

ECONOMIC AND SOCIAL COUNCIL

*Reinforcing Natural Disaster
Response Mechanisms amidst
increasing concerns of Climate
Change*

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**RESEARCH
REPORT**



Forum: Economic and Social Council (ECOSOC)

Issue: Reinforcing Natural Disaster Response Mechanisms amidst increasing concerns of Climate Change

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Introduction

All countries have been impacted by the high rates of urbanization, environmental degradation, and industrial growth, but in disaster-prone areas, the impact is significantly larger, increasing the amount of damage from natural disasters. Modern economies have had to adjust due to the global nature of environmental change, and sustainability is a crucial issue. It is obvious that natural disasters will have an impact on an enterprise's competitiveness. This study focuses on managing natural disasters in a region where physical consequences including floods, droughts, tsunamis, and rising sea levels offer immediate dangers.

On a local level, a disaster's potential effects on a firm and the amount of loss it results in for infrastructure and future revenue are of concern. Each business must develop plans to reduce foreseeable risk. Risk analyses need to be finished as soon as possible. The management of disasters is crucial to national policy. Strategies for disaster prevention, early warning (prediction) systems, disaster mitigation, preparedness and response, and human resource development are a few examples of natural disaster management techniques. These programs ought to include participation from both public and private entities in governmental management.

The involvement of the neighborhood is crucial for effective catastrophe mitigation, planning, and execution of such actions. This study focuses on a preliminary idea for creating an effective probabilistic method to make design optimization with probabilistic constraints easier.

Definition of Key Terms

Climate Change - Climate change refers to a shift in a region's typical weather over an extended period of time, including changes in temperature and precipitation. For instance, the United States was largely covered by glaciers 20,000 years ago. There are fewer glaciers and a warmer temperature in the United States today. Global climate change is the collective term for all of the Earth's average long-term changes. They include the consequences of Earth's warming, changes in precipitation, and rising temperatures.

Natural Disaster Response Mechanisms - The second stage of the catastrophe management cycle is disaster response. It includes a variety of components, such as warning/evacuation, search and rescue, immediate help, assessing damage, continuous assistance, and the quick construction of infrastructure or restoration of infrastructure (i.e. provisional storm drains or diversion dams). The purpose of emergency response is to deliver quick aid to keep people alive, enhance their health, and boost their spirits. Such support could take the form of providing targeted but limited relief, including helping refugees with travel, temporary housing, and food, or it could take the form of constructing semi-permanent colonies in

camps and other places. It could also entail shifting infrastructure or making preliminary repairs to damaged areas.

General Overview

The organization and administration of resources prior to, during, and following a disaster is referred to as the disaster management cycle. Prepare, Respond, Recover, and Mitigate are the four stages that make up the act of managing a disaster (the process of making an issue less severe).

Measures made to prepare for and lessen the devastating impacts of a disaster are referred to as disaster preparation. This can mean anticipating the time and location of a disaster and, whenever feasible, averting it. Planning, organizing, training, and preparing local communities to have the tools and knowledge required to confront the consequences of the disaster when and if it occurs are also included in disaster preparation when disaster prevention is not possible.

Disaster reaction describes the steps conducted as soon as a devastating event takes place. Search and rescue operations, emergency medical care and injury assessment, food and water management, and housing assignment for displaced people and families are just a few examples.

Disaster mitigation is the process of reducing the severity of a problem. This procedure aids in minimizing or eliminating the effects and dangers of hazards that will continue to worry the affected population. Also, by engaging in these activities, the neighborhood is made more resilient to the next time a crisis strikes. Stormwater management system evaluation and repairs, political and social effect reform, building code enforcement, and other zoning and community planning initiatives are examples of mitigation measures.

The most prominent activity of federal, state, and municipal emergency management agencies are disaster response operations. The effectiveness of an emergency management organization is evaluated by the political elite, the media, and the general public based on how effectively it performs during the reaction phase. Any administrative level must have a strong command and control structure, open lines of communication, and the ability to coordinate various agencies from various jurisdictions in order to respond to disasters effectively. Fire, police, and emergency medical personnel from the area are typically the first to arrive. To comprehend the situation and successfully operationalize a response, local and state emergency managers coordinate resources and carry out damage and capacity assessments within their respective jurisdictions.

To comprehend the situation and successfully operationalize a response, local and state emergency managers coordinate resources and carry out damage and capacity assessments within their respective jurisdictions. The National Response Framework (NRF), which directs the delivery of the nation's whole range of federal government support to local and state authorities, is activated by a presidential disaster proclamation for the majority of major disaster situations. There are alternative ways, nevertheless, for civilian and military federal resources to be used in the assistance of local governments affected by disasters.

Major Parties Involved and Their Views

International Federation of Red Cross and Red Crescent Societies (IFRC)

The IFRC is assisting Red Cross and Red Crescent Societies worldwide in their efforts to strengthen their readiness for catastrophes. This includes working with local communities to understand the needs of those most at risk, setting up early warning systems so communities can take action before a disaster hits, coordinating with national authorities and partners to know what risks and hazards to prepare for, training and equipping millions of volunteers as first responders to a variety of hazards, researching new technologies to improve their response, and Instead of waiting for the next crisis to strike, we must take more proactive measures and increase our investments in preparedness.

They use a cyclical technique called "Preparedness for Effective Response" (PER) to help them assess the capabilities, strengths, and weaknesses of a National Society's reaction system. It is based on our global network's decades of combined experience in preparedness and catastrophe response. Their goal is for all National Societies to continuously improve how well they can react to emergencies in a timely, appropriate, coordinated, relevant, and efficient manner.

UN Disaster Assessment and Coordination (UNDAC)

The worldwide emergency response system for sudden onset emergencies include the United Nations Disaster Assessment and Coordination (UNDAC). In 1993, UNDAC was established. It is intended to support the UN and the governments of nations that have experienced a disaster during the initial stages of a sudden emergency. UNDAC also aids in coordinating incoming foreign aid at the national level and/or the emergency's location. Teams from UNDAC can be sent anywhere in the world within short notice (12–48 hours). These are offered at no cost to the nation affected by the tragedy, and they are sent out at the government's or the UN Resident Coordinator's request.

The primary responsibilities of UNDAC in an emergency response operation are assessment, coordination, and information management. In particular, in reaction to earthquakes, UNDAC teams established and oversee the On-Site Operations Coordination Centre (OSOCC) to assist in coordinating international Urban Search and Rescue (USAR) teams responding to the catastrophe, which is crucial for USAR support to be effective. Resolution 57/150 of the United Nations General Assembly, dated 16 December 2002, on "Strengthening the effectiveness and coordination of international urban search and rescue aid," firmly approved this idea.

UNDAC has carried around 300 emergency missions in more than 115 countries as of February 2022. (see latest UNDAC mission table). When a disaster-affected country requests international help and needs more international coordination resources, OCHA mainly mobilizes UNDAC teams in the case of a natural disaster. When there is a sudden beginning or change in the intensity of a complex emergency that is likely to necessitate the unexpected need for additional international coordination resources, OCHA also mobilizes UNDAC teams.

Timeline of Events

1962	<i>Buin Zahra Earthquake becomes a warning signal for the UN to improve disaster response services</i>
1971	<i>United Nations Disaster Relief Office (UNDRO) formed</i>
2004	<i>“Health systems resilience” is defined</i>
2005	<i>Hyogo Framework is adopted</i>
2015	<i>Sendai Framework and Disease Control 3 are adopted</i>
2016	<i>Ethiopia National Surgical Obstetric Anesthesia Planning (NSOAP) which is a plan on improving the infrastructure, workforce, service delivery, financing, information management, and governance of a country</i>
2017	<i>Zambia NSOAP</i>
2018	<i>Rwanda and Tanzania NSOAP's</i>

Treaties and Events

A/RES/69/283 - Sendai Framework for Disaster Risk Reduction 2015-2030 - Adopted on 03 June 2015

A/RES/60/196 - Natural disasters and vulnerability - Adopted on 22 December 2005

A/RES/60/125 - International cooperation on humanitarian assistance in the field of natural disasters, from relief to development - Adopted on 15 December 2005

A/RES/63/216 - International Strategy for Disaster Reduction - Adopted on 18 December 2008

Evaluation of Previous Attempts to Resolve the Issue

Governments, organizations, communities, and individuals can better respond to and deal with the immediate aftermath of a disaster, whether it is caused by natural disasters or human-induced ones, by taking a number of proactive steps. Reducing the loss of life and livelihood is the goal. Basic actions like preparing for search and rescue missions, establishing early warning systems, creating contingency plans, or stockpiling supplies and equipment can have a big impact. In order to increase a community's resilience, disaster preparedness is crucial.

A growing number of people and assets are vulnerable to disasters as a result of population increase, rapid and unplanned urbanization, climate change, environmental degradation, and pervasive poverty. Also, a lot of these events take place in unstable and war-affected regions, adding to the complexity of crises and burdening nations with violent conflict or unstable governments. The ability of nations and communities to lessen the effects of disasters is strengthened by better practices and reaction procedures, which also save lives. It is easier to be more prepared when one is aware of the likelihood and frequency of natural hazards as well as their dangers, weaknesses, and potential effects on people and property.

International efforts should support governments and communities in recognizing threats and developing preparedness capacities for preventative and early action rather than merely providing emergency reaction. Disaster preparedness is economical and saves money for help. International agreements, such as the Sendai Framework for Disaster Risk Reduction (2015), the Paris Agreement (2015), the Agenda 2030, the New Urban Agenda, and the Grand Bargain pledges, all have these ideas deeply ingrained in them.

Possible Solutions

In addition to saving lives and protecting property, well-thought-out emergency preparedness and response strategies frequently can help resilience and post-disaster recovery by reducing the impact of a disaster. In order to reduce injury, loss of life, damage to property, and destruction of sensitive environments, cities, communities, and individuals who are threatened by natural or other hazards can act quickly and appropriately. This is made possible by preparedness efforts, early warning systems, and communication systems. Sustainability can be attained if both the community and the local government recognize the value and necessity of local emergency preparedness and response. There are solutions to this problem, some of which include developing and improving preparedness plans, bolstering an early warning system, and upgrading the city's emergency response capabilities.

People of color and low-income neighborhoods have been affected disproportionately hard, bringing into harsh light issues of capacity and equality that have been festering for decades in the country's approach to disaster preparedness. We must stop putting off the difficult work of updating emergency management since the climate problem is increasing the likelihood of disasters. Some funding could be designated for—and required for—certain crucial mitigation work, which is occasionally resisted by local political forces, such as elevating structures in flood-prone areas or enacting zoning laws to reduce wildfire risks, in order to address the issue that all emergency agencies do little in advance to prepare for disasters. So that they do not fast become obsolete, these initiatives should take into account the most recent findings in climate science, such as forecasts of sea level rise. Funding for future mitigation and recovery efforts must also be allocated fairly.

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