

Reflections on Implementation Science

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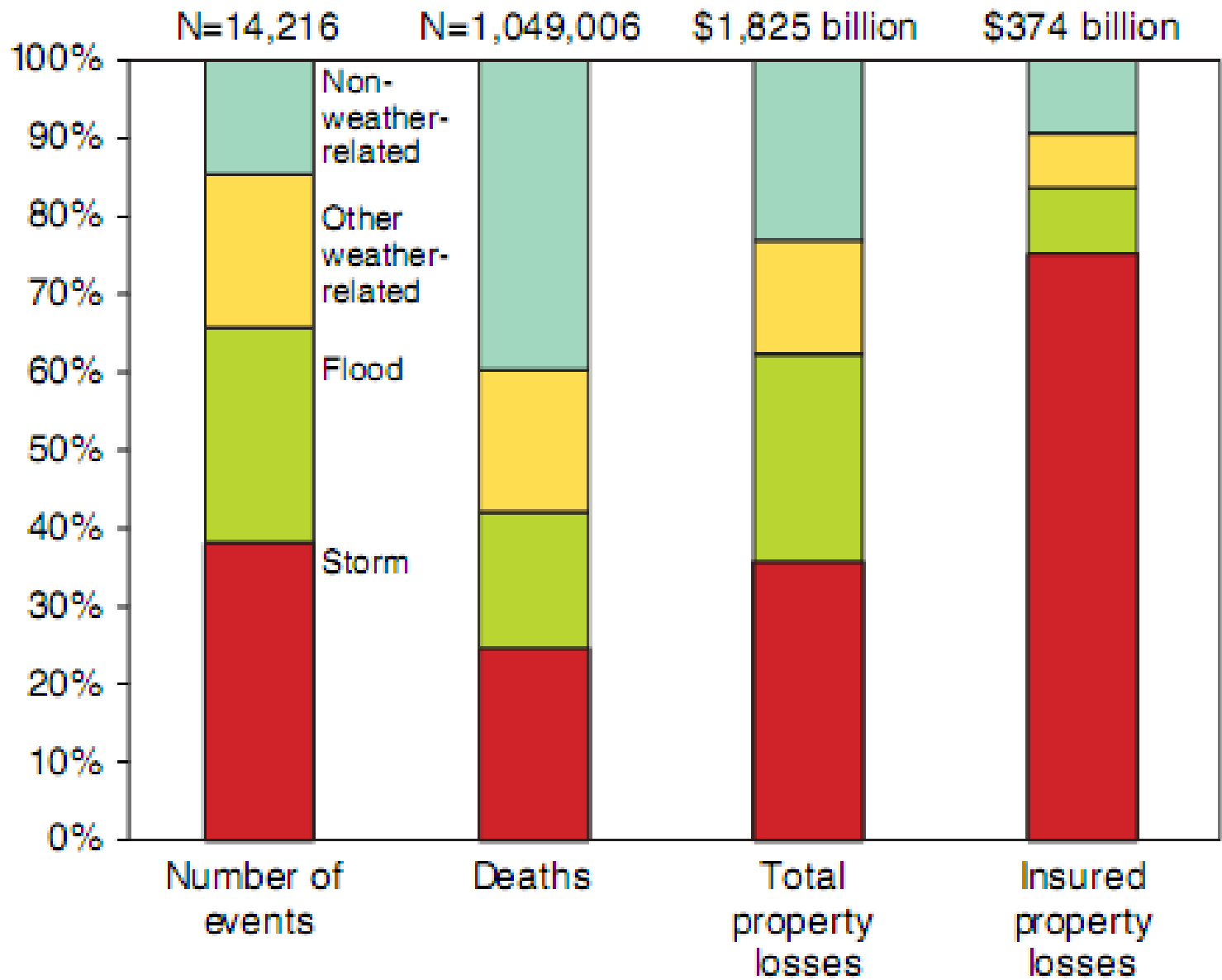
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Introduction

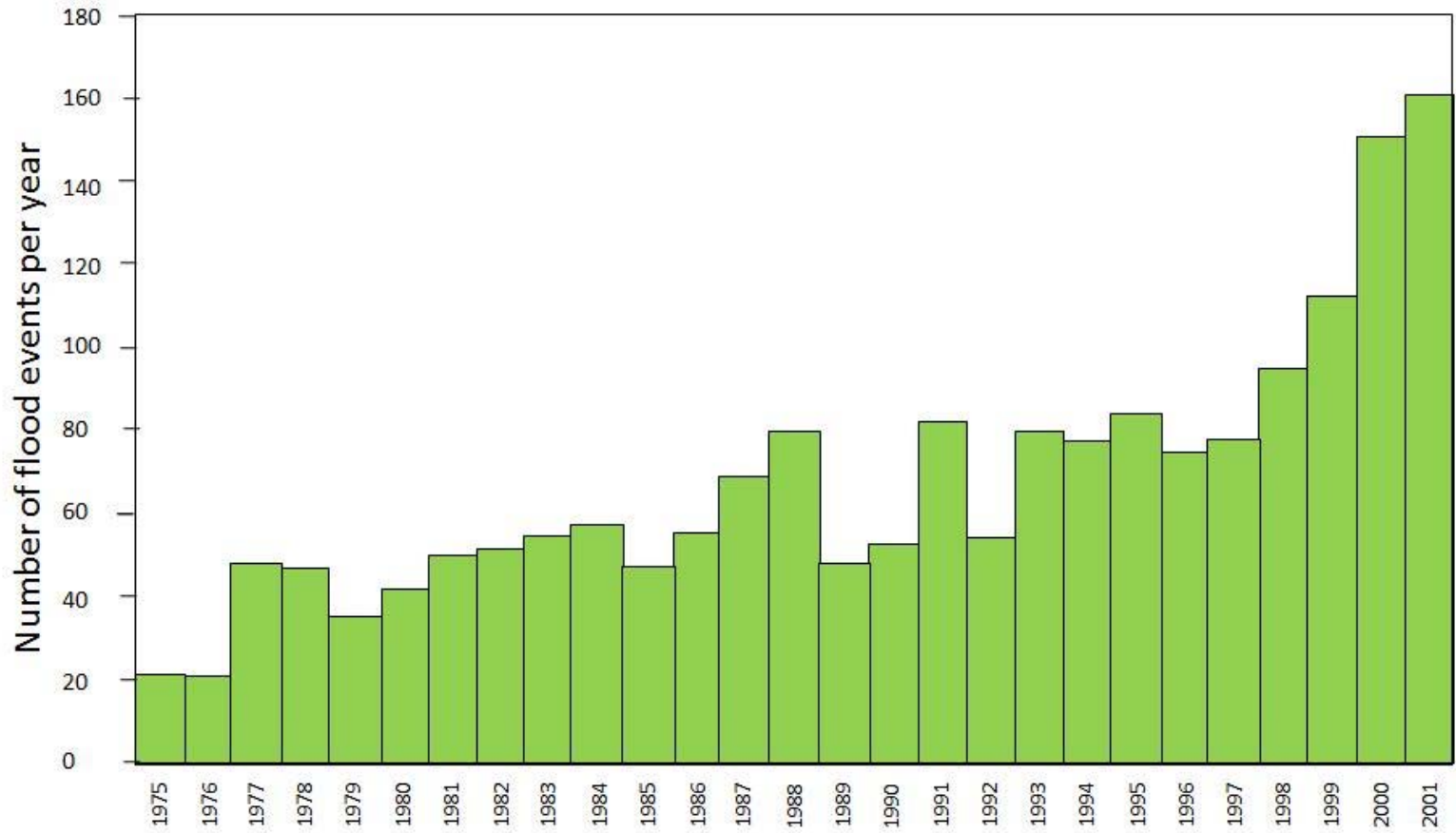
“Implementation failure is like original sin; it is everywhere and it seems ineradicable” (Weale, 1992: 43).

Key Area of Concern: Implementation Gap - Difficulty in moving from visions, strategies and plans to action.

Implementation Failure: Global Natural Disasters – Two Profiles



Global impacts of natural disasters from 1980 to 2004



Profile of global flood events from 1975 to 2001

Goal of this Presentation: A review and analysis of concepts, strategies, and policies, including implementation failures, as a basis to develop an implementation science to bridge the implementation gap.

Implementation Science

- Production and development of a systematic body of knowledge on the costs and consequences of natural and human disasters
- Careful analysis of facts, empirical evidence, insights and experiences
- Successful implementation of emerging findings from the analysis

Key Concepts

- COMPLEXITY
- UNCERTAINTY
- CONTINGENCY
- VITALITY
- FEASIBILITY VS. VIABILITY
- CASE-STUDY STATIONS
- PROTOTYPE TECHNOLOGY
- SUSTAINABILITY
- OPEN SYSTEM
- GOVERNANCE
- MUTUAL ACCEPTANCE
- CULTURAL CALIBERATION
- URBAN DIAGNOSIS
- VULNERABILITY

Complexity

- Systems are complex and dissimilar
- Endogenous and exogenous variables differ from system to system.
- Standardized strategies and approaches do not fit diverse spatial and temporal settings
- Pitfalls in implementation – standardized approach to all disasters.

Uncertainty

- Uncertainties arise because systems are complex.
- Complex systems need to be reduced to simpler subsystems.
- Reduction of complexity will reduce risk and uncertainty and increase effectiveness of implementation

Contingency

- Closely related to risk and uncertainty
- Autonomy in decision-making – local level
- Scenario-based anticipatory approach should be used

Vitality

- Heart of implementation – ongoing surge of energy, movement, and dynamics
- Power to generate risks and hence, the human propensity for risk avoidance and risk aversion and the reluctance to accept and implement risky policies.
- Power to energize life and encourage people to be risk-takers
- Seek a new balance of the risk-averting and risk-taking modes of vitality

Feasibility Vs. Viability

- Conventional disaster risk management treats feasibility and viability synonymously
- Feasibility - Linear extrapolation of what is currently in place.
- Viability – nonlinear approach requiring flexibility to initiate dynamic change and adaptation
- Credible implementation policies have to be grounded in viability and thus vitality

Case Study Stations

- Accomplish effective spatial and temporal monitoring of disaster management practices on a continuing basis
- Differ from the conventional case studies – snapshot of a given period in a given setting
- Propose the establishment of case study stations in different disaster-prone areas to monitor, record, analyze, and disseminate information on a regular basis.
- This will enhance the effectiveness of implementation in the domain of disaster management.

Sustainability Reconsidered

- Synergistic interactions of survivability and vividness
- Take into account risk-avoidance and risk-acceptance aspects of vitality
- Propose a concept of dynamic sustainability
- Clear potential for incremental or exponential improvements
- Derives strength from vitality

Open System

- Free flow of ideas, perspectives, and information
- Nature and natural disasters transcend human boundaries and constraints
- Disaster management policies constrained by excessive concern for safety and security
- Propose an open system, “liberated” from constraints of all kinds

Governance

- Flexibility is the hallmark of governance
- Flexibility is freedom from the chain of command in decision-making, political ideologies, religious rivalries, and economic disparities
- Implementation is friendly governance
- Friendly governance includes participatory approach, democracy and its variants, the fostering of civil society, and thinking locally and acting globally

Mutual Acceptance

- Closely intertwined with the concepts of prototype technology and open system – the notion of a “global commons” is the governing principle
- Facilitates the distillation and integration of the most effective disaster management and implementation policies

Cultural Calibration

- Collectively-shared values, beliefs, customs, and traditions
- Explicit recognition of cultural diversity by all stakeholders involved in decision-making
- Implementation policies for disaster mitigation and management in the 21st century have to operate from a new premise – they have to be “culturally calibrated”

Urban Diagnosis

- New factors and forces emerging in integrated disaster risk management
- These include rising role of NGOs, public private partnership, emergence of citizen initiatives, institutionalized participatory processes, and growing concerns for public risk
- “Urban diagnosis” refers to this public participatory management approach

Vulnerability

- The poor, densely populated urban areas lacking basic amenities and rudimentary infrastructure are the most vulnerable
- Low-lying, impoverished farm areas in many countries, especially in the third world are equally vulnerable
- Affluent mega-cities also highly vulnerable to major natural disasters eg., Kobe Earthquake, Hurricane Andrew & Hurricane Katrina

Implementation Failures: A Snapshot

Natural Disaster

- Hurricane Katrina (August 2005)
- Indian Ocean Tsunami (December 2004)
- Izmit Earthquake (August 1999)
- Hanshin Awaji (Kobe) Earthquake (January 1995)
- Tangshan Earthquake (July 1976)

Key Issues

- Complexity, Uncertainty, Feasibility, Governance, Urban Diagnosis, Vulnerability
- Complexity, Uncertainty, Contingency, Governance, Cultural Calibration, Vulnerability
- Contingency, Governance, Urban Diagnosis, Vulnerability
- Contingency, Uncertainty, Feasibility Vs. Viability, Governance, Vulnerability
- Uncertainty, Contingency, Open System, Cultural Calibration, Vulnerability

Toward an Implementation Science: New Research Urgently Needed

- Implementation dimension has been historically neglected in the discourse on IDRM. Floods, droughts, tsunamis, hurricanes, and earthquakes are all cases in point.
- To correct this situation, a systematic and comprehensive study of natural disasters to identify the key factors contributing to implementation failure is immediately needed.
- This should be followed by a thorough analysis, including ranking, of the identified factors to determine the relative importance of specific causal factors in implementation failure.
- Based on the findings, major new efforts to launch innovative research to develop a new body of knowledge, a science, to bridge the implementation gap have to be undertaken.
- The newly-launched IDRM society is the logical scientific body to take the lead in launching this new research agenda.