LIFELINES
The Resilient Infrastructure Opportunity

WORLD BANK GROUP

Global Facility for Disaster Reduction and Recovery (GFDRR)
Resilient Infrastructure?
Resilient Infrastructure?

Resilience of infrastructure assets
Resilient infrastructure is less costly to maintain and repair
Resilient Infrastructure?

Resilience of infrastructure services
Resilient infrastructure provides more reliable services
Resilient Infrastructure?

responsibility of infrastructure users

Resilient infrastructure makes people better able to cope with and recover from shocks.
People wait in line for water after the 2010 earthquake in Port au Prince, Haiti.
A traffic jam after flooding in Chiangrai, Thailand
The lack of resilient infrastructure is harming people and firms
Damages and repair costs are significant...

$30 billion
Annual global damages to transport and power generation

$18 billion
Annual damages to low- and middle-income countries
... but repairs are only part of the problem.

$391–$647 billion

The annual cost of infrastructure disruptions on households and firms in developing countries.

Firms
- Reduced utilization rate ($151 billion)
- Lost sales ($82 billion)
- Self-generation costs ($65 billion)
- Increased inventories
- More expensive localization choices
- Higher barriers for entry of new firms
- Less competition and innovation
- Labor-biased technologies

Household
- Willingness-to-pay ($90–$343 billion)
- Health expenditures ($3–$6 billion)
- Income impact and gender implications
Investing in more resilient infrastructure is sound, profitable, and urgent.
Quality infrastructure

Resilience of infrastructure *users*
Resilient infrastructure makes people better able to cope with and recover from shocks

Resilience of infrastructure *services*
Resilient infrastructure provides more reliable services

Resilience of infrastructure *assets*
Resilient infrastructure is less costly to maintain and repair
Asset and system vulnerabilities can be very different.
Criticality analyses show where strengthening is more important and beneficial

a. Impacts of disruption on households

b. Impacts of disruption on international clients
Criticality analyses show where strengthening is more important and beneficial.
With the right data, strengthening assets would cost $11–$65 billion per year—3 percent of total needs.
Altogether: Investing in resilience is sound, profitable, and urgent

- $4
  In net benefit for each $1 invested in infrastructure resilience

- $4.2 trillion
  Net benefit from building new infrastructure to higher resilience standards

- $100 billion
  Cost of delaying action by one year
Good infrastructure management is the necessary basis for resilient infrastructure—but targeted actions are also needed.
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