

Importance of Environmental and Disaster Data

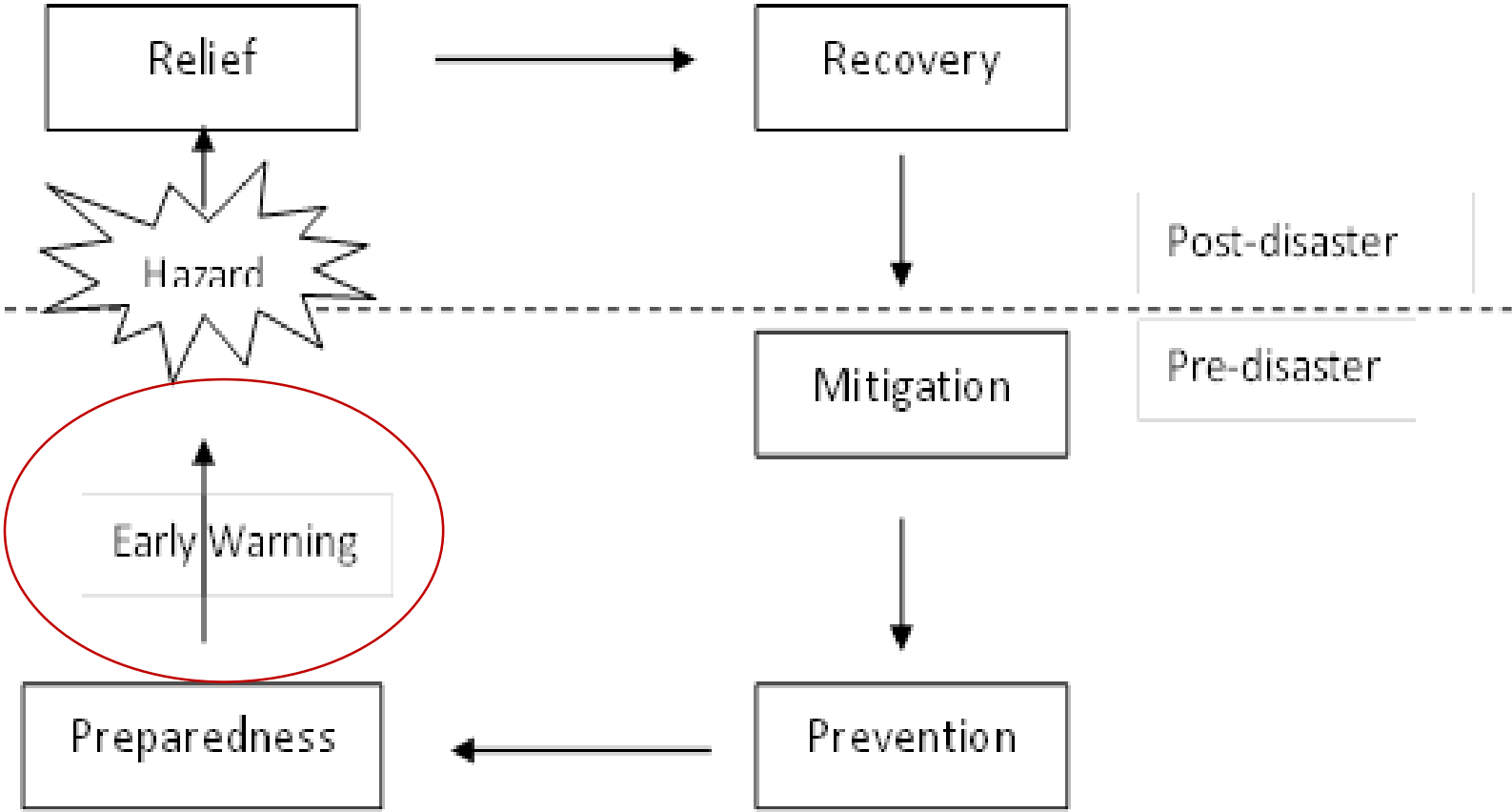
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Sarvodaya Fusion, Ministry of Disaster Management & UNDP

19 February 2018



The disaster cycle

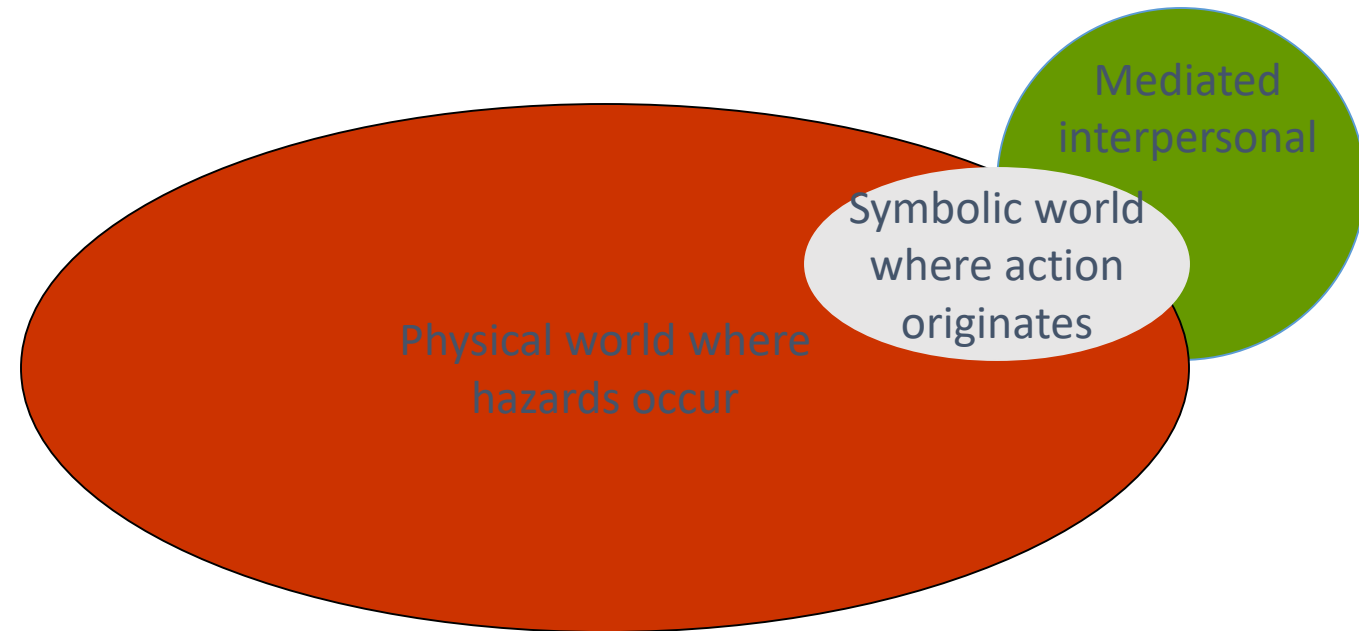


Why declining deaths?

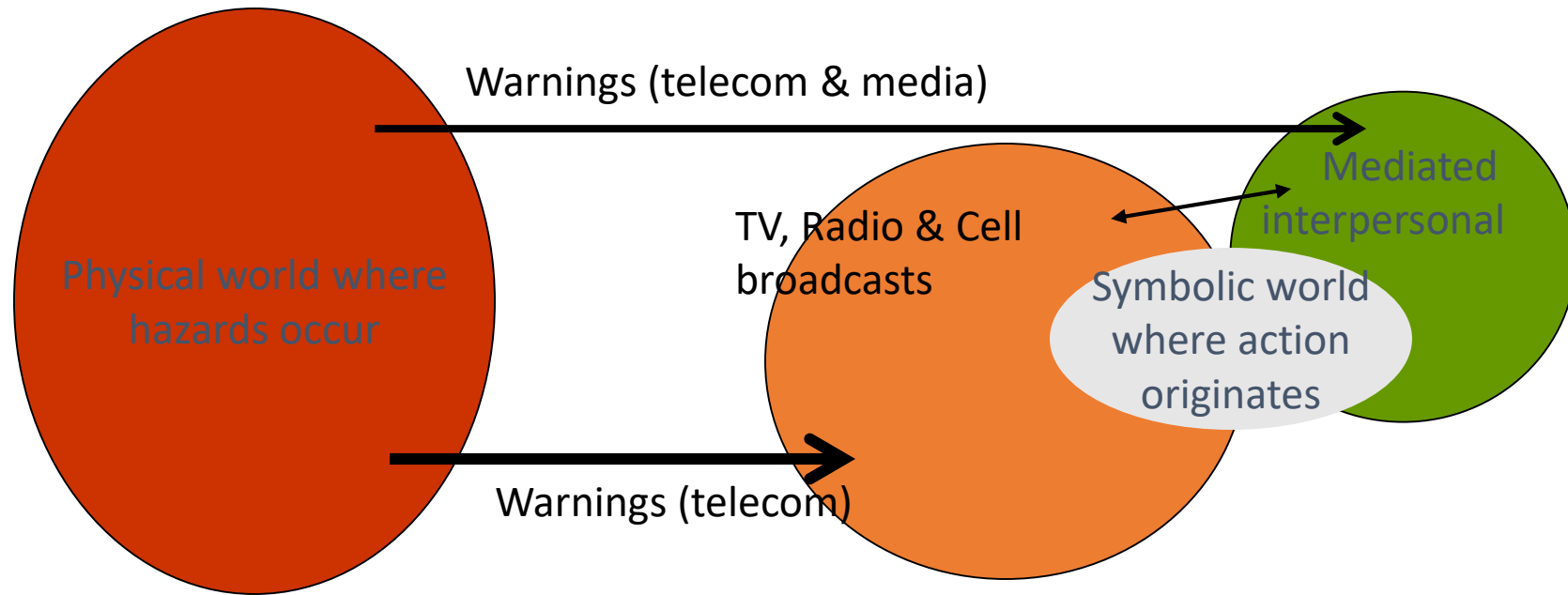
Year	Cyclone	Strength	Deaths
1970	Bhola	Category 3	300-500,000
1970+21	Gorky	Category 4	~138,000
1970+37	Sidr	Category 4	~3,447



Physical and symbolic worlds, absent linking technologies

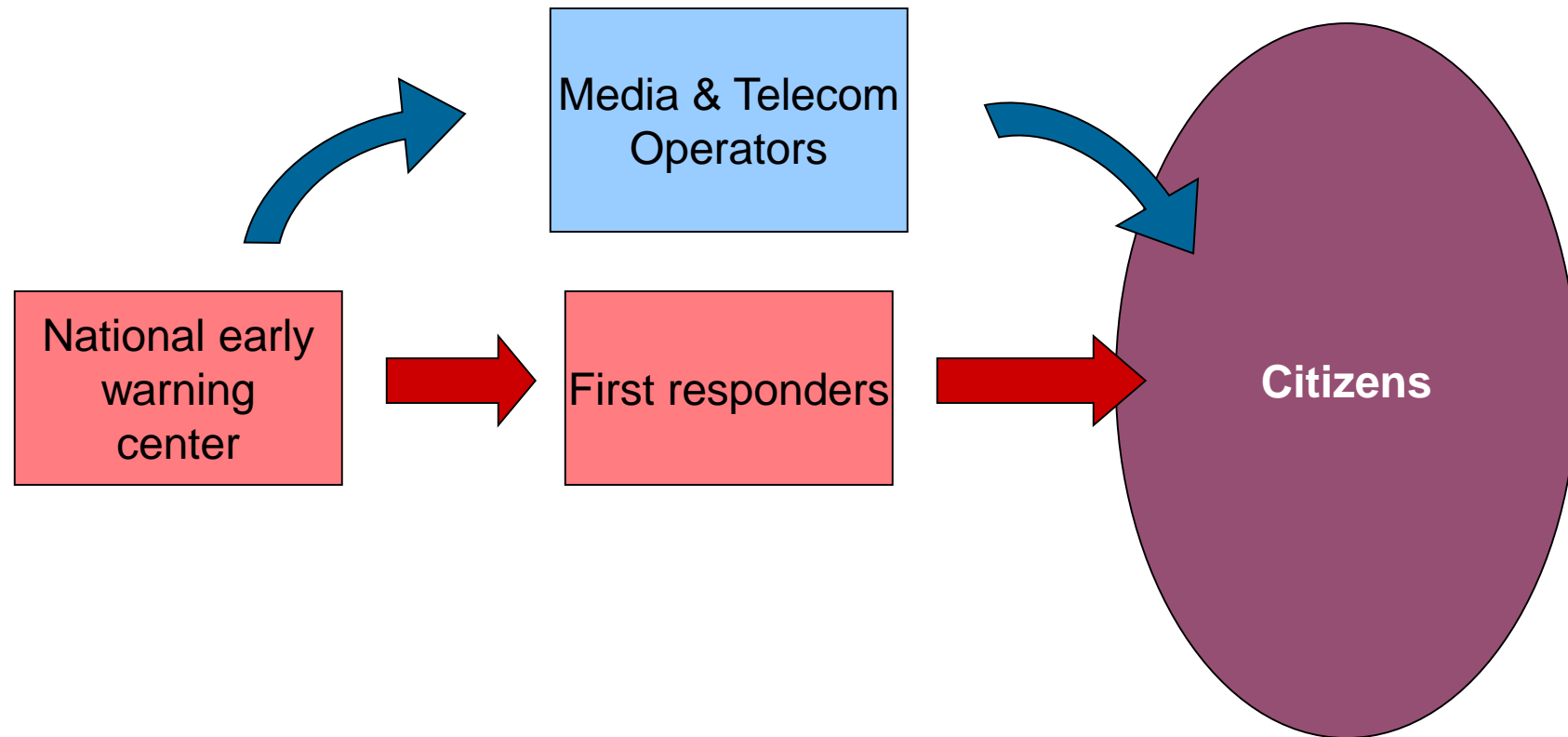


The physical, the symbolic & their linking through ICTs, simplified



More time to run; more lives saved

Early warning chain (standard form)



Factors contributing to deaths & damage

- How good are the messages citizens receive?
 - A specific message that Kelani River will rise 2 meters at around 6 PM on a particular day in my neighborhood is better than a general message that river is rising
- Can they evacuate?
 - Security, trust
- Where to?
 - Are camps safe?
- Are they prepared?

LIRNEasia & U of Moratuwa have been shortlisted for a project to create a proof of concept for rainfall predictions using microwave link attenuation as a proxy. We are partnering with Dialog Axiata, Sri Lanka's largest mobile network operator with island-wide coverage.

The project would cover the Kelani, Kalu and Malvatu river basins. The rainfall calculations will be validated by rain-gauge data and fed into models.

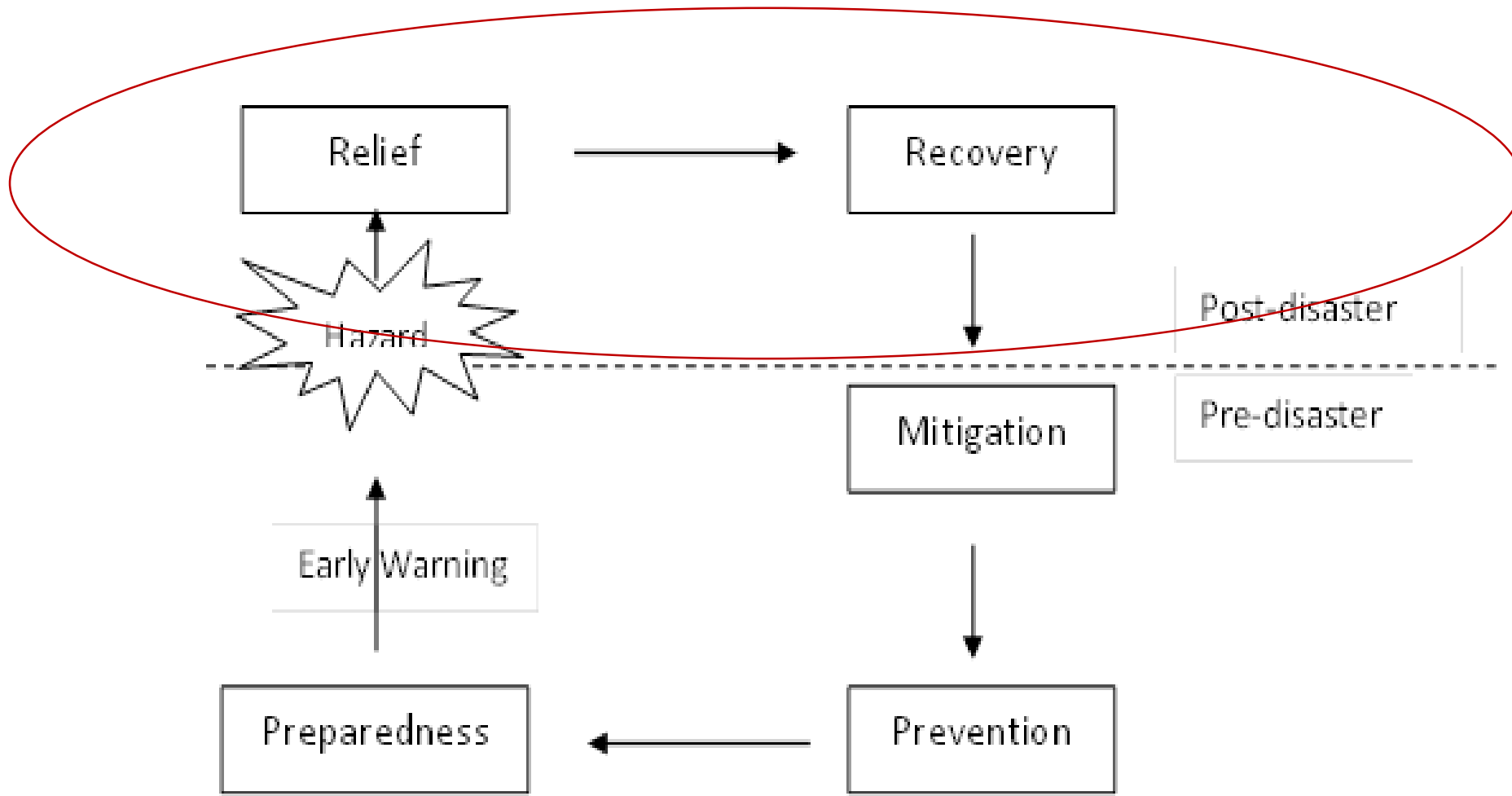
The potential beneficiaries, in addition to all who live in river basins, are: (1) the Met Department, (2) Center for Urban Water under the Ministry of Megapolis and Western Development, (3) the Disaster Management Center, (4) Dept. of Irrigation, (5) various stakeholders of the Agriculture sector, including but not limited to the weather-indexed crop insurance scheme announced in the 2018 Budget Speech.

Evacuation is not enough



- Insurance claims from 2016 Kelani floods > 2004 Indian Ocean tsunami
 - Greater use of insurance as country develops
- If we do not focus on saving livelihoods and only improve warning, we will end up with lots of impoverished survivors

Relief



Relief

- General problem is matching supply and demand for relief services
- Sahana is a centralized software developed in Sri Lanka after the tsunami and now used world over, but not here
 - Is it something wrong with the software, or with government?
 - Do we need a decentralized solution?