Increasing Resilience through Integrated Climate Risk Management (ICRM)

BACKGROUND

According to Munich Re¹, 710 natural disasters struck the world in 2017, causing significant economic loss, destroying important infrastructure, and claiming human lives. The amount of loss and damage caused by such climate related events has increased substantially over the last couple of decades. A single disaster can have enormous financial impacts. For example, the earthquakes in Mexico in 2017 are estimated to have caused almost $2 billion USD worth of damage² and Hurricane Maria caused between $40 billion to $85 billion USD in damages³ to the Caribbean region. In Asia, 40 million people across India, Bangladesh, and Nepal were affected by floods from the monsoon season⁴.

It is important to develop new and innovative strategies to better prepare for, manage, and cope with climate hazards. The topic of Climate and Disaster Risk Management (DRM) has gained importance on international agendas and in many organizations, including the UN Framework Convention on Climate Change (UNFCCC), the Paris Climate Agreement, the Sendai Framework for Disaster Risk Reduction 2015-2030, the Agenda 2030 for Sustainable Development, the G7 Initiative on Climate Risk Insurance (InsuResilience), and the Climate and Energy Action Plan for Growth by the G20.

The ICRM approach was thus developed, based on existing conceptual frameworks, to help governments, businesses, and individuals better manage these ever-increasing climate risks and natural hazards. Previous concepts of DRM focused on the phases “Prevention”, “Preparedness”, “Response”, and “Recovery”. This PPRR approach, however, was missing an important phase: “Retention & Transfer”. This phase refers to the fact that, even when all the necessary steps in the PPRR phases have been taken, some amount of residual risk still remains. In addition, adverse effects of climate change pose new forms of risks that are currently difficult to predict. For this reason, ICRM emphasizes the importance of risk transfer mechanisms, like insurance, in averting potentially large amounts of economic loss and reinforcing the other steps in the PPRR phases.

The ICRM approach has five (5) phases, which are as follows: Prevention, Retention & Transfer, Preparedness, Response, and Recovery. These phases can all be developed simultaneously, and work best when all stakeholders are involved in the planning and implementation of the different steps. This is a constant process of planning, implementing, evaluating, and adapting strategies and measures relating to the analysis, reduction, and transfer of disaster risks. The process begins generally with the Prevention Phase.
Prevention

The Prevention Phase starts with a risk assessment, which includes an analysis of the hazards, exposure, and vulnerability of a given region or target group. These first analyses are followed by impact and DRM performance analyses, which measure the effects of extreme weather on the people’s lives, ecosystems, economies, and physical infrastructure. They also measure the effectiveness, affordability, feasibility, scalability, and sustainability of applied DRM mechanisms. The final step in the Prevention Phase involves turning proposed measures into policies. For example, if a government wants to prevent flood damage to farmers’ land, they can enact laws and regulations that require the building of dykes and flood protection walls or put land-use restrictions in place for flood prone areas.

Retention & Transfer

Even when preventative actions have been taken, some residual risk remains. In the Retention & Transfer Phase, it is important to conduct a cost-benefit analysis to determine if a type of pre-disaster financing or insurance would be appropriate. These risk transfer mechanisms enable the quick mobilization of disaster funds after a natural hazard strikes. When governments and individuals manage the financial consequences of natural hazards before they strike, they will not need to manage ad-hoc and rely solely on donor assistance. Implementing different prevention measures will greatly help in reducing the cost of these types of insurance and financial instruments because they significantly reduce the overall risk exposure.

Preparedness

After analyzing the need and suitability of pre-disaster financing, it is vital to prepare for the natural hazards. The Preparedness Phase aims at enabling a rapid and effective response in the aftermath of a disaster. Important elements include monitoring risk, setting up response structures and procedures (such as conducting a gap analysis, building disaster scenarios, and introducing standard operating procedures), and creating contingency plans. The government can train individuals in rescue and emergency services, establish early warning systems, and come up with an emergency plan. Adaptation investments, microcredit, and increasing savings, could also be options for the government to ensure that they are ready for the impact of a natural hazard.

Response

The Response Phase occurs after a natural hazard has struck. This phase requires immediate action, particularly from the government, in delivering relief to individuals and communities, providing temporary shelter and food, and quickly repairing the most needed infrastructure. The pre-disaster financing will play a big role in making this quick response possible. It may also be necessary to acquire some post-disaster financing by increasing taxes, reallocating national budgets, or taking out credit. However, post-disaster financing can be complicated, as conflicting groups will not have the chance to oppose these actions during an emergency.

Recovery

Once relief programmes have been implemented and risks of further impact have been minimized, it is time to start the Recovery Phase. Resilient recovery contains a multitude of sector-specific activities that can be clustered under the following key steps: 1) setting sector priorities and implementing recovery programs, 2) adjusting institutional frameworks, 3) establishing/refining effective coordination and communication mechanisms, 4) developing standard implementation procedures and 5) developing a monitoring and evaluation (M&E) system. With the right assistance, savings, and possible payouts from insurance schemes, these steps, as well as and implementing the “build back better” concept in certain sectors will be much easier.
About MCII

The Munich Climate Insurance Initiative was initiated as a charitable organization by insurers, research institutes and NGOs in April 2005 in response to the growing realization that insurance solutions can play a role in adaptation to climate change, as suggested in the UN Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. This initiative is hosted at the United Nations University Institute for Environment and Human Security (UNU-EHS). It is focused on bringing solutions for the risks posed by climate change to poor and vulnerable people in developing countries. MCII provides a forum and gathering place for insurance-related expertise applied to climate change issues.

Follow us on Twitter: @MCII
Email Us: mcii@ehs.unu.edu

PARTNERSHIPS FOR IMPLEMENTATION

When governments, businesses, and individuals implement the relevant measures in the five (5) ICRM phases in a harmonized, synergetic, and efficient way, the consequences of natural hazards will be much less severe. Partnerships among the academic, civil society, public and private sectors are essential to implementing the different activities, as each stakeholder offers knowledge and services that will greatly enhance the effectiveness of the individual steps and overcome the limitations created when one entity acts alone. For example, public programmes respond to shocks such as natural catastrophes by providing compensation after the fact but fail to create incentives for proactive action. Private-public collaborations can explore possibilities to develop insurance cover that is conditional on adaptation measures, which will help to keep risk premiums at an acceptable level and decrease the overall impact of the hazard. Through this integrated approach to climate and disaster risk management and possible risk transfer mechanisms, natural hazards can be prevented from turning into natural disasters and catastrophes.

Visit the climate insurance database here: www.indexinsuranceforum.org/climate-insurance

To find out more visit: www.climate-insurance.org