ADB ASIAN DEVELOPMENT BANK

Mongolia: Strengthening Integrated Early Warning System in Mongolia

Project Name	Strengthening Integrated Early Warning System in Mongolia
Project Number	53039-001
Country	Mongolia
Project Status	Proposed
Project Type / Modality of Assistance	Loan
Source of Funding / Amount	Loan: Strengthening Integrated Early Warning System and Disaster Preparedness in Mongolia Ordinary capital resources — US$ 20.00 million concessional ordinary capital resources lending / Asian Development Fund — US$ 10.00 million
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth
Drivers of Change	Governance and capacity development Knowledge solutions Partnerships Private sector development
Sector / Subsector	Agriculture, natural resources and rural development - Land-based natural resources management - Water-based natural resources management
Gender Equity and Mainstreaming	Effective gender mainstreaming
Description	The proposed project will support the development of a comprehensive approach to early warning system (EWS) by putting in place the five key elements of EWS in a cycle (i) risk knowledge with appropriate assessment, (ii) detection and surveillance networks, monitoring and analysis, (iii) forecasting and warning, (iv) dissemination and communication, and (v) preparedness and response capacity. These elements are fundamental needs for early warning system for all kind of hazards including epidemics and pandemics. Lack of or inadequate interventions or poor performance of any of these elements in the cycle may lead to the failure of the entire EWS. To achieve an outcome of effective EWS, the system should (i) involve the people and communities at risk from a range of hazards; (ii) link EWS to contingency plans, adequately supported by physical and social infrastructure; (iii) utilize cutting edge technologies to enhance efficiency; (iv) promote inclusiveness; and (v) engage all stakeholders at different levels. At present, integrated EWS is not available in Mongolia, and its need is becoming even more apparent during recent national emergencies. In Mongolia, early warning information is available only for selected hazards such as earthquakes in and around Ulaanbaatar. Likewise, meteorological forecast alone is often regarded as warning information. Investment in comprehensive EWS for critical hazards through proper assessment is therefore urgently needed in Mongolia. The proposed project will also result in significant capacity building and awareness raising about disaster risk management and the role of disaster risk reduction strategies. The proposed loan will build on existing capacity and activities within the National Emergency and Management Agency as well as coordinate with stakeholders in the sector.

Project Rationale and Linkage to Country/Regional Strategy	Mongolia is extremely vulnerable to different types of hazards due to its geographical location, poorly planned and rapid urbanization and infrastructure growth, persistent poverty, limited institutional capacity, and continental climate. The most common hazardous events in Mongolia are dzuds (extreme winter episode), snowstorms, droughts, heavy rain, and fires. Currently, the coronavirus disease (COVID-19) outbreak presents a significant challenge for the country due to the impact on local, regional, and global economic conditions. In 2017, the country experienced 4,182 occurrences of hazardous events, that resulted in direct economic losses of $38 million (MNT96.6 billion). The toll of disasters has been significant, from 2004 to 2013 disasters and hazardous phenomena caused approximately $321 million (MNT841.5 billion) of economic losses. The annual economic loss to Mongolia's gross domestic product during 2004 to 2013 ranged from equivalent to 1% 4%, with most significant losses occurring from dzud conditions in 2009 2010. Over the same period, a total of $16 million (MNT42.2 billion) was spent for emergency response and recovery activities. About 30% of population in Mongolia live under poverty and their livelihood relies on traditional animal husbandry, which has frequently been suffered from disasters. Besides social impacts, the cost of disasters places a significant financial burden on government and affected communities and causes severe economic impacts. To support the sustainable socioeconomic development of the country, there is a significant need to strengthen disaster risk management (DRM). Until recently, institutional mandates, laws and policies have predominantly focused on planning for disaster response. The Government of Mongolia, in line with its commitment to the Sendai Framework for Disaster Risk Reduction, 2015 2030, and International Health Regulation has recently reoriented its approach to place additional importance on a more comprehensive approach to DRM with greater emphasis placed on identifying, preventing new, and reducing existing disaster risk along with ongoing response and recovery approaches. In recent years, the government has been promoting activities with the objective of refining the DRM's legal, environmental, and organizational standards and improving effectiveness of DRM including monitoring and supervision activities. For example, activities have been piloted in selected areas focusing on: (i) the establishment of early warning system for earthquakes in Ulaanbaatar City and nearby areas (footnote 2); (ii) support for herder households to strengthen preparation and response mechanisms for dzuds; and (iii) capacity building at central and local levels. Success from pilot activities have supported the government's plan for a comprehensive DRM approach with the intention to increase investments in DRM measures. The government has also opened up opportunities to engage the private sector as a complement to further increase overall financial, economic, social, public health, and environmental resilience to disasters. The National Disaster Protection Law (2003) was amended in 2017 by the government to accommodate such plans. However, there are still significant gaps and challenges that the government is facing that continue to constrain the upscaling and broad adoption of comprehensive DRM approaches. Most notable constraints for comprehensive DRM are the limited resources, skilled personnel, awareness, analytical tools and systems, equipment, and physical and institutional infrastructure. This results in fragmented measures and uneven geographical coverage, and incomplete application of systems such as early warning. The disaster preparedness and response including containing the spread of pandemics such as COVID-19 have been a challenging task in Mongolia due to the country's demographic and geographic characteristics as well as due to weak coordination among organizations at different levels. Particularly, the organizations that produce hazard forecasts are not those that issue and disseminate warnings and respond to emergencies. Although it has not been a case during COVID-19 response, the situation could have been worse if the pandemic had already spread in the local communities or if other hazards requiring evacuation of populations occurred in pandemic-affected communities. Likewise, different channels with inconsistent early warning communication and emergency response for dzud, flash floods, and forest and steppe fires without proper coordination will necessarily cause confusions among operators and communities during emergencies. The National Emergency Management Agency's (NEMA) is mandated for overall DRM including coordination at national and local levels but its technical and institutional capacity needs to be strengthened significantly to overcome the challenges. An effective end-to-end early warning system (EWS) involves five key elements in a cycle (i) risk knowledge with appropriate assessment, (ii) detection and surveillance networks, monitoring and analysis, (iii) forecasting and warning, (iv) dissemination and communication, and (v) preparedness and response capacity. These elements are fundamental needs for early warning system for all kind of hazards including epidemics and pandemics. Lack of or inadequate interventions or poor performance of any of these elements in the cycle may lead to the failure of the entire EWS. To achieve an outcome of effective EWS, the system should (i) involve the people and communities at risk from a range of hazards; (ii) link EWS to contingency plans, adequately supported by physical and social infrastructure; (iii) utilize cutting edge technologies to enhance efficiency; (iv) promote inclusiveness; and (v) engage all stakeholders at different levels. At present, integrated EWS is not available in Mongolia, and its need is becoming even more apparent during recent national emergencies. In Mongolia, early warning information is available only for selected hazards such as earthquakes in and around Ulaanbaatar. Likewise, meteorological forecast alone is often regarded as warning information. Investment in comprehensive EWS for critical hazards with proper assessment is urgently needed in Mongolia. Local governments and communities have limited awareness, capacity, access to information, and supporting equipment and infrastructure to adequately address potential disasters including epidemics and pandemics. This has also limited their ability to adopt and maximize the use of EWS as well as plan and implement disaster preparedness activities, instead they remain largely focused on disaster response and recovery, therefore are highly vulnerable to hazardous events. There is a strong need for capacity building and training, with continuous support services for local governments and communities to be able to apply comprehensive DRM approaches, including taking appropriate and timely action in response to hazard warnings. Coordination within national and regional contexts and integration of solutions in the vertical, i.e. different tiers of government and policy levels, and also in the horizontal, i.e. sector and multi-sector levels are required for integrated EWS to work effectively. At present there is limited understanding among policy makers, private sector stakeholders, and the public about the rationale and potential benefits of such comprehensive approach and system. As current actions are not integrated and coordinated and have not been fully mainstreamed into institutional settings, DRM actions including EWS have limited impact with evidence of significant losses in Mongolia. At present, the country remains at high risk for COVID-19 outbreak, and the absence of EWS has been felt more than ever to trace, communicate, and contain the disease.
Impact	Mongolia's resilience to disasters enhanced Disaster resilience in developing member countries strengthened
Outcome	Disaster preparedness at the national and local levels strengthened
Outputs	National multi-hazard early warning system established Community preparedness to disasters strengthened Institutional, policy technical and management capacity strengthened
Geographical Location	Nation-wide

Safeguard Categories	
Environment	C
Involuntary Resettlement	C
Indigenous Peoples	C

Summary of Environmental and Social Aspects
Environmental Aspects
Involuntary Resettlement
Indigenous Peoples
Stakeholder Communication, Participation, and Consultation
During Project Design
During Project Implementation

Business Opportunities	
Consulting Services	Procurement of goods and services, including consultants, will follow ADB's Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time).
Procurement	Procurement of goods and services, including consultants, will follow ADB's Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time).

Responsible ADB Officer	Osti, Rabindra P.
Responsible ADB Department	East Asia Department
Responsible ADB Division	Environment, Natural Resources & Agriculture Division, EARD
Executing Agencies	National Emergency Management Agency Partizan Rd., Ulaanbaatar Mongolia

Timetable	
Concept Clearance	15 Jul 2020
Fact Finding	24 May 2021 to 28 May 2021
MRM	25 Jun 2021
Approval	-
Last Review Mission	-
Last PDS Update	15 Jul 2020

Project Page	https://www.adb.org/projects/53039-001/main
Request for Information	http://www.adb.org/forms/request-information-form?subject=53039-001
Date Generated	16 July 2020