

Khon Kaen Province

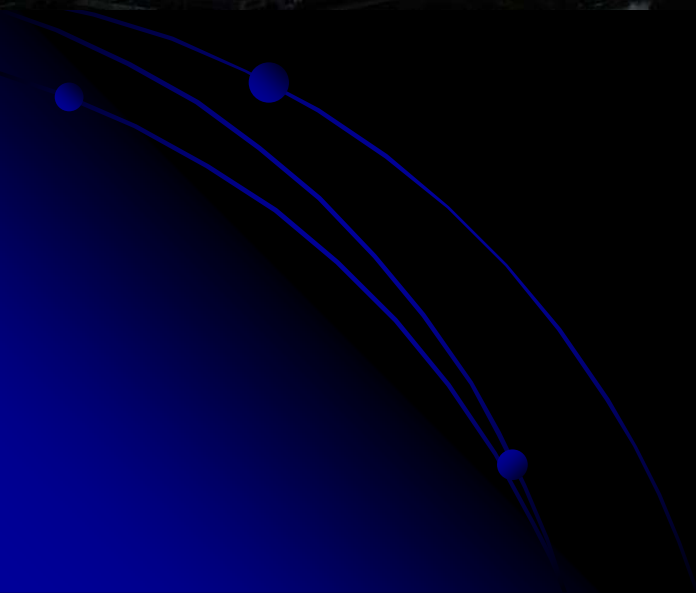




Khon Kaen Regional Hospital















EMS mission during 9-23 October 2011 *reported by EMIT*

- 404 hospitals had been submerged and needed to be closed
- 357 patients transported by car ambulances
- 349 patients transported by boats
- 170 patients transported by C130
- 53 patients transported by helicopters
- Not included thousand of missions for emergency conditions
- 400.000 visits at the camp

ระบบบริการทางแพทย์ฉุกเฉิน
ภาคตะวันออกเฉียงเหนือ











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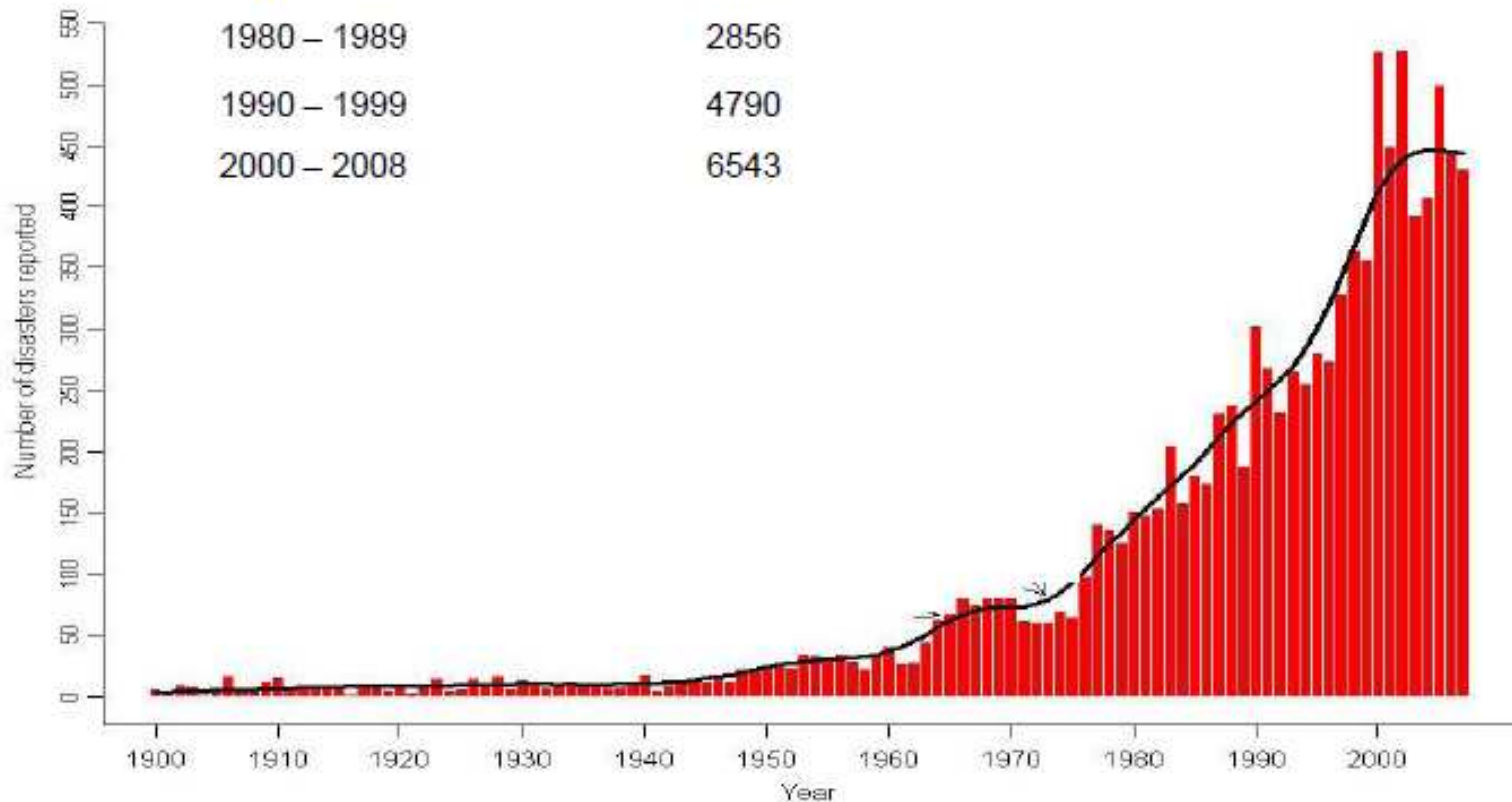


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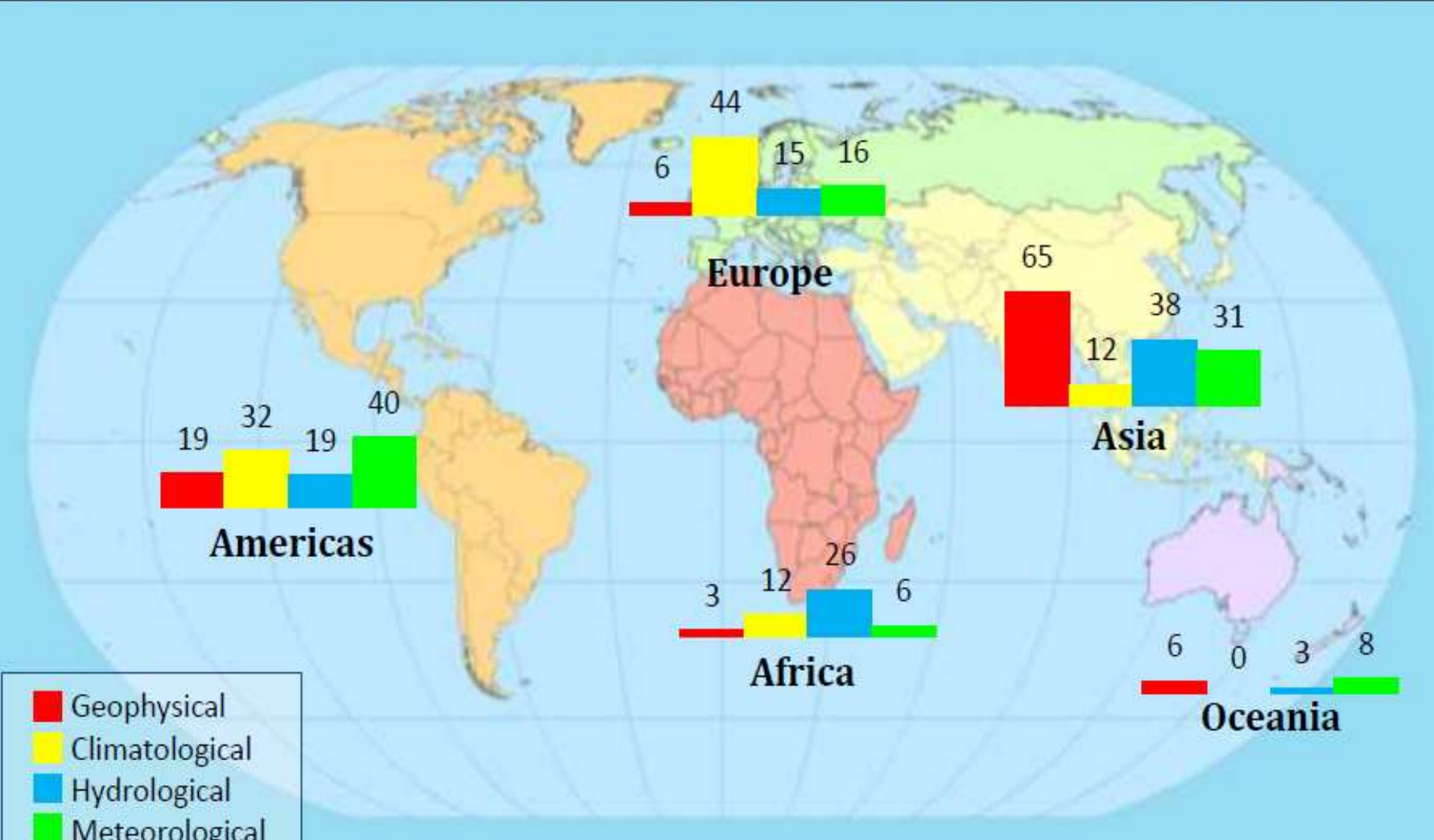
Number of disasters in the world, 1900 - 2008

Year	Number of Disasters
1970 - 1979	1230
1980 - 1989	2856
1990 - 1999	4790
2000 - 2008	6543



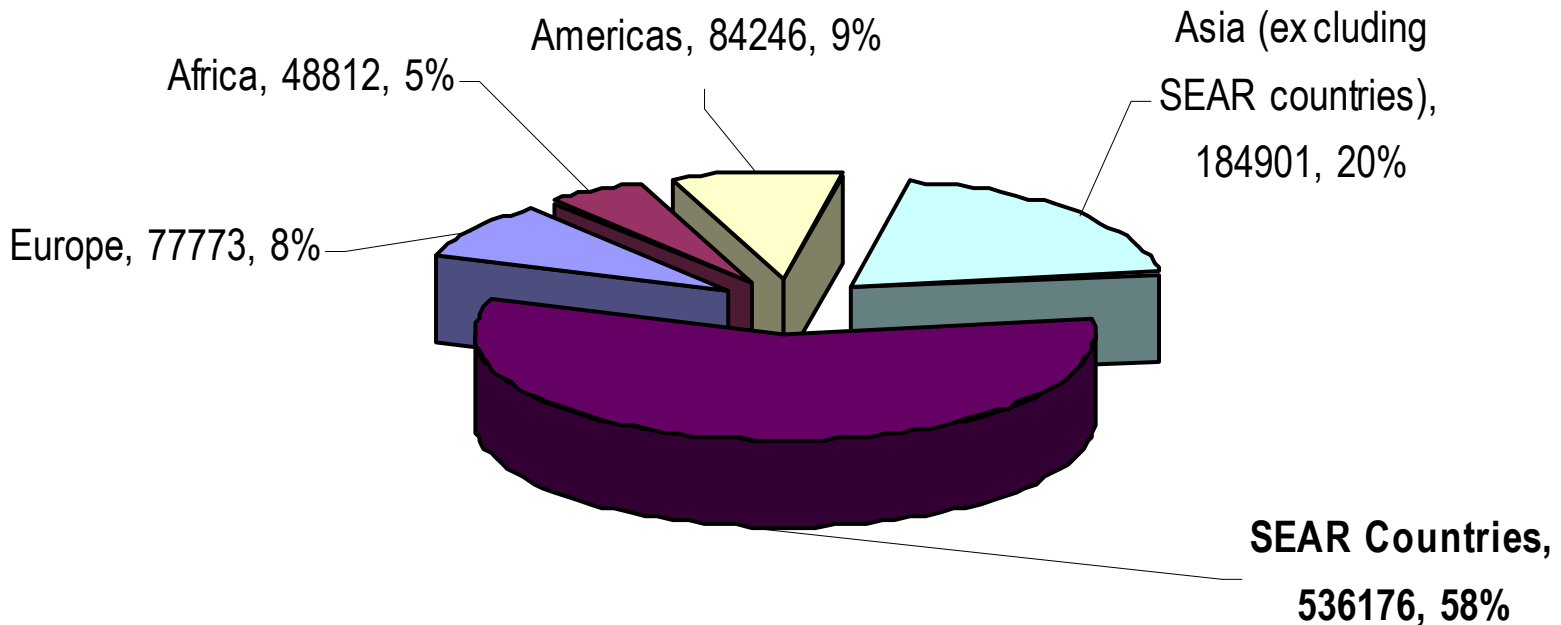


Map 1 – Percent share of reported occurrence by disaster sub-group and continent in 2010



Situation in the Region

Total number of people killed in natural disasters (1996 to 2005) Numbers



■ Europe ■ Africa ■ Americas ■ Asia (excluding SEAR countries) ■ SEAR Countries



- Recovery from the tsunami offers an opportunity to look beyond, not merely rebuilding what previously existed, but to improve upon earlier systems.
- The clear message that came forth is that to **respond effectively to any disaster preparedness is essential.**

Countries that had a better health infrastructure were able to respond better.

WHO 2005



Strategic Management

What is Japanese Vision ?

Yr	1923	1995	2004	2007	2008
City	Tokyo	Kobe	Niigata	North western	North
Magnitude	7.5	7.3	6.8	6.8	7.2 (40 after)
Deaths	140,000	6400	65	7	3

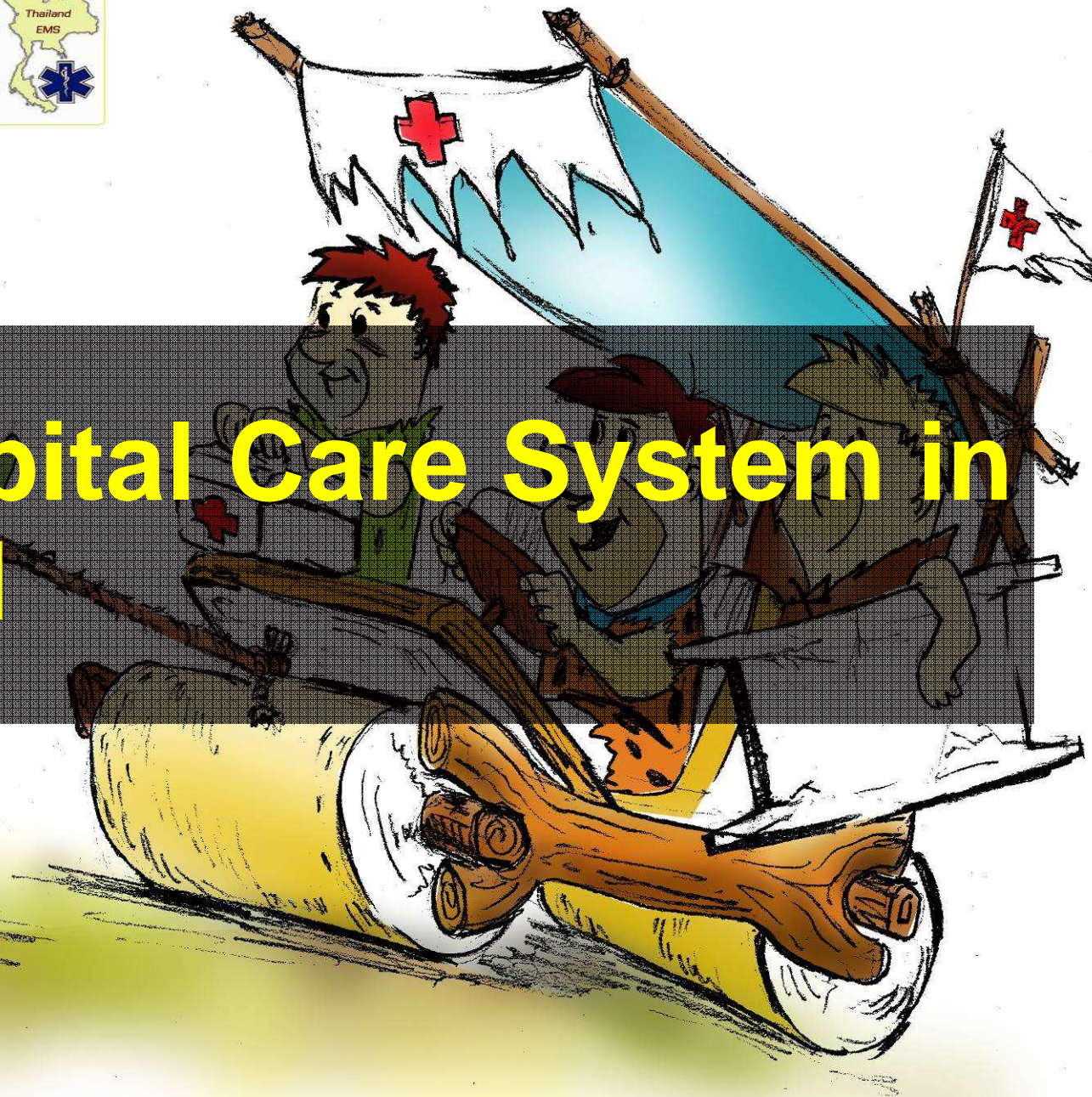
REUTERS

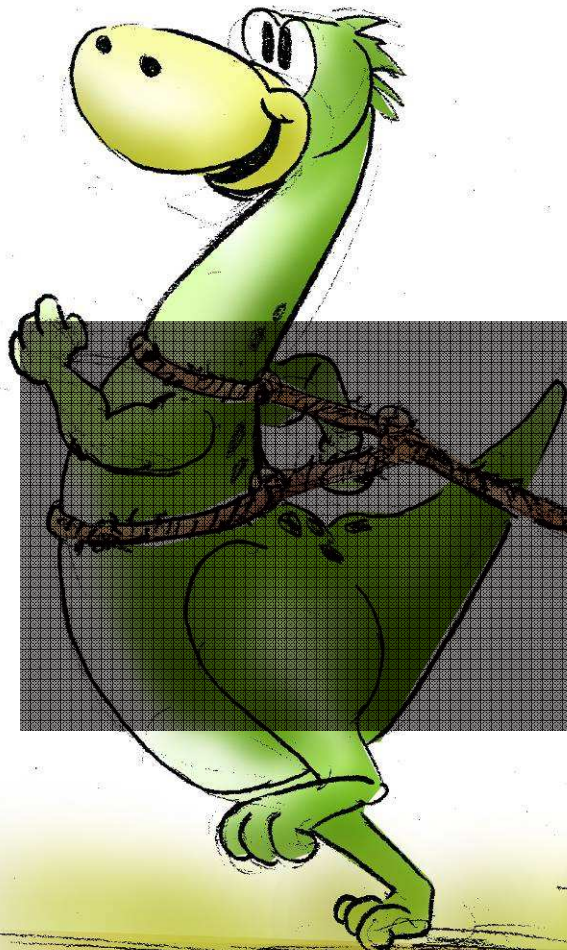
- If pre hospital care system cannot provide service for the people properly in daily life,
- In disaster situation , they can never manage to take care of the victim effectively.



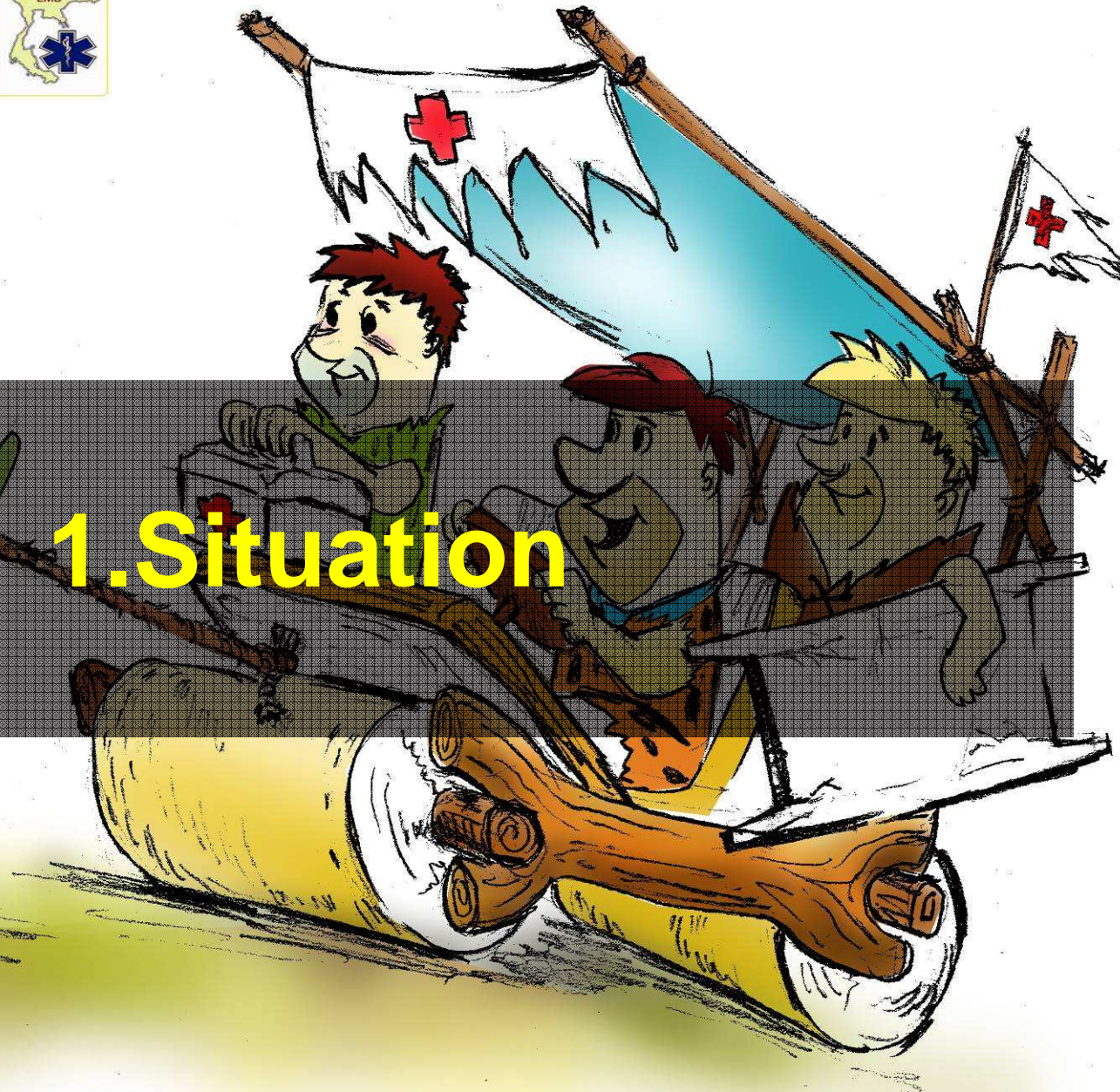


Pre Hospital Care System in Thailand





1. Situation



Situation of ER Utilization in the Population of Thailand

	1999	2000	2001
Emergency	4,476,741	5,042,222	5,783,981
Trauma	1,356,834 (19.5%)	1,469,582 (18.9%)	1,610,065 (18.2%)
total	6,947,150	7,792,025	8,776,465

Data collected at ER from responded hospitals

* Q-naire to 817 hospitals
(522 responded hospitals)

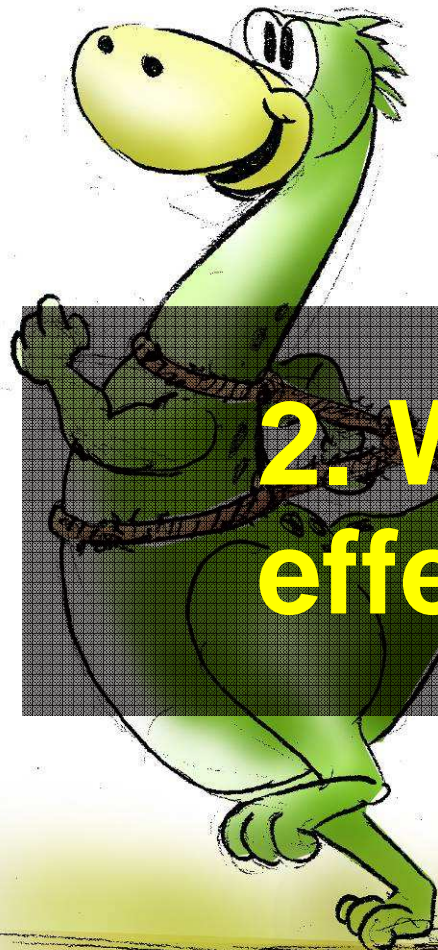
* GLOBAL BURDEN OF DISEASE 2000, WHO



“Thailand Risk Areas”

Hazards





2. Without establishing effective EMSS

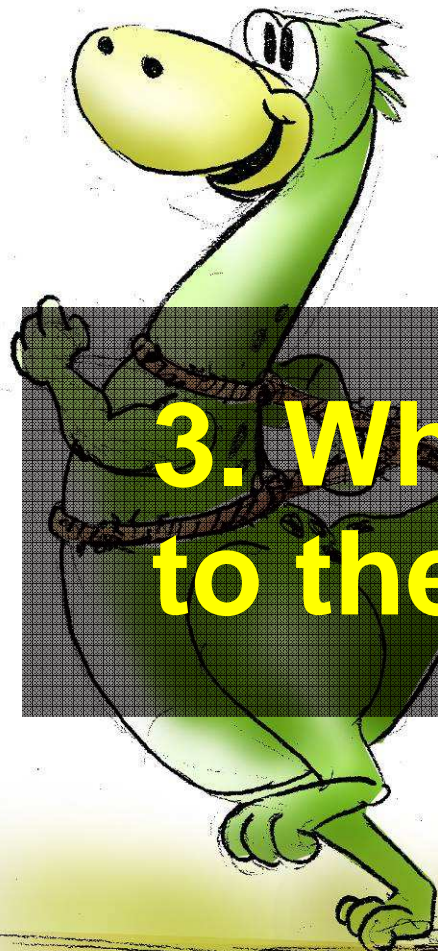
Current Situation



Facts

- Only 0.1- 20 % of the traumatic patients were firstly taken care by standard ambulance officers.
- The rest of them were received first aids by bystanders. Most of the assistances were inappropriate.





3. Why EMSS is Necessary to the Public?

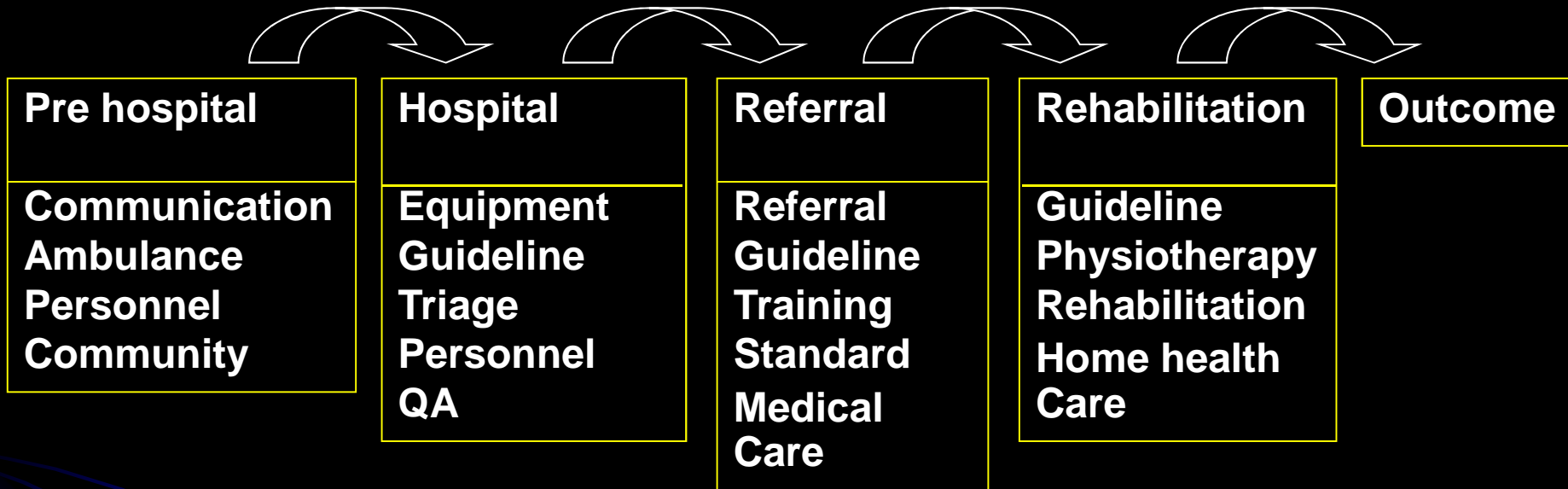


Facts

- Effective pre hospital care system can save lives and disabilities of trauma and emergency patients for more than 30 %.
- In Thailand, if we can establish the universal coverage of pre hospital care system , we can save over 10,000 lives each year.
- However, the standard pre hospital care system in Thailand is in the early stage of the development



Process in Trauma Care



**WHO Policy in Developing Pre Hospital Care System,
2003**



Principles for Developing Pre Hospital Care System

1. It should incorporate into the component of inclusive trauma system which should has close relation with hospital care and prevention.
2. The work plan in this system should be done by multi-sector and multidisciplinary
3. The major principles in developing this system may be similar worldwide, but the details may be different depending on each particular area.
4. It is not necessary to invest high cost technologies. Simple and cheap method may be effective.
5. It should be accepted by community and community participation is required



The Achievements for Setting Pre hospital Care System

1. Mortality rate from injury and critical illness should be reduced
2. Morbidity should also be decreased
3. The physical, mental suffer of the families would be reduced
4. The burden of health personnel and facilities would be finally diminished
5. One of the national infrastructure safety systems would be established





4. Background for the Development of Pre Hospital Care System in Thailand



History

- 1937 the establishment of Po Tek Tueng Chinese Charitable Foundation
- 1970 the establishment of Ruam Katunyu Foundation
- 1980 the establishment of police call center
- 1986 military ambulance center and 123 emergency call number
- 1992 the establishment of Emergency Medical Service System, Khon Kaen Province
- **1994** the first ambulance mission of Khon Kaen Hospital
- 1995 the establishment of Rajvithi Ambulance station and Narenthorn Center



History

8th National Economic and Social Development Plan (1997-2001)

- Project for the development of Pre Hospital Care System in every Provincial Hospital
- At the end of the 8th NESDP 80 hospitals can provide EMS service for the people in the municipality
- No such a formal system , no legislation , no budget supported
- Start to formulate an idea for drafting National Pre Hospital Care Master Plan



History

9th National Economic and Social Development Plan (2002 – 2006)

- The policy for generalizing EMS system nationwide
- The work plan for providing budget for implementing Emergency Medical Service (10 Baht/capita) supported by NHSO
- The work plan to support the ambulance mission according to the workload
- Bureau for Emergency Medical Service System was established and assigned to be the responsible organization to implement the policy and work plan



History

9th National Economic and Social Development Plan (2002 – 2006)

- At the end of the 9th National Plan ,the National Task Force was formulate to set up the National Master Plan for EMSS



History

10th National Economic and Social Development Plan (2007 – 2011)

- 11 April 2007 , the Cabinet approved to have the EMSS Legislation





Key success factor

- Contributing Factors from National Level
 - National EMS Act (2009)
 - National Emergency Medical Institute (2009)
 - National EMS Board (2009)
 - National master plan (2010)
 - National budget (2007)
 - National Emergency Alarm Number (2006)
 - National Trauma Care Standard (2010 by RCST)
 - Trauma Center Verification and Inspection (on going)

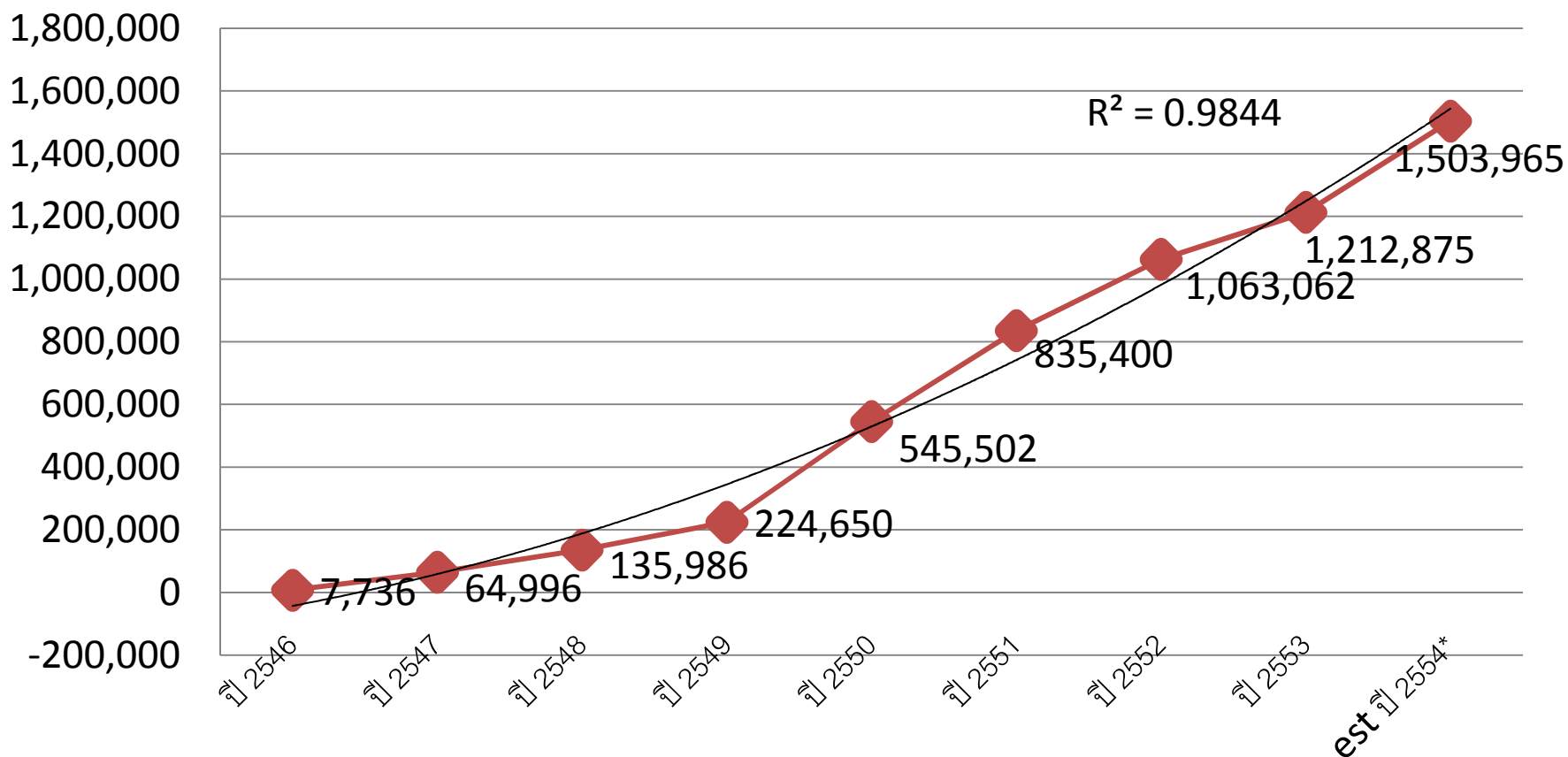


The registered EMS. Personnel June 2011 : 122,945 persons

EMS. Personnel	persons
EMS.Physicians (Docter)	247
GP	1.237
Paramedic Nurse	15.049
EMT-I	873
EMT-B	3,849
FR	101,690



National statistic of EMS mission: 2003-2511



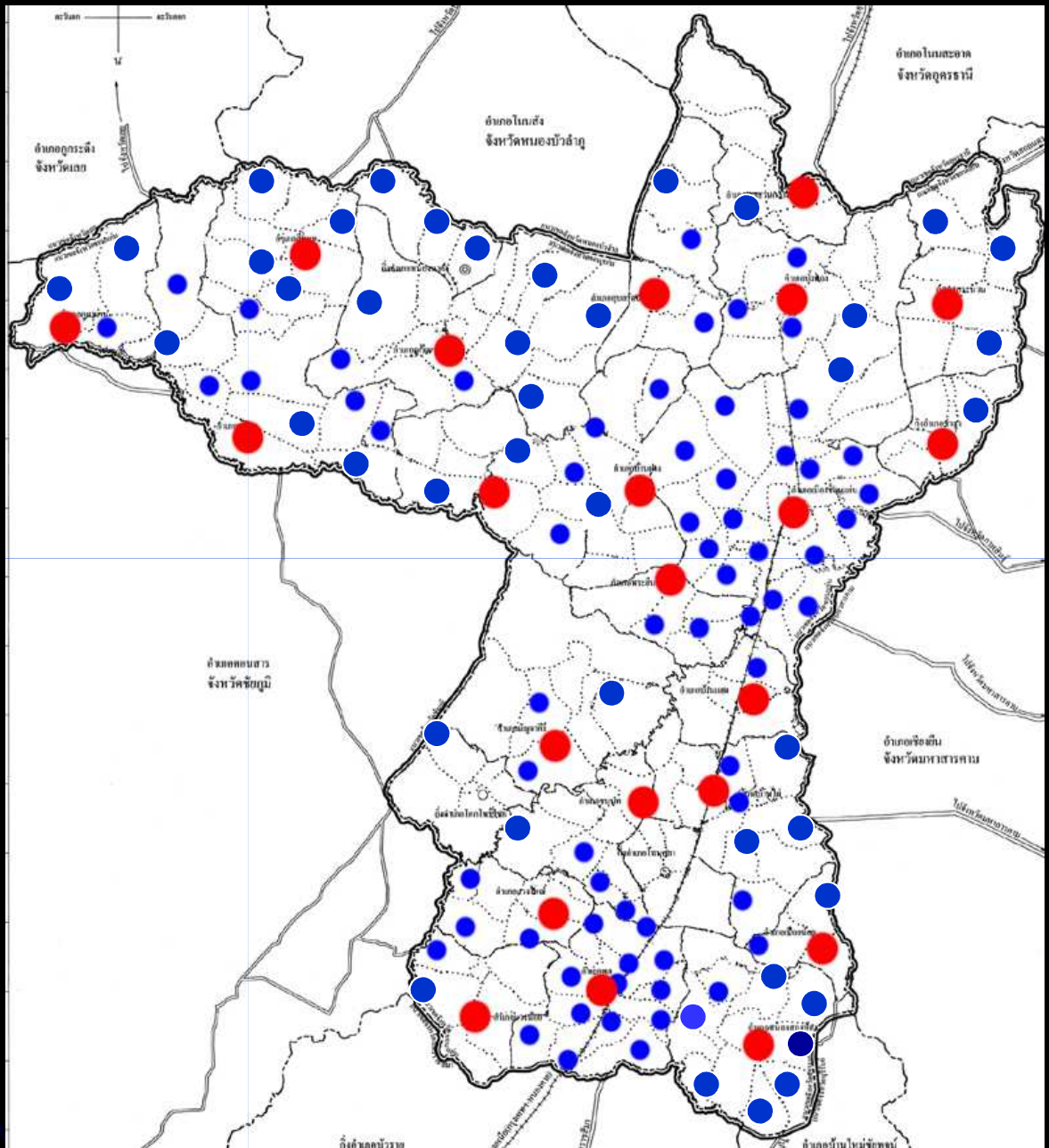
Location of ambulance Stations in Khon Kaen

Advance level

(ALS)

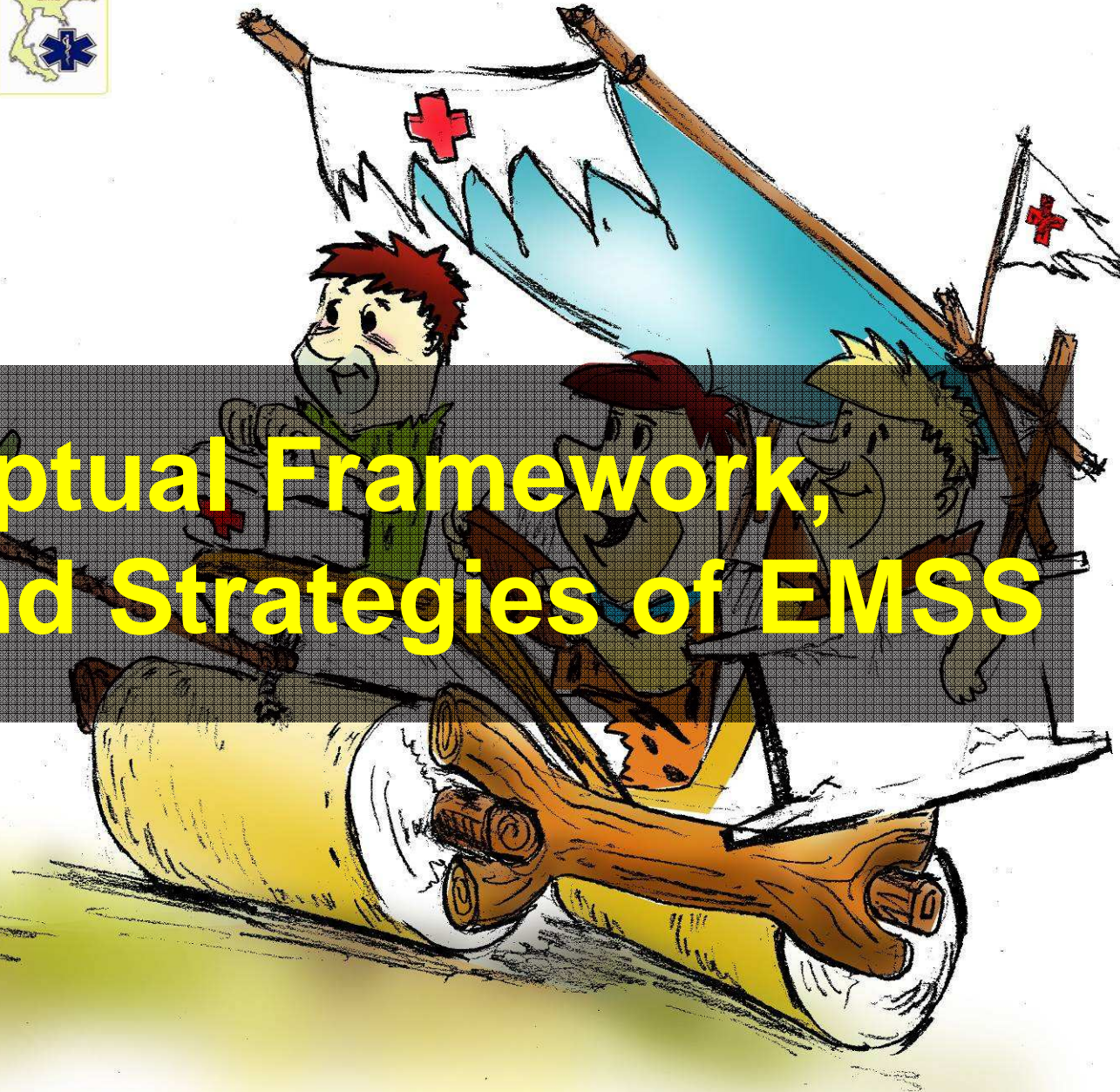
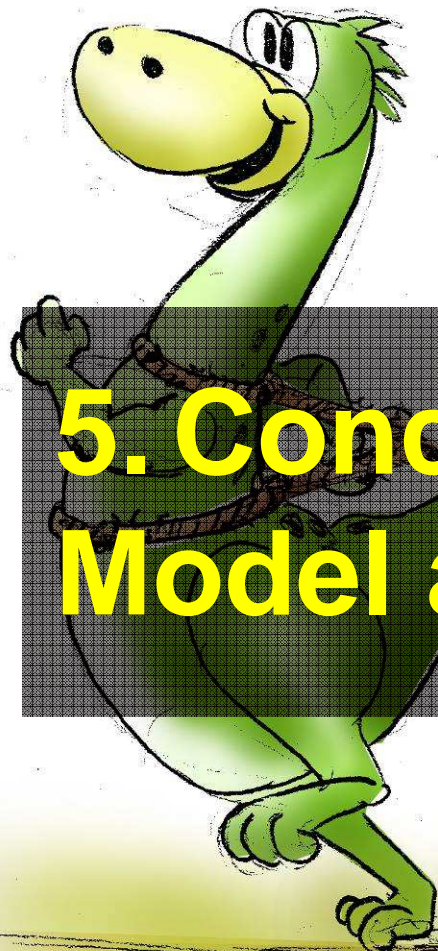
Basic level

(FR)





Means of the operational response	Time Hr : min : sec
Dispatching	00:01:35
CCC to the ambulance station	00:01:59
From the ambulance station to the scene	00:08:20
At the scene	00:03:12
Receiving a call to scene	00:14:05
From the scene to the nearest hospital	00:20:15



5. Conceptual Framework, Model and Strategies of EMSS

Core Components in EMSS

Administration

- Structuring
- Networking
- Budgeting
- Ruling and legislation

Human Resource

- HRD
- Medical oversight
- Quality control

Communication

- Command and Control Center
- Promotion

Equipment

- Ambulances
- Equipment





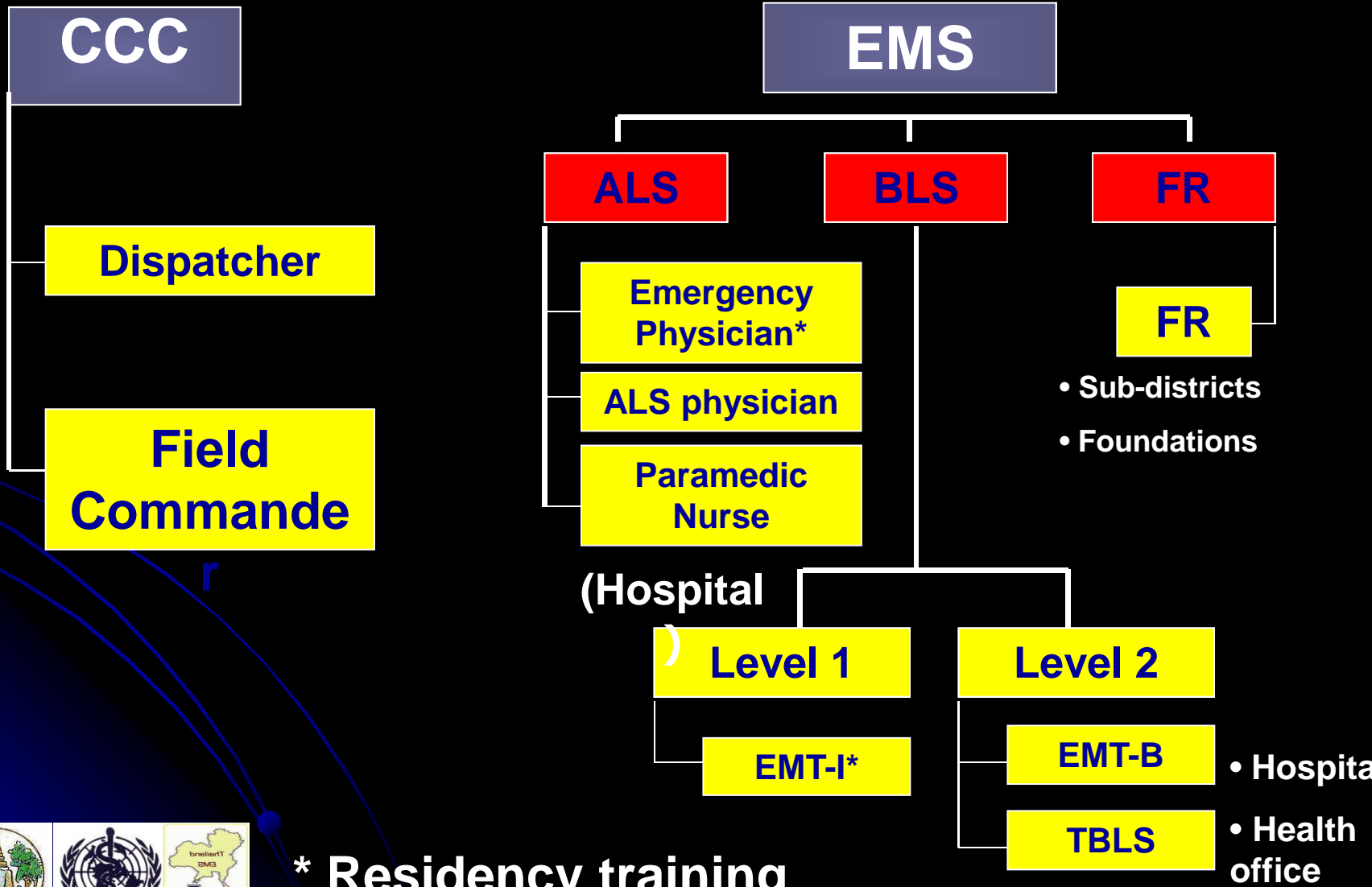


Level of Ambulance

	KKH	KKU	General Hos.	Private Hos.	District hos.	PCU	Volun teer	FR	Total
Advance	4	3	2		36				45
Intermedi eat	4	5		6	48			2	65
Basic	2				2	9	27	142	182
Total	10	8	2	6	86	9	27	144	292



Operational personnel



* Residency training









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The heart of Pre Hospital Care

Selected bystanders, community volunteers and other citizens with minimal training working in concert with providers and formal medical care structures can provide effective and sustainable PHC. regardless of a national level of resources

**Etienne Krug
WHO Geneva**

Khon Kaen EMS Framework

 1669



**Command and
Control Center**



Provincial level



Sub-district Level



Community Level







Chain of Survival

Transfer to
Definitive
Care
Care in
Transit

Detection

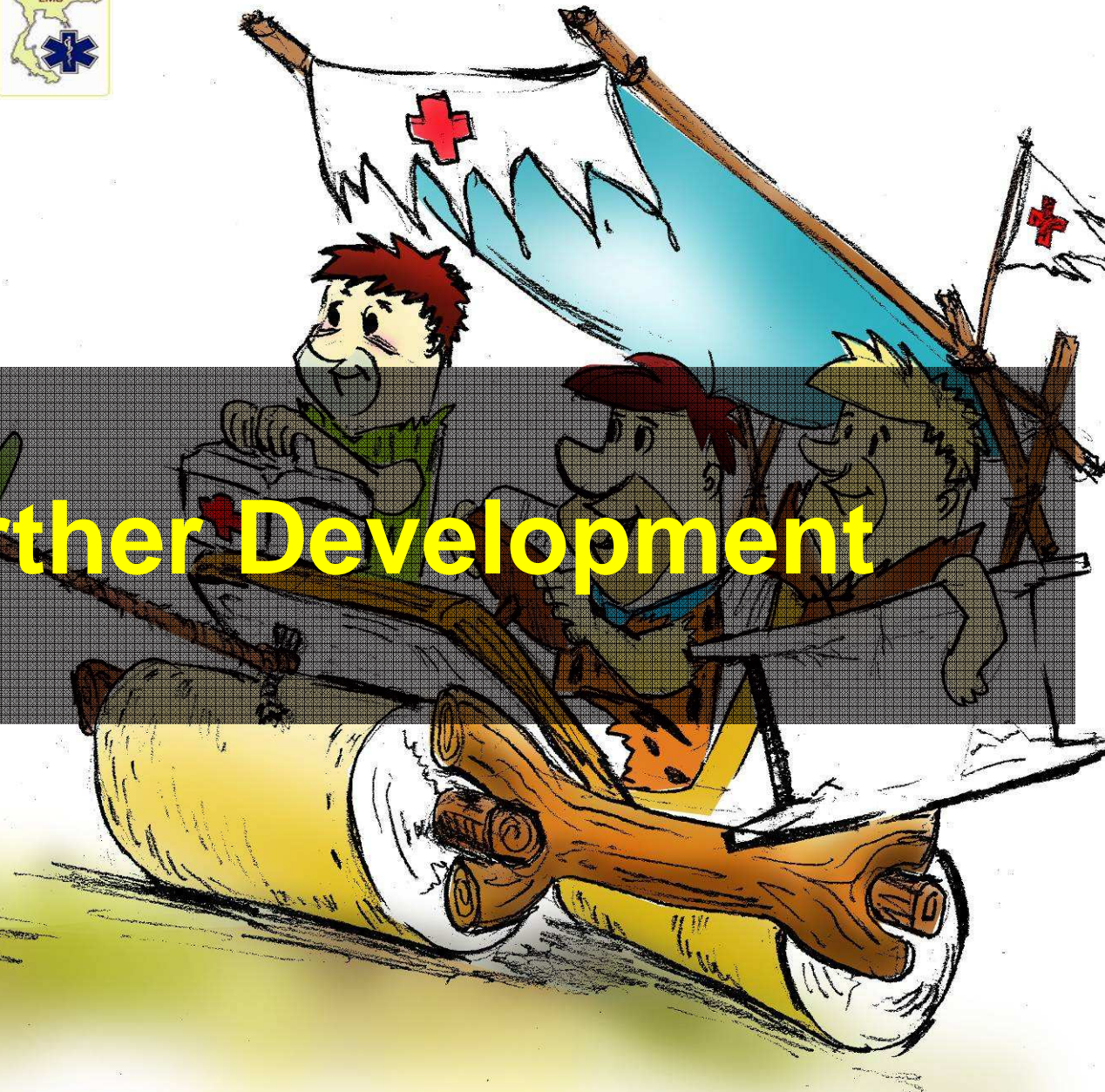
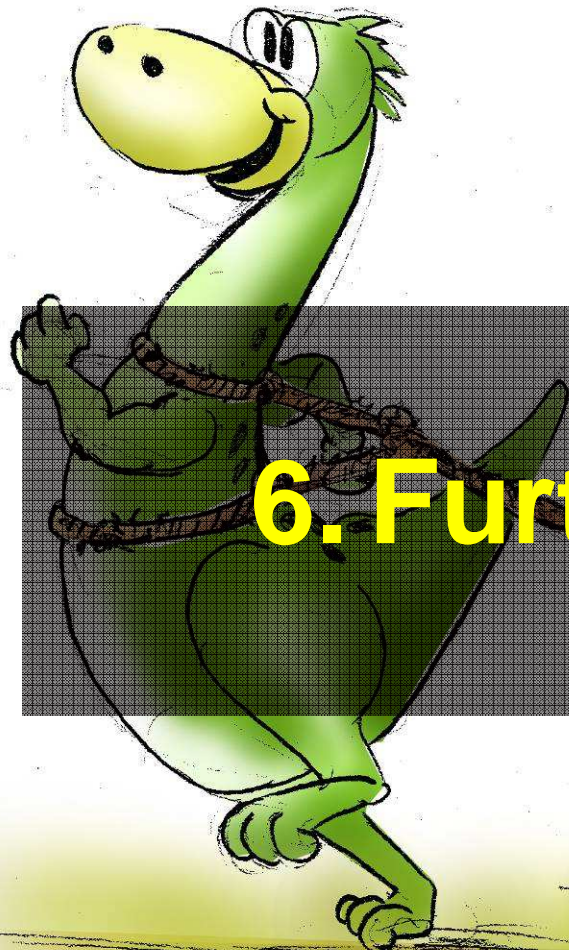


Report

Response

On Scene Care





6. Further Development

EMSS: Further development

1. Provincial and regional EMS system
2. Center for mass casualty preparedness
3. Center for Disaster preparedness
4. Comprehensive research, local , regional and netional





**The life you save
may be your own**