



# KERANGKA PIKIR MENEJEMEN BENCANA KESEHATAN

dr. Hendro Wartatmo SpB.KBD  
Pusat Kebijakan Manajemen Kesehatan  
Fakultas Kedokteran – Keperawatan dan Kesehatan Masyarakat  
Universitas Gadjah Mada



# Curriculum Vitae

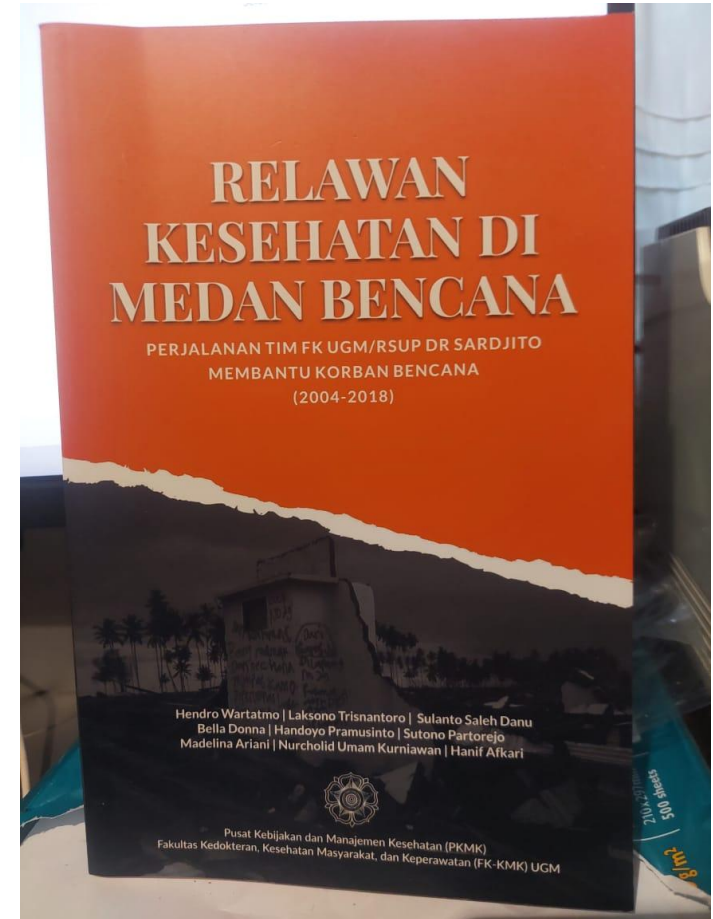
- Nama : dr Hendro Wartatmo SpB KBD
- Purwokerto, Juli 1952
- Recent Activities :
  - Lecturer of Departement of Public Health, Facuty of Medicine, UGM
  - Lecturer of Disaster Management Magister, Post Graduate School, UGM
  - Lecture of Departement of Surgery, Faculty of Medicine, UGM
  - Guest lecture : Faculty of Medicine, Gunung Jati University
- Organisation:
  - WADEM ( World Association of Disaster and Emergency Medicine )
  - Hospital Preparednes Section, Indonesian Hospital Association
  - Pusbankes – 118 / PT Citra Paramedika
  - Disaster Management Division, CHPM, FK-KMK UGM
  - Senior Consultant : Asean Institute for Disaster Health Management
  - Kolegium Bedah Digestif – PPDSp2 Bedah – Digestif
  - Committee on Trauma IKABI





# Response to Natural Disaster in Indonesia

- **Famine, Lombok (1980),**
- **Volcano eruption, Yogyakarta (1994)**
- **Earthquake-Tsunami, Aceh (2004),**
- **Earthquake, Nias (2005),**
- **Earthquake, Yogyakarta – Central Java (2006)**
- **Earthquake-Tsunami, Pangandaran (2006),**
- **Landslide, Banjarnegara (2006)**
- **Earthquake, Bengkulu (2008),**
- **Earthquake, Padang (2009),**
- **Volcano eruption, Yogyakarta (2010)**
- **Flood, Jakarta (2013)**
- **Earthquake, Aceh (2015),**
- **Flood Bima (2015)**
- **Famine, Measles-Diphtheria outbreaks, Asmat (2017)**
- **Earthquake, Lombok (2018)**
- **Earthquake, Palu (2018)**
- **Earthquake-Tsunami, Sunda Strait (2018)**
- **Earthquake, Garut – West Java ( 2022 )**



*Earthquake, Nepal – Kathmandu, 2015 ( after match )*

# Presentasi



1. Hendro Wartatmo: Disaster Management Emergency Response in Hospital Level : Experiences from Aceh Tsunami ( 2004 ) and Bantul Earthquake ( 2006 ), International Conference on National and International Coordination, Cooperation and Humanitarian Assistance in Natural Disaster and State of Emergency (IC-HAND 2007), Kyrenia, April 2007
2. Hendro Wartatmo: Two-year-experience (2005-2006) in Improving Services at West Aceh after Tsunami 2004, 15th WCDEM ( World Conggres of Disaster and Emergency Medicine ,Amsterdam, May 2007
3. Hendro Wartatmo, Sri Endarini, Budi Mulyono: Emergency Responses of Sardjito General Hospital During Earthquake in Bantul, Indonesia, on May 2006, 9th APCDEM ( Asia Pacific Conference on Disaster and Emergency Medicine ),Seoul, November 2008.
4. Hendro Wartatmo: Responses of Five District-Hospitals after Disaster in Indonesia During 2004-2007, 9th APCDEM ( Asia Pacific Conference on Disaster and Emergency Medicine ),Seoul, November 2008.
5. Hendro Wartatmo, Laksono Trisnantoro: Disaster Taskforce's management supportat emergency response phase in the Merapi eruption in November 2011.
6. Hendro Wartatmo, Rosyadi Shewadana: Treatment of Burn Injury Patient in Sardjito General Hospital after the Merapi Volcano eruption in 2010 ( 13th World Conggres of Disaster and Emergency Medicine, Manchester-UK, 2013 )
7. Disaster in Lombok, Palu, and Sunda Strait : The Events that break the Rule  
*World Conggres of Disaster and Emergency Medicine, Brisbane 2019*
8. *TOPCOM ( Tabletop Exercise and Communication in Disaster Medicine, Kualalumpur, Malaysia*
  - 2021 :*"Lessons Learnt of Response to Covid-19 Pandemic in Yogyakarta Special Territory"*
  - 2022 :*"Dealing Trauma Victim during Disaster Response"*
  - 2023 :*"Disaster Medicine during Acte Response"*
  - 2024 :*"Evaluation of Disaster Recovery Program"*



## Bencana :

*“Bencana adalah **peristiwa** atau rangkaian peristiwa yang mengancam dan mengganggu kehidupan dan penghidupan masyarakat yang disebabkan, baik oleh **faktor alam** dan/atau faktor **non alam** maupun faktor manusia sehingga mengakibatkan timbulnya **korban jiwa** manusia, **kerusakan lingkungan**, **kerugian harta benda**, dan **dampak psikologis**.”*

*( UU Republik Indonesia no 24 th 2007 Tentang Penanggulangan Bencana )*



# Disaster

## Definition :

A serious disruption of the functioning of society, causing widespread human, material or environmental losses which exceed the ability of affected society to cope using its own resources.

*Sudnes KO, Birnbaum ML 2003 : Health Disaster Management Guidelines for Evaluation and Research in Utstein Style*

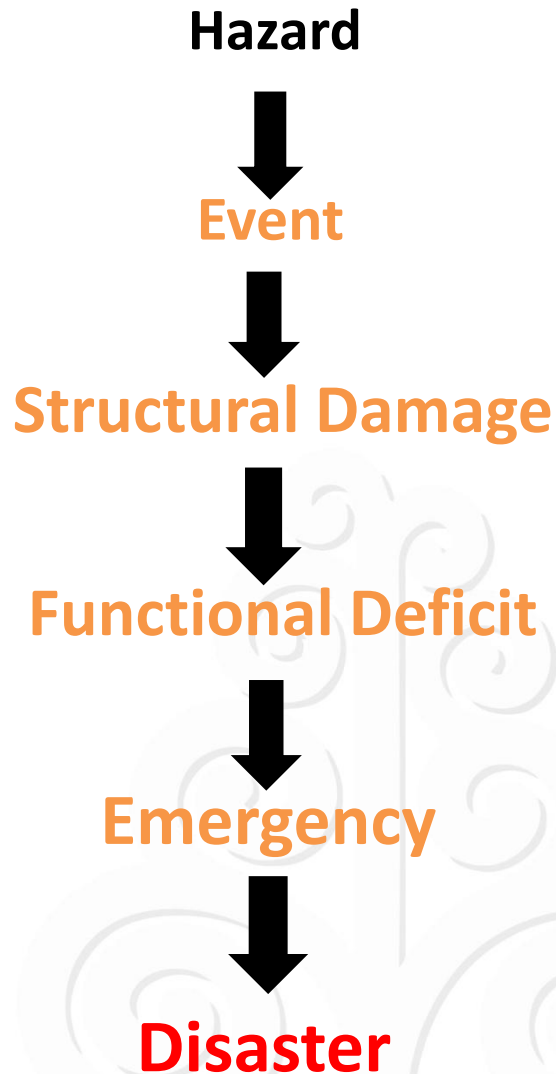


Disaster :

Any emergency that disrupts normal community function causing concerns for safety of its citizens including their lives and property







**Hazard** — anything that may **pose a danger**; it is used in this discussion to mean a natural or human-made phenomenon or a mixture of both, that has the potential to adversely affect human health, property, activity, and/or the environment. Hazards are specific as to type, and as a general rule contain energy.

**Event** — an **occurrence** that has the potential to affect living beings and/or their environment; a realization of a hazard.

**Precipitating event**: event responsible for initiating the damage resulting directly from the occurrence of the event.

**Secondary events**: events that occur as a result of the damage caused by the precipitating event

**Structure** — a set of interconnecting parts of any complex thing; a framework the equipment and personnel, and the way in which these resources are organized.

**Damage** — the **negative result** from the impact of an event.

**Deficit** — the condition that results when the **available supply is less** than the rate of consumption

**Emergency** — a **situation that is out of control** and requires immediate attention.





# Disaster & Health Disaster

## Disaster

- **serious disruption of the functioning of society**, causing widespread human, material or environmental losses which exceed the ability of affected society to cope using only its own resources;
- the result of a **vast ecological breakdown** in the relations between man and his environment, a serious and sudden event (or slow as in drought) on such a scale that the stricken community needs extraordinary efforts to cope with it, often with outside help or international aid.
- A disaster results when the absorbing capacity of the affected society is unable to maintain the functionality of an essential element above a threshold.

## Health Disaster:

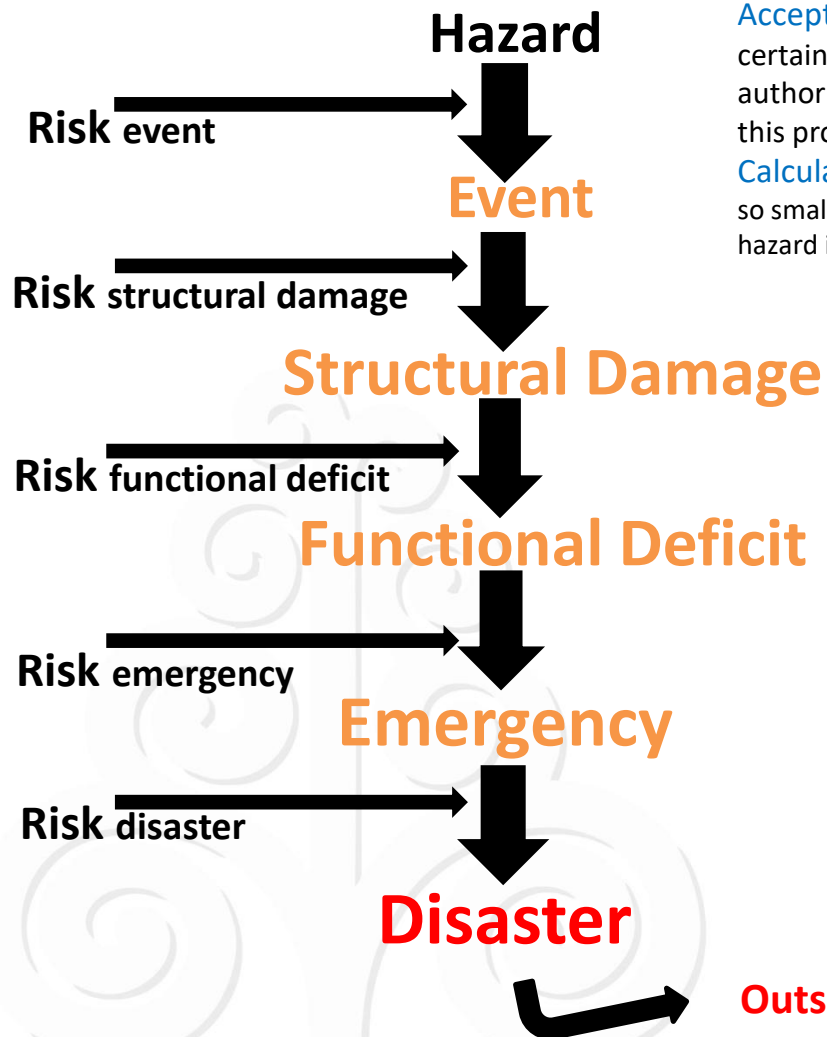
- **precipitous** or **gradual decline in the overall health status** of **a community** for which the community is unable to cope without outside assistance.



**Risk** — the objective (mathematical) or subjective (inductive) probability that some thing negative will occur (happen).

**Acceptable risk** — Probability of a human and material loss of a certain degree that is perceived by the community or relevant authorities as tolerable compared to actions necessary to minimize this probability

**Calculated risk** — Potential that an event will take place is perceived as so small that the benefits from the hazard than cause this event (even if the hazard is enormous) out weights the possibility that the event will happen.



### THE DISASTER RISK EQUATION

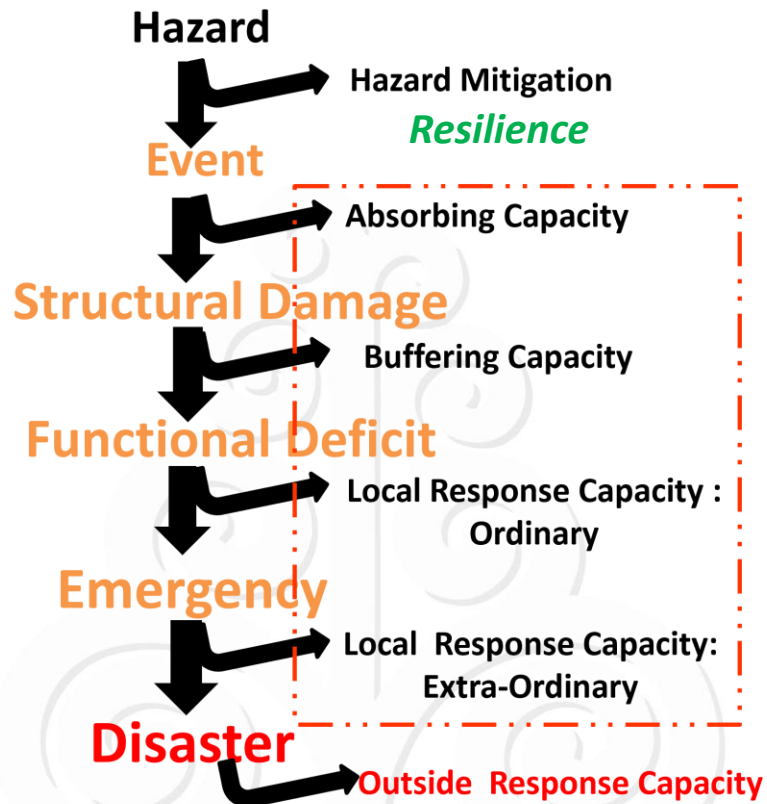
$$\text{Risk [R]} = \frac{\text{HAZARD [H]} \times \text{VULNERABILITY [V]}}{\text{CAPACITY TO COPE [C]}}$$

The risk of a disaster increases as the frequency or severity of hazards increases, people's vulnerability increases and people's capacity to cope (ability to cope with the consequences) is decreased.



## Resilience

Disaster resilience is our ability to prevent, withstand and recover from the harmful impacts of natural hazards on people, places and the natural environment.



**Hazard** — anything that **may pose a danger**; it is used in this discussion to mean a natural or human-made phenomenon or a mixture of both, that has the potential to adversely affect human health, property, activity, and/or the environment. Hazards are specific as to type, and as a general rule contain energy.

**Mitigate** — to **lessen or decrease** the seriousness of the process  
Disaster mitigation : alterations that are achieved before an event occurs that decrease vulnerability.

### Absorptive capacity

The ability to take **protective action** and cope with known stress and shocks, such as those caused by disasters, extreme weather events, and conflict. It's a key factor in helping communities adapt to new and unprecedented disasters.

### Buffering capacity

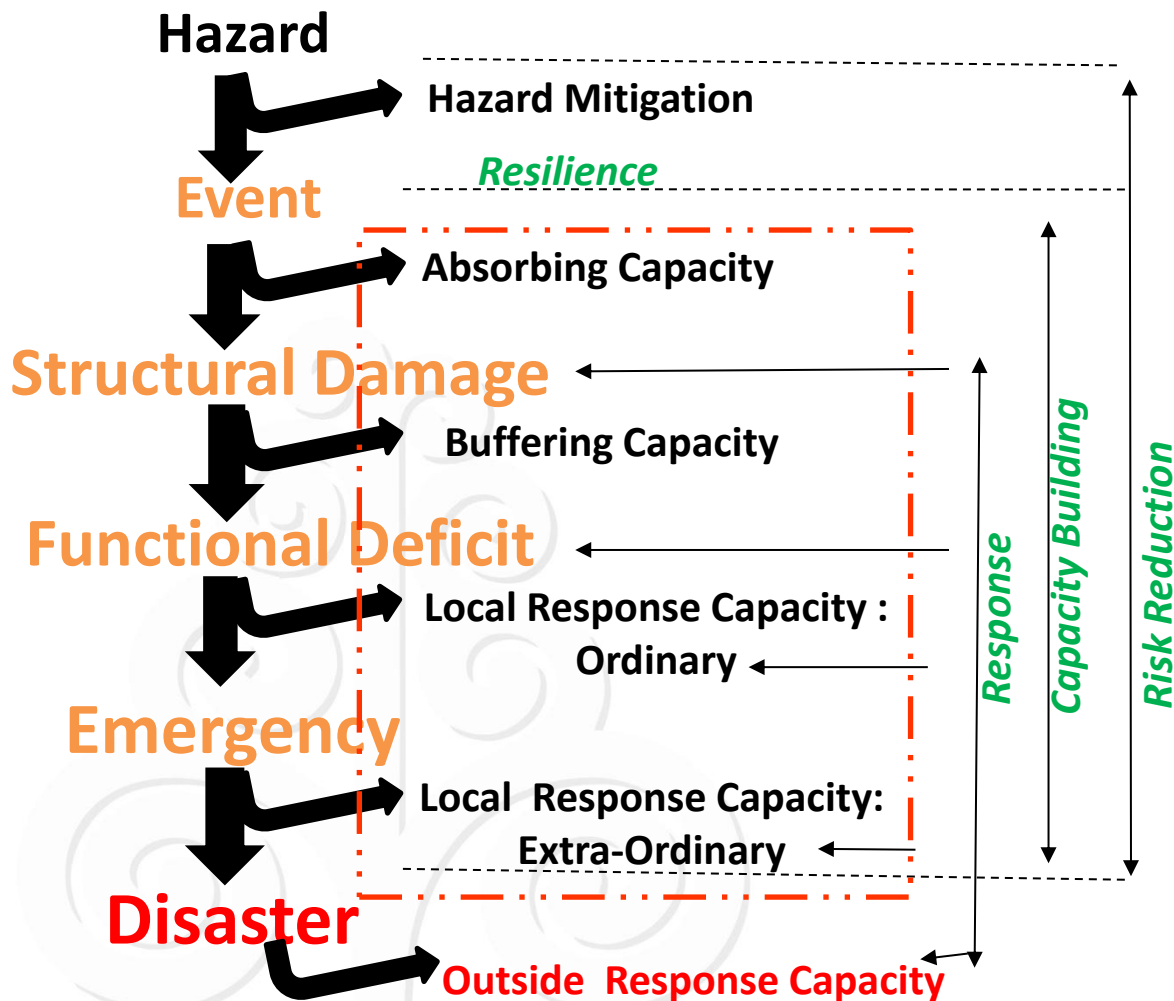
The **ability of a community**, or components of a community, to cope with the Structural Damage or Functional Damage sustained from an event without a decrease or loss of function of the System ( ie, continue to function in spite of the Structural Damage

### Response Capacity

The **combination of all the strengths**, attributes and resources available within an organization, community or society to manage and reduce disaster risks and strengthen resilience.

**Response capability** of local government.

The **ability to provide** equipment and a suitable number of persons, using the resources available, to effectively manage or help another entity to manage an emergency situation or a disaster in the local government area.



### Resilience

The **ability** to prevent, withstand and recover from the harmful impacts of natural hazards on people, places and the natural environment.

### Response

The **answer** to a defined need or a request.

### Capacity Building

A **concept** currently widely used, in many different domains, especially in the United Nations and other international development organizations. In general, capacity building efforts aim to provide a defined target group or an organization with skills, resources, both human and financial, or technology needed to enable it to perform to its full potential.

### Risk Reduction

A selective application of appropriate techniques and **management principles** to **reduce** either likelihood of an occurrence or its consequences, or both.

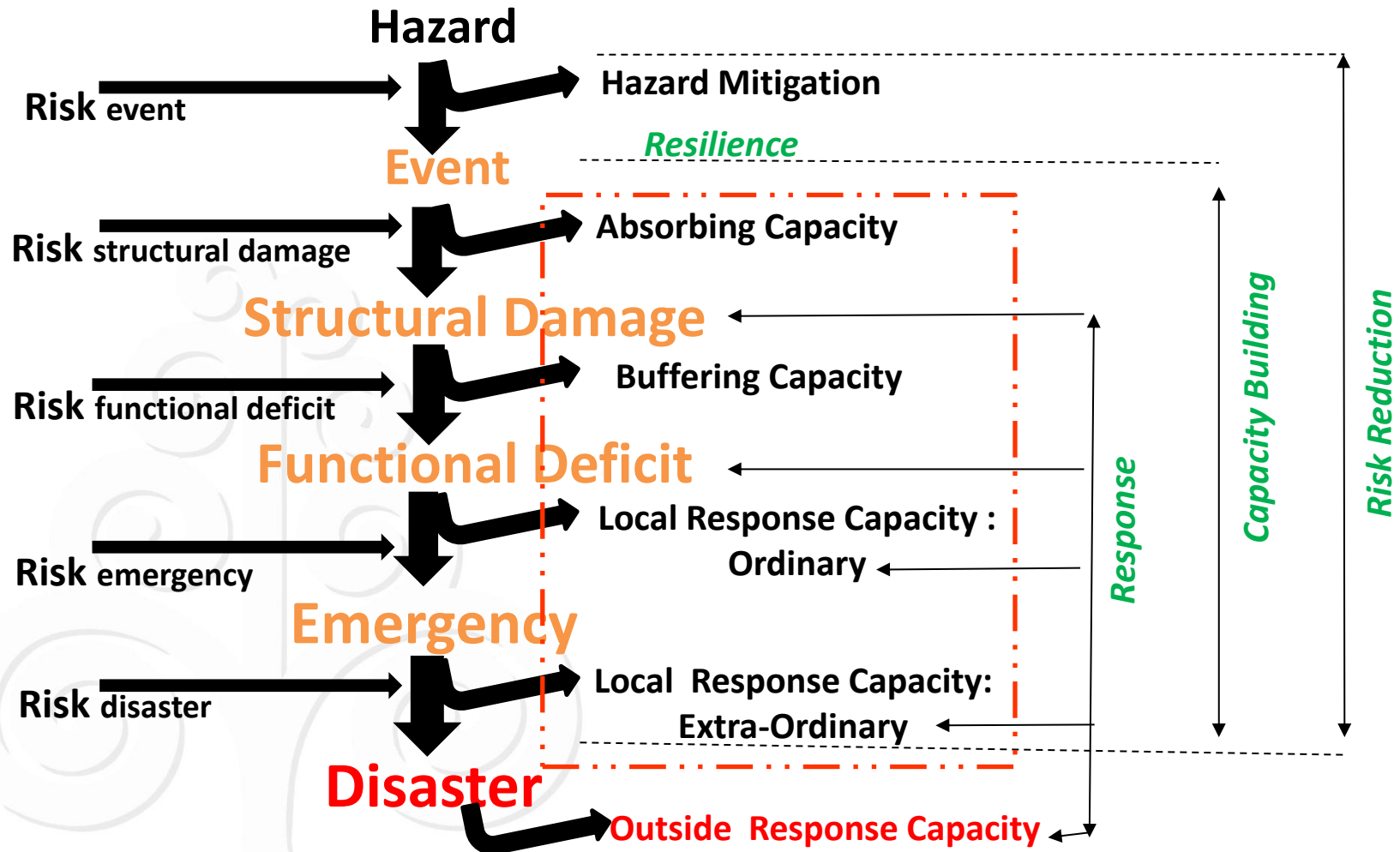


# Disaster Management

- The aggregate of all measures taken to reduce the likelihood of damage that will occur related to hazard(s) and to minimize the damage once an event is occurring or has occurred and to direct recovery from the damage.
- The body of policy and administrative decisions and operational activities that pertain to the various stages of a disaster at all levels

# Disaster Logic Model

Frameworks for Disaster Research and Evaluation - WADEM





# Disaster Preparedness

Preparedness — the aggregate of all measures and policies taken by humans **before the event**; to be prepared for the event.

- Disaster preparedness consists of a set of measures undertaken in advance by **governments, organisations, communities**, or **individuals** to **better respond** and cope with the immediate aftermath of a disaster, whether it be human-induced or caused by natural hazards. The objective is to reduce the loss of life and livelihoods.
- Simple initiatives can go a long way, for instance in training for search and rescue, establishing early warning systems, developing contingency plans, or stockpiling equipment and supplies.
- Disaster preparedness plays an important role in building the resilience of communities.

*European Civil Protection and Humanitarian Aids Operation*

*[https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/disaster-preparedness\\_en](https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/disaster-preparedness_en)*



# Disaster Management in Indonesia

[www.bnpb.go.id](http://www.bnpb.go.id)



**BNPB**

*Badan Nasional Penanggulangan Bencana*  
National Disaster Management Authority



**BPBD - Propinsi**

*Badan Penanggulangan Bencana Daerah*  
Provincial Board for Disaster Management



**BPB – Kabupaten/Kota**

*Badan Penanggulangan Bencana Kabupaten - Kota*  
City / District Board for Disaster Management

Kementrian Tehnis  
Kemenkes

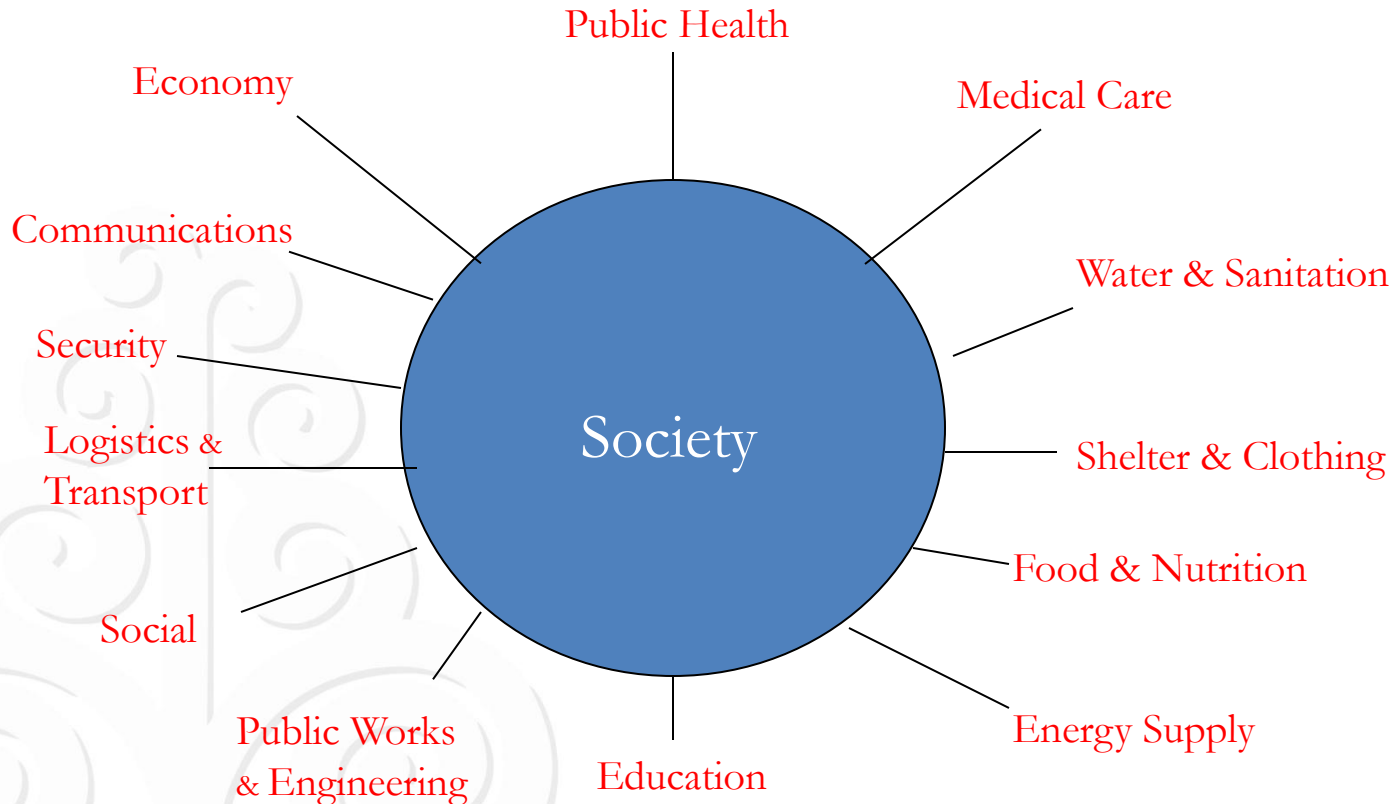


Kantor Dinas Departemen  
Dinas Kesehatan Tk 1 / Propinsi



Kantor Dinas Departemen  
Dinas Kesehatan Kabupaten / Kota

# Transactional Structure of Society





*Sundness KO, Birbaum ML 2003, Health Disaster Management Guidelines for Evaluation and Research in The Utstein Style, Prehospital and Disaster Medicine*



# What is the cluster approach?

The cluster approach is a way of organizing coordination and cooperation among humanitarian actors to facilitate joint strategic planning. At country level, it:

(i)

establishes a clear system of leadership and accountability for international response in each sector, under the overall leadership of the humanitarian coordinator; and

(ii)

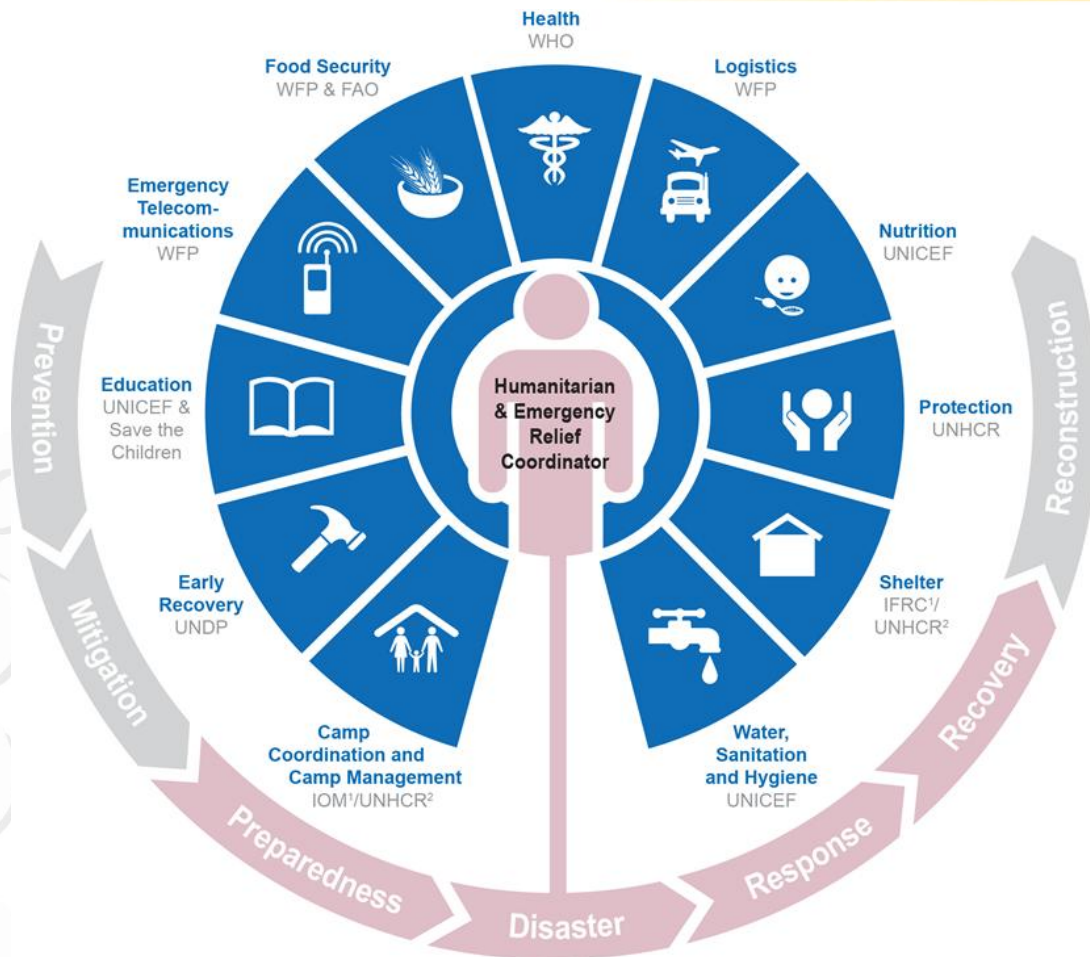
provides a framework for effective partnerships among international and national humanitarian actors in each sector.



# Pendekatan Kluster

- The basis of the current international humanitarian coordination system was set by General Assembly resolution 46/182 in December 1991. The Humanitarian Reform of 2005 introduced new elements to improve **capacity, predictability, accountability, leadership and partnership.**
- <http://www.unocha.org/what-we-do/coordination-tools/cluster-coordination>







# When should it be used?

It is used in countries where a Humanitarian Coordinator has been appointed and should be used in any country faced with a sudden major new emergency requiring a multi-sectoral response with the participation of a wide range of international humanitarian actors. Where a cluster exists, it should also be used for inter-agency contingency planning for potential major new emergencies.





## Principles of Partnership (PoP)

### A Statement of Commitment

Endorsed by the Global Humanitarian Platform, 12 July 2007.  
The Global Humanitarian Platform, created in July 2006, brings together UN and non-UN humanitarian organizations on an equal footing.

- Striving to enhance the effectiveness of humanitarian action, based on an ethical obligation and accountability to the populations we serve,
- Acknowledging diversity as an asset of the humanitarian community and recognizing the interdependence among humanitarian organizations,
- Committed to building and nurturing an effective partnership,

... the organizations participating in the Global Humanitarian Platform agree to base their partnership on the following principles:

### Equality

Equality requires mutual respect between members of the partnership irrespective of size and power. The participants must respect each other's mandates, obligations and independence and recognize each other's constraints and commitments. Mutual respect must not preclude organizations from engaging in constructive dissent.

### Transparency

Transparency is achieved through dialogue (on equal footing), with an emphasis on early consultations and early sharing of information. Communications and transparency, including financial transparency, increase the level of trust among organizations.

### Result-oriented approach

Effective humanitarian action must be reality-based and action-oriented. This requires result-oriented coordination based on effective capabilities and concrete operational capacities.

### Responsibility

Humanitarian organizations have an ethical obligation to each other to accomplish their tasks responsibly, with integrity and in a relevant and appropriate way. They must make sure they commit to activities only when they have the means, competencies, skills, and capacity to deliver on their commitments. Decisive and robust prevention of abuses committed by humanitarians must also be a constant effort.

### Complementarity

The diversity of the humanitarian community is an asset if we build on our comparative advantages and complement each other's contributions. Local capacity is one of the main assets to enhance and on which to build. Whenever possible, humanitarian organizations should strive to make it an integral part in emergency response. Language and cultural barriers must be overcome.



# Prinsip Kerjasama

- EQUALITY
- TRANSPARANCY
- RESULT BASED OBJECTIVE
- RESPONSIBILITY
- COMPLIMENTARY



# Terima Kasih

# Disaster Logic Model

