Capacity building resources on ICT for resilience

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Resilient ICT Connectivity for the Knowledge Economy, SDGs and the WSIS Goals
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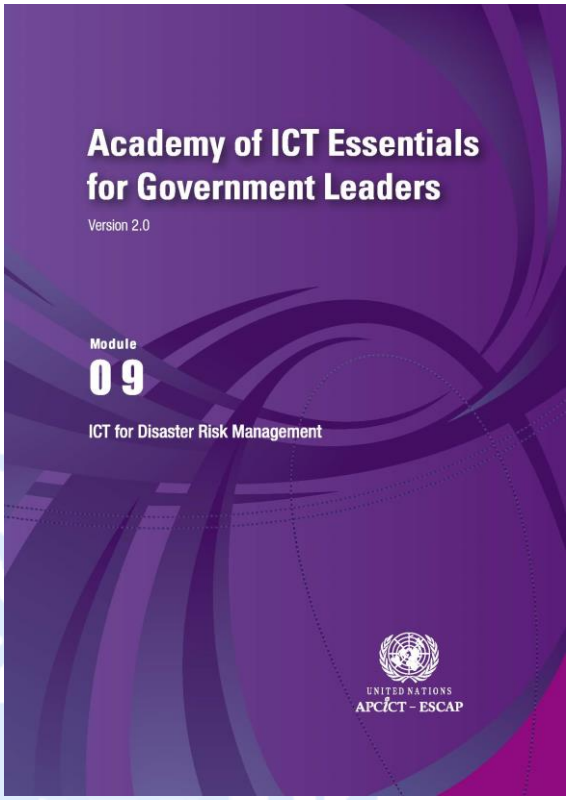
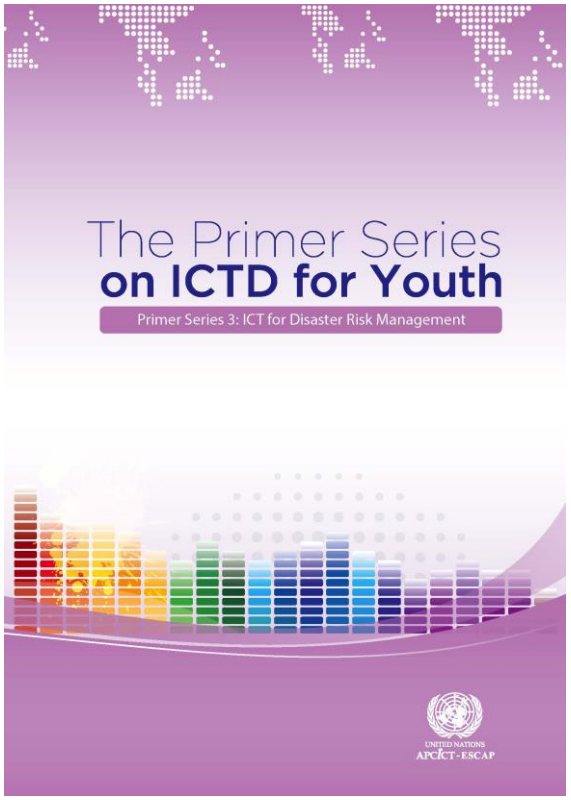
Background

- Great attention disaster events
- Better understanding of disaster risk and climate change impacts
- Coordinated preparedness and response
- Desire for integration of disaster risk and climate impact in development planning
- Continuous developments in information and communication technologies

ICT and Disaster Risk Management

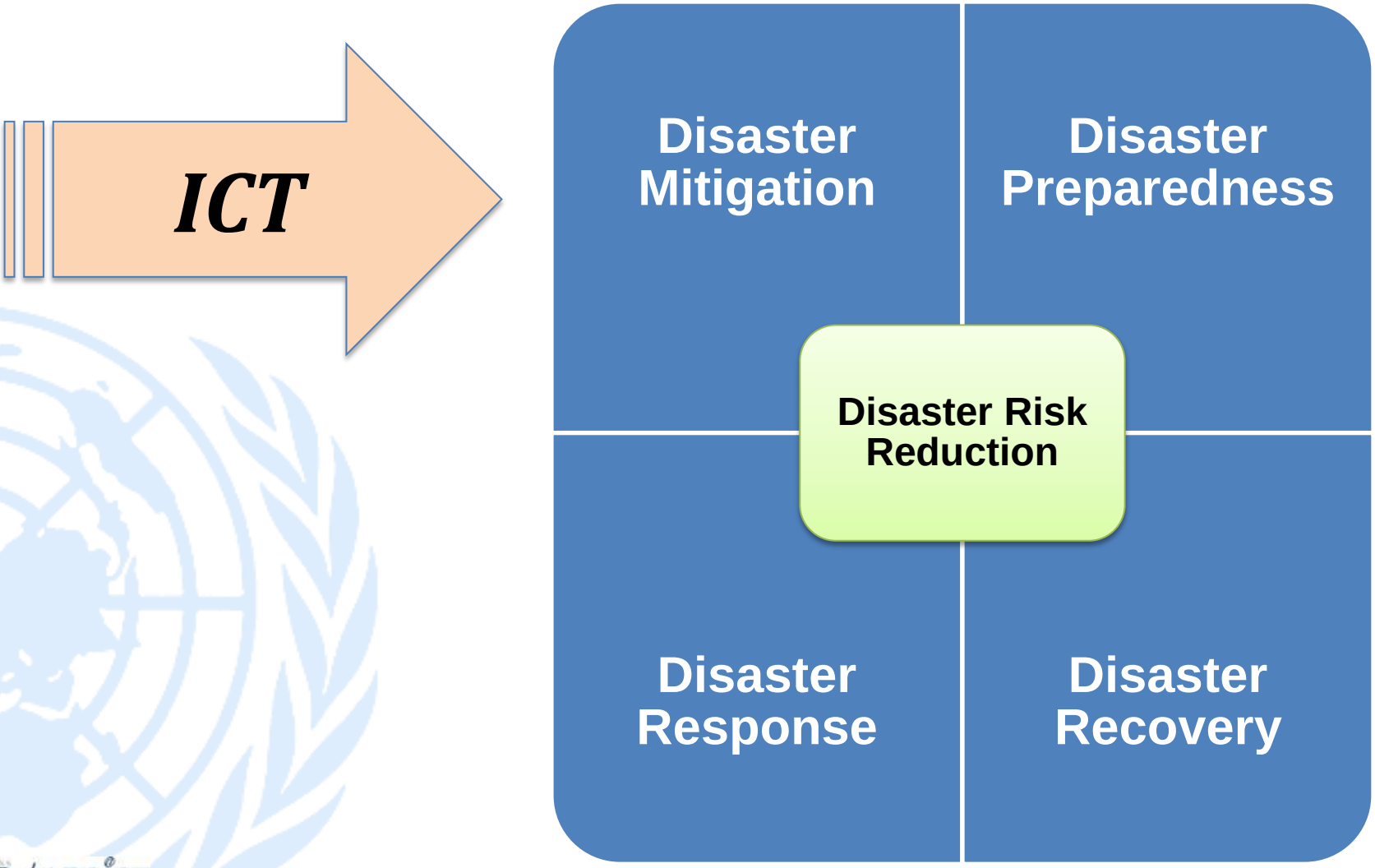




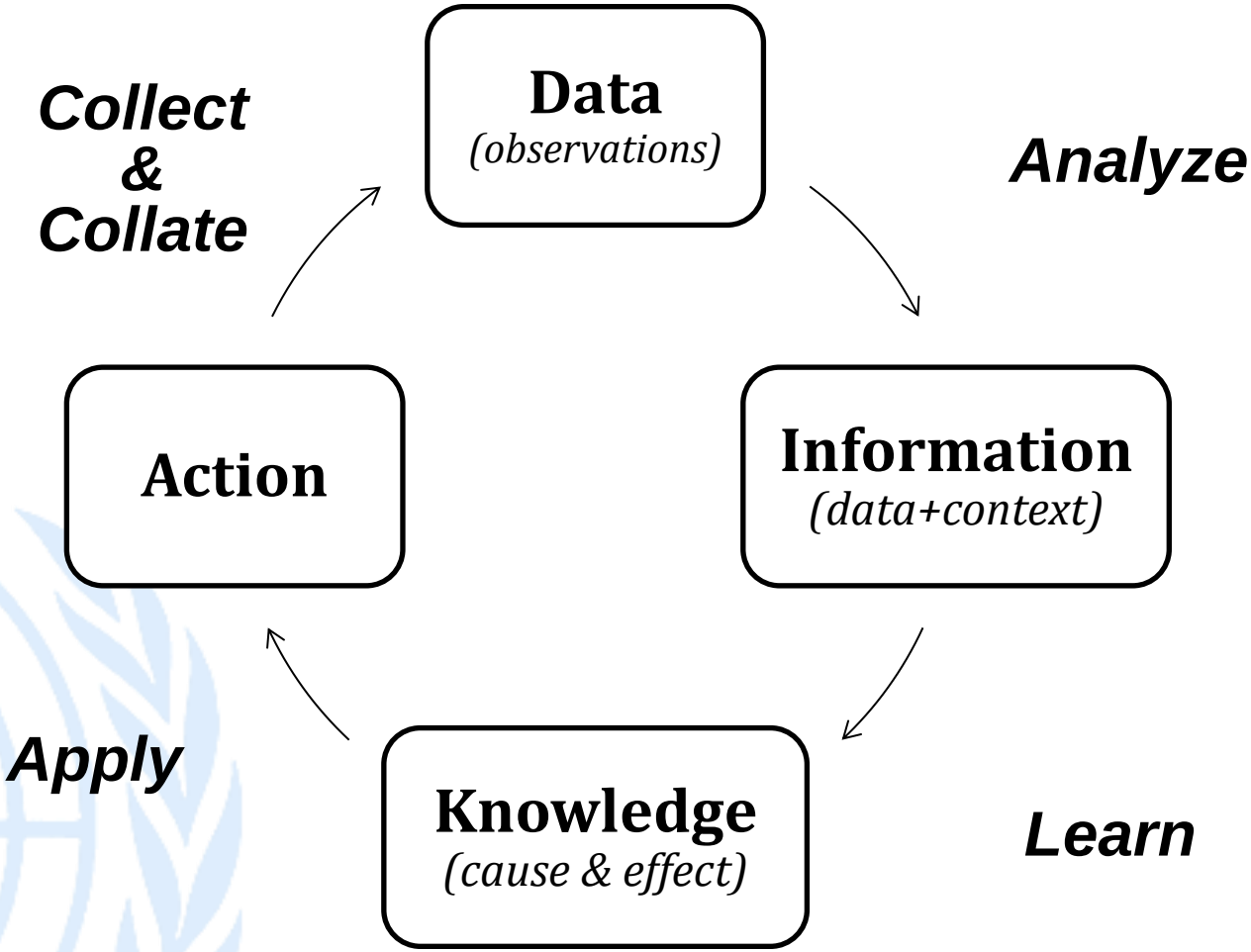
Objectives

- Provide an overview of disaster risk management (DRM)
- Present an approach: matching ICT to information needs
- Give examples of ICT applications in DRM
- Raise the policy considerations for employing ICT in DRM (Academy module)

Phases of Disaster Risk Management



Information Management Cycle

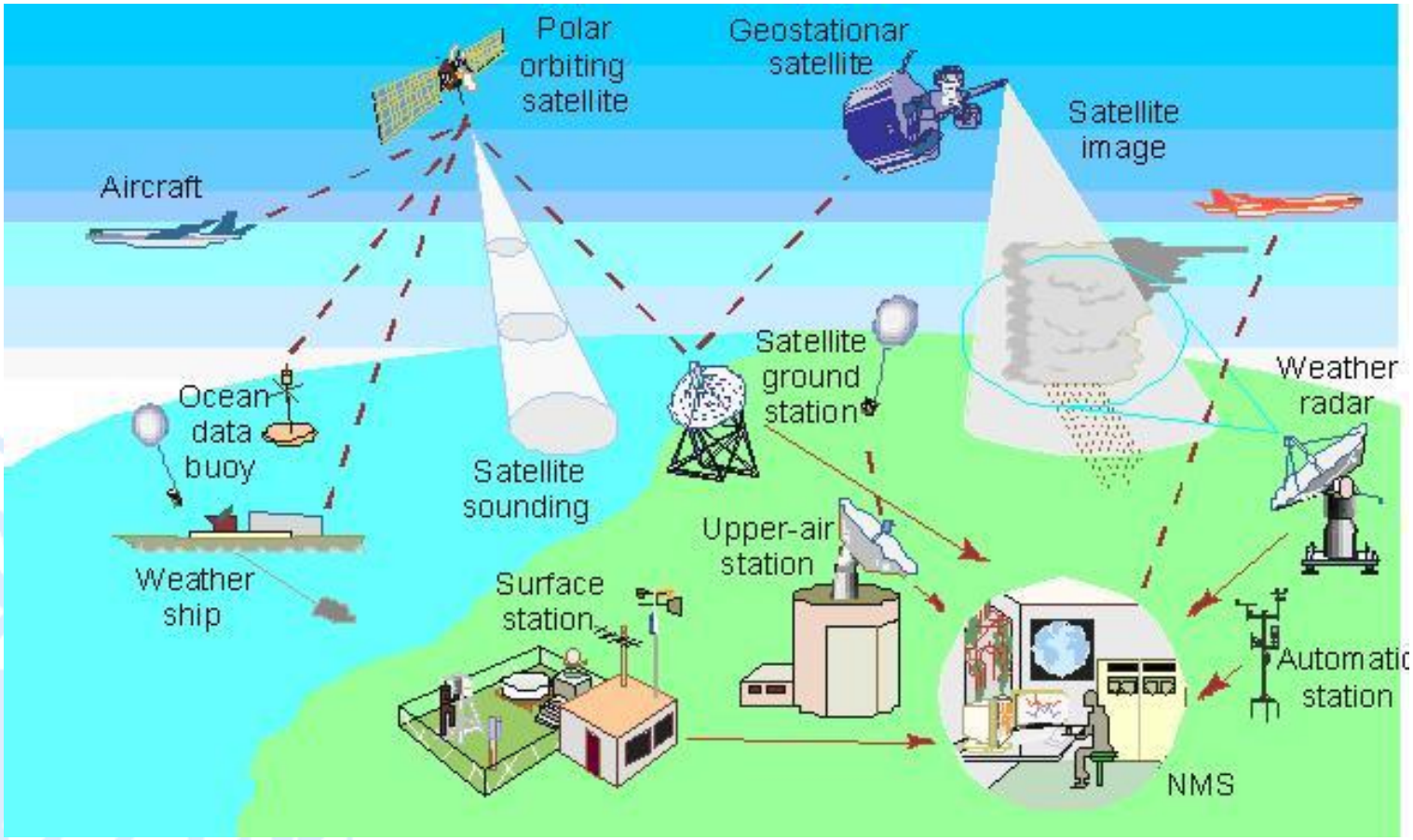


What are the information needs?

Some examples

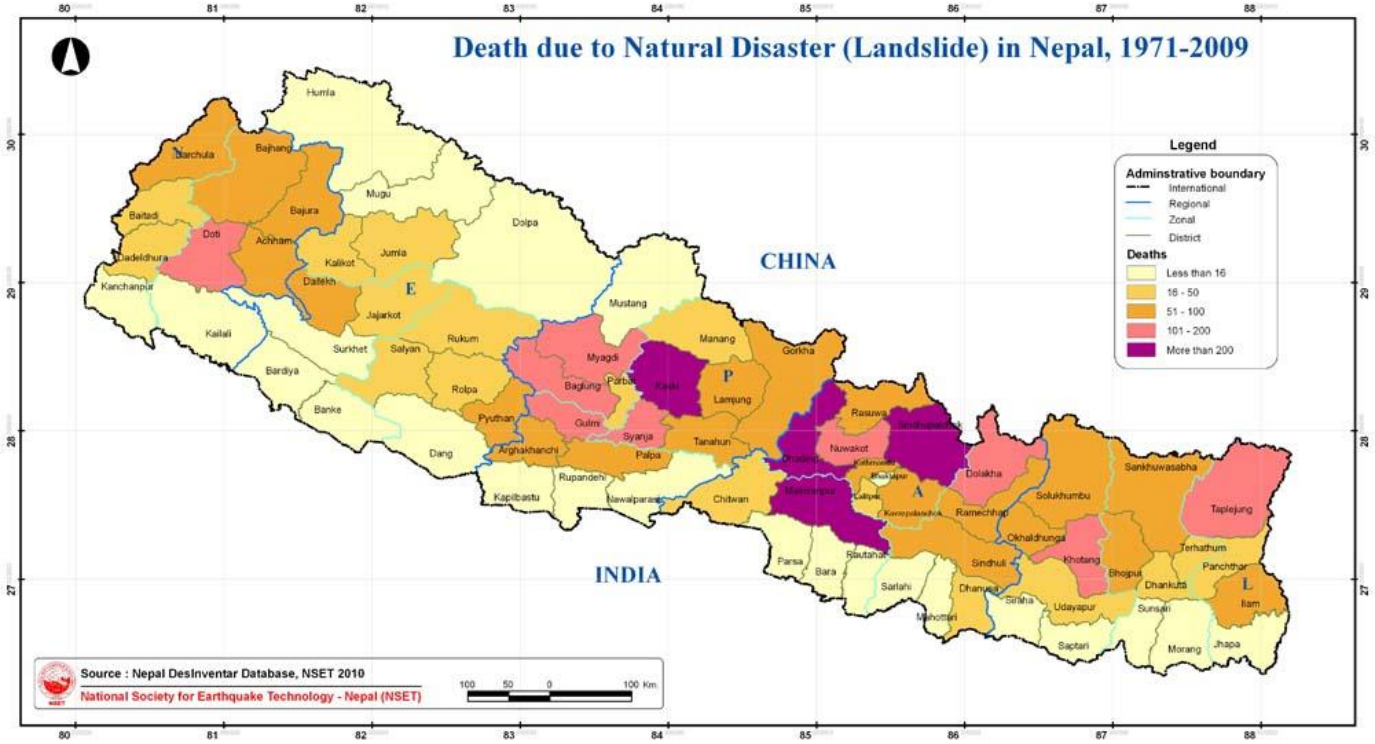
DRM Activities	Decisions to be Taken	Information Needs
Early warning	To evacuate or not? Where to send evacuees	Hazard arrival time Safe locations and routes
Provide relief	Amounts of items to procure Where to send relief	Hazard duration estimate Records of relief shipments
Construct buildings	Houses, schools or hospitals? How many do we build?	Extent of damage to houses, buildings, infrastructure
Regulate construction	Allow or deny the application for a building permit?	Hazard zones Extent of hazard impacts

Sensors in Early Warning Systems



Web Applications for Dissemination

desinventar
Disaster Information Management System



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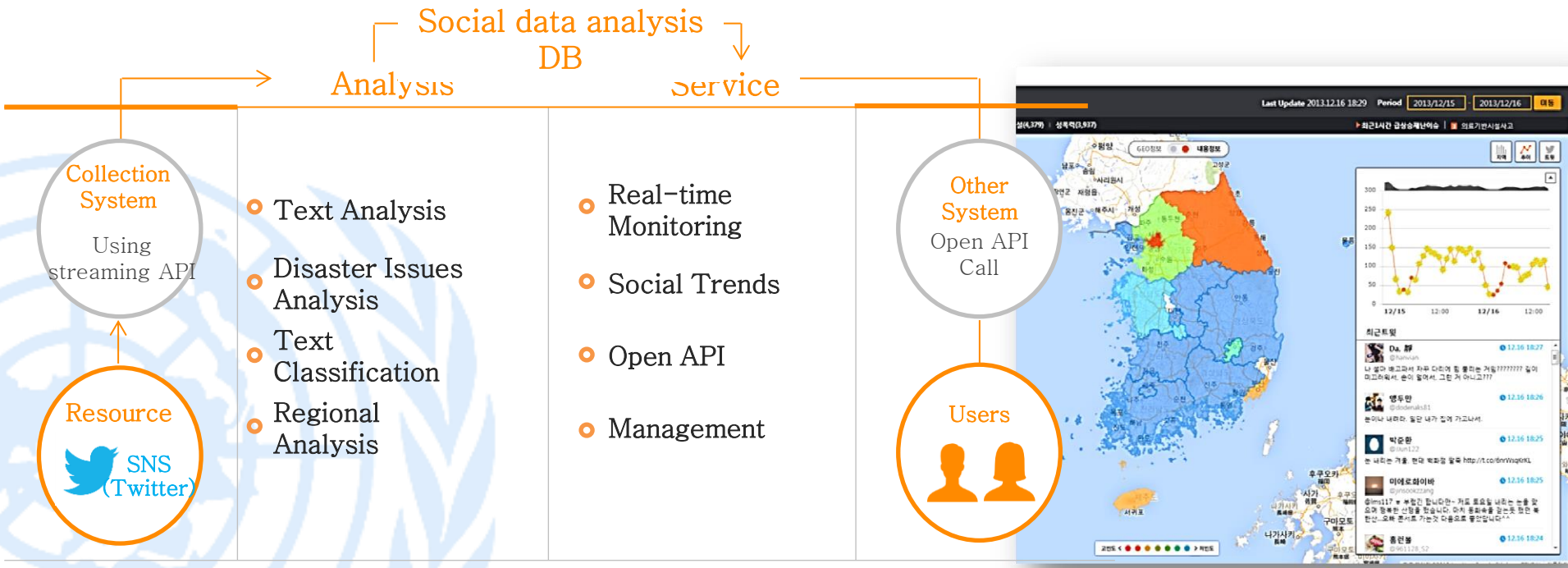
Community Tsunami Early Warning Center

Mobile Phones

Image taken from: http://www.flickr.com/photos/newley/3364753072/

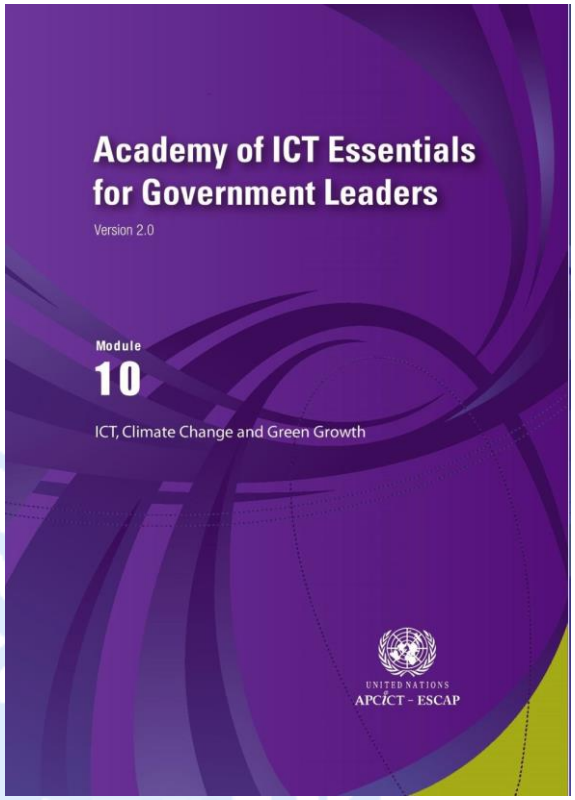
Social Media and Big Data

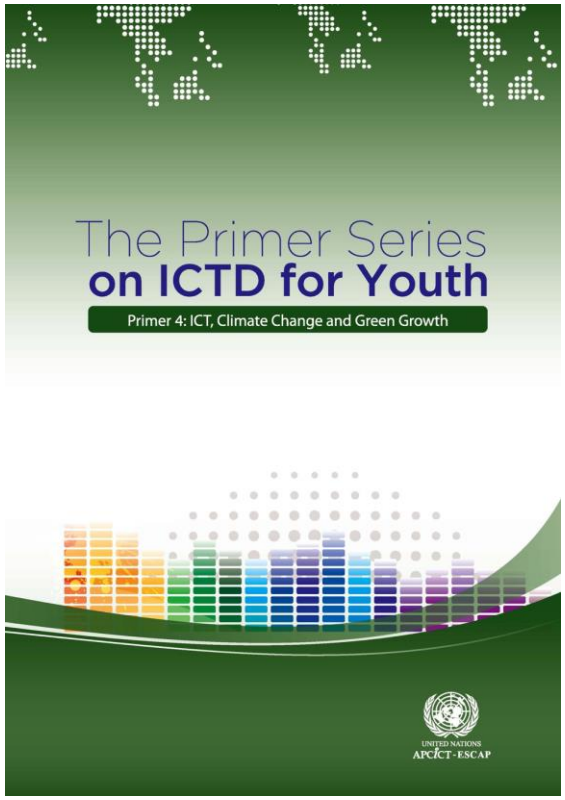
- Big data analysis of posts over social media
- Korea's Social Big Board



Images from National Disaster Management Institute

ICTs, Climate Change and Green Growth





Objectives

- Provide an overview of the challenges posed by climate change for development
- Provide examples of ICT applications;
- Suggest policy considerations for the use of ICTs for responding to climate change (Academy module)

Responses to climate change

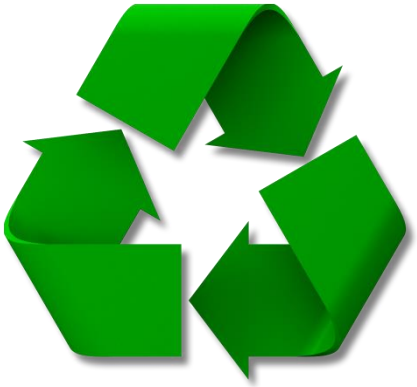
- **Adapt** to the climate impacts of a changing environment
- **Mitigate** the amount of GHGs released into the atmosphere
- Pursue **green growth** to reduce carbon emissions, strengthen climate resilience, and increase sustainability of development

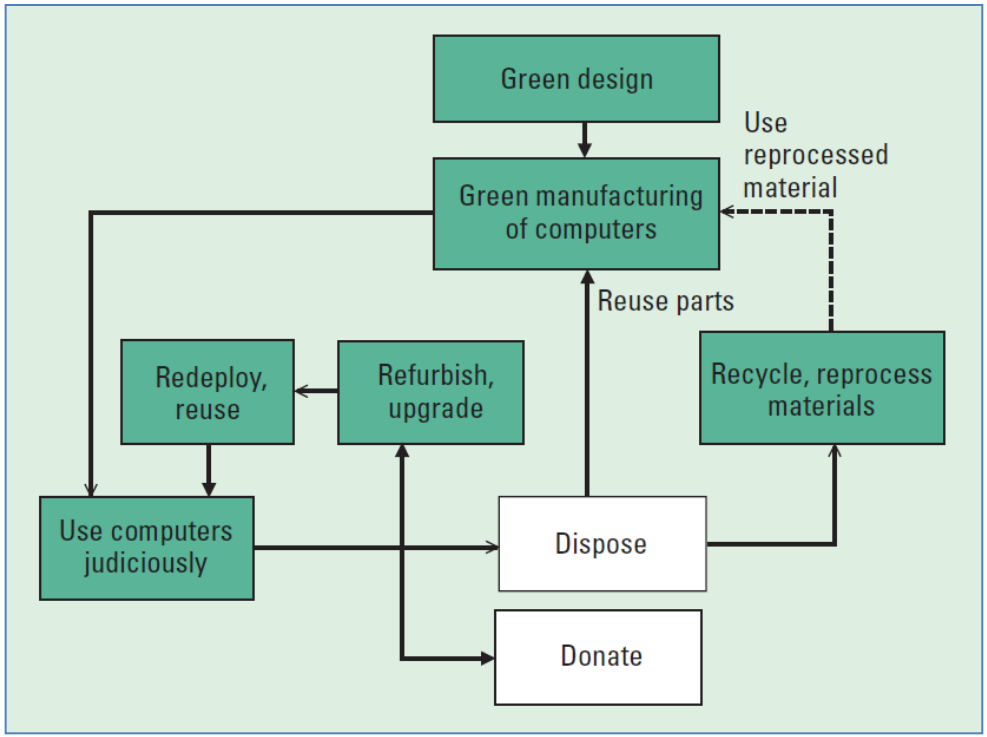
Key ICT trends

- **Digitization**: changing manual processes to digital ones
- **Dematerialization**: replacing human activities or even goods and services with electronic equivalents

E-waste and recycling

- Electronics tend to have toxic and hazardous materials
- E-waste management strategy is needed for:
  - Efficient collection
  - Safe dismantling and pre-processing of electronic components
  - Safe recovery of recyclable materials and treatment of hazardous materials



Green computing

- Economically viable ICT industry, minimal environmental impact
- Green design, green manufacture, green use, green disposal
- Certification (EPEAT, ENERGY STAR)