Management and Community - based Disaster Preparedness

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Think about …

"A state of emergency *preparedness* exists when communities are *ready* and *able to cope* effectively with the impact and the consequences of most hazards with *little* or *no* external assistance"

Agenda

1) **Several characteristics of disasters in Indonesia**
2) **Several management problems**
3) **Bali's community disaster preparedness experiences**

1. Several characteristics of disaster in Indonesia

Risk factors and disasters

Geographic factors and climates

Demography factors

Social, economy, political factors

Health system and resources

Disasters

1) Natural
2) Man-made
3) Complex
4) Outbreaks
5) Technological
6) Terrorism
7) Etc.

2. Several problems on preparedness

Risk factors

Geography

Archipelago; Thousands of islands (16,000); Big number (128) of active volcanoes; Tectonic areas; Earthquake; Landslides; Tsunami; Strong winds; Poor health sanitation, etc.

Demography

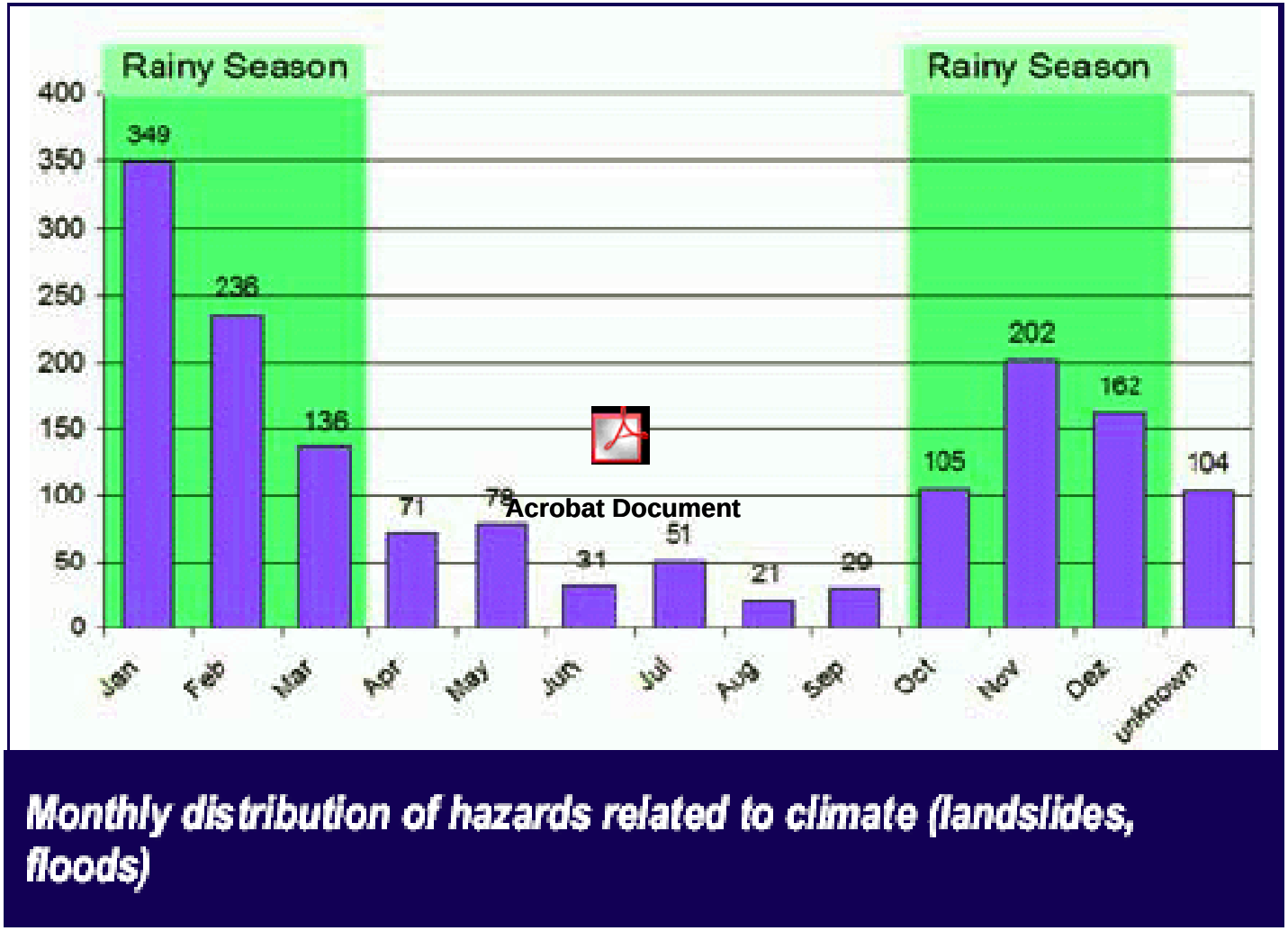
Multi ethnics; Multi religions; Big number of population (215 million); Low education level; Ages (young, old); Fast people mobility, etc.

Health – Social – Economy – Politic

Malnutrition; Lower coverage of immunization; Big number of poor families; Big number of unemployment; Low income; Economic crisis and unrest; Social unrest Decentralization process since 2001

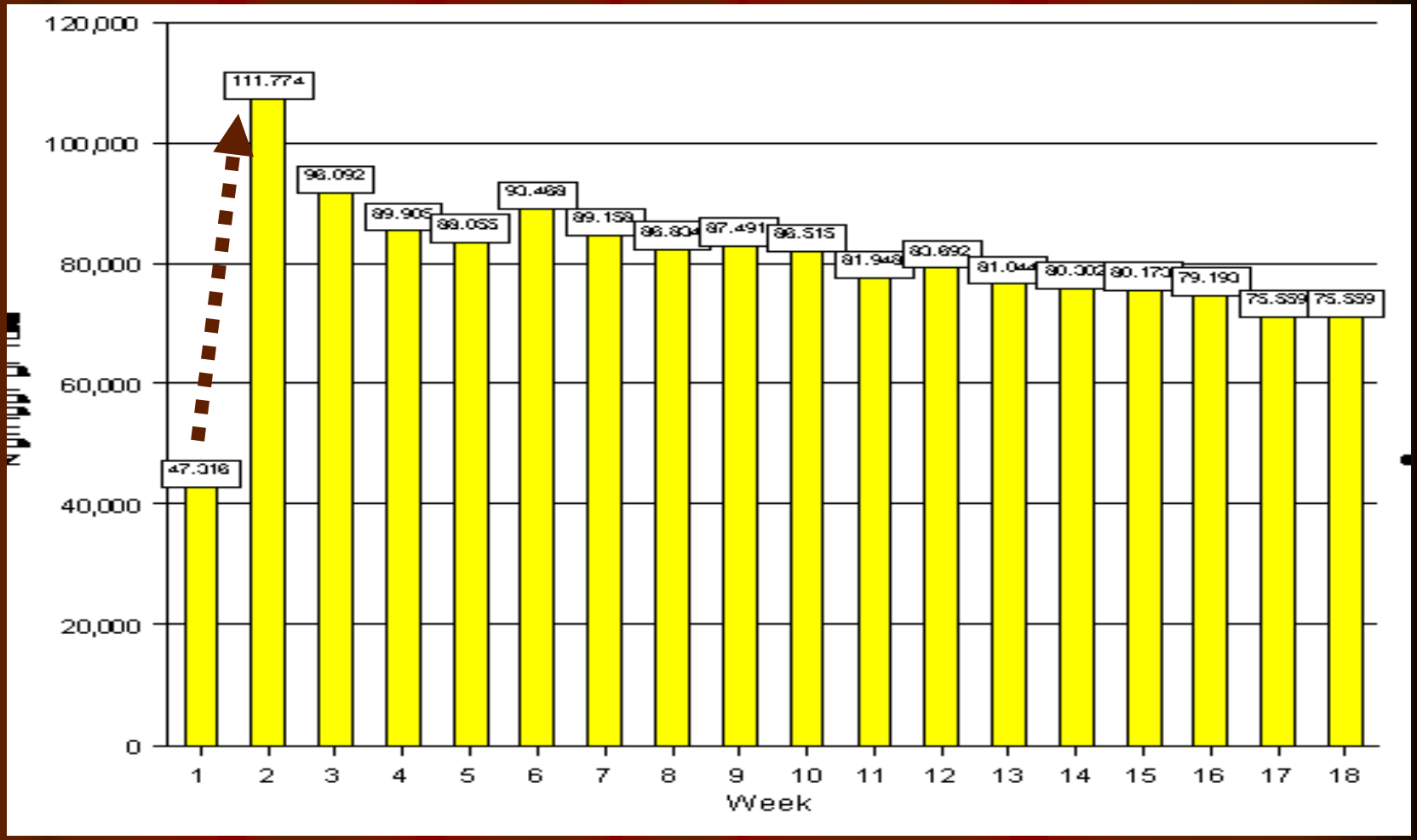
Human attitude ???

Disaster management: Inappropriate emergency mechanism coordination



Monthly distribution of hazards related to climate (landslides, floods)

Source: GeoProject. Mitigation of geohazards in Indonesia. Jan. 2005.



Accumulative number of IDPs in the case of West Kalimantan

Within two weeks: 100.000 IDPs

Number of affected people – Selected earthquake and tsunami

Date	Death and buried		Missing		Displaced	
	Aceh	North Sumatra	Aceh	North Sumatra	Aceh	North Sumatra
Tsunami						
31 Jan 05	108,110	130	127,749	24	426,849	n/a
28 Feb 05	124,829	130	111,578	24	400,376	19,620
02 Mar 05	125,313	130	94,682	24	400,062	19,620
Earth quake						
28 March 05	62	851	-	-	+81.816	+56.182
14 May 05	?	?	?	?	?	?

27 May 06	Bantul	Yogya	Klaten	Sleman	Gn. Kidul	Others
Death	2,159	109	727	55	36	12
Wounded	1,889	300	1,224	2,380	1,500	155

Source: Bakornas PBP and Kompas


13 Aliran Kali (Sungai) dan Kawasan Berpotensi Banjir

P JAWA

Teluk Jakarta

JAKARTA BARAT

JAKARTA PUSAT

JAKARTA UTARA

JAKARTA TIMUR

JAKARTA SELATAN

Pos Pengamat Angke Hulu

Pos Pengamat Sunter Hulu

Pos Pengamat Krukut Hulu

Pos Pengamat Pesanggrahan

Pos Pengamat Depok

Pos Pengamat Cipinang Hulu

Pos Pengamat Ketulampa

KE BOGOR

Keterangan

Banjir Kanal Barat

Proyek Banjir Kanal Timur

Aliran Wilayah Tengah

Aliran Wilayah Barat

Aliran Wilayah Timur

Sungai

Waduk/danau/situ

Muka Air Tertinggi di Beberapa Pos dan Pintu Air

Tanggal 3 Februari-6 Februari 2007

Lokasi	Tinggi Normal	Tanggal	Waktu	Tinggi Muka Air
Pos Ketulampa	170	3/2/2007	11.00	250
Pos Depok	200	3/2/2007	16.00	400
Pintu Air Manggarai	750	4/2/2007	08.00	1090
Pintu Air Karet	450	4/2/2007	11.00	770
Pos Sunter Hulu	140	5/2/2007	12.00-14.00	260
Pos Cipinang Hulu	150	5/2/2007	10.00	210
Pintu Air Pulo Gadung	556	3-4/2/2007	07.00-23.00	785

KORBAN BANJIR

Menanti Bantuan, Dirikan Tenda di Jalan Tol

oleh PASCAL S BIN SAJU

Rumah dan seluruh isinya tergenang banjir. Tidak ada pakaian dan makanan.

Suasana sempat menjadi sedikit tegang ketika aparat Kepolisian Resor (Polres) Metro Jakarta Utara tiba-tiba menangkap Jumali (33) dan Heri (33), Senin

nah meminta paksa," kata Yaumil Akmal, seorang warga yang juga mengangsi ke jalan tol itu.

Kepala Polres Metro Jakarta

Memang tidak ada pelapor resmi, tetapi tindakan segelitir warga di jalan tol itu bisa menimbulkan keresahan yang luas. Mereka diamankan dalam rang-

Warga korban banjir yang masih bertahan di perumahan elite di kawasan Kelapa Gading, Jakarta Utara, mulai berbelanja bahan makanan, Selasa (6/2). Hingga hari kelima bencana banjir, kawasan tersebut masih tergenang air.

Flood Survival Shopping Jakarta 2007


MYANMAR
THAILAND
Bangkok
INDIA
LUZON
Manila
Philippine Sea
GUAM
MICRONESIA
VIETNAM
South China Sea
Andaman Sea
Bay of Bengal
Phnom Penh
Ho Chi Minh City
Cebu
MICRONESIA
Gulf of Thailand
PHILIPPINES
Koror
Davao
Bandar Seri Begawan
Strait of Malacca
Kuala Lumpur
Medan
Singapore
Sulawesi Sea
PACIFIC OCEAN
BORNEO
SUNDA ISLANDS
SUMATRA
INDONESIA
Balikpapan
Sorong
Palembang
Ujung Pandang
NEW GUINEA
PAPUA NEW GUINEA
Tanjungkarang-Telukbetung
Jakarta
Surabaia
Semarang
Banda Sea
Ende
CHRISTMAS ISLAND
Port Moresby
COCOS ISLANDS
INDIAN OCEAN
Darwin
Coral Sea
WESTERN AUSTRALIA
NORTHERN TERRITORY
QUEENSLAND
AUSTRALIA
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Positive findings

Fact	Place
Disaster mapping is available at IDP, flood, typhoon, landslides, haze, and earthquake Satkorlak developed guidance and SOP on emergency	North Sumatra
Fast spontaneous emergency response from the local community and neighbourhood districts and other countries during Bengkulu earthquake on 4 June 2000	Bengkulu
Air pollution performed at 2-weeks interval Almost every villages had a fire prevention clubs, and worked together in case of fire	South Kalimantan
Province Health Office established its own health emergency task force PBP SATGAS for IDPs and disasters to identify the short comings and the needs of several sub-districts	North Maluku
SSB radio communication was available at hospitals, districts, and health centres Satlak developed SOP on emergency in 1996	North Maluku, NTT

Source:. Echevarria JM, Besuges P, Basuki B. Assessment on Emergency Preparedness (AEP) in Disaster Situations. Jakarta. WHO-SEARHA.2002.

Other Findings

- Good will and efforts in the Government and international donor community, but lack of sensitivity on preparedness, compared to response, at central and provincial levels.
- Meagre coordination mechanisms and communication flows among the public sectors at all levels, and the UN agencies.

- Yearly funds, allocated by the central government for emergency matters, are not sufficient.
- Limited amount of these funds are available to the sub-districts, district, and provincial levels.

Other Findings

- Most of these emergency funds are used for response rather than for preparedness
- Number of qualified staff are clearly insufficient.
- The communities and their leaders are rarely involved in emergency preparedness or management.
- Trainings on emergency preparedness do not have good and standard methodology, and training efforts are not coordinated.

Disaster management

Disaster management

Legislation
Management
Coordination
Early warning system
Constraints

Management
Coordination
Constraints

Management
Coordination
Reconstruction
Rehabilitation
Constraints

BAKORNAS
(National Coordinating Board)

1966

Advisory Board for Natural Disasters Management
(Emergency Relief for Disaster Victims)

1979

BAKORNAS PBA

Extended to Provincial (SATKORLAK) and District Task Forces (SATLAK) levels.
Four Ministers, Chaired by Minister for People Welfare

1990

BAKORNAS PB

Armed Forces included

1999

BAKORNAS PBP

Management of man-made disasters or social unrest, (IDPs issues) included.
Membership extended up to 13 Ministers and related Governors

BAKORNAS PBP

Revised 2001

BAKORNAS ORGANIZATION

BASED ON PRESIDENT DECREE No. 3 2001)

Central Level

BAKORNAS PBP
Chairman: Vice President
Members:
Related Ministers,
Armed Forces Chief Commander
Head of National Police,
The related Governor.

Bakornas PBP Secretary

Province Level

SATKORLAK PBP
Chairman: Governor
Members: Head of Provincial Govn. Offices
Armed Forces Province Commander
Head of Prov. Police

Satkorlak PBP Secretary

District Level

SATLAK PBP
Chairman: Head of District / Municipality Office
Members:
Head of District / Municipality Offices
Armed Forces District Commander
Head of District Police

Satlak PBP Secretary

Sub-District Level

SATGAS PBP
Chairman: Head of Sub-District Office
Members:
Head of Sub-District Offices
Armed Forces Sub-District Commander
Head of Sub-District Police

Satgas PBP Secretary

Command Post (POSKO) DISASTER RELIEF FOR TSUNAMI, CENTRAL LEVEL

POSKO KESRA

POSKO ACEH

PST ------- 0868–12128645
KODAM-- 0868–12128643
POLDA -- 0868–12128644
Kol.Yardi --- 0811.689699

POSKO UTAMA MEDAN

061 – 77814162
061 – 7881221
061 – 7881444
Tabrani – 0812.910644
Amrun Daulay–0812.1061669

POSKO DEPSOS

021-392.30780

POSKO DEPDAGRI

021-3140186

POSKO DEPKES

021-526.5043

POSKO LIN

T. 021-352.0185
F. 021-3440051

RS. ACEH

RSU Tapak Tuan : 0656-21013
RSU Langsa : 0641–21009
RSU Cut Meutia : 0645-21701
RSU Cut Nyak Dhien : 0655-21173
RSU Cut Meutia Lhok.0645-43012
RS PT Arun : 0645-653153
RS Rem011 Lhoks. :0645.42617
RSU Dr.Zainoel Abd : 0651.22077
RS Jiwa B. Aceh : 0651.32010
RSU Sabang : 0652.21310

POSKO HALIM

Posko – 021.8019035
Pak Andi–0813.10129186
Ibu Tio – 0812.1012660

KANTOR MENKO KESRA

345.3676 ---- 345.9102
350.7538 ---- 350.7543

Account : BNI Cab. Harmoni
A.n. : Posko Bencana Alam Aceh
Kementerian Kesra
070.003112717.911

POSKO DEPLU

021-384.6633
Fax.021-3858049

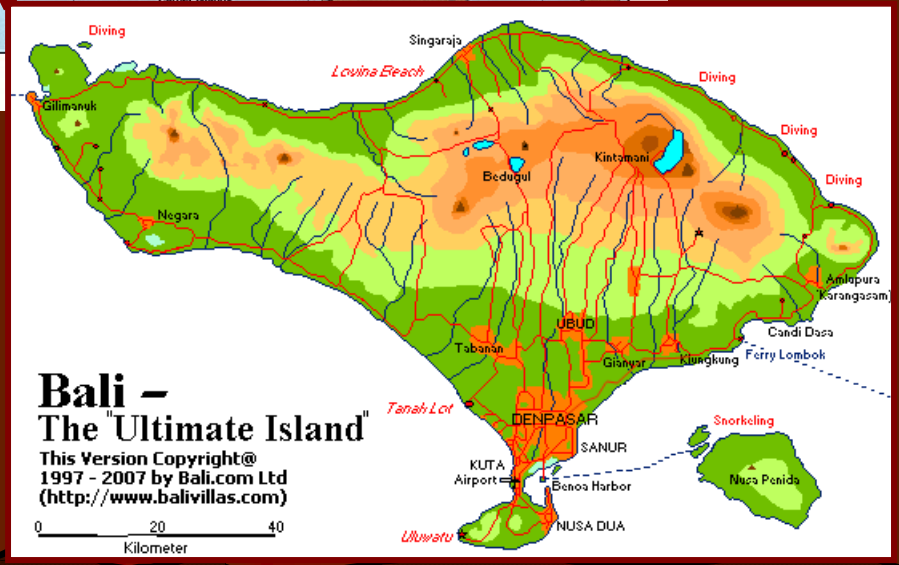
POSKO DEPHUB

Ibu Titin & Bp Djoko
021-3507633
021-3503345
0816.1903217
0816.946340

Source: Bakornas PBP
23 July 2008

3. Bali's community-based disaster preparedness experiences

Bali's community preparedness experience



Bali's community preparedness experience

- **Bali had two times unexpected bombings**
- **The bombing made toppled Bali economy. Bali economy had reached the bottom level and freeze for many years.**
- **Bali gross product which had relied on tourist industry had crumpled beyond any repair, and effort to go back to agricultural and fishery were much too late.**

Bali's preparedness experience *(continued)*

- **The health system for mass disaster and mass casualties, which was not exactly existed before the bombing, emerged quickly to the surface**
- **Health professionals especially surgeons realized the importance to develop the pre-hospital and hospital system and networking which to be able mitigate casualties more effectively.**
- **Training set up and training implementation started soon after first Bali bombing.**
- **The second Bali bombing (smaller scale) → the external mass disaster system was able to manage casualties better than the first bombing**

"Community"

- Central government
- Provincial government
- District government
- Sub district government
- Village leader
- People / Laymen

Donor agency
Etc.

THE TRAINING

- The training for different levels of health personnel starting with the personnel at provincial hospital in Bali (Sanglah Hospital), smaller district hospitals of all over the Island of Bali, and private hospitals / clinics as well.
- The training also was involving the hospital, ambulance and health center personnel and laymen, including *pecalang*.

Pecalang, **Balinese "traditional security members, recruited from local village community. They have important role as the first laymen who will arrive at the disaster scene. When properly trained, would be a good "medical first responder" or even could give "simple triage and basic life support" to the disaster victims.**
The training have to spread island wide, started with pecalang representative of districts, and when funds are available, this training should be continued to the smaller region at least sub-districts.

Specific community-based programme

1) Community Based Action Teams (CBAT) effectively mobilise a number of communities for **Community Based Risk Reduction** (CBRR), and CBATs effective in CBRR planning, awareness raising and advocacy for local government support
2) Awareness about CBRR raised in target villages and local Government authorities.
3) Co-ordination mechanisms between local government, NGOs and other agencies are established
4) *A number of* CBRR focused disaster response volunteers are trained and functioning well in a target community

Training type, participant, and topics

Type of training	Participant	Topics /obbjective
Disaster management	**Policy maker, stakeholder**	**Management support**
MFR (Medical First Responder); BLS (Basic Life Support)	***Pecalang,*** **ambulance driver**	**How to use: simple communication equipment: handy-talky, phones to report accident in their villages medical personnel; to do simple field triage, and basic life support such as: to open airway, simple breathing support, simple technique of pressure bandage to stop bleeding and "fracture splinting" of long bones**
BTLS (Basic Trauma Life Support)	**Nurse/ paramedic**	**To handle and manage disaster victims at higher level, while waiting for doctors to come.**
ATLS (Advanced Trauma Life Support)	**Medical doctor**	**to be able to do more advance triage, primary and secondary assessment of patient condition, and resuscitate patients who need most according to ABCD priorities.**
DSTC (Definitive Surgical Trauma Course)	**Surgeon**	**front line personnel in dealing with mass disaster, have to be equipped with the ability to read victims general condition**

Source: Manuaba C, Bali, 2007

Problem and needs

Problems	Needs
Insufficient number of “new instructors”	The recruitment of “new instructors” for every district in Bali Trainng for trainers
The training given in Bali were not regular and continuing basis, and were not yet distributed to all districts in Bali; Budget constraint.	More budget
The training mostly were involved the districts which were more active sending their personnel, and did not from districts with more hazards or risks in their area.	More interpersonal approach
The training were not or rarely materialized into “real situation training” such as: on the table exercises, regular field simulation and drills,	The disaster plan should be developed looking at local / district / need, and risk and hazards
	Please join us ...

Ideal Training Maintenance

- The training would be conducted every 2 – 3 months, rotating in each district in Bali, involving the *"pecalang"*, ambulance drivers, nurses/ paramedics.
- Training for doctors (ATLS), surgeons (DSTC/ Disaster Management) and management levels (HOPE) every 6 months at provincial level.
- The field training or "drills/simulation" of disaster (plan) conducted every 3 months in each district, and every six months at provincial level involving all districts in Bali.

Budget needed for training one year

Training	Participant	Number of participant per class	Day	Cost per person (US$)	Sub-total (US$)
MFR (Medical First Responder) & BLS (Basic Life Support): 3 day training	*Pecalang*, ambulance driver	30	4	200	24,000
BTLS (Basic Trauma Life Support) training	Nurse	30	4	250	30,000
ATLS (Advanced Trauma Life Support) for doctor	Medical doctor	30	2	500	30,000
DSTC (Definitive Surgery for Trauma Care) for General Surgeon	Surgeon	30	2	600	36,000
HOPE (Hospital Preparedness for Emergency and Disaster)	Hospital or health manager	30	2	600	36,000
Instructor's airfares and accommodation/lodging*					
Airfare Tickets = 4 x 16 x US$200					12,800
Accommodation cost = 3 x 4 x 16 x US$ 100					19,200
				Total	**200,800**

Think about …

"A state of emergency *preparedness* exists when communities are *ready* and *able to cope* effectively with the impact and the consequences of most hazards with *little* or *no* external assistance"

Thank you …

Bali's preparedness experience *(continued)*

- **Health professionals, especially surgeons, started to train other health personnel to be able to manage a great numbers of casualties.**
- **Training started from the "grass root levels" to sophisticated level I trauma centers more efficiently.**
- **Medical First responder and Basic Life Support (BLS) for ambulance drivers, Basic Trauma Life Support (BTLS) for ambulance nurses and Advanced Trauma Life Support (ATLS) for ambulance doctors.**
- **Most of trainings were funded by government or by international funds (such as AUSAID, WHO).**
- **List of ambulances and their geographical map and locations were put into data base.**

Bali's preparedness experience *(continued)*

- **Training of hospital and health offices concerning hospital preparedness (HOPE = Hospital Preparedness for Emergency and Disaster) was given by Collegiums team of Indonesian Surgeons Association on disasters management from the management point of view (management support).**

Disaster plan for pre-hospital and hospital system (internal or external disaster)

1) to identify risk factors, specific hazards of the region, priority;
2) to develop a “guideline book” of specific risks/ hazards;
3) to write a plan of how to handle/ manage, mitigate and if possible to prevent them from happening;
4) to conduct training for trainers;
5) to conduct training for policy makers, organizers, stakeholders, implementers or executors, field workers, etc.
6) Guideline book has to be translated into different disaster plans for different possible hazards that might occur.

Once "disaster plans" have been developed …

- **They should be simulated by personnel involved in a morel likely real situation,**

  to give them the sense of real emergency and how to cope and manage them.

  Simulations and "drills" have to done in regular basis.

  Identification of shortcomings, problems have to be improved to have a effective and "simple" disaster plans.