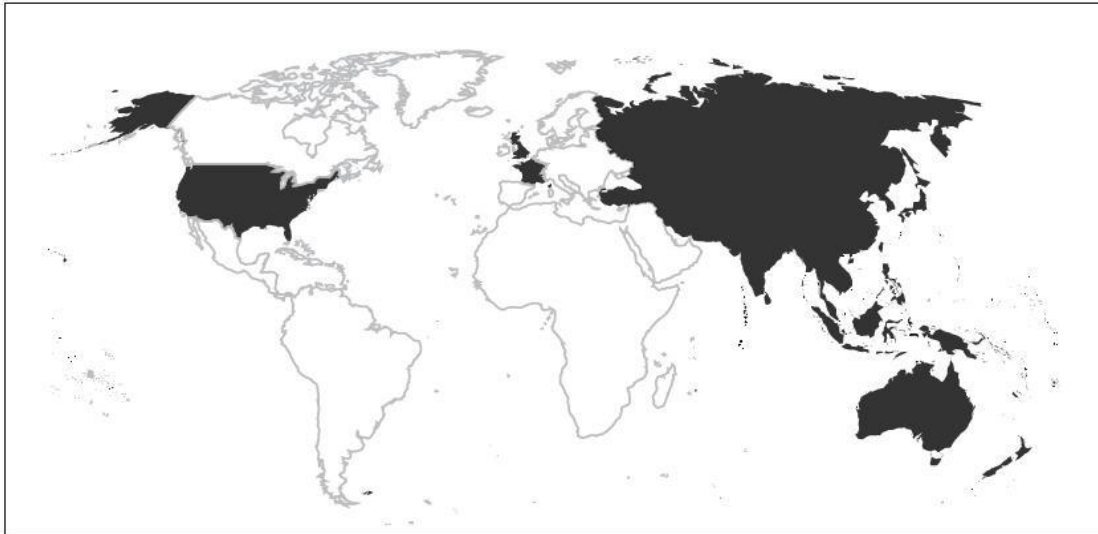


Building e-resilience: Enhancing the role of ICTs for Disaster Risk Management (DRM)



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List of Acronyms and Abbreviations

AADMER	ASEAN Agreement on Disaster Management and Emergency Response
ARRND	Agreement on Rapid Response for Natural Disasters
AVP	Audio–Visual Presentations
CAM	Communication Authority of Maldives
CDR	Call Detail Records
DINA	Disaster Information for National Awareness
DMC	Disaster Management Center
DOST	Department of Science and Technology
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EMS	Energy Management System
EMA	Energy Market Authority
FAiTH	Foreign Aid Transparency Hub
GIS	Geographic Information System
HFA	Hyogo Framework for Action
ICT	Information and Communication Technology
IES	Intelligent Energy System
IOC	Intelligent Operations Center
ISOC	Internet Society
ITU	International Telecommunication Union
KT	Korea Telecom
MNBD	Mobile Network Big Data
NCDM	National Council for Disaster Management
NDA	Non-Disclosure Agreements
NDRMC	National Disaster Risk Reduction and Monitoring Council
NOAH	Nationwide Operational Assessment of Hazards
NTU	Nanyang Technological University

PSC	Parliament Select Committee
SAARC	South Asian Association for Regional Cooperation
UAV	Unmanned Aerial Vehicles
UNDP	United Nations Development Program
UNISDR	United Nations International Strategy for Disaster Reduction
VLR	Visitor Location Registry

1. Introduction

Between 2004 and 2013, 41.2 per cent of all the reported natural disasters in the world were in the Asia-Pacific region.¹ While the frequency of natural disasters has stayed relatively constant, when compared with the previous ten years, the death toll increased three-fold during the same period, resulting in economic damage of over USD 560 billion.^{2,3} Within the Asia-Pacific region, South-East Asia, in particular Indonesia and the Philippines were hardest hit. The underlying reasons appear to be unplanned urbanization, poor management of land use and climate change.⁴

Events that cause a state of emergency are, by definition, unexpected. From terrorist attacks to the rapid spread of communicable diseases to natural disasters, they cause disruption and distress. Dealing with the aftermath of any type of a disaster has many aspects. Each group of actors from government entities to the private sector, to community groups and the general public have roles to play. The lack of organized support services and access to infrastructure makes response and recovery a daunting task. For instance, when disasters occur in rural areas where access to transport and communication is poor it is harder to respond in a timely manner, and timely response is critical.

What governments can do is to reduce the risks posed by disasters to the lives and livelihoods of citizens. Generally, the focus is on having policies in place so that when a disaster strikes, the chain of command outlined by the policy is followed and first responders are deployed quickly. The emphasis is on saving lives and providing relief to those affected. With advances made in technology, the sophistication of systems

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