

# Disasters: Role of media

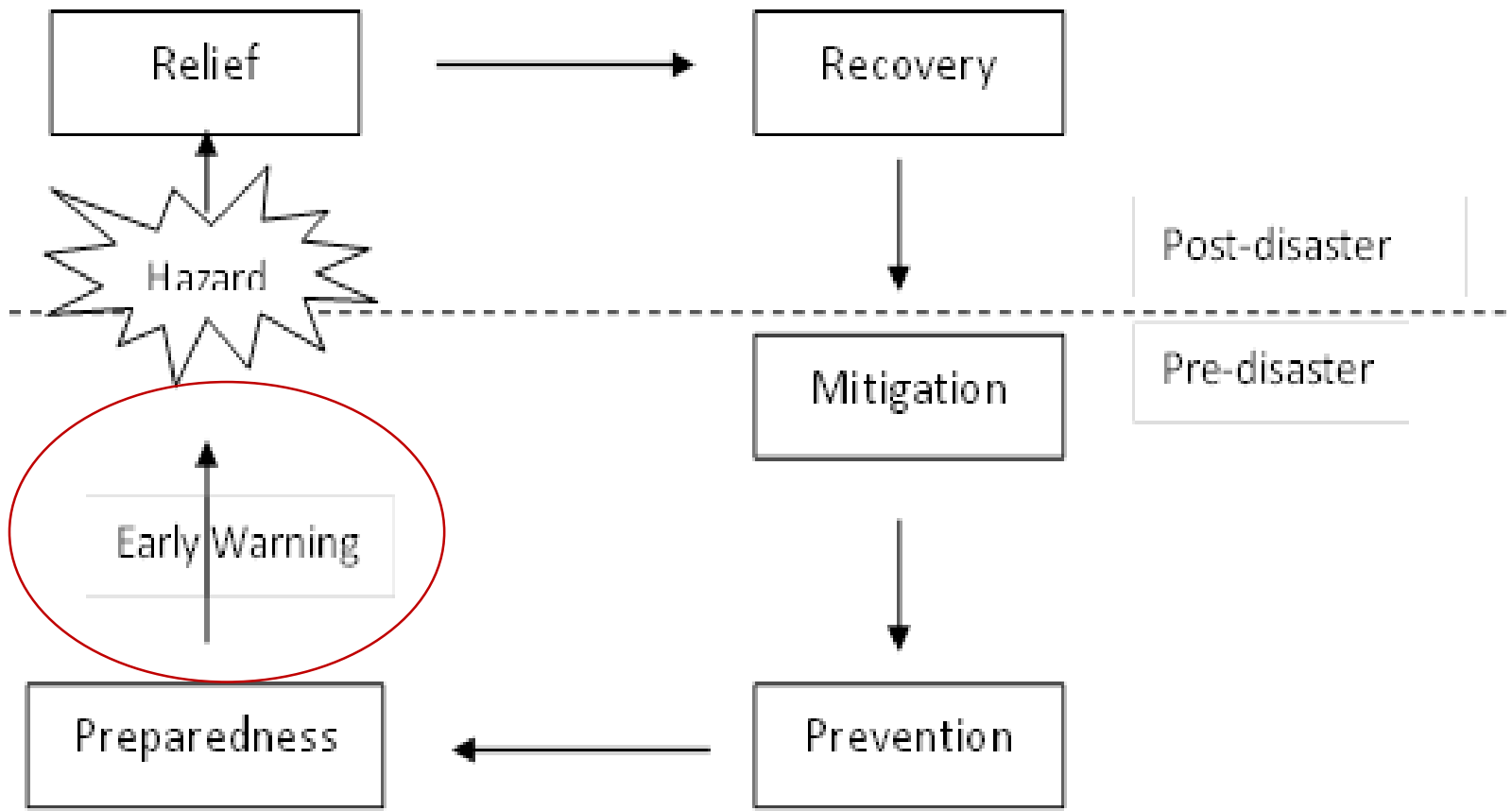
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Ministry of Disaster Management

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# The disaster cycle

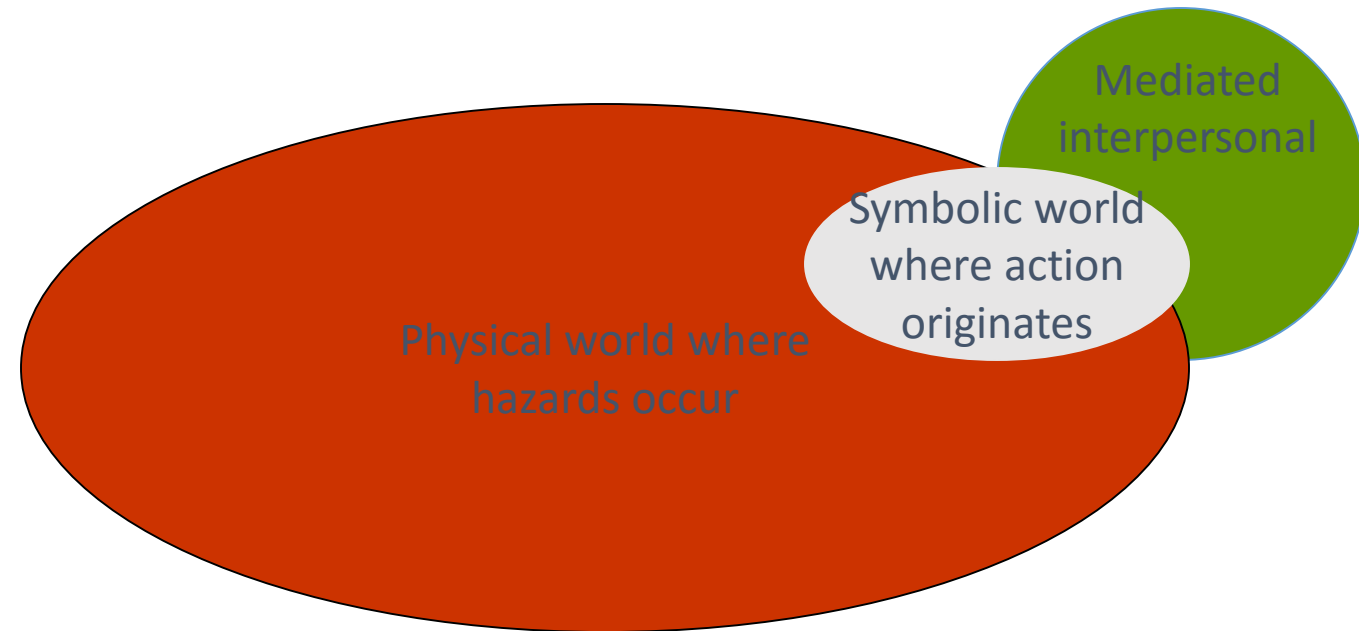


# Why declining deaths?

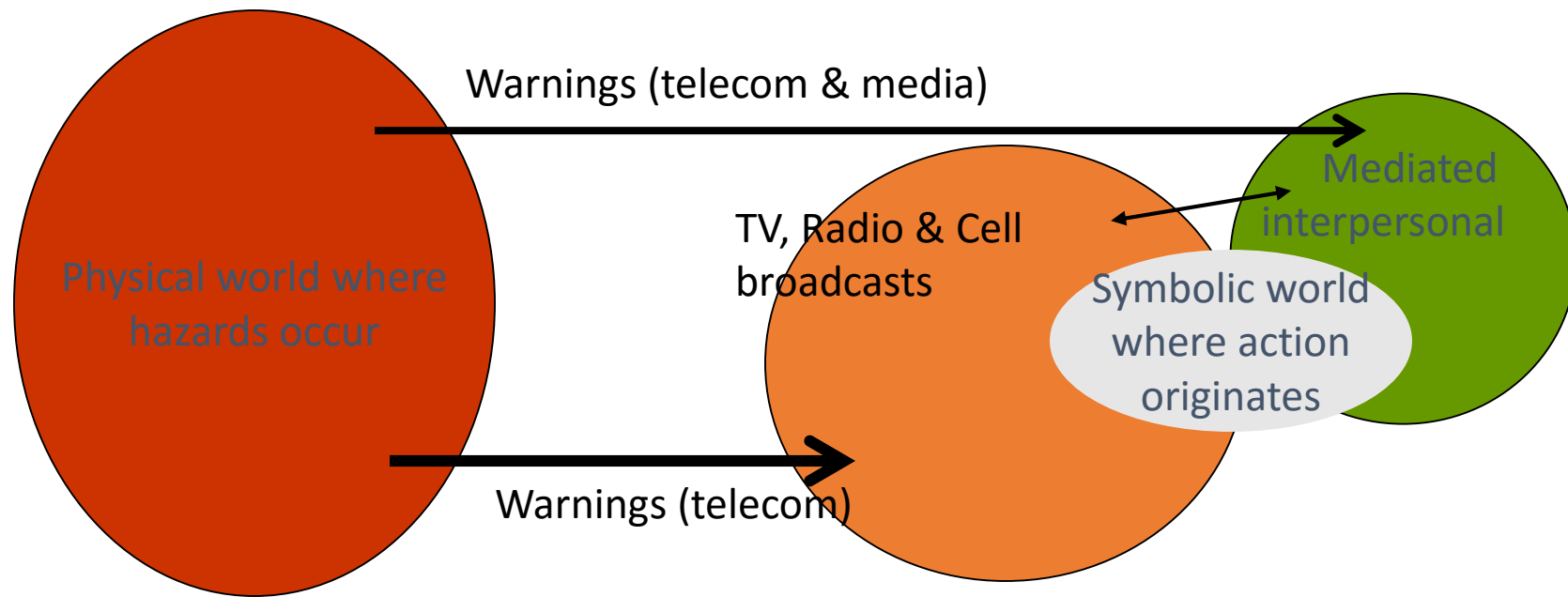
Year	Cyclone	Strength	Deaths
1970	Bhola	Category 3	300-500,000
1970+21	Gorky	Category 4	~138,000
1970+37	Sidr	Category 4	~3,447



# Physical and symbolic worlds, absent linking technologies

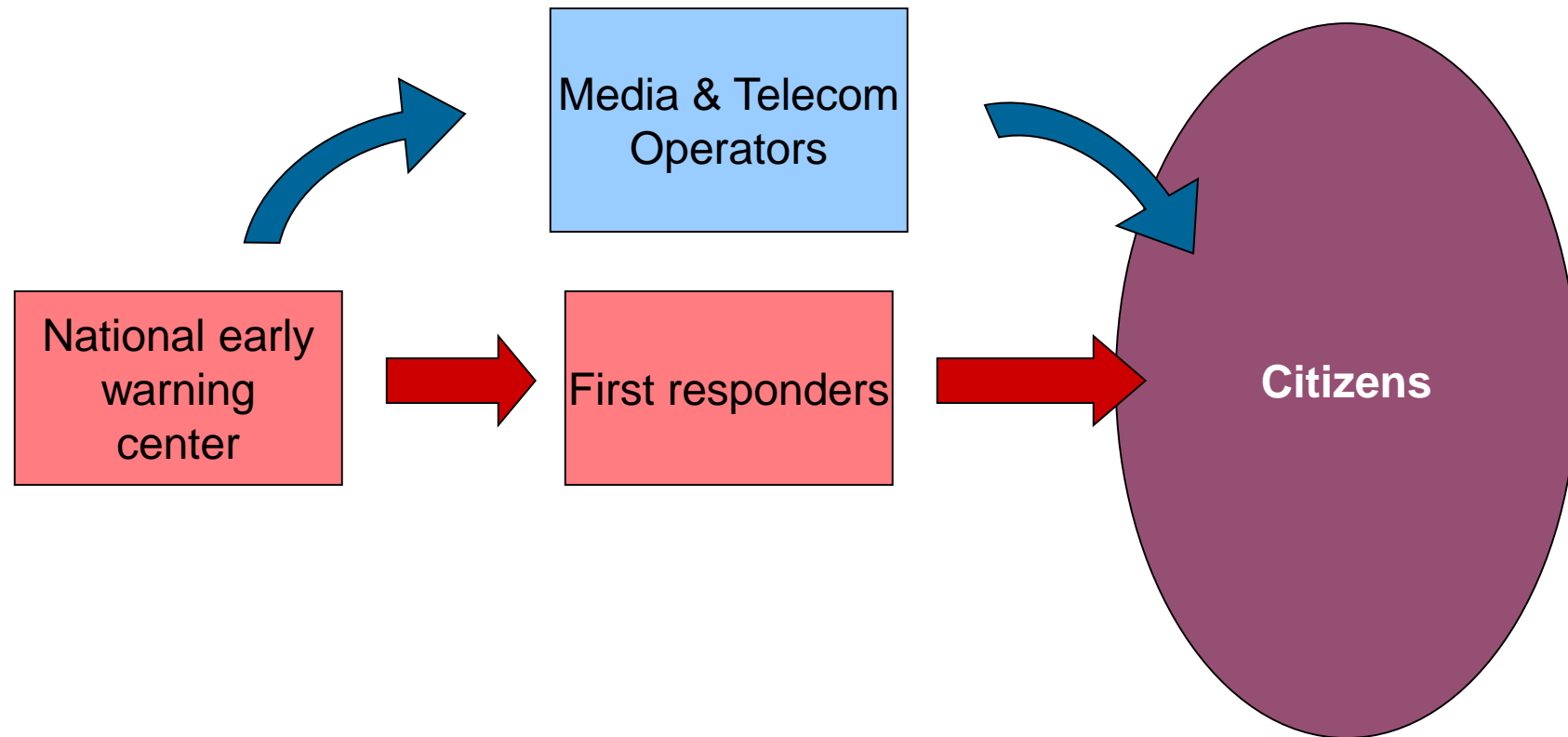


# The physical, the symbolic & their linking through ICTs, simplified



**More time to run; more lives saved**

# Early warning chain (standard form)



# Causes of delay leading to deaths & damage

- How good (and how quick) is decision making at government warning center?
  - Problem of defining “good” in the context of tension between good and quick
- How efficient is communication to first responders and media?
  - Common Alerting Protocol
  - DEWN
- How efficient is public warning?
  - Cell broadcasting and radio/TV

# Households with telephones, HIES 2012-13

- Only 12.5% of Sri Lanka households without phone in 2012-13
  - Colombo district lowest 5.6%
  - Ampara & Batticaloa highest 26.3% and 25.2% (1 out of 4)

**Table A 21: Percentage distribution of households, which have telephone facilities by type of telephone facility sector, province and district - 2012/13**

Sector/Province/ District	Type of telephone facility				No telephone (%)
	Total (%)	Fixed only (%)	Mobile only (%)	Fixed and mobile (%)	
<b>Sri Lanka</b>	<b>100.0</b>	<b>6.4</b>	<b>50.9</b>	<b>30.3</b>	<b>12.5</b>
<b>Sector</b>					
Urban	100.0	4.5	46.0	42.6	6.8
Rural	100.0	6.3	52.7	28.0	13.0
Estate	100.0	15.4	37.4	22.6	24.7
<b>Province</b>					
Western	100.0	4.4	47.4	41.3	6.9
Central	100.0	8.6	45.9	34.4	11.1
Southern	100.0	6.7	53.8	27.5	12.0
Northern	100.0	2.5	68.6	16.9	12.0
Eastern	100.0	3.4	61.2	11.1	24.3
North-western	100.0	6.2	56.6	25.3	11.9
North-central	100.0	8.9	52.7	23.6	14.8
Uva	100.0	12.9	38.9	30.5	17.8
Sabaragamuwa	100.0	7.5	45.7	29.2	17.6
<b>District</b>					
Colombo	100.0	3.8	44.0	46.6	5.6
Gampaha	100.0	4.1	49.5	40.2	6.2
Kabutarra	100.0	6.2	49.8	33.3	10.7
Kandy	100.0	7.4	43.1	40.5	9.0
Matale	100.0	4.9	58.2	28.0	8.9
Nuwara Eliya	100.0	14.0	42.2	26.9	16.9
Galle	100.0	5.6	55.0	26.2	13.2
Matara	100.0	8.3	52.6	26.0	13.1
Hambantota	100.0	6.6	53.3	31.7	8.4
Jaffna	100.0	2.6	65.5	21.2	10.6
Mannar	100.0	2.6	69.9	12.2	15.3
Vavunia	100.0	3.4	63.8	24.1	8.7
Mullaitivu	100.0	-	82.9	1.3	15.9
Kilinochchi	100.0	2.4	78.4	1.0	18.2
Batticaloa	100.0	2.4	61.5	10.9	25.2
Ampara	100.0	4.2	56.7	12.7	26.3
Trincomalee	100.0	3.4	68.2	8.5	20.0
Kurunegala	100.0	7.4	53.1	27.6	11.9
Puttalam	100.0	3.6	64.1	20.4	11.9
Amuradhapura	100.0	9.8	52.8	21.4	16.1
Polonnaruwa	100.0	7.0	52.5	28.4	12.2
Badulla	100.0	12.8	33.1	36.7	17.5
Moragala	100.0	13.0	48.9	19.8	18.3
Ratnapura	100.0	6.9	49.2	25.5	18.4
Kegalle	100.0	8.4	41.0	34.0	16.6

Source: Survey of household telephones, 2012/13



# Comm devices in homes, 2012: mobiles > TV > radio

District	Total households	Radio	Television	Fixed line telephone	Mobile telephone	Desktop Computer	Laptop Computer	Fax
Colombo	577,779	73.0	88.7	50.7	86.0	28.4	16.9	1.5
Gampaha	604,183	69.8	84.3	43.9	84.2	21.7	8.8	0.6
Kalutara	305,319	70.8	83.0	46.1	81.7	18.4	6.3	0.5
Puttalam	203,547	63.5	77.7	31.1	81.6	11.2	4.3	0.3
Kandy	347,159	76.9	84.2	48.8	81.2	20.6	6.4	0.3
Vavuniya	41,961	54.7	59.0	32.3	79.7	9.0	4.6	0.5
Kurunegala	440,944	71.9	80.0	44.0	79.7	13.2	4.1	0.2
Galle	271,624	74.1	83.1	44.7	79.5	15.2	5.2	0.3
Sri Lanka	5,251,126	69.0	78.7	42.4	79.0	15.1	5.8	0.4
Hambantota	156,735	68.2	79.0	37.7	78.1	10.0	2.2	0.1
Matara	205,722	75.2	82.4	44.4	78.0	13.0	2.9	0.2
Kegalle	220,154	75.5	80.2	49.4	77.8	15.1	3.3	0.2
Matale	129,078	72.1	77.9	42.2	77.7	13.0	3.5	0.2
Mullativu	24,750	59.3	25.4	10.9	77.7	1.5	1.4	0.1
Anuradhapura	231,771	68.8	78.6	45.9	76.9	8.1	2.3	0.3
Jaffna	139,078	51.2	62.3	29.1	76.7	13.1	7.6	0.4
Ratnapura	285,059	71.5	77.0	40.1	76.1	10.4	2.6	0.2
Polonnaruwa	110,575	66.1	77.6	41.3	76.0	8.1	2.1	0.2
Killinochchi	27,511	57.3	15.9	9.6	74.9	1.9	1.7	0.1
Ampara	165,532	55.6	70.5	28.8	74.3	8.9	2.5	0.1
Trincomalee	95,529	44.5	61.5	22.8	73.7	7.5	2.9	0.4
Batticaloa	135,645	44.5	56.7	16.9	71.5	8.5	3.2	0.2
Monaragala	120,546	69.3	66.4	37.9	70.9	5.4	1.4	0.1
Badulla	209,956	71.8	77.6	50.4	70.2	9.9	2.6	0.1
Mannar	22,743	56.2	45.2	22.4	70.0	4.5	2.9	0.1
Nuwara-Eliya	178,226	69.3	78.8	50.3	69.3	7.4	1.8	0.2

5% of households thru 2012 census

# Factors contributing to deaths & damage

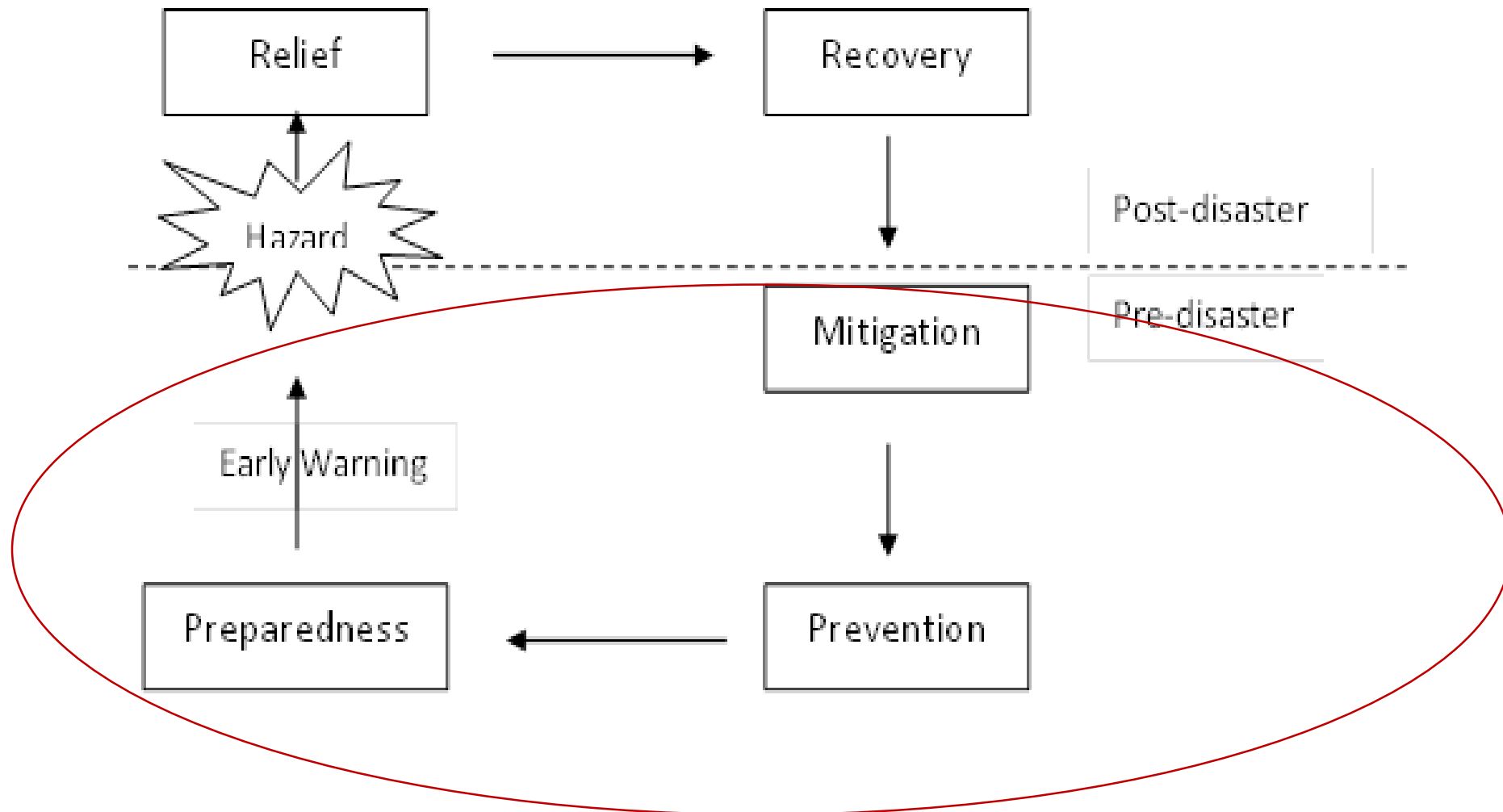
- How good are the messages citizens receive?
  - A specific message that Kelani River will rise 2 meters at around 6 PM on a particular day in my neighborhood is better than a general message that river is rising
- Can they evacuate?
  - Security, trust
- Where to?
  - Are camps safe?
- Are they prepared?

# 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

# Preparedness/prevention/mitigation



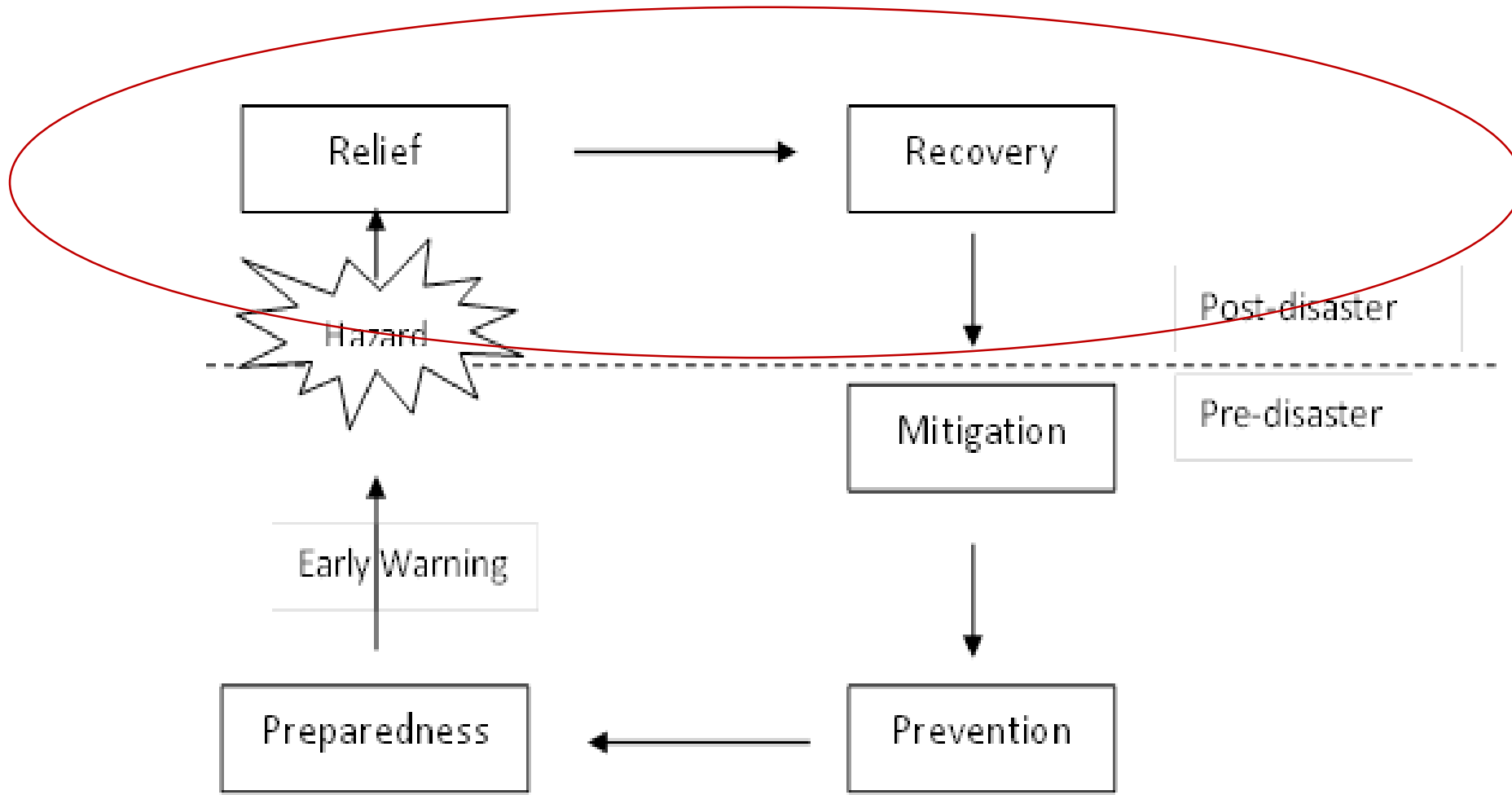
# Resilient architecture in time of climate change

- How can we build in ways that minimize damage to homes and business premises?
  - Role of standards
- How can we use incentives supplied by insurance to support resilience?
  - 100 meter rule

# Landslides will become a serious threat. What can be done?

- Meeriyabedda residents had been warned; told to evacuate; given rain gauges
  - But did not evacuate because there was nowhere to go
- Much progress made in remediation: slopes above towns of Padiyapalalla, Peradeniya
  - But we do not have money to remediate all dangerous slopes; not even Norway has
- How realistic is requirement that NBRO approve every construction plan in landslide-prone areas?

# Relief



# Relief

- General perception is that government failed to perform during 2016 Kelani Flood
- Government's primary role is that of coordinating
  - Why can't we deploy Sahana, software developed in Sri Lanka after the tsunami and now used world over?