



Disaster Management and Climate Change: Role of ICTs and Emergency Communications

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Urban Demographic Intensity and Extensity Expanding
Infrastructure lagging behind implies greater adverse impacts
Time-sensitive and cost-effective systems require extensive
use of ICTs

Total systems costs need to include collateral losses and
damages to people and properties

Preventive measures –including Early Warning Systems
(EWS)- seen as most cost-effective

Fundamental Identity $I = G (V, E, C)$



- C in the Identity I explained

C = f (ICTs for adaptive capacity building, technological and human capabilities, preventive infrastructure, EWS, ICTs backed by resilient systems within ICT-enablers such as provision of multiple redundancies and source diversifications for reliable energy systems, comprehensive contingency planning with assessments of *ex ante* and *ex post* actions in emergency situations - backed by interactive reactive interface with all stakeholders during extreme events)




UNFCCC, NAPAs and National Adaptation Plans

- Role of the UNFCCC to reprioritize and scale up resources for NAPAs in LDCs to enable extensive use of ICTs in urban and other regions
- Role of the UNFCCC to enable effective large scale transfer of technologies to enable effective CCG, with the use of ICTs and diversified decentralized energy sources
- Role of the UNFCCC to effect pragmatic cost effective loss and damage compensation systems that include ICTs
- Need for NAPs in developed countries to prioritize ICTs and effective upgrade of Capacities (C)




Technical Ingredients for ICTs Infrastructure

- Spatial data structures including GIS and GPS
- Firehawk Processors with multi-tower capabilities
- Multi-hazard EWS, including adaptive flood risk assessments and relay of information
- Underground fibre-optic and advanced physical infrastructure including in-house energy supplies for reliable provision of services
- Interactive contingency planning and action-based systems with multi-user interface



ICTs and Emergency Communications: Global Players and Roles

- ITU (public –private partnerships and expanded reliable resources)
- UNFCCC (scaled up funds for NAPAs and revised priorities)
- UNISDR (Post-2015 HFA to ensure greater role of ICTs)
- WIPO (enabling cost-effective transfer of relevant technologies)
- GEF (mainstreaming ICTs in planning and implementation)
- UNDP (mainstreaming ICTs in disaster governance and resiliency)
- IFC (effective participation in public –private partnerships)
- GFDRR (mainstreaming ICTs in DRM)
- GCF (ensuring CCA is transformational with funds for CCA and DRM in integrated frameworks)
- ICLEI (enabling members to avail ICTs for urgent priorities)



Priorities for CCA – any different from DRM?

OECD (2013) Review of NAPs lessons of experience in OECD countries suggests:

prioritization is a critical component of adaptation plans, and needs to be “more comprehensive and based on firmer technical foundations than in adaptation strategies”

The key link in this is the role of DRR / DRM, and have to realize the roles of integration suggested in the IPCC’s SREX Report (2012)



Post-2015 Frameworks

- Post-2015 Development Agenda
- Post-2015 HFA
- Post-2015 MDGs
- Post-2015 SDGs
- Post-2015 Consultations on Governance

Need for provision of effective roles of DRM with priority for application of ICTs and effective transfer of relevant technologies, with assessments of creation of ‘green jobs’ and other decent jobs as well as sustainable alleviation of poverty



ITU and Regional UN Bodies

Catalytic actions are better effected at regional and country levels, and “The Future We Want” seeks greater action frameworks at regional and national levels

ITU contributions can possibly scale up DRM and CCA activities (for example, involved in the UNESCAP and others); ‘Delivering as One’ in the UNDG must be more effectively coordinated to minimize transaction costs

The world with more potential extreme events need not be the same as the world with more disasters

Let us avail the role of $I = G$ (....) to make the difference



Specific Issues and Holistic Approaches

- Integration of Climate Change Governance and Disaster Risk Governance via ICTs and Decentralized Energy Supply
- Provision of Social Protection Systems and Community Coordination
- Setting and aligning incremental goals with transformational objectives and goals, using flexible steps progressive over time
- Raising ambition levels of goals and targets: social, environmental, and economic –with the backdrop of climate change
- Ensuring synergistic win-win-win policies and actions:
 - ICTs-enabled emergency coordination using civic groups and public authorities for effective preventive as well as response actions to minimize impacts of adverse climatic impacts



Urban Priority Aspects

- Larger sections of populations along coastline urban areas require greater degree of Climate Change Adaptation (CCA) and Disaster Risk Management (DRM), considering the certainty elements of coastal storms and sea level rise (IPCC SREX)
- Adoption of transformational agenda for CCA and DRM, rather than the common incremental approach in city regions and coastal regions
- Provision of multi-level participatory frameworks for policy, implementation, monitoring and evaluation with civic participation



THANK YOU

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