

**PENGELOLAAN**  
**LOGISTIK ( Medik & Non Medik) di INSITUSI**  
**KESEHATAN dan FASILITAS PELAYANAN**  
**KESEHATAN pada BENCANA.**

***SULANTO SALEH DANU R.***

***PUSAT MANAJEMEN PELAYANAN KESEHATAN ( PMPK ).***  
***FAKULTAS KEDOKTERAN, KESEHATAN MASYARAKAT dan***  
***KEPERAWATAN ( FKMK )***  
***UNIVERSITAS GADJAH MADA.***

# **OBJEKTIF PERTEMUAN INI :**

**MEMAHAMI PENGELOLAAN  
LOGISTIK ( MEDIK dan Non MEDIK) di  
INSTITUSI KESEHATAN (INSTIKES) dan  
FASILITAS PELAYANAN KESEHATAN  
(FASYANKES)  
pada BENCANA.**

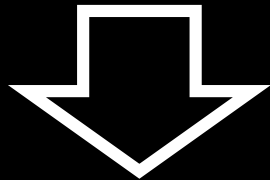
**DALAM PERTEMUAN INI ADA  
3 POKOK BAHASAN :**

- INSTITUSI KESEHATAN ( INSTIKES ) &  
FASILITAS PELAYANAN KESEHATAN  
( FASYANKES )**
- PENGELOLAAN LOGISTIK**
- BENCANA / *DISASTER***

**→ INSTITUSI KESEHATAN  
( INSTIKES )  
dan  
FASILITAS PELAYANAN KESEHATAN  
( FASYANKES ).**

# **INSTITUSI KESEHATAN:**

**Institusi / Perkantoran yang mempunyai tugas melakukan pelayanan administrasi, perijinan, regulasi, koordinasi, pengawasan dan evaluasi dalam BIDANG KESEHATAN.**



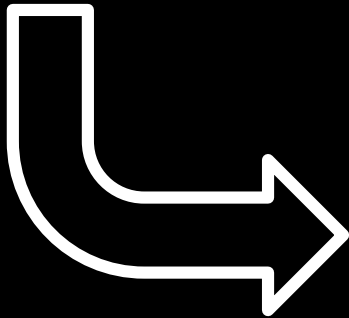
**Contoh :**

**Tingkat NASIONAL : KEM. KESEHATAN dan JAJARANNYA**

**Tingkat DAERAH : DIN KES PROPINSI / KANWIL KES;  
DIN KES KABUPATEN / KOTA.**

# **FASILITAS PELAYANAN KESEHATAN ( FASYANKES ):**

**Institusi dibawah koordinasi INSTITUSI KESEHATAN yang mempunyai kegiatan / tugas/tanggung jawab memberikan dan menyelenggarakan PELAYANAN KESEHATAN bagi Masyarakat.**



**Contoh : RUMAH SAKIT  
PUSKESMSS / PUSTU/POLINDES dll  
BALAI PENGOBATAN / KLINIK dll**



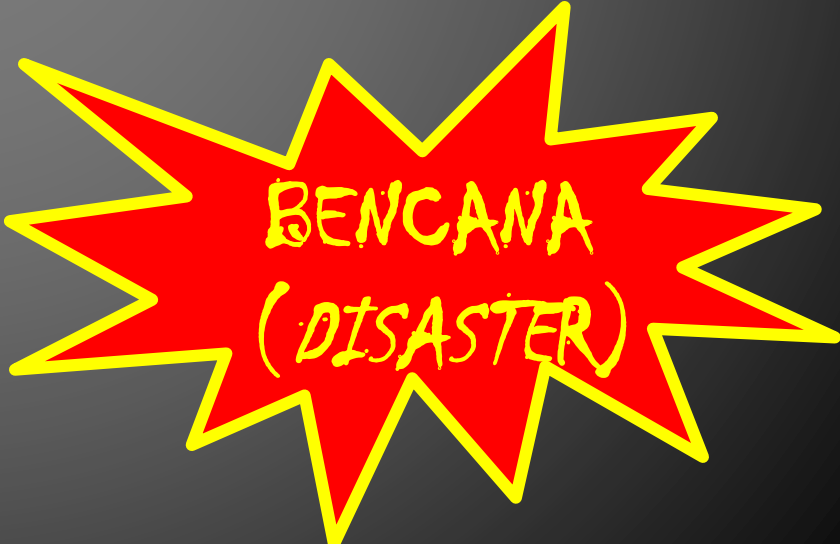
BENCANA  
(DISASTER)

INSTI KES

FAS YAN KES

BENCANA  
(DISASTER)

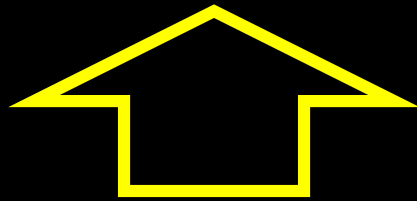
DAPAT MENIMPA :  
INTERNAL maupun EXTERNAL  
INSTI KES dan FASYANKES.



BENCANA  
(DISASTER)

UNTUK NEGARA KITA yang dikenal dengan  
“ *RING OF FIRE* “

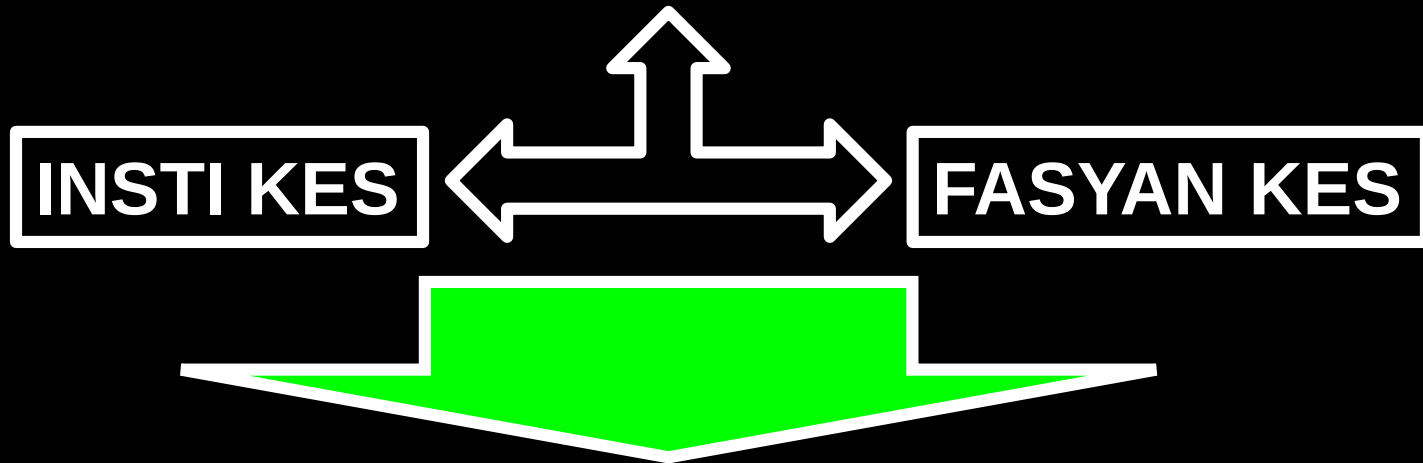
BAIK INSTI KES maupun FAS YAN KES  
HARUS MEMILIKI KONSEP KESIAP SIAGAAN  
MENGHADAPI BENCANA YANG TERTUANG  
DALAM “ *DISASTER PLAN* “.



**BENCANA  
(DISASTER)**

DAPAT MENIMPA :  
INTERNAL maupun EXTERNAL  
INSTI KES dan FASYANKES.

# ***DISASTER PLAN***



antara lain MEMUAT :

- *ICS ( Incident Command System )*
- PENGORGANISASIAN
- URAIAN TUGAS & WEWENANG
- RECORD & REPORTING / ADMIN.
- → LOGISTIK & FASILITAS – SAR PRAS.
- OPERASIONAL PLANNING dll.

# LOGISTIC

and

# DISASTER



**MEDICAL LOGISTIK - MEDLOG**  
OBAT & LOGISTIK MEDIK  
(OLM)

**NON-MED-LOGISTIK**  
LOGISTIK NON-MEDIK  
(LNM)

*..... before the fighting proper,  
the battle is won or lost  
by quartermasters .....*

*( Rommel "The desert lion " 2<sup>nd</sup> World War)*

**BEFORE-  
DISASTER**



  
**DURING  
DISASTER**

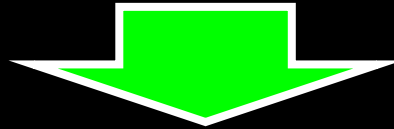
**AFTER-  
DISASTER**



**LOGISTIC STOCK & STORAGING :**  
**“ DRUG & MEDICAL LOGISTIC (MedLog) “:**  
**→ DEPEND ON :**

phase of disaster  
type of disaster  
impact in population  
location of disaster  
communication-  
transportation , etc

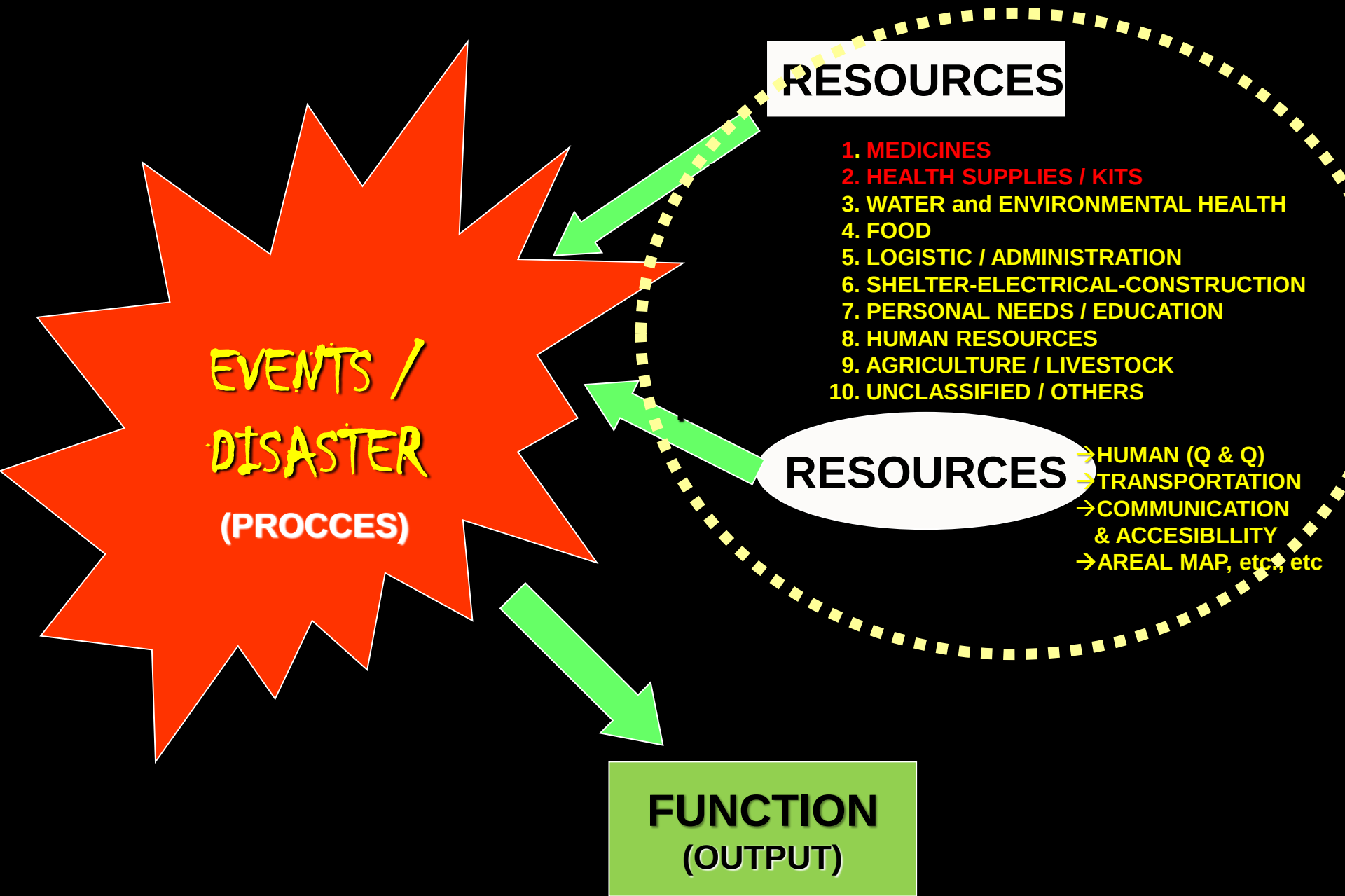
**→SURVEILANCE & EPIDEMIOLOGICAL TEAM**  
**→RAPID HEALTH ASSESSEMENT (RHA) TEAM**



**DATA : HEALTH SITUATION**  
**In DISASTER LOCATION**



**LOGISTIC STOCK & STORAGING :**  
**DRUG & MEDICAL LOGISTIC (MedLog)**  
**→DEPEND ON :**  
phase & type of disaster  
impact in population  
location of disaster  
communication-  
transportation , etc



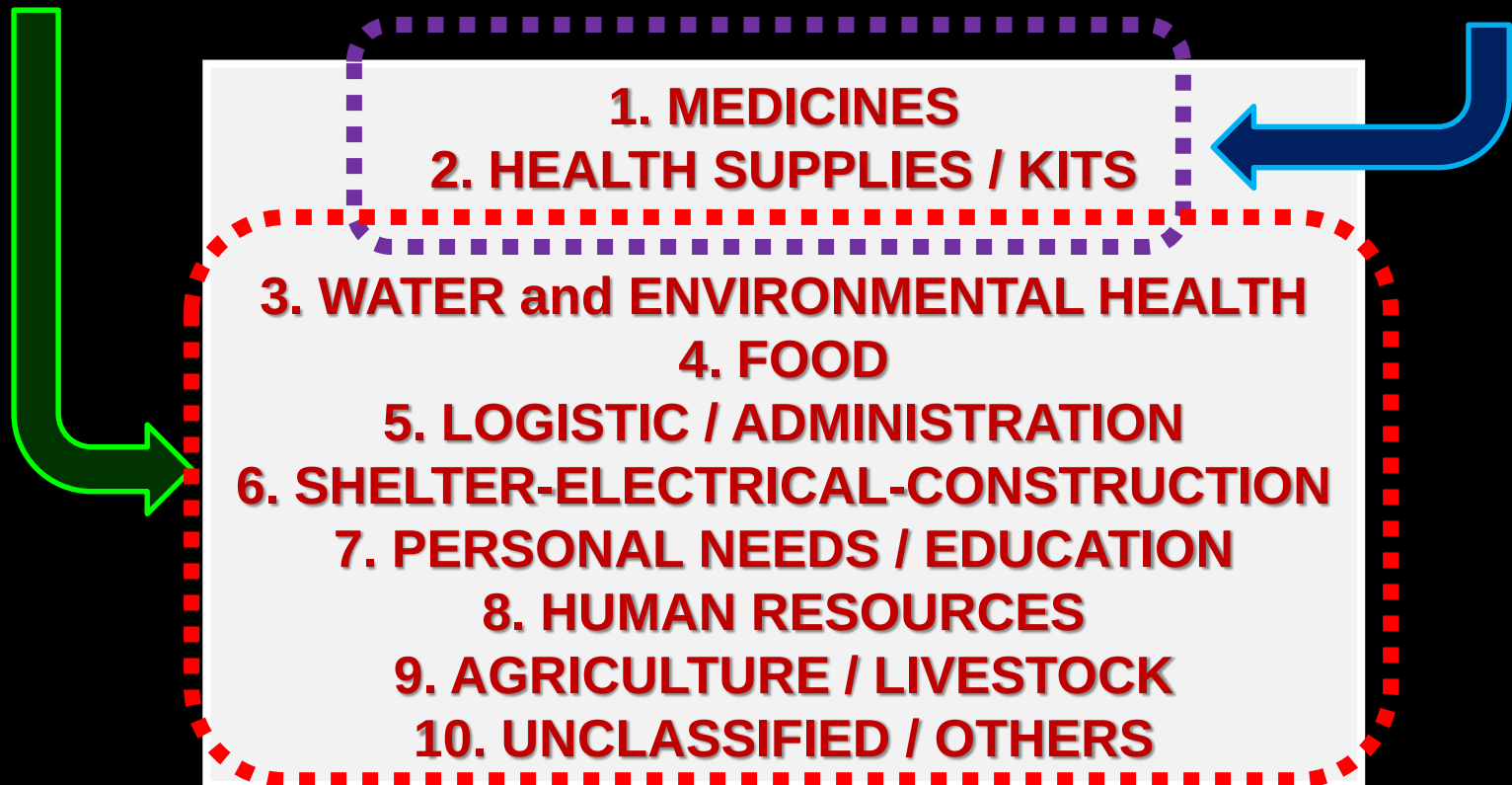
# LOGISTIC

## Non-MED-LOGISTIC

*LOGISTIK NON-MEDIK  
(LNM)*

## MEDICAL LOGISTIC

*OBAT-LOGISTIK MEDIK  
(OLM)*



**LOGISTIC** (originally from military procedure for :

**procurement;  
maintenance;  
material transportation;  
facilities;  
personal ).**

a system whose parts interact smoothly to help reach a good promptly and effectively to optimized use of resources.

**in EMERGENCY** : logistic are required to support the organization and implementation of response operation in order to ensure their timeliness and efficiency.

*(PAHO-WHO, 2001)*

# Disaster Management

## THE DISASTER RISK MANAGEMENT CYCLE



### DISASTER RISK MANAGEMENT CYCLE (DRMC) DIAGRAM

**Definitions:**

**Mitigation/Prevention:**

Activities which eliminate or reduce the chance of occurrence or the effects of a disaster.

**Preparedness:**

Planning on how to respond to disasters should they occur. This includes the provision of legislation, trained personnel and resources.

### 3 stages of DRMC

#### PRE-DISASTER

- Risk Assessment
- Mitigation/Prevention
- Preparedness

#### DISASTER RESPONSE

- Warning/Evacuation
- Saving People
- Providing Immediate Assistance
- Assessing Damage

#### POST-DISASTER

- Ongoing Assistance
- Restoration of Infrastructural Services
- Reconstruction (Resettlement /Relocation)
- Economic & Social Recovery
- Ongoing Development Activities
- Risk Assessment Mitigation/Prevention

# ***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***

*\* World Association of Disaster and Emergency Medicine ( WADEM )*

## **What is Emergency Management?**

**→ The dynamic process of preparing for  
mitigating,  
responding to , and  
recovering from  
an emergency ( *unplanned event* )**

# **LOGISTIC**

## **1. RESPONSIBLE :**

- STOCK, STORAGING and DISTRIBUTION THE FACILITIES LOGISTIC (MEDIS dan NONMEDIS); HUMAN RESOURCES**
- SUPPORTING ALL HEALTH CARE ACTIVITIES (MEDICINES, FOOD-DRINK, CLOTHES, and OTHER SUPPLIES FOR DAILY LIVING )**

## **2. SUPPORTING COMMUNICATION INTERNAL and EXTERNAL**

## **3. TRANSPORTATION FACILITIES**

**( Staff: Patients and other Personal )**

## **4. FACILITY; RESOURCES. AREA → ISOLATION; DECONTAMINATION and FIELD HOSPITAL**

# LOGISTIC

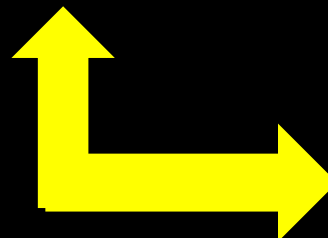


→ Personal daily living  
→ Personal safety



- EFFICIENT
- NOT TOO MUCH / TOO HEAVY
- Prepare for the Duration stay in location

▪ Team daily living  
▪ Team safety  
▪ Team communication  
▪ Team transportation  
personal & logistic carrier/  
ambulance, etc



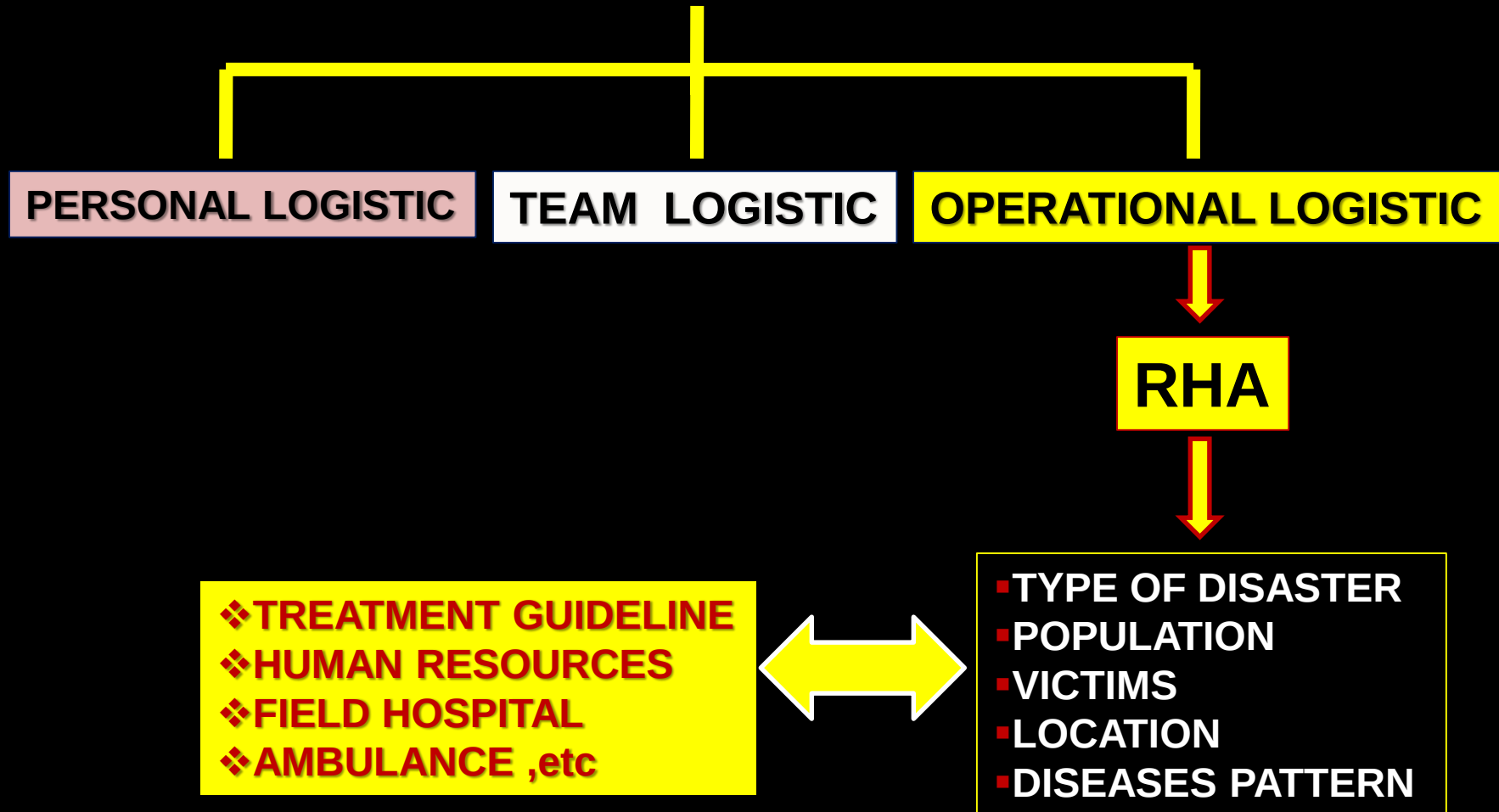
**RHA**



- TYPE OF DISASTER
- POPULATION
- VICTIMS
- LOCATION
- DISEASES PATTERN

**RHA = Rapid Health Assessment**

# LOGISTIC



# LOGISTIC & RESOURCES PREPARATION DEPENDS **THE PERIODE** **OF DISASTER :**



## PRE – DISASTER (BEFORE)

- HAZARD MAPPING
- DISASTER TYPE
- POPULATION
- HUMAN RESOURCES
- DISEASES PATTERN
- LOCATION, etc



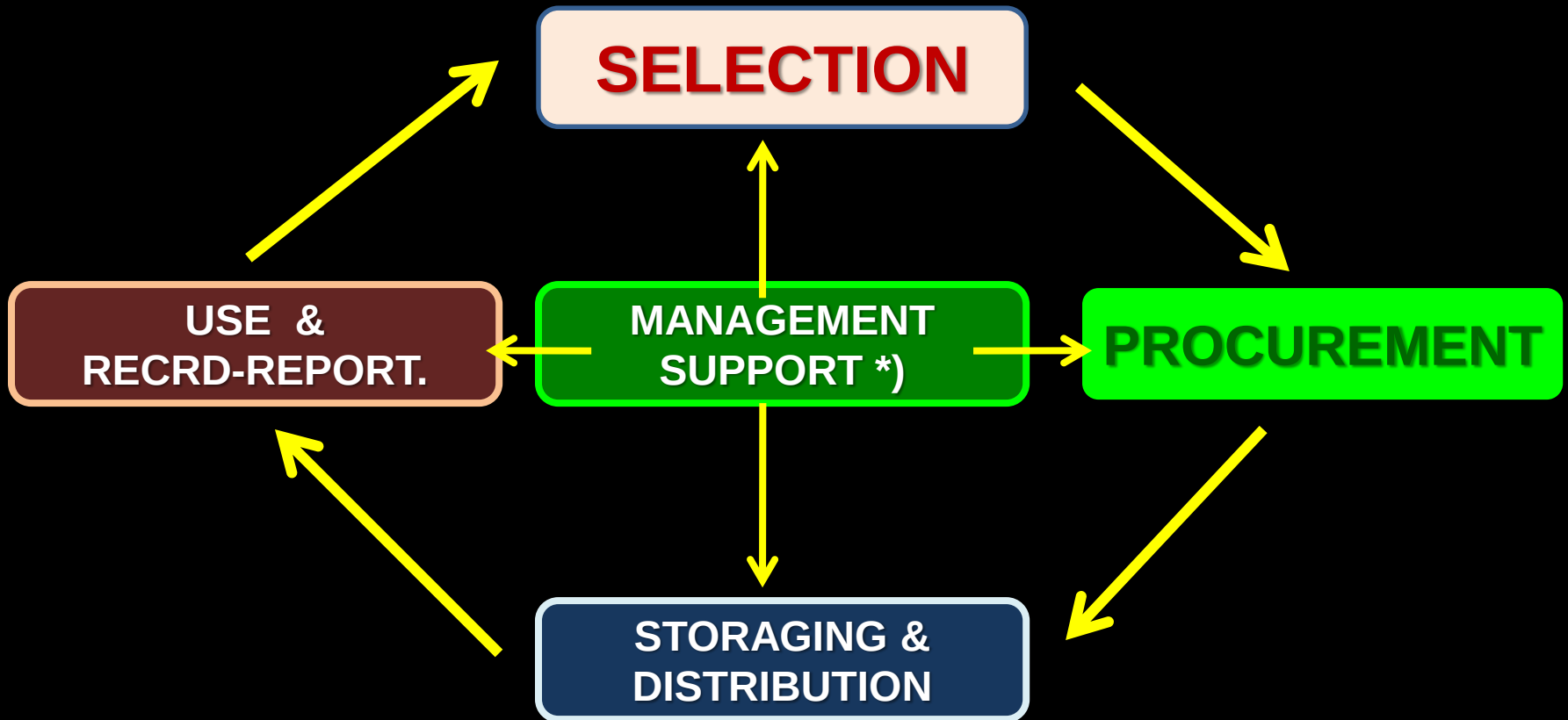
## RESPONSE & EMERGENCY (DURING)

- TRAUMA
- ACUTE
- EMERGENCY
- LIVE SAFING
- QUICK & FAST ACTION



## POST – DISASTER (AFTER)

- COMMUNICABLE DISEASES
- CHRONIC
- DEGENERATIF
- COMPLICATION



# LOGISTIC MANAGEMENT CYCLE

**\*) MANAGEMENT SUPPORT :**  
→ ORGANIZATION  
→ HUMAN RESOURCES (Q & Q)  
→ MANAGEMNT INFORM. SYST.  
→ FINANCING

→ **What is needed**

→ *How much is needed*

→ *When is it needed (urgency ?)*

→ *Where is it needed*

**POPULATION AFFECTED :**

- **total**
- **age, sex**
- **culture**

- **TYPE OF EVENT/DISASTER**  
- **DISEASE PATTERN**  
- **RESPONSIBLE PERSON**

- **TYPE OF EVENT/DISASTER**
- **SIZE OF DISASTER**
- **PHASE OF DISASTER**
- **LOCATION OF DISASTERS**

DATA / INFORMATION  
for **SELECTION** :  
MEDICAL LOGISTIC &  
NON-MEDICAL LOGISTIC.

- **LOCATION AREA AFFECTED**
- **TRANSPORTATION INFRASTRUCTURE**
- **COMMUNICATION**

# LOGISTIC RESOURCES :

## DONATIONS :

- NEIGHBOR / OTHER PROV.
- GOVERNMENT ORGANIZATION
- POLITICAL ORGANIZATION
- NON-GOV. ORGANIZATION
- HEALTH INSTITUTION
- FOREIGN COUNTRY :  
Formal Aid / by NGO

## SELF-PROCUREMENT

BUFFER STOCK  
PROVINCE

DISTRICT  
PHARMACEUTICAL  
STORAGE

LOGISTIC STOCK  
in DISASTER LOCATION.

DISTRIBUTION HEALTH CENTER

# PROCUREMENT

LOGISTIC  
PROCUREMENT

LOGISTIC  
DONATION

RESPONSIBLE  
PERSON ???

→ RECEIVER?  
→ DISTRIBUTION ?  
→ R – R ?  
→ MNGMT.  
INFORM  
SYST. (MIS)?

HRD ?

FACILITY ?

SYSTEM &  
REGULATION ?

WHO ?  
WHEN?  
HOW ?

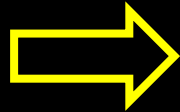
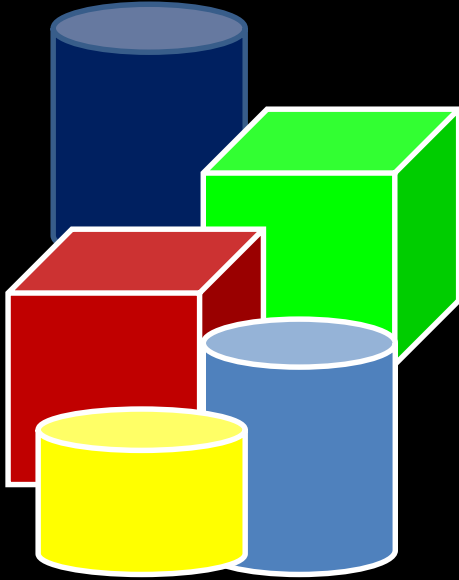
HEALTH  
CENTER

PRIMARY  
HEALTH CARE.

DISTRICT  
HOSPITAL

MOBILE  
TEAM

# RECEIVING & STORAGING THE DONATIONS (PHARMACEUTICAL & OTHERS)



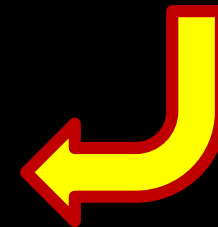
- The items ?
- Amount /volume each items?
- The donator?
- Items requirement ?
- Exp. Date.?
- Value ?
- Tax ? Etc,etc.



**LOGISTICS :**  
→ PROCUREMENTS  
→ DONATIONS

**STORAGE :**  
→ capacity?  
→ location?  
→ facility ?  
→ storing system ? etc.

- HUMAN RESOURCES ?
- WORK MECHANISM ?
- FACILITY ?
- MANGMT. SYSTEM ?
- FINANCING ?



# DISTRIBUTION

- ➡ LOCATION
- ➡ ACCESS
- ➡ TRANSPORTATION
- ➡ FACILITY
- ➡ “PULL” or “PUSH” SYSTEM

DISTRICT  
HOSPITAL

FIELD  
HOSPITAL

PRIMARY  
HEALTH CARE

MOBILE  
TEAM

HEALTH  
CENTER



**FACTs**

BANTUAN

BANTUAN

BANTUAN

LOG-MED

BANTUAN

LOG-NON-MED

BANTUAN

LOG-MED

**LOGISTIC**

**AID**

**NO INFORMATION**

**NO REPORT**

**RESPONSIBLE  
PERSON ?  
COORDINATOR ?**

**DIRECT  
DISTRIBUTION  
TO  
the LOCATION**

**DISATER  
LOCATION**

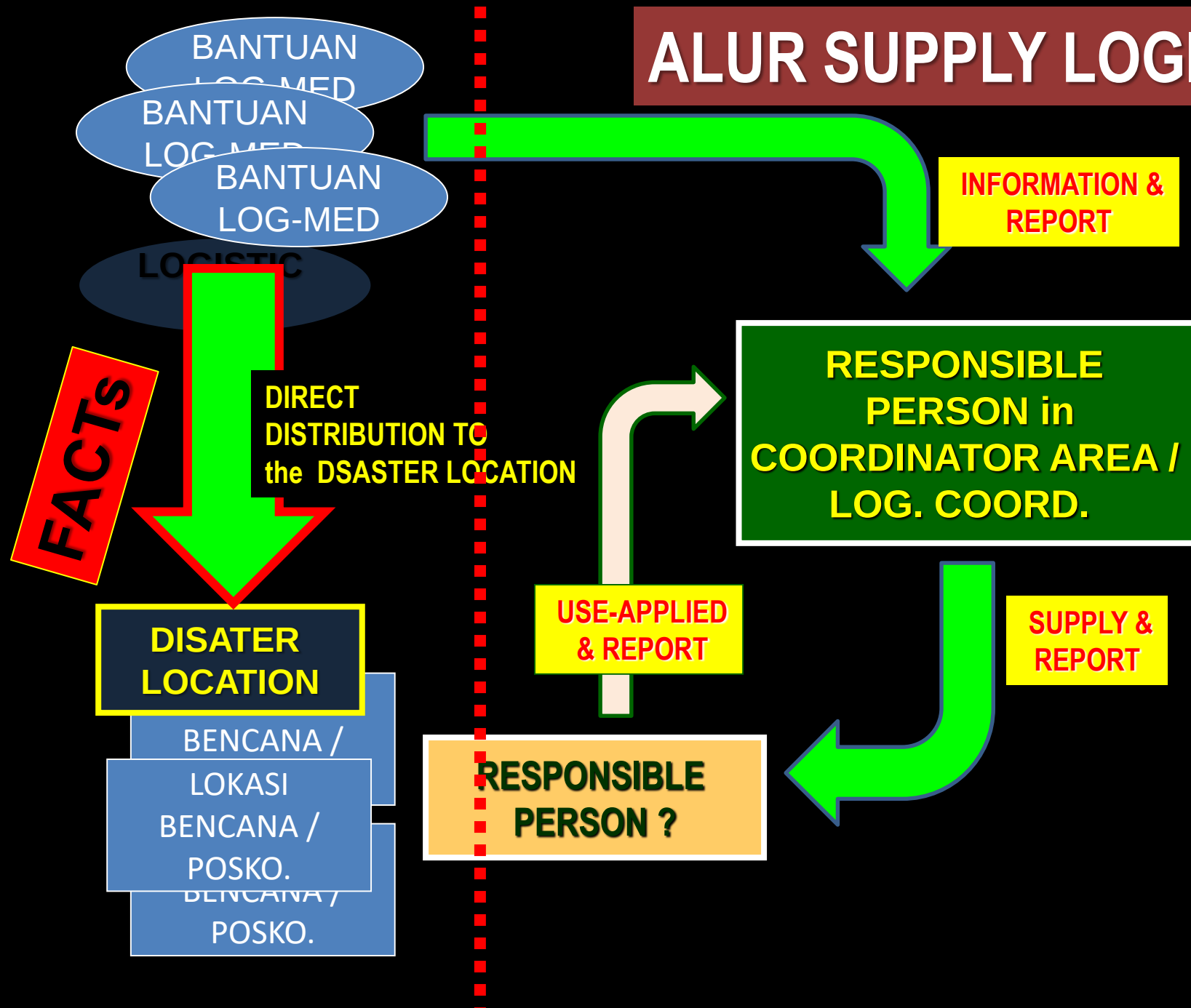
LOKASI

LOKASI

LOKASI

LOKASI

# ALUR SUPPLY LOGISTIK



## ***CORE PRINCIPLES OF A DONATION:***

- 1. MAXIMUM BENEFIT TO THE RECIPIENT***
- 2. RESPECT FOR WISHES AND AUTHORITY OF THE RECIPIENT***
- 3. NO DOUBLE STANDARDS IN QUALITY***
- 4. EFFECTIVE COMMUNICATION BETWEEN DONOR AND RECIPIENT***

## →GUIDELINE FOR DRUG DONATIONS :

WHO; UNHCR; UNICEF; the Red Cross / ICRC;  
Medicines sans Frontieres; OXFAM; Dewan Gereja & LSM.

### Objective :

- increasing the quality of medical logistic donation.  
NOT AS INTERNATIONAL REGULATION , but IT's MORE  
GUIDELINE FOR MEDICAL and DRUGS DONATION.

### Guideline content:

- Selection and storaging ( generic name; indication; dosage; formulation; diseases pattern –condition of reciepients )
- QA , based on WHO certificate. Expired Date > 1 year;
- Packing, labelling: clear and international standard.
- Packed information, how to use and managing the supplies



**POKOK BAHASAN :**

**→ BENCANA / *DISASTER***



# REGULASI: UU 24/2007 tentang PENANGGULANGAN BENCANA

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

**NATURAL DISASTER:** *earthquake, tsunami, eruption, flood, drought, typhoon/tornado and landslide.*

**NON-NATURAL DISASTER :** *technology failure, inappropriate modernization epidemic - pandemic .*

**SOCIAL DISASTER** : *manmade disaster, social conflict : terrorism, between human / group/ mass.*

# Disaster :

*“ Sudden ecological phenomenon of sufficient magnitude to require external assistance “*

*( WHO )*

*“ Destructive effect of natural or manmade force overwhelm the ability of given area or community to **meet the demand for health care** “*

*( American college of Emergency Physicians )*

**MITIGASI (DepKes 2007) : Upaya yang dilakukan untuk mengurangi dampak yang terjadi akibat bencana dengan menggunakan teknologi inovatif, misalnya, pembangunan RS tahan gempa; pengaturan aliran lahar g.berapi; kelambu anti nyamuk malaria.**

***MITIGATION ( DISASTER MITIGATION) –Sundnes,K O;  
Birnbaum, M L; 2002: alteration that are  
achieved **before an event occurs** that  
**decrease vulnerability*****

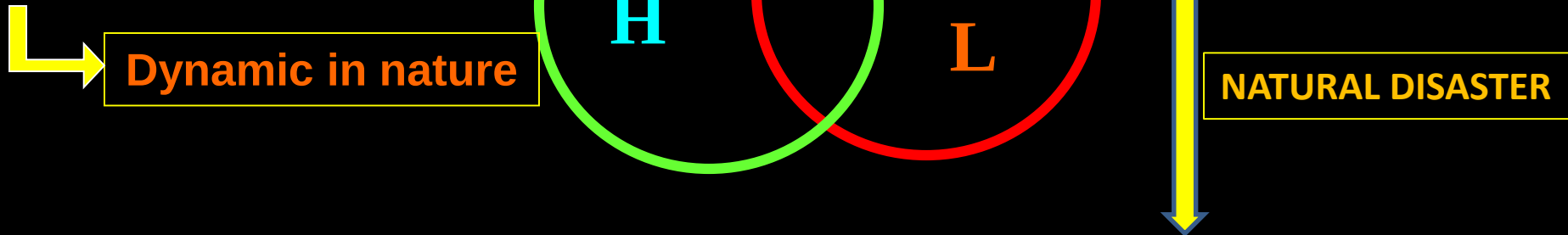
# CAUSE & TYPES OF NATURAL DISASTER

A: Atmosphere

H: Hydrosphere

L: Lithosphere

B: Biosphere



Natural disaster on A: typhoon, tornado, storms

Natural disaster on H: flood, tsunami, drought

Natural disaster on L: earthquake, volcanic eruption, landslide, liquifaction.

Biological disaster on B: disease outbreak; epidemic (ebola; cholera; etc)

HAZARD

RISK(S)

EVENT

IMPACT

DAMAGE

DISASTER

**Prevention**

**Mitigate**

**Preparedness**

**Resilience**

Absorbing capacity

Bufering capacity

**Response**

**Recovery  
Development**

**Disaster  
Management**

➤ **Pre Disaster**

➤ **In Disaster**

➤ **After Disaster**

**REGIONAL  
DISASTER  
PLAN ( RDP )**

**HOSPITAL  
DISASTER  
PLAN ( HDP )**

**Acute Medical Response :**

**Pre Hospital**

**Hospital**

# NATURAL: HAZARD and DISASTER?



***Hazard*** is an event or occurrence that has the potential for causing injuries to life and damaging property and the environment.



An event, either man-made or natural, sudden or progressive, causing widespread human, material or environmental losses

**PREPARADNESS  
ACTION PLAN**

**RESPONSE**

**Mitigation &  
Preparedness**

**EARLY WARNING;  
RISK ASSESSEMENT;  
& PREPARADNESS.**

**SECOND /  
ALTERNATION  
PLAN**

**LOGISTIC : MED &  
NON-MED;  
Human Resources:  
VOLUNTEER.**





Aftermath of an earthquake in Japan, 2004  
Photograph by Kimimasa Mayama/Reuters

NATIONAL GEOGRAPHIC

© 2007 National Geographic Society. All rights reserved.

## THE DISASTER RISK MANAGEMENT CYCLE



### 3 stages of DRMC

#### PRE-DISASTER

- Risk Assessment
- Mitigation/Prevention
- Preparedness

#### DISASTER RESPONSE

- Warning/Evacuation
- Saving People
- Providing Immediate Assistance
- Assessing Damage

#### POST-DISASTER

- Ongoing Assistance
- Restoration of Infrastructural Services
- Reconstruction (Resettlement /Relocation)
- Economic & Social Recovery
- Ongoing Development Activities
- Risk Assessment Mitigation/Prevention

### DISASTER RISK MANAGEMENT CYCLE (DRMC) DIAGRAM

#### Definitions:

**Mitigation/Prevention:**  
Activities which eliminate or reduce the chance of occurrence or the effects of a disaster.

**Preparedness:**  
Planning on how to respond to disasters should they occur. This includes the provision of legislation, trained personnel and resources.

DRMC/18 - 6/10/2010 2003



## **TUGAS HOME WORK**

- 1- TULIS NAMA; NO; MHSW; ASAL DAERAH; TANDA TANGAN.**
- 2. TUGAS DIKERJAKAN DALAM WAKTU : 10 HARI  
( DITUMPUK PALING AKHIR TGL 14 – 09 – 2024 )**

### **TUGAS :**

**Pada pagi hari menjelang subuh, awal bulan ini didaerah anda \ terjadi BENCANA ALAM GEMPA BUMI DISERTAI BANJIR BANDANG DAN LONGSOR meimbulkann korban yang cukup banyak ;**

**Anda ditunjuk oleh Pimpiman untuk menyusun Perencanaan dan Pengelolaan LOGISTIK.**

**SEKIAN,  
TERIMA KASIH,  
SAMPAI JUMPA  
dan  
WASSALAMU'ALAIKUM WrWb**