

Global Initiative on Disaster Risk Management (GIDRM) Strengthening the Resilience of Critical Infrastructure through Risk-Informed Development

CONTEXT

Extreme natural events, slow-onset events such as droughts and sea-level rise, and technological or human-induced hazards often have disastrous impacts if the resilience of people and infrastructure is not sufficiently strengthened. As urbanization continues apace, coupled with inadequate health care, environmental degradation, fragile statehood and violent conflicts, disaster risks become more acute, complex, and increasingly interdependent. Climate change amplifies these factors.

Disasters have impacts on a variety of areas such as public health, economy, governance, tourism, critical infrastructure (e.g., hospitals, transport, water, communication) and can have devastating effects in already fragile contexts. The current **COVID-19 pandemic** illustrates the vulnerabilities and interdependencies of all socio-political and economic areas and sectors worldwide. The pandemic has pushed many health systems to their limits, and the rapid spread of the virus has also created immense economic and socio-political burden in almost all sectors and areas of society. Increasing interdependencies and complex hazards and risks confront us with the challenge of finding new and more resilient approaches to reduce the risk of critical infrastructures failure.

Despite an increasing understanding of the complexity of risks, these are not always adequately considered in development planning and programming. **Disasters suddenly wipe out many years of development successes and reduce the development opportunities of countries.** Achievements in terms of poverty reduction, combating illnesses and improving access to health care, education and services are fragile and undermined by new and emerging threats. A lack in understanding and managing systemic risks jeopardizes the achievement of the Sendai Framework for Disaster Risk Reduction (2015-2030) and the Sustainable Development Goals.

Current approaches frequently address just one threat at a time, typically a natural hazard, rather than considering several new global threats or multiple, simultaneously occurring risks. Disaster risk management is still largely focused on responding to disasters rather than adopting a cross-cutting, preventative approach to minimize risks. Decision-makers often lack the necessary skills and capacities to adequately deal with risks.

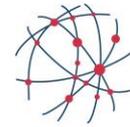
GUIDING PRINCIPLE: RISK-INFORMED DEVELOPMENT

The debate around risk-informed development (RID) is becoming increasingly relevant at international level. It refers to an understanding of development that takes account of a wide range of **interdependent, dynamic, cross-border and, in some cases, simultaneous risks**.

KEY MESSAGES ON RID:

- (1) Development is taking place in a complex and uncertain environment of risks – at the same time current development pathways are creating risk faster than we can manage risk
- (2) Risk needs to be understood as being interdependent and systemic
- (3) Disaster risk reduction is not enough – we need to transform our development pathways to risk-informed development
- (4) Building capacities and promoting an enabling environment to make decisions risk-informed is key
- (5) Fostering the participation of all members of society and systemically addressing inequalities are cornerstones of risk-informed development
- (6) There is no universal blueprint – risk-informed development needs to be tailored to the context with enough flexibility to re-evaluate and adapt continuously
- (7) Risk-informed decision-making is a prerequisite for sustainable development and fundamental to preventing the creation of risk





CRITICAL INFRASTRUCTURE

Critical Infrastructure refers to different assets, facilities, services, and systems that are essential for the social and economic functions and basic operations of a country and its government. The access to or supply by critical infrastructures is important for the wellbeing of everyone in and the development of a society.

Critical infrastructures are characterized by a high degree of interdependence, which means that the impairment or failure of a single critical infrastructure can affect systems within the sector or spread to other sectors. The health sector, for example, relies heavily on the smooth supply of water and electricity, the transport sector on the provision of fuel and road accessibility, meanwhile the food industry depends on the transport and water availability. By “spilling-over” into another sector, any setback or failure in one of these infrastructure systems can detrimentally affect public administration, economic activities, reliability of supply, development works, the welfare of communities, and public health, among others.

The complex systems of critical infrastructure are of vital importance for our day-to-day life, however, at the same time they are easily taken for granted. Our dependence on these networks is oftentimes disregarded until the services provided by such infrastructure are interrupted, for example, when we lose access to electricity, transportation, or water due to severe storm or flooding.

Major disruptions can occur even in countries with exceptionally reliable infrastructure systems. Additionally, the resilience and vulnerability of individuals and communities against disruption varies—for marginalized and disadvantaged parts of the population a disruption of basic services might result in more severe social or economic repercussions. As the failure of critical infrastructure disproportionately affects vulnerable people, it is also crucial to consider the need of different population groups when strengthening critical infrastructure resilience.

GIDRM IN INDIA

GIDRM is working with the Coalition for Disaster Resilient Infrastructure (CDRI) to promote the topic of inclusive resilient critical infrastructure among partner countries of the CDRI and the GIDRM. Together, GIDRM and CDRI aim

What is the CDRI?

The Coalition for Disaster Resilient Infrastructure (CDRI) is a partnership of national governments, UN agencies and programmes, multilateral development banks and financing mechanisms, the private sector, and knowledge institutions that aims to promote the resilience of new and existing infrastructure systems to climate and disaster risks in support of sustainable development.

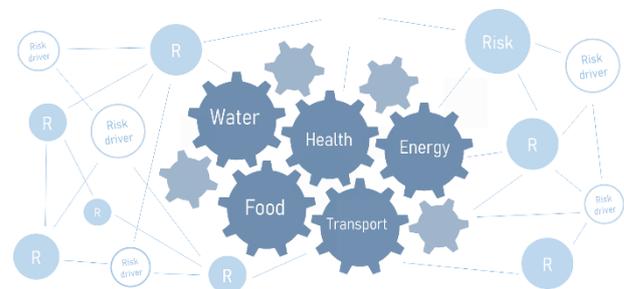


Figure 1 Interlinked Systems

to develop a common and comprehensive understanding of resilient critical infrastructure focusing especially on the health sector but also on other interconnected and interdependent sectors such as water, electricity, and transport infrastructure.

By setting up a technical working group of like-minded partners, GIDRM is promoting knowledge exchange on good practices and lessons-learned across regions. In addition, GIDRM is aiming to implement small-scale activities in a CDRI member countries focusing on participatory approaches to strengthen the resilience of critical infrastructure systems, focusing on critical health infrastructure. Based on the piloting activity, as well as the knowledge exchange through the technical working group, a handbook including recommendations and good practice examples on an all-inclusive participatory approach to strengthen the resilience of critical infrastructure will be developed and published.



The Global Initiative on Disaster Risk Management (GIDRM) is an initiative commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). GIDRM III (2020-2023) supports selected decision-makers and regional organisations in Southern Africa, Asia and Latin America in strengthening their capacities and skills to foster risk-informed development while taking into account context-specific fragility factors.