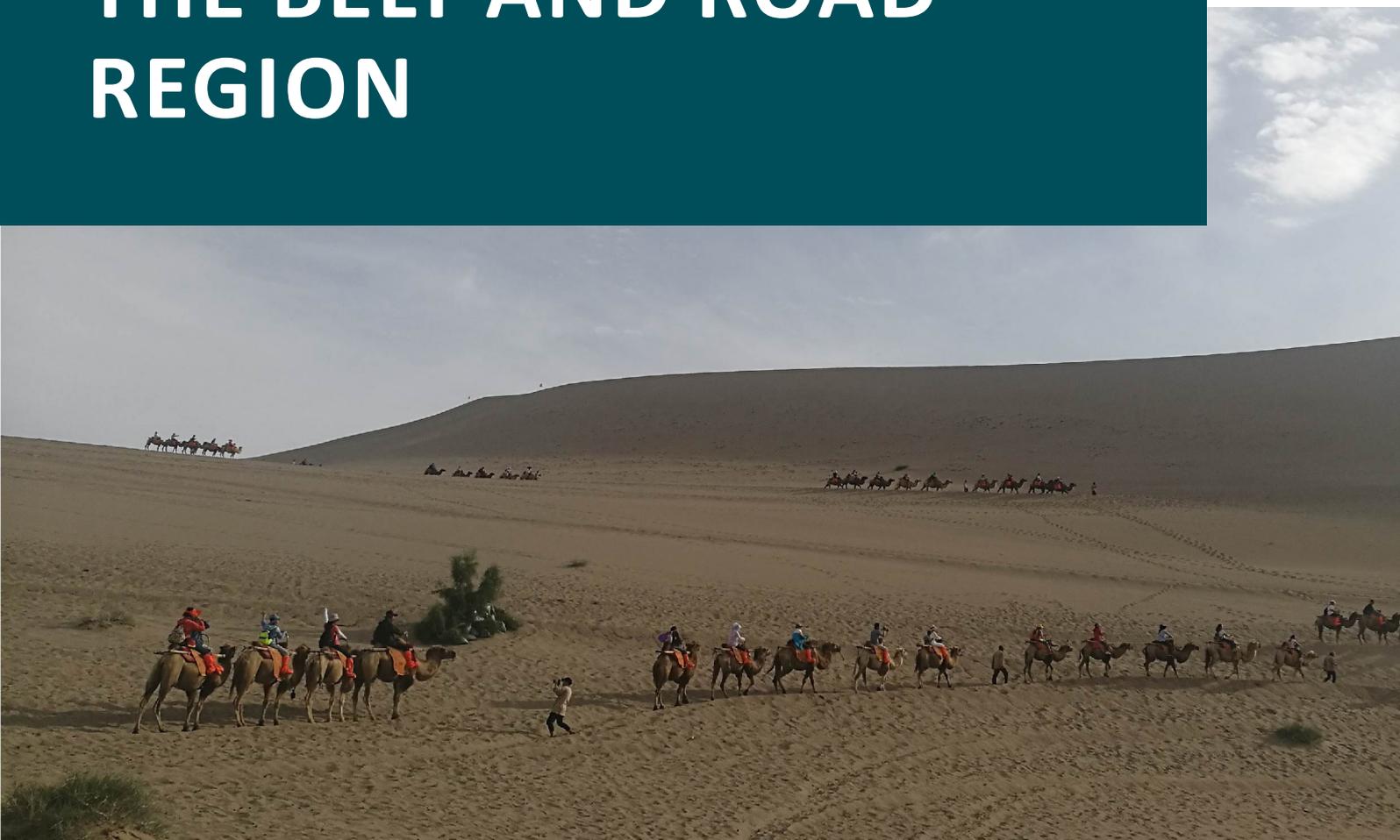


COOPERATION TOWARDS DISASTER RISK REDUCTION IN THE BELT AND ROAD REGION



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COOPERATION TOWARDS DISASTER RISK REDUCTION IN THE BELT AND ROAD REGION

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INTRODUCTION

Regional disaster risk reduction (DRR) is one of the essential tools to minimize losses caused by natural hazards across country borders. Due to geological, social, cultural and political resemblance, different countries from one region often share similar characteristics of disaster risks, which make regional DRR possible and efficient. Among many other regional alliances, the Belt and Road (B&R) region is a new concept proposed by the Chinese government to promote the connectivity of Asian, European and African continents, within which regional cooperation of DRR should play a role.

The B&R region refers to the Silk Road Economic Belt and 21st Century Maritime Silk Road. The Silk Road Economic Belt is the land-based component covering countries situated on the original Silk Road⁵ through Central Asia, Russia, and Europe (the Baltic); linking China with the Persian Gulf and the Mediterranean Sea through Central Asia and West Asia and connecting China with Southeast Asia, South Asia and the Indian Ocean. The 21st Century Maritime Silk Road⁶, deriving from the ancient Maritime Silk Road, is designed to go from China's coast to Europe through the South China Sea and the Indian Ocean in one ocean-based route, and from China's coast through the South China Sea to the South Pacific in another.

According to the "Version and Action on Jointly Building the Silk Road Economic Belt and 21st Century Maritime Silk Road" issued by the Chinese government on 28 March 2015, the B&R initiative sets up five major goals which are policy coordination, facilities connectivity, unimpeded trade, financial integration and people-to-people bonds. The security and stability of the countries and regions along B&R are important to achieve those goals, however, many countries along B&R are prone to a wide range of hazards. Disasters may cause a chain reaction for societies, economies and politic relations between the countries across the B&R region. Hence, cooperation towards DRR is an indispensable segment of the B&R strategy.

DISASTERS IN THE B&R REGION

According to the international disasters database EM-DAT, 4580 large disasters occurred in the B&R region from 1980 to 2015 (Table 1). Floods, storms, and earthquakes are associated with the highest number of large disasters, representing respectively 37.28%, 24.86% and 12.81% of the total number of events. In recent years, the number of large disasters and the scale of losses associated with disasters increased significantly.

Many of the B&R countries are facing the same natural hazards (Table 1). Among the disasters noted in table 1, a number have affected more than one countries, e.g. the 2004 tsunami in South and Southeast Asia and Typhoon Haiyan in 2013. These disasters have caused tremendous losses. From 1980 to 2015, large events have caused 1.3 million deaths and left 3.3 million people injured. In total, 5.66 billion people have been affected within the B&R region over the same period. The total economic losses have exceeded USD829 billion, including property damage and declines in output or revenue generally arise from disruption of the flow of goods and services.

EXISTING DRR COOPERATION IN THE B&R REGION

Of the various initiatives among the sub-regions in the B&R region, cooperation in South-East Asia probably has progressed the most. This work has mainly developed under the Association of Southeast Asian Nations (ASEAN) and started in 1976 with the ASEAN Concord I, where disaster management was identified as one of the eight principles and objectives for regional cooperation. Cooperation in this area improved in 2003 with the start of the ASEAN Regional Programme on Disaster Management (ARPDPM), and in the aftermath of the 2004 Indian Ocean Tsunami the ASEAN Agreement on Disaster Management and Emergency Response

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⁵ The silk road was an ancient network of trade routes since the Han dynasty (from 206 B.C.) and were central to cultural interaction through regions of the Asian continent connecting India subcontinent, Persia, Europe, the Horn of Africa and Arabia.

⁶ The maritime silk road was a conduit to export silks, china, tea, and brass and iron and to import spices, flowers and plants, and rare treasures for the court from China's south-eastern coastal areas to foreign countries since Qin Dynasty (from 221 B.C.).

HAZARD TYPE	CHINA	SOUTHEAST ASIA	SOUTH ASIA	CENTRAL AND WESTERN ASIA	MIDDLE EAST AND AFRICA	CENTRAL AND EASTERN EUROPE	TOTAL
DROUGHT	31	41	21	13	6	22	134
EARTHQUAKE	131	114	64	138	44	23	514
EPIDEMIC	8	94	119	36	21	22	300
EXTREME TEMPERATURE	13	1	90	19	15	131	269
FLOOD	243	519	463	214	107	247	1793
INSECT INFESTATION	1	1	2	2	1	1	8
LANDSLIDE	64	98	85	44	13	9	313
MASS MOVEMENT	7	6	4	3	4	2	26
STORM	254	396	267	34	42	86	1079
WILDFIRE	6	19	5	6	9	39	84
VOLCANIC ACTIVITY	0	59	0	0	1	0	60
TOTAL	758	1348	1120	509	263	582	4580

Table 1. Number of disasters and associated natural hazards in the B&R region between 1980 and 2015 (data from EM-DAT: <http://www.emdat.be/>)

(AADMER) was signed in July 2005 (and came into force in December 2009 after being ratified by all 10-member states). AADMER is the world's only legally binding instrument. In 2009 the AADMER work programme (2010-2015) was developed and was formally launched in May 2010. AADMER also paved the way for the establishment of the ASEAN Coordinating Centre for Humanitarian Assistance (AHA Center) for the purpose of facilitating co-operation and co-ordination among the Parties and with relevant United Nations and international organizations.

Following Southeast Asia, another sub-regional cooperation mechanism in DRR is in the South Asia region. Cooperation on DRR in this sub-region started in 1985 with the adoption of the Charter of the SAARC, although DRR was only indirectly mentioned in the Charter. Disaster management figured for the first time when the third SAARC Summit in 1987, which was then followed by relevant decisions at the sixth SAARC Summit in 1991. Following the Indian Ocean Tsunami in the SAARC Comprehensive Framework on Disaster Management for South Asia was adopted in 2006. The framework, which was aligned with the Hyogo Framework of Action (HFA), was endorsed in 2007. In 2005, the thirteenth SAARC Summit adopted the Dhaka Declaration, which resulted in the establishment of the SAARC Disaster Management Centre

(SDMC). The SDMC has developed a perspective plan for the period 2007-2015 and Regional Road Maps on six key areas of disaster management – outlining the tasks ahead in the short, medium and long term to be addressed by local authorities, national governments and sub-regional organizations. Based on these road maps a number of projects have been taken up at the sub-regional level.

In the Central Asia sub-region, the Economic Cooperation Organization (ECO) has many significant programmes or agenda on DRR. Established in 1985, ECO includes Iran, Pakistan, Turkey, Afghanistan and Azerbaijan in addition to the five Central Asian States. In 2006, ECO leaders called for regional programmes for early warning, and practical steps for disaster preparedness. Since then ECO has organized annual International Conferences on DRR. The five Central Asian States also signed a Cooperation Agreement for Prevention and Liquidation of Emergencies in 1998. In addition, Kyrgyzstan, Tajikistan and Uzbekistan, agreed in 2009 to cooperate on a number of disaster concerns, including to establish early warning systems, train professional search-and-rescue teams, and exchange information, including hydro-meteorological data.

In West Asia, cooperation in DRR largely was promoted under the League of Arab States. Set up in 1945 the League now

has 22 member states. In 2009, it called for the development of an Arab strategy for DRR and an executive programme, including technical and financial mechanisms at national and regional levels. In addition, the Arab Academy for Science and Technology provides regional capacity building for DRR through training and other programmes.

Additional sub-regional cooperation on DRR is fostered through intergovernmental and non-governmental regional organizations such as the International Centre for Integrated Mountain Development (ICIMOD), the Asia-Pacific Economic Cooperation (APEC), the Asian Disaster Reduction and Response Network (ADRRN), Duryog Nivaran, the Asian Disaster Preparedness Center (ADPC) and the Asian Disaster Reduction Center (ADRC).

THE ROLE OF INTERNATIONAL ORGANIZATIONS

The United Nations has also been promoting cooperation on DRR. For example, following the Indian Ocean Tsunami in 2004 and the World Conference on Disaster Reduction in January 2005, the United Nations International Strategy for Disaster Reduction (UNISDR) established an Asia-Pacific regional unit in Bangkok. In 2006, UNISDR established the UNISDR Asian Partnership on Disaster Reduction (IAP), where governments, and other organizations meet to review the progress of implementation of DRR in the region. The IAP also provides technical, operational and secretarial support for the implementation of decisions taken at the Asian Ministerial Conferences on Disaster Reduction, which was also started in 2005.

In addition, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) is another principal source of regional cooperation on DRR. ESCAP works closely with other agencies to promote DRR cooperation through organizations such as the Mekong River Commission, the ESCAP/World Meteorological Organization (WMO) Typhoon Committee, the ESCAP/WMO Panel on Tropical Cyclones and, the Regional Space Applications Programme. ESCAP's Tsunami Regional Trust Fund supports the development and strengthening of the tsunami early-warning system in the Indian Ocean.

Following Cyclone Nargis in 2008 the UN also supported regional cooperation through the Tripartite Core Group (TCG) of the ASEAN Humanitarian Task Force between the ASEAN, the Government of Myanmar and the United Nations, and facilitated collective efforts in urgent post-Cyclone Nargis humanitarian relief and recovery work. Other regional United Nations agencies supported cooperation on DRR, including the United Nations Development Programme (UNDP) Regional Centre in Bangkok on Crisis Prevention and Recovery, the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) supporting responses to major disaster caused by natural hazards, the UNESCO regional promoting school safety, and the World Food Programme initiatives on humanitarian logistics.

CHINA'S EFFORTS TO PROMOTE DRR IN THE B&R REGION

The Chinese government considers that DRR capacity building is essential to ensure smooth implementation of the B&R initiative.

The National Comprehensive Disaster Prevention and Reduction Plan (2016-2020), issued by the General Office of the State Council on 13 January 2017, states that it is necessary to take into account domestic and international resources for DRR in implementing the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction 2015-2030. It entails cooperation with the other countries, relevant United Nations agencies and regional organisations to carry out wide-ranging DRR activities. Such cooperation should focus on the monitoring and forecasting natural hazards, early warning and information sharing, risk assessment, humanitarian aid and post-disaster recovery and reconstruction. The plan further outlines tasks for integrated DRR in B&R countries.

In 2016, the Bureau of International Cooperation of the Chinese Academy of Sciences (CAS) launched the International Cooperation Programme for Disaster Risk and Comprehensive Mitigation under the B&R Initiative (2016-2021). This programme focuses on disaster risk assessment and seeks to promote international cooperation on DRR in the B&R region. It also aims to set up mechanisms for information sharing and coordinated DRR across the region.

The Earth Observation and Navigation initiative, launched by the Ministry of Science and Technology in 2017, further aims to substantially improve technological support for integrated earth observation and navigation within the B&R region. It particularly focuses on key technologies for monitoring and responding to major disasters through space-air-ground integrated earth observation, including remote sensing and SI applications.

On 22 October 2016, the Commission for Science, Technology and Industry for National Defense issued Guidelines on Accelerating the Development and Application of the B&R Spatial Information Corridor. The Corridor is a Spatial Information (SI) service system that integrates remote sensing as well as data transmission, processing and application. The Corridor is expected to provide SI services to the B&R countries and achieve information interconnectivity. Within this corridor, the Guidelines propose to build a cross-border emergency response mechanism to provide quick access to SI before and in time of disasters within countries of the B&R region. Such mechanism would provide remote sensing image collection, emergency communication and navigation and location services for regional disaster monitoring and response. The guidelines also calls for the creation of a China-ASEAN Satellite Application Information Centre and for bringing together marine environment monitoring satellites, high-resolution satellites, weather satellites, navigation satellites and search and rescue satellites facilities. An integrated satellite system would improve SI service capacities in DRR in the B&R region. Ultimately, the Corridor is expected to provide emergency communications, location services, resource assessment, environmental and ecological monitoring as well as disaster monitoring.

RECOMMENDATIONS

Significant progress have been made towards enhancing cooperation for DRR in the B&R region. Most initiatives have focused on cross-border cooperation for humanitarian response to disasters through better sharing of resources and scientific advancement. Further attention is now needed to foster risk reduction through long-term vulnerability reduction and strengthening of people's capacities in facing natural hazards. This requires appropriate institutional frameworks to allow for the integration of both top-down and bottom-up initiatives. In this perspective, the AADMER constitutes a significant step forward that should be expanded to the whole B&R region. Fostering civil society collaboration, so that the needs of those affected are better catered for in cross-border initiatives, is another important area to be considered for improving DRR across the B&R region. Existing networks such as Duryog Nivaran and ADRRN provide an excellent platform to strengthen such collaboration that needs to be formalized within cross-border agreements. Increased collaboration towards risk reduction through greater inclusion of civil society organisations should be supported and facilitated by international organisations such as United Nations agencies and regional organisations such as ASEAN and SAARC. Ultimately, broadening the range of stakeholders to be engaged in DRR initiatives in the B&R region will be essential to foster genuine cooperation and fully address the scope of disaster risk.