and national levels, including officials from national and state government departments, UN bodies, World Bank representatives, and CSOs. In addition, focus group discussion (FGD) guidelines were developed for collecting responses from local communities.

3.3.3 Institutional responses

A number of centrally sponsored labour- and employment-related measures and schemes had been designed and implemented annually across India, whether or not disasters were an immediate issue. In the Uttarakhand context, therefore, these schemes and measures were applied by default (ILO, 2015c):

- **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGS).** According to the Ministry of Rural Development (MORD), “The Mahatma Gandhi National Rural Employment Guarantee Act aims at enhancing the livelihood security of the people in rural areas by guaranteeing a hundred days of wage-employment in a financial year to a rural household whose adult members volunteer to do unskilled manual work. The rural job guarantee scheme has been instrumental in providing employment in disaster-hit areas across India.”
- **Employment Assurance Scheme (EAS).** Since 1993, EAS has been implemented

in remote blocks⁵ of different states (drought disposed, tribal, desert, or hilly). The scheme is open to all adult rural poor in need of wage employment, and is useful for disaster recovery.

- **Prime Minister's Rozgar Yojana (PMRY).** The Prime Minister's Employment Generation Programme (PMEGP) is a credit-linked subsidy programme launched by the Ministry of MSME in 2008–09 to create employment in both rural and urban areas of the country.
- **Rashtriya Swasthya Bima Yojana (RSBY).** Launched in 2007 and operationalized in 2008, RSBY provides smart card-based cashless health insurance cover of 30,000 Indian rupees (INR), or US\$463, per annum on a family floater basis, to below poverty line (BPL) families in the unorganized sector. The central and state governments share the premium according to a 75:25 ratio, and each family makes an annual financial contribution of INR30 (\$0.46). The scheme provides coverage of all pre-existing diseases and hospitalization expenses, including maternity benefits. Recently, RSBY has been extended to building and other construction workers registered under the Building and Other Construction Workers (Regulation of Employment and Condition of Service) Act, 1996; street vendors; MGNREGA beneficiaries (who have worked for more than 15 days during the preceding financial year); and domestic workers.
- **Employees State Insurance Act.** The Employees State Insurance Act was enacted in 1948 to cover the organized sector, providing medical care and cash benefits in case of sickness, maternity, and employment injuries. The Employees' State Insurance Corporation (ESIC) has been implementing the ESI scheme since 1952. The number of beneficiaries covered under the scheme has risen to 60.2 million.

Following the floods, the central Government provided the state of Uttarakhand with INR10 billion (\$154,392,600) in disaster relief, of which INR1.45 billion (\$22,386,927) was released immediately. The Prime Minister's National Relief Fund (PMNRF) allocated ex gratia assistance of INR200,000 (\$3,088) each to the families of those who lost their lives, and INR50,000 (\$772) each to those who were injured. In addition, PMNRF gave ex gratia assistance of INR100,000 each to those whose houses were completely destroyed and INR50,000 (\$772) to those whose houses were only damaged. In June 2013, the Union Tourism Ministry sanctioned a special financial package of INR1 billion (\$15,439,260) for restoration and reconstruction of affected government tourist facilities. This was in addition to central financial assistance of about INR950 million (\$14,667,297) already allocated during fiscal year (FY) 2013–14 for developing tourism infrastructure in the state. The funds were intended for use in restoring and reconstructing tourist infrastructure, with a special focus on tourist facilities along the *yatra* (pilgrimage) route. The Ministry of Labour and Employment also asked the staff of Employees' Provident Fund Organisation to fast-track settlement of provident fund, pension, and employee's

⁵ A "block" is an administrative subdivision of a district.

deposit-linked insurance claims from affected families. After the mid-June disaster, the central Government sanctioned INR11.14 billion (\$171,993,356), and the PMNRF contributed INR1.54 billion (\$23,776,460). In December 2013, a Cabinet Committee on Uttarakhand, formed under the Uttarakhand Reconstruction and Rehabilitation Plan (CCU) and headed by the Prime Minister, allocated INR73.46 billion (\$113,416,803) for the relief and rehabilitation of flood-hit Uttarakhand. This package included INR18.85 billion (\$291,030,051) for centrally sponsored schemes; INR12 billion (\$185,271,120) went to the National Disaster Response Force (NDRF); INR31.61 billion (\$488,035,009) was allocated for spending on externally aided projects; and INR11 billion (\$169,831,860) was disbursed under Special Plan Assistance. INR500,000 (\$7,720) was given to each family of missing or dead people in Uttarakhand, while INR300,000 (\$4,632) went to the families of victims from other states.

According to the MGNREG Act of 2005, funds are provided for meeting costs of employment up to 100 days per household in a financial year, where the central Government funds the entire cost of unskilled employment up to 100 days per household and 75 per cent of the corresponding cost of materials and semi-skilled and skilled employment. The cost of employment over and above 100 days is borne by the respective state government. Keeping in view the likelihood of increased demand for public works employment due to the floods, the central Government provided additional financial assistance for up to 50 days of employment in FY 2013–14. MORD announced that removal of debris from roads or private lands was a permissible activity under MGNREGA. Other MGNREGA conditions were relaxed in flood-affected districts with respect to such requirements as 100 per cent management information system (MIS) data entry; appointment of the ombudsman; and social audits.

Assuming primary responsibility for compensation and reconstruction, the state government provided the following assistance to crisis victims:

- INR200,000 (\$3,088) for damage to or loss of a home, or a proportionately higher amount for the loss of commercial properties;
- fixed rental payments of INR2,000 per month (\$31), later revised to INR3,000 (\$46), for those rendered homeless;
- exempted payment of water tax, electricity dues, and interest on agriculture loans extended by cooperative banks for the remainder of the financial year; and
- a one-year moratorium on repayment of loans to state credit agencies.

Uttarakhand's private sector has played an important role in securing community livelihoods. Beginning with emergency response and relief, private sector players initiated key employment generation activities, adding their own sources of funding to those of the Government. Local and international agencies, meanwhile, have supported both recovery and reconstruction efforts and played an important role in providing advisory services to key government agencies. Academic and research-oriented agencies have helped the state identify actual needs on the ground while, adopting their advocacy

roles, they have indicated areas that need more attention. Major international contributions to Uttarakhand's recovery and development included support from sources such as the European Commission, the United States Agency for International Development (USAID), and the Government of Japan. The World Bank and ADB provided major reconstruction support.

3.3.4 Key lessons from the employment sector

There follow highlights from the study:

- **Provision of a national employment guarantee scheme.** Given a variety of national-level employment generation and support schemes, the Government was able to quickly mobilize the initial support for employment generation and livelihoods recovery. This was especially effective for remote rural areas, which are often neglected in the recovery process (see section 3.3.2 and box 3).
- **Centre-state relationship.** Disaster situations can present a major challenge where the centre-state relationship is poorly coordinated, a relationship that is crucial for a federal governance system such as India's, where state governments enjoy much independence and decision-making power, and DRR is usually the responsibility of the state, unless a catastrophic disaster strikes and the national Government declares a state of emergency.
When the Uttarakhand Floods struck, the same political party held power in both the central and state (province) governments, so institutional responses at both levels were relatively efficient, with effective coordination between national and state government agencies.
- **Private sector participation.** Major private sectors supported initial emergency response and relief work, and also helped with some job creation in the early recovery phase.
- **Lack of precise loss and damage estimates.** Due to scant initial data, precise damage and loss assessments were inadequate, and getting a picture of the real needs was challenging, given the inaccessibility of the affected areas.
- **Micro and small enterprises.** Micro and small businesses often do not register themselves with local governments, and in many cases are operated by individuals and/or family. These enterprises thus receive neither proper government compensation nor they are covered by government insurance schemes, so they must bear the entire economic brunt of the impacts on their lives and livelihoods. A policy to promote the mainstreaming of such enterprises would help to alleviate this situation.

Box 3

India's employment guarantee scheme: The Mahatma Gandhi National Rural Employment Guarantee Act

The Indian government's national scheme guaranteeing 100 days of employment was key to employment generation following the disaster. Experience shows that external aid usually reaches the most accessible areas, while remote areas tend to lie beyond these aid efforts.

The employment guarantee scheme collapses this boundary. Regardless of how remote an area, where residents are registered in a specific location, they qualify for the scheme. This is crucial in a post-disaster aftermath, when people have lost their usual employment, and are seeking alternative sources of income

3.4 Nepal: Gorkha Earthquake (2015)

3.4.1 Background

Nepal was hit by a major earthquake on 25 April 2015. The main shock (magnitude 7.8) was followed by 400 aftershocks of greater than magnitude 4.0. Thirty-one districts were affected, of which 14 were declared "crisis hit" and in need of immediate attention. About 8,790 people died and 22,300 were injured. The Government declared a state of emergency in the worst-affected districts on 26 April 2015, and requested humanitarian assistance. Severely damaged property and infrastructure included private and public buildings, heritage sites, historical buildings, temples, drinking water systems, roads, and bridges. About 4.24 million workers were affected, and 2.27 million were from worst-affected districts.

3.4.2 Case study procedural overview

The Nepal case study addressed one of the most recent disasters among the four country studies, so the related issues were still evolving as the research was being conducted (ILO, 2015d). The study was prepared using a range of primary and secondary information, including both qualitative and quantitative data, collected in September–October 2015. Recommendations were based upon an analysis of these findings.

Primary sources

A desk review of relevant primary documents included, among others, the following:

- national strategies/policies regarding employment creation/promotion, livelihoods, social protection, and disaster risk reduction;
- local, regional, and national policies on post-disaster recovery strategies;

- project documents on post-disaster recovery and reconstruction projects by UN and development assistance agencies; and
- project documents on DRR projects by UN and development assistance agencies.

Semi-structured interviews and consultations with key stakeholders including:

- officials from national and local labour institutions (e.g. Ministry of Labour, Ministry of Federal Government and Local Development);
- UN agencies;
- development assistance agencies (i.e. World Bank, ADB); and
- CSOs such as Women for Human Rights (WHR), Concern World Wide, Plan Nepal, and the International Organization for Migration (IOM).

Secondary sources

A review and analysis of existing documentation included academic articles and other publications and reports.

3.4.3 Institutional responses

(1) When a post-disaster situation exceeds the Government's capacity to mount effective relief operations, the Cabinet, at the recommendation of the Central Natural Disaster Relief Committee, declares a state of emergency. (2) The Natural Disaster Relief Fund is active at the central, regional, district, and local levels. (3) The Prime Minister's Natural Disaster Relief Fund is mobilized for disaster response as per the Prime Minister Natural Disaster Relief Fund Regulation 2064.

Among the principles guiding the Government's approach to recovery operations is the idea that recovery programmes should employ the assets and skills of people affected by disaster, at once reducing vulnerability and building such resources for the longer term. This entails encouraging consultations with communities and social networks and, always in light of cultural sensitivities and the local environment, identifying and using local skills and knowledge. This process promotes local innovation in building practices at the same time it builds local capacities. Skills and capacities needed for reconstruction are the major national need, in these circumstances. Professionals such as engineers, masons, and other tradespeople and technicians at all levels are in urgent demand, as are the capacity-building programmes that can provide them.

Immediately after the second earthquake, the National Planning Commission (NPC) initiated a PDNA to assess the impact of the earthquakes and develop a recovery strategy. Among the 23 thematic sectors, "Employment and livelihoods" was designated the cross-cutting theme for the strategy.

On 16 September 2015, Parliament approved a bill related to post-earthquake reconstruction that established the National Reconstruction Authority (NRA). However, a functional authority has, as of this writing, yet to be established, and therefore institutionalization of the reconstruction process has thus stalled. At this stage of the reconstruction, government agencies dealing with mainstream sectors are conducting their various efforts independently. This does not allow for a comprehensively planned approach, one that addresses cross-cutting issues and takes advantage of the potential reciprocal benefits of cross-sectoral interventions.

This has adversely affected the labour and employment dimensions of recovery. A delay in starting the reconstruction of more than 500,000 houses has set back the employment opportunities that were expected to emerge with reconstruction activities soon after the earthquake. Institutional mechanisms were not yet in place; detailed assessments had not yet been conducted; compensation packages had yet to be announced; and the funds pledged had not yet been claimed. All this has amounted to a situation wherein, even given eventual establishment of the required institutions, the expected employment opportunities will take much longer to materialize (ILO, 2015d).

Similarly, tourism sector employment is tied to resumed tourist flows, but recovery was still impeded, as of this writing, by delayed reconstruction of tourist infrastructure including hotels, monasteries, and cultural sites. The tourism, culture, and other departments operating in their own restricted domains cannot address this issue effectively until a larger enabling institutional mechanism takes shape.

Recovery in the agriculture sector, which for its part is tied to reconstruction of markets and access roads, is encountering the same obstacles.

3.4.4 Key lessons from the employment sector

Key findings are listed below:

- **Lack of a clear national policy.** A clear government policy is needed for restoring livelihoods, especially in the informal economy, which includes most of the poor and the marginalized people from rural areas. Even six months after the Gorkha disaster, the Government and other sectors were still struggling with this issue. For the future, a clear mechanism must be developed to mount immediate rescue, relief, and reconstruction efforts, such that recovery of livelihoods among affected families begins immediately after disaster strikes.
- **Cash-for-work programme.** This measure restored incomes to local people immediately following the Gorkha Earthquake. A number of organizations practised the cash-for-work approach in clearing debris and in reconstructing roads, schools, and other public buildings, thereby restoring some informal economy incomes.

- **Shelter reconstruction.** This represents the most important immediate reconstruction need. After the earthquake, for example, affected people faced the challenge of surviving in turn monsoon rains and winter conditions. Following the Gorkha disaster 25,000 masons and other skilled workers were needed to reconstruct damaged and destroyed infrastructure. This presented an opportunity not only for reconstruction, but also to build craftsmanship for the country's future, while marketing essential construction materials that will ultimately produce private sector livelihoods opportunities.
- **Urban workforce and employment.** Urban settings present complex and challenging issues for reconstruction. With the Gorkha Earthquake, much infrastructure was demolished and many people, many of them already counted among the urban poor, were left homeless and without livelihoods. Meanwhile, many returned to hometowns outside the city, leaving fewer workers available in urban areas for reconstruction. This phenomenon of urban workforces returning to their hometowns immediately after disasters typically impedes urban reconstruction and restoration of livelihoods.
- **Migration.** Male migration in country and out of country leaves elderly people, women, and children at home, especially in rural areas. During the Gorkha Earthquake, some households had no resident male members, which left the women responsible for leading reconstruction efforts.
- **Human trafficking.** During this time of increased vulnerability, traffickers of women and children were especially active. Gender-sensitive preparedness in planning and policy-making is an essential element of disaster preparedness. Effective implementation of social security plans can help to address such issues.

3.5 Comparative analysis

Table 1 Comparative analysis of four case studies

	Japan	Philippines	India	Nepal
Disaster	High-impact, catastrophic tsunami.	Category 5 (highest) typhoon.	Mud and debris flows, floods following heavy rainfall.	Moderate to high magnitude earthquake with severe aftershocks.
Affected areas	Coastal areas; livelihoods predominantly	Coastal areas; mostly smaller towns and municipalities.	Mountain areas; mostly religious tourism destinations.	Spread over both urban and rural areas; a variety of livelihoods

	fishing and tourism related.			
Governance	Relatively new government, as main opposition party becomes ruling power.	Normal governance.	Normal governance.	Transition to a new Constitution, and change of leadership.
Economy	Poorly performing economy, in decline.	Standard and stable economy.	Standard and stable economy.	Standard and stable economy.
Assessment phase	Two years after the disaster.	One-and-a-half years after the disaster.	One-and-a-half years after the disaster	Six months after the disaster.
Employment-related policy Issues	<ol style="list-style-type: none"> 1. Pre-disaster emergency employment scheme in place. 2. Availability of income- and employment-related data and statistics. 3. Tertiary disaster (a nuclear reactor meltdown) forced people to evacuate and thereby posed significant threat to employment recovery. 	<ol style="list-style-type: none"> 1. Confusion and discrepancies among two agencies performing the PDNA survey. 2. Inter-institutional conflict in the cash-for-work issue. 3. Institutional conflict persisted even in the recovery phase. 	<ol style="list-style-type: none"> 1. National employment guarantee scheme in place before the disaster; proved a useful measure for rural communities, especially in the remote areas. 2. The centre-state relationship was efficacious, the respective leadership being from the same political party at the time of the disaster. 3. Effective public- 	<ol style="list-style-type: none"> 1. Disaster happened during a transition in national Government and the adoption of a new Constitution. 2. Effective initial coordination with Planning Commission and PDNA team (World Bank, ADB, and UNDP). 3. Lack of specific national employment policy a key barrier in the initial stage.

Employment-related operational issues	<ol style="list-style-type: none"> 1. Local governments equipped with field data (except a few LGUs that suffered direct hits from the tsunami). 2. Relocation issues in some cities led to initial problems in identifying proper jobs. 3. Prominent PPP. 	<ol style="list-style-type: none"> 1. Gaps between national policy and local implementation. 2. Inadequate or no relationship between local government and donor. 3. Lack of proper assessment data at the local level. 	<p>private partnership (PPP) was another feature of the recovery process.</p> <ol style="list-style-type: none"> 1. Lack of precise damage and loss data at the local level created significant confusion at the outset. 2. Losses of micro-enterprises were highest in most affected towns. 	<ol style="list-style-type: none"> 1. Cash-for-work programme at the local level proved an effective measure. 2. Different challenges in urban and rural areas. The transient urban population returned to their villages of origin, contributing to labour shortages in the affected areas. The villages, meanwhile are usually labour deficient, with in-country and out-country migration proving to be key issues.
Others	<p>A national and local government driven recovery, with little scope of donors and international agencies except for the initial response stage</p>	<p>A highly donor-driven recovery — therefore communications and coordination between national and local levels, and between government and</p>	<p>A national and state government-driven recovery, with less scope for interactions with donors and</p>	<p>A largely donor-driven recovery programme . Governance turmoil caused some disruption in the initial stages, and then again during the</p>

		donors, was especially important.	international agencies. National NGOs worked closely with the state governments.	post-new Constitution phase due to road blockages in Indian border areas.
--	--	-----------------------------------	--	---

Chapter highlights

Key outcomes of the comparative analysis:

1. A well-developed database of labour statistics, available before the disaster, is useful for post-disaster relief as well as for short- and long-term recovery efforts. PDNA needs to involve national and local statistics bureaux.
2. An employment generation/guarantee policy before the disaster is helpful in reaching out to rural communities in remote areas in the initial post-disaster response and relief phase.
3. Inclusive recovery efforts must include focuses on gender and people with disabilities.
4. PDNA is the key to the recovery process, and requires a well-coordinated assessment by national governments and donor agencies.
5. With some countries, national economic ministry- or planning ministry-led PDNAs seems more inclusive, in terms of data sets, than do PDNAs led by dedicated disaster-related ministries/organizations.
6. Effective national-local and local government-donor relationships are vital for an efficient recovery process.
7. Unpredictable factors, e.g. the nuclear reactor meltdown in Japan, or conflicts involving constitutional amendments in Nepal, presented some post-disaster setbacks. Such events and circumstances often affect recovery processes, especially those of livelihood/employment recovery.
8. PPP is important for effective employment recovery.
9. Data sets for informal economies are crucial to post-disaster recovery, especially with regard to micro-enterprises, and they need to feature as key elements of PDNA exercises.
10. Country-level cluster coordination and linking/liaison with local authorities are important for effective recovery programme operations.

4. Key observations and future perspectives

This chapter focuses on (1) general observations based on key issues that emerged from the four case studies, and (2) suggested future perspectives on employment-based DRR.

4.1 Key issues related to employment and disaster risk reduction

4.1.1 Policy issues

- **Economic level, growth pattern, and political will.** National economic level of development, the employment-unemployment ratio, and the socio-economic growth trajectory often define the way in which a country approaches employment-based DRR. This applies to developing and developed countries alike, as exemplified by the Japan experience. The tsunami struck Japan at a time of both political turmoil and economic recession. Nepal, on the other hand, experienced post-disaster conflict and unrest six months after its disaster, and that may have affected the national recovery process. Meanwhile, the Philippines and India experienced their respective disasters in times of normal governance. The four case studies suggest that the timing of disasters with respect to periods of relative socio-economic growth and strength and focus of political will play an important role in the recovery process.
- **National employment scheme and emergency employment framework.** An operative national employment scheme prior to the disaster often proves a key factor in post-disaster employment recovery. In both India and Japan, guaranteed employment schemes as well as emergency employment measures at the national level helped support rural livelihoods. This was especially important in remote rural areas. This supports the argument that effective disaster resilience needs to be integrated into national development schemes. Most national employment generation schemes, for example, are part of poverty reduction policies in both urban and rural areas. One such scheme, as we have seen, guarantees 100 days of compulsory employment for every adult in rural areas. This proves especially effective after a disaster, where the employment and livelihood recovery normally takes longer. In Japan, an emergency employment scheme enabled local government to extend grants to local CSOs or NGOs to employ people in emergency evacuation centres or temporary housing sites (Ueda and Shaw, 2015). This helped to provide immediate employment for affected people, while meeting a vital community need for temporary shelter.

- **National-local government relationship.** India presents a special case, where the national-state (province) relationship often poses a challenge or obstacle in undertaking recovery process. The same issue becomes evident when the provincial/state governments enjoy special legislative powers. Political similarities and differences at the national and local levels in some other countries have also helped or hindered decision-making. In Japan, the city-province relationship often becomes a key issue in determining the speed of decision-making processes. In states of emergency, the city government often wants to bypass the provincial government and negotiate directly with the national government, which often fosters conflicts in the governance process.
- **PDNAs and institutional arrangements.** PDNAs provide important baselines for immediate and long-term recovery. However, a period of chaos and confusion often follows mega disasters. A number of institutions, as well as both national and international partners, are typically involved in the initial stage of the PDNA. Nepal presents a classic example, where the Planning Commission, together with the UNDP, World Bank and ADB, coordinated the PDNA exercise. In the Philippines, on the other hand, two assessments were undertaken, one by NEDA (the national planning body), and the other by the OCD (Office of Civil Defense), the designated national disaster agency. Thus, initial confusion reigned regarding which data should be relied upon. Employment and livelihood issues are usually included in the PDNA. However, as discussed above, absent a pre-disaster database on micro enterprises, PDNAs often under-estimate a disaster's impacts. This issue needs to be resolved in future.
- **Compensation schemes and their liabilities.** Following disasters, local governments announced different levels of compensation scheme for the Cash for Work Programme. Sometimes donor agencies find it difficult to support such programmes, given the high costs of support, which have often proven unacceptable to donor agencies. Thus, the compensation scheme and its liabilities should be properly agreed among government and donor agencies, especially those in the livelihoods cluster.
- **Public-private partnership.** Available data indicate that, with most disasters, the private sector bears a greater burden of costs than does the public sector (Chatterjee and Shaw, 2015). Therefore private sector involvement in the early stage of recovery policy formulation is very important. The national and local chambers of commerce and other business associations can play important roles in the relief and recovery phase, as well as with the emergency employment support scheme. To that end, it is essential to negotiate pre-disaster agreements between business associations and relevant government agencies.

4.1.2 Programme and operational issues

- **Need for a data set at the operational level.** One of the key challenges at the operational level in a post-disaster settings, especially for local government, is to assess employment sector damage. For various reasons, including tax issues, most micro enterprises and other private businesses are not registered with local governments. Thus some incentive is needed to encourage local micro enterprises to register before the disaster, thereby enabling better PDNAs.
- **Need for governance mechanisms to deliver recovery needs.** Effective local governance is the key to risk reduction as well as to response and recovery. And this is very much related to overall national governance and its capacity at the local level. A large gap often appears between national and local-level capacities in terms of governance, and this often makes an important difference in the recovery process. The design of appropriate employment recovery measures should therefore take account of local government capacity in any given case.
- **Operational local government-donor relationship.** In the light of the previous item, a healthy local government-donor relationship is essential for an efficient recovery process. This may be a general observation, not restricted to employment or livelihoods clusters. What needs to be emphasized, however, is that recovery is operationalized mainly at the local level, especially with small and micro enterprises. Therefore, aside from the national government policy framework, it is equally important to establish workable relations with local government, so that on-the-ground expectations regarding employment and livelihoods recovery can be satisfied.
- **Specific scheme for micro and SMEs.** A separate scheme is needed for MSMEs. These are often neglected in the larger recovery programme, since most of them are not mainstreamed with the local government in the regular economic process. An alternate scheme is needed, one that targets MSMEs and their employees in the initial post-disaster phase. Experience suggests that the first few months prove crucial for the recovery of such enterprises, and customized support measures need to be adopted.
- **Availability and inclusiveness of employment insurance.** In most cases, employment insurance covers public enterprises and larger businesses, which are generally linked to business associations. In some countries, however, no such system exists. Thus, the first step is to establish employment insurance schemes. A related issue involves how inclusive a given insurance system is, and whether it covers micro and small enterprises, those who most need it for initial recovery following a disaster. The issue of inclusiveness should also address the gender issue in the

employment and livelihood sectors, especially in rural areas of developing countries, as well as the needs of people with disabilities.

4.2 Future directions in employment promotion and occupational resilience

Fostering occupational resilience lies at the core of employment-based DRR. This begins with identifying vulnerable occupations, or vulnerabilities in different types of occupation, and establishing a clear pre-disaster strategy to cope with both slow-onset “stress” and rapid-onset “shock” events. Policy-makers and planners often prioritize the fast-onset events, while creeping disasters such as drought or soil and water salinity are often neglected, even though these have deep-rooted impacts on rural livelihoods and related employment. Thus it is essential to promote occupational resilience, a key concept with important policy/strategy and operational dimensions.

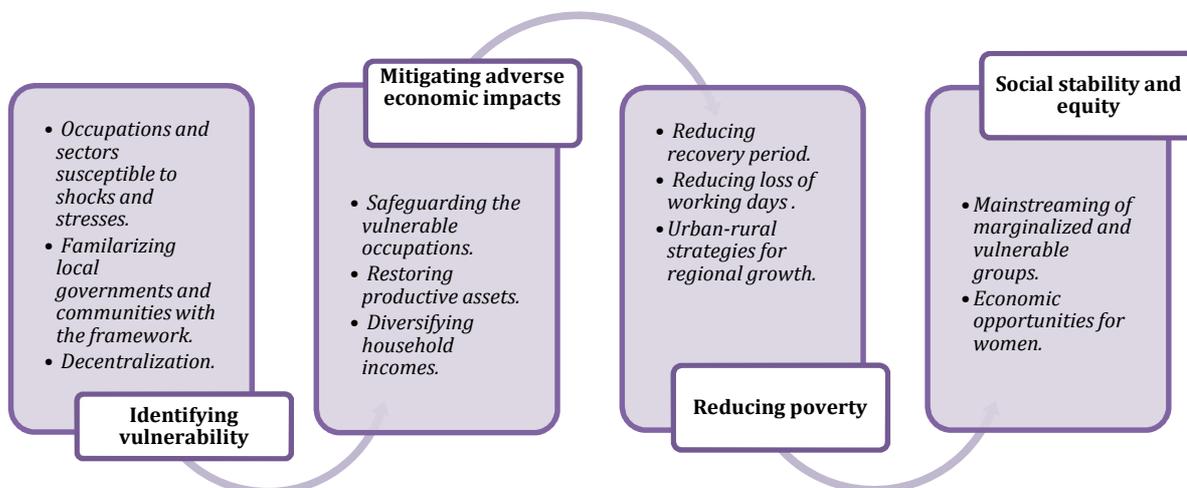
Attention to this issue can also serve as an opportunity to redefine and re-negotiate traditional gender roles and to target greater mutual participation and inclusiveness among men and women, as well as to encourage individual empowerment. These aims require baseline data for vulnerable occupations that are both gender aggregated and inclusive in terms of individual and family-based businesses, supporting the development of income-generating opportunities for both men and women.

Recovery measures should also target the pre-disaster unemployed population. Disaster recovery can provide an opportunity to rebuild and revive the economy, generating new businesses and providing new types of employment, as well as strengthening existing ones.

Four objectives of employment-based DRR have been identified: (1) identifying vulnerabilities; (2) mitigating adverse economic impacts on vulnerable occupations, (3) reducing poverty; and (4) promoting social stability and equity. These objectives are inter-related, and can function together to achieve the overall goal of occupation-based risk reduction.

Situation-specific pre-disaster employment recovery planning is needed at the local level. Simulations and action-planning exercises provide important tools for this purpose, ideally incorporating local capacities as well as local labour and employment statistics. This suggests the great importance of pre-disaster collaboration between concerned agencies and the labour statistics office.

Figure 1 Employment-based risk reduction: Identified goals



Employment-based DRR can involve all the non-traditional stakeholders, which have not previously been part of risk reduction processes. In most developing countries, there are many informal and low-income urban settlements where disaster always threatens employment. Self-help and other social groups are often found in such communities, organizations established to maximize the outputs and benefits of following a single occupation. These groups can be recruited before disaster strikes to collect data regarding numbers of people, income sources, and associated vulnerabilities. In rural areas, similarly, agricultural and livestock-based groups (producer groups) may be found working to common purpose. These could be adapted to address the goals of inclusive recovery (see box 4), as well as other ends.

Box 4
Inclusive recovery: Concept to realization

In most cases, PDNA with regard to employment does not consider gender or people with disabilities. Women’s employment, as part of the informal economy, goes unregistered, and related statistics are generally unavailable. Similarly, databases include little or no statistics on employment among people with disabilities. Yet an inclusive database must be very much part of any inclusive recovery. Available statistics should include the following: (1) proper information on the informal economy and micro enterprises (often at the household level); (2) gender-disaggregated statistics; and (3) relevant information regarding disabled persons. Such information should be considered part of a social safety net, and needs to be incorporated within the respective national social protection mechanisms. The more this becomes customary in normal times, the more effective it will prove in post-disaster

- **Minimize vulnerability.** Vulnerability assessments of occupations is one key measure before a disaster, and these should establish a baseline of different vulnerable occupations. Local government departments can then focus efforts on issues related to any particular affected group.
- **Develop sustainable urban-rural flow elements.** Groups of producers can apply the strengths of their urban-rural linkages to their benefit. The most common example is employing traditional skills in a specific sector and establishing sustainable urban markets for rural products. After a disaster, governments usually focus on providing alternative jobs, often failing to consider existing skills among the affected people. Creation of related markets can keep micro-enterprises based on traditional skills active in a disaster scenario, where demand for these products are not normally affected.
- **Enhance coping strategies.** Affected groups can learn from the coping strategies employed by other groups in other regions.

Box 5

Labour statistics and local authority coordination essential for recovery

Labour statistics, including employment statistics, are key to the recovery process. In most cases, PDNAs do not include informal sector data. Experience of past disasters strongly suggests that national statistical bureaux need to be included in the PDNA process. In some countries, related ministries such as planning and economic development also need to be part of the exercise. Statistical bureau capacity needs to be improved, furthermore, especially regarding pre-disaster labour statistics.

PDNAs also need to ensure effective coordination between local authorities, donors, and such agency clusters as livelihoods and employment so that all programmes more surely address actual local needs and priorities.

Populations in both urban and rural areas want more financial independence through skills development and access to entrepreneurial opportunities. Private sector engagement can address these needs. Micro and small enterprises can play a role in risk reduction through poverty reduction. Labour statistics can be an important part of this (see box 5, above). Micro and small enterprise roles in risk reduction in developing countries include the following:

- **Reducing vulnerability.** The World Bank suggests that the "effects of natural disasters [constitute] an important dimension of poverty. Low-income families typically live on marginal land, [are employed] in the

informal sector and have few, if any, resources with which to protect themselves [World Bank, 2001]." Precise calculations of indirect economic loss to the population might be impossible, yet determining the spheres of loss would at least help to prepare for reduced loss in subsequent disasters. Parameters recently developed by researchers can be contextualized to determine the comparative vulnerability of micro enterprises under different categories of activity, allowing local governments to identify priority micro-enterprise groups when it comes to interventions (Srivastava and Shaw, 2014a).

- **Mitigating adverse economic impacts.** A strong entrepreneurial foundation, especially one embedded in the social fabric of the community, might act as "a mitigating buffer to reduce a community's vulnerability to disasters" (Galbraith and Stiles, 2006). Micro enterprises (MEs) are said to provide just such a strong entrepreneurial foundation. The evidence points to both short- and long-term negative economic impacts from disasters, but entrepreneurial impulses within an affected community can mitigate some of these structural economic impacts. On the other hand, one observer categorically states that a growing marginal economy further widens the gap between rich and poor and increases occupational vulnerability (Sassen, 2001).
- **Reducing poverty.** Local MEs play an important role in economic and social recovery after a natural disaster by contributing significantly to economic growth. This sector provides one of the most important vehicles whereby low-income people can avoid poverty and, in some cases, escape from it. Micro-enterprises can be especially useful in regions suffering from slow-onset disasters, where policies that encourage small business development may offer an effective intervention strategy.
- **Social stability and equity.** Entrepreneurial solutions may help to mitigate the often uneven impact of natural disasters on certain socio-economic groups. Age-old disparities may be bridged through such enterprises, especially in post-disaster scenarios. Studies indicate that women are generally the primary stakeholders and owners of micro-enterprises. Female-owned businesses comprise one of the fastest-growing sections of the micro-enterprise sector. Greater social equity may be achieved through women's empowerment and a diversification of household incomes that benefits women in households.
- **Business continuity.** Like any other private sector entities, MEs need to adapt their business strategies to remain viable or competitive. This adaptation demands innovative adaptive measures, not only from micro enterprises but also from small, medium, and large private sector operators. In this world of globalization, such businesses are

interdependent, and the swift recovery of one encourages faster recovery among others. Hence there is a need to interlink enterprises of various magnitude on a variety of scales, where the collective cushion is better able to bear the brunt of disaster.

Chapter highlights

Key highlights from this chapter follow:

1. Economic level, socio-economic growth pattern, and political will often influence the recovery process, and, as part of that, employment/livelihoods recovery.
2. PDNAs need to include national labour statistics bureaux and their core employment-related data as planning and capacity building tools.
3. PDNA and compensation schemes need to include gender perspectives, as well as respect for the needs of people with disabilities and the needs of micro-enterprises.
4. Local authority relationships with donors or clusters are important for effective employment recovery.
5. Employment-based DRR should involve non-traditional stakeholders such as self-help and social groups.
6. The four pillars of employment-based DRR include identifying vulnerability; mitigating adverse impacts; reducing poverty; and fostering social stability and equity.
7. With employment-based DRR, urban-rural linkages become important in improving the coping mechanisms of certain types of vulnerable occupation.
8. Women-driven small and micro enterprises are often vulnerable to disasters, and are often neglected in the recovery process. The PDNA exercise should address these issues.
9. Pre-disaster recovery planning for employment is an important measure, where labour statistics bureaux and disaster-related government agencies need to collaborate before the disaster to develop area-specific disaster scenarios and action plans.

5. Conclusion

In summary, two future approaches to employment-based DRR suggest themselves:

- **Policy or strategy level.** Countries with established social employment schemes in terms of poverty reduction are well equipped for quick recovery in most sectors. The accuracy of post-disaster damage and needs assessment very much depends on the availability of a basic pre-disaster data set covering employment and livelihoods (in terms of labour statistics). Establishing a quick post-disaster employment recovery framework at an early stage, studies show, promotes longer-term recovery. It is important to involve national and local employment/labour statistics departments from an early stage of the PDNA.
- **Local action and implementation level.** This approach needs to focus more on micro and small enterprises, on businesses that cannot avail themselves of the main recovery schemes or insurance compensation. The PDNA exercise often also neglects enterprises owned by women or people with disabilities, whether in terms of respective business viability or employment generation. An inclusive recovery must incorporate informal economy workers, women, people with disabilities, and micro-enterprises. Non-traditional stakeholders such as community self-help groups can assume important roles, and it is important to recognize and partner with them. Local authorities move to the forefront of recovery efforts, and links between the cluster groups and local authorities become crucial,

Inclusive and rapid recovery from disaster presupposes pre-disaster training and capacity building. Extensive and reliable labour or employment-related statistics comprise an essential part of this. PDNAs can further serve pre-disaster employment recovery planning by helping to ensure that measures take account of real local needs and perceptions. Efficient coordination between the national-level framework and local action is another important element of recovery efforts. Success depends on a good governance system and an effectively collaborative centre-state relationship.

References

- Adger, W.N. 1998. *Indicators of social and economic vulnerability to climate change in Vietnam*. Working Paper GEC 98-02. Centre for Social and Economic Research on the Global Environment (CSERGE). University of East Anglia and University College London. Available at: http://www.cserge.ac.uk/sites/default/files/gec_1998_02.pdf [18 Oct. 2013].
- ; Brooks, N.; Bentham, G.; Agnew, M.; Eriksen, S. 2004. *New indicators of vulnerability and adaptive capacity*. Tyndall Centre Technical Report 7, Tyndall Centre for Climate Change Research Norwich, UK. Available at: http://www.tyndall.ac.uk/publications/tech_reports/tech_reports.shtml [13 June 2014].
- Bamdad, N. 2005. *The role of community knowledge in disaster management: The Bam Earthquake lesson in Iran*. Conference Papers, International Conference on Engaging Communities. An Initiative of the United Nations and Queensland Government (Brisbane, Australia, 14–17 August 2005). Available at: <http://www.engagingcommunities2005.org/abstracts/Bamdad-Nasserfinal.pdf> [20 Dec. 2012].
- Cannon, T. 1994. “Vulnerability analysis and the explanation of ‘natural’ disasters”. *Disasters, Development and Environment*, Vol. 1, pp. 13–30.
- . 2000. “Vulnerability analysis and disasters”, in D.J. Parker (ed.) *Floods* (Routledge).
- Cardona, O.D.; Hurtado, J.E.; Duque, G.; Moreno, A.; Chardon, A.C.; Velásquez, L.S.; Prieto, S.D. 2004. *Disaster risk and risk management benchmarking*. Information and Indicators Program for Disaster Risk Management, Institute of Environmental Studies (IDEA) and Inter-American Development Bank (IDB). Available at: http://idea.manizales.unal.edu.co/ProyectosEspeciales/BID/desc_gta.asp?IdActividadAcademica=33
- Carter, M.; Little, P.D.; Mogues, T.; Negatu, W. 2007. “Poverty traps and natural disasters in Ethiopia and Honduras”. *World Development*, Vol. 35(5), pp. 835–856.
- Chatterjee, R.; Shaw, R. 2015. “Role of regional organizations for enhancing private sector involvement in disaster risk reduction in developing Asia”. In Izumi, Takako; Shaw, Rajib (eds), *Disaster management and private sectors: Challenges and potentials* (Tokyo, Springer), pp. 47–67.

- Cutter, S.L. 1996. "Vulnerability to environmental hazards". *Progress in Human Geography*, Vol. 20, pp. 529–539.
- Galbraith, C.S.; Stiles, C. H. 2006. "Disasters and entrepreneurship: A short review". In C.S. Galbraith and C. H. Stiles (eds) *Developmental Entrepreneurship: Adversity, Risk, and Isolation*. International Research in the Business Disciplines, Vol. 5, pp. 147–166.
- Hewitt, K. (ed). 1983. *Interpretation of calamity: From the viewpoint of human ecology* (Boston, Allen).
- Hoddinott, J. 2006. "Shocks and their consequences across and within households in rural Zimbabwe". *Journal of Development Studies*, Vol. 42(2), pp. 301–321.
- International Labour Organization (ILO). 2010. *Global employment trends* (Geneva, Switzerland, International Labour Office).
- . 2015a. *Research on employment and labour measures in the post-Great East Japan Earthquake recovery process*.
- . 2015b. *Assessment of gaps, opportunities, challenges and impacts of employment-focused disaster risk management and reconstruction in the Asia and Pacific Region: Case study on the Philippines (Typhoon Haiyan)*.
- . 2015c. *Employment-focused disaster risk management and reconstruction in the Asia and Pacific Region; Case study on India (Uttarakhand floods); Assessment of gaps, challenges, opportunities, and impacts*.
- . 2015d. *Assessment of gaps, opportunities, challenges and impacts of employment-focused disaster risk management and reconstruction in the Asia and Pacific Region: Case study on Nepal*.
- McBean, G.; Ajibade, I. 2009. "Climate change, related hazards and human settlements". *Current Opinion in Environmental Sustainability*, Vol. 1(2), pp. 179–186.
- O'Brien, K.; Heyd, T. 2009. "Culture, values, and world perspectives as factors in responding to climate change", in *Synthesis report: Climate change, global risk, challenges and decisions*. Copenhagen, 10–21 March 2009. Available at: <http://climatecongress.ku.dk/pdf/synthesisreport> [10 July 2009].
- Rygel, L.; O'Sullivan, D.; Yarnal, B. 2006. "A method for constructing a social vulnerability index: An application to hurricane storm surges in a developed country", in *Mitigation and Adaptation Strategies for Global Change*, Vol. 11(3), pp. 741–764.
- Sassen, S. 2001. *The global city: New York, London, Tokyo* (Princeton University Press).
- Satterthwaite, D.; Huq, S.; Reid, H.; Pelling, M.; Romero, L.P. 2007. *Adapting to climate change in urban areas: The possibilities and constraints in low- and*

- middle-income nations*. Human Settlements Discussion Paper Series, Climate Change and Cities 1. London, International Institute for Environment and Development (IIED).
- SEEDS. 2005. *Swayam micro-credit program for livelihood recovery after Indian Ocean Tsunami: Case of Andaman and Nicobar Islands*. Available at: http://www.recoveryplatform.org/assets/publication/9%20sept/INDIA_Tsunami_LIVELIHOOD,SHELTER_SEED%20INDIA_2005.pdf [22 Dec. 2015].
- Shaw, J.; Mulligan, M.; Nadarajah, Y.; Mercer, D.; Ahmed, I. 2007. *Lessons from tsunami recovery in Sri Lanka and India: Community, livelihoods, tourism and housing*. Monash and RMIT University Publication, 31 pages.
- Srivastava, N.; Shaw, R. 2014a. "Establishing parameters for identification of vulnerable occupations in a disaster scenario in Gujarat, India". *Risk Hazards and Crisis in Public Policy*, Vol. 5(2), pp. 212–238.
- . 2014b. "The role of micro enterprises in disaster risk reduction in India". In T. Izumi and R. Shaw (eds), *Disaster management and private sectors*. Disaster Risk Reduction series. DOI 10.1007/978-4-431-55414-1_8.
- Ueda, Y.; Shaw, R. 2015. "Managing and bridging communities in temporary housing: Case of Great East Japan Earthquake and Tsunami in Kesenuma, Japan", in *Natural Hazards*, DOI: 10.1007/s11069-015-1984-3
- United Nations (UN). 2012. *The Millennium Development Goals report 2012* (New York, United Nations. Available at: <http://www.un.org/millenniumgoals/pdf/MDG%20Report%202012.pdf> [20 Dec. 2012].
- United Nations International Strategy for Disaster Reduction (UNISDR). 2009a. *Risk and poverty in a changing climate*. The 2009 Global Assessment Report on Disaster Risk Reduction (Geneva, Switzerland, UNISDR).
- . 2009b. *UNISDR terminology on disaster risk reduction* (Geneva, Switzerland).
- . 2009c. *Disaster risk reduction in the United Nations: Roles, mandates and areas of work in key United Nations entities*, 145 pages.
- World Bank. 2001. *World development report 2000/2001: Attacking poverty* (New York, Oxford University Press). Available at: <https://openknowledge.worldbank.org/handle/10986/11856> [9 Feb. 2016].
- . 2010. *World development indicators*. World Bank's Country Poverty Assessments and Country Poverty Reduction Strategies. (Washington, USA, World Bank-Global Poverty Working Group).

Employment-focused disaster risk management and reconstruction in Asia and the Pacific: A comparative analysis of recent disasters in India, Japan, Nepal, and the Philippines

For making post-disaster recovery sustainable, employment is indispensable. This paper examines how employment issues have and have not been mainstreamed in disaster risk management and recovery efforts, focusing on four case study countries, i.e., India, Japan, Nepal and the Philippines. Through a comparative analysis between the four case studies, the paper distils key lessons and good practices for enhancing employment-centred disaster risk management and recovery. The study finds that countries with established employment schemes are well equipped for swift recovery. Establishing a quick post-disaster employment recovery framework at an early stage leads to a longer-term recovery.

ILO Regional Office for Asia and the Pacific
United Nations Building
Rajdamnern Nok Avenue
Bangkok 10200, Thailand
Tel.: +66 2 288 1234
Fax: +66 2 280 1735
Email: BANGKOK@ilo.org
www.ilo.org/asia



ISBN: 978-92-2-130782-2 (print)
978-92-2-130783-9 (web pdf)

Employment-focused disaster risk management and reconstruction in Asia and the Pacific: A comparative analysis of recent disasters in India, Japan, Nepal, and the Philippines

For making post-disaster recovery sustainable, employment is indispensable. This paper examines how employment issues have and have not been mainstreamed in disaster risk management and recovery efforts, focusing on four case study countries, i.e., India, Japan, Nepal and the Philippines. Through a comparative analysis between the four case studies, the paper distils key lessons and good practices for enhancing employment-centred disaster risk management and recovery. The study finds that countries with established employment schemes are well equipped for swift recovery. Establishing a quick post-disaster employment recovery framework at an early stage leads to a longer-term recovery.

ILO Regional Office for Asia and the Pacific
United Nations Building
Rajdamnern Nok Avenue
Bangkok 10200, Thailand
Tel.: +66 2 288 1234
Fax: +66 2 280 1735
Email: BANGKOK@ilo.org
www.ilo.org/asia



ISBN: 978-92-2-130782-2 (print)
978-92-2-130783-9 (web pdf)