

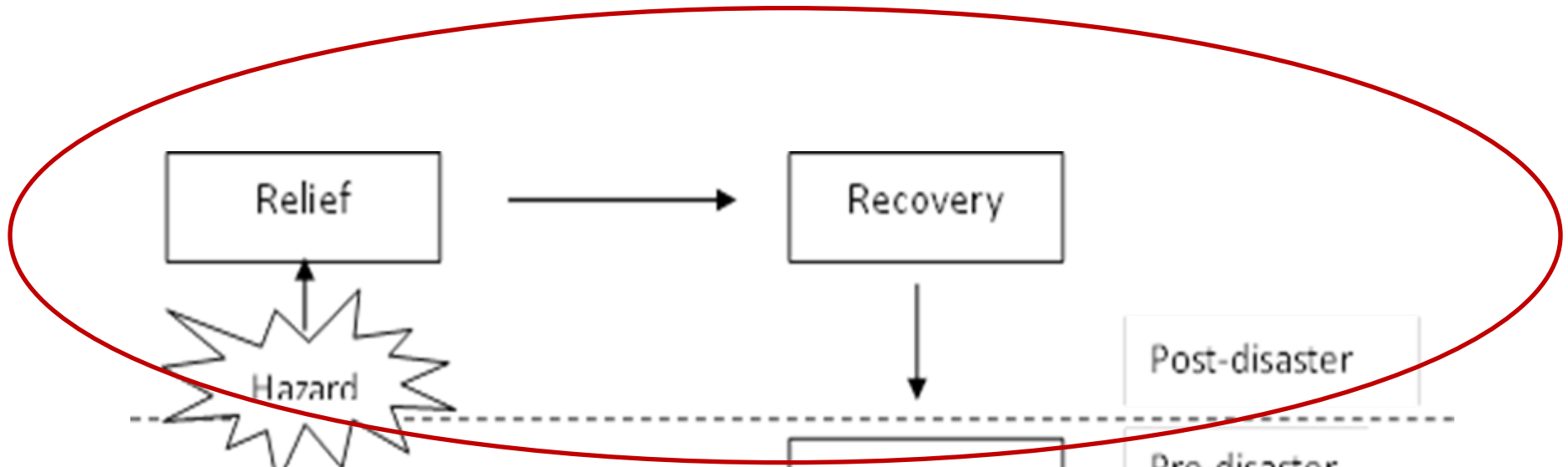
The resilience of ICT infrastructures and their role during disasters

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The diagram illustrates the disaster management cycle. A red oval highlights the 'Relief' and 'Recovery' phases. A starburst labeled 'Hazard' points to the 'Relief' box. An arrow points from 'Relief' to 'Recovery'. A downward arrow from 'Recovery' points to a dashed line separating the 'Post-disaster' phase (above) from the 'Pre-disaster' phase (below).



Role of information & communication after a disaster

- Natural disasters & humanitarian crises cause disorder and panic
- Communication services may not be considered a priority when basic needs such as food, clean water and shelter are lacking
 - But, access to accurate information is what calms societal turbulence
- For information to be communicated
 - Underlying network must function
 - Supporting soft infrastructure (e.g. institutions and policies) must exist

FUNCTIONS THAT CAN BE DONE BETTER WITH ICTS

Documentation of needs and resources

- Enhanced information processing and visualization capabilities can, by themselves, enable better documentation of needs, e.g.,
 - Registries of the missing and injured
 - Medicines and food for the affected
 - Housing and infrastructure damage assessments
- Integration with Geographical Information Systems (GIS) can enhance further
- If coupled with communication technologies (essential in recovery phase), can enable
 - Superior field data collection (faster and with fewer errors) and
 - Effective dissemination to those who can address the needs
- If databases are organized and populated prior to the incident, efficacy is greater

City of New York (Office of Emergency Management): Since 2007, the City of New York's Office of Emergency Management has used Sahana software for managing its all-hazards sheltering plan, which involves over 500 shelters capable of housing over 800,000 persons and staffed by over 60,000 city agency employees and volunteers.

Coastal storms, including "nor'easters", tropical storms and hurricanes, can and do affect New York City. In fact, New York's densely populated and highly developed coastline makes the city among the most vulnerable to hurricane-related damage. Due to regional geography, hurricanes in New York City – though infrequent – can do far more damage than hurricanes of similar strength in the southern United States. With sustained winds of 74 miles per hour or greater, along with torrential rains, storm surge is among a hurricane's most hazardous features. A major (category 3 or 4 storm) could push more than 30 feet of storm surge into some part of New York City.

As part of the NYC Coastal Storm Plan, a customized version of Sahana software is used to plan for and manage the evacuation facility structure necessary to house the thousands of potential evacuees in the NYC metropolitan area. From 2009-2012, a team of developers at the City University of New York's School of Professional Studies (CUNY SPS) worked to customize and optimize Sahana software for the City of New York. A public release of this software developed by the City - *Sahana Mayon* - will be supported by the Sahana Software Foundation for use by other jurisdictions and organizations as an all-hazards planning and resource management tool.

2013

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SAHANA EDEN ESSENTIAL GUIDE



The Sahana Eden Essential Guide was written for decision makers looking for an appropriate solution for disaster management, those who are deploying Sahana Eden, and those who are extending Sahana Eden for more specialized solutions or want to contribute to the project. View [online](#) or [order one today](#). A portion of the proceeds goes to the Sahana Software Foundation.

Source: Sahana Foundation

Spatial coordination

- ICTs allow for synchronous or asynchronous communication across space, enabling greater coordination of spatially separated actors
- Especially important when
 - A disaster has a geographically wide scope (a tsunami or a cyclone versus a localized landslide) and
 - Physical transportation systems may have been degraded or even destroyed
- Even with localized disasters, ICTs enable coordination of assistance from unaffected areas

Publication

ve voice to affected people, especially in
npowering them in relation to the
authorities, be they government or non-
it bodies

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