Thematic Session 1B

Planning for recovery and reconstruction of infrastructure

12:15 – 13:45

Tuesday, 19th March 2019

Taj Mahal Hotel, New Delhi

The Panel

Chair

- Setsuko Saya, Cabinet Office, Japan

Moderator

- Prof. Mauro Dolce, Dipartimento della Protezione Civile, Italy

Speakers

- Fulvio Soccodato, National Autonomous Road Corporation (ANAS), Italy
- Rita Missal, Recovery Specialist, UNDP
- Joe Leitmann, Recovery Advisor, GFDRR

Discussants

- Mexico
- Indonesia*

Session Format

This is a breakout session as part of Thematic Session 1.

It will have presentations by the speakers of 10 minutes each followed by a moderated discussion.

Overview

At present, most countries focus on systematic post-disaster recovery of infrastructure sectors only after major disasters. Small and medium scale events also cause incremental damage and degradation of infrastructure leading not only to direct loss of capital assets but also productivity losses. This calls for predictable mechanisms for systematically assessing damages and losses to financing infrastructure recovery after disasters of varying magnitudes. Reconstruction and recovery in infrastructure sectors must follow the "Build Back Better" principle for multiple hazards. The principle needs to be applied not only for the structural design of the infrastructure but also in management systems.

A disaster risk financing framework can involve:

a. **risk retention** that involves government budget reserves, calamity funds and contingent credit facilities;
b. **risk transfer** through government and private insurance and reinsurance markets, catastrophe bonds and other insurance-linked securities; and
c. **post-disaster budget allocations**—mostly external assistance.

This panel will discuss the following questions:

1. How do we improve the reporting of medium scale and smaller disasters? How can loss assessments be improved to take into consideration gradual degradation due to such events?
2. How do we identify critical infrastructure? How can we increase the likelihood that critical infrastructure services are recovered and resumed rapidly following a disaster?
3. How do we resolve the tension between providing essential services quickly, and 'building back better'? What are the measures to establish good contingency planning to ease this?
4. How can countries make coherent disaster recovery financing strategies to ensure that liquid funds are reliably available at the appropriate levels of government recovery and reconstruction?
5. How can decisions on retaining and transferring risk be rationalised?
6. How can we institutionalize the learning process after each disaster?

Background and context

Reconstruction and recovery after a disaster requires a systematic approach for assessing losses, estimating needs, and channelling adequate funds to the affected areas in a timely manner. The gaps leading to delays and inefficiencies in post disaster recovery and reconstruction have been identified as:

(a) Lack of reliable mechanisms for assessing damages and financing infrastructure recovery after moderate and small scale disasters
(b) Most countries do not always follow the build back better principle

These gaps have been elaborated on below.

1. **Lack of reliable mechanisms for assessing damages and financing infrastructure recovery after moderate and small scale disasters**

Currently most countries conduct systematic recovery and reconstruction only after major disaster events. However, small and medium scale disasters — which cause limited damage per event but cause cumulative damage over time — do not receive the same response. Part of this issue is due to gaps in data regarding the occurrence and impact of such small and medium scale disasters, as compared to data on large disasters. It is possible that they occur more frequently and, because they escape attention, cause more damage and economic losses overall.

2. **Most countries do not always follow the build back better principle**

“Build back better” is a core principle for post-disaster reconstruction. However, usually even when the principle is applied, its application is typically limited to structural design of the infrastructure. Redesigning management systems which contributed to the structure’s vulnerability in the first place get overlooked. Thus, the application of the “build back better” principle is often incomplete.

Key insights from IWDRI 2018[1]

1. **Small and medium scale disasters:**
   - At present, most countries focus on systematic post-disaster recovery of infrastructure sectors only after major disasters. More predictable mechanisms are needed to account for damages, degradation and productivity losses due to small and medium-scale events.

2. **Build Back Better:**
   - Under the concept of "Build Back Better", Japan highlighted the importance of having a combination of structural and non-structural (social and economic) measures for faster recovery. Japan has established a system of pre-disaster contracts that are made with private sector infrastructure developers such that they are prepared to facilitate efficient post-disaster reconstruction activities.
   - As infrastructures are interconnected, their reconstruction must be discussed at a regional/territorial level to account for downstream risk creation and capacities must be built at the local level to manage reconstruction activities.
   - The expenditure money for reconstruction after the 2011 Tohoku earthquake was derived from taxation, issuance of bonds, and even taking 10% off all government employees' salaries for a period of three years.

3. **Standardized reporting methods:**
   - UNDP reflected on its experience in infrastructure recovery and reconstruction to emphasize the role of a standardized format for estimation of post-disaster damages, losses, and replacement costs. E.g. Post Disaster Need Assessment (PDNA) tool, Global Recovery Cost Estimation guideline.
   - PDNA plays a critical role in guiding future projects, especially in order to follow the "Build Back Better" principle based on existing building codes.
   - There is a need to move away from pure "restoration of services" to "resilience focused reconstruction". Hence, alternative models of financing recovery such as private sector participation, selling of reconstruction bonds, and the setting up of intergovernmental risk pools must be explored.
   - Nepal's experience in reconstruction and recovery after the 2015 Gorkha Earthquake started with the setting up of the National Reconstruction Authority (NRA).

[1]Workshop Summary, IWDRI 2018

- Environmental impact assessments encourage reduction in creation of new risks, adopting different approaches to rural and urban reconstruction projects and the incorporation of business continuity related indicators in the resilience building process.

4. **Owner-driven reconstruction:**
   - Post-disaster reconstruction is an opportunity for incorporating resilience.
   - An owner-driven reconstruction programme will provide greater impetus for mainstreaming risk awareness and resilient practices.
   - An inclusive approach for recovery and reconstruction is crucial for ensuring that the needs of the most vulnerable sections of the population, such as the poor, marginalized and persons with disabilities, are effectively incorporated.

5. **Psychology of decision making:**
   - Uncertainty, complexity and volatility are factors that challenge decision making in post-disaster contexts. Additional complexities are added due to time pressure, changing preferences/norms and the cascading effects of infrastructure damage.
   - Mapping and quantifying vulnerabilities of various sectors, industries and their failures aid in prioritization of decisions.
   - The Humanitarian Decision Maker's Anatomy helps understand the psychology of decision-makers in post-disaster contexts that must be able to account for various interdependencies and fragmented/volatile coordination.

6. **Role of sub-national governments:**
   - Faster rebuilding processes require developing and maintaining capacities of sub-national governments