Urban DRR Strategy and JICA Group Training at RCUSS, Kobe Univ.

Yasuo Tanaka,
Research Center for Urban Safety & Security, Kobe Univ., Japan

1995 Great Hanshin-Awaji EQ and Damages at the University

- 1995.1.17 5:46am, M7.3 Earthquake hits Kobe City and nearby cities, resulting 6434 death & damage cost more than US$100billion.
- In total, 4 university staffs and 44 students, including 8 overseas students, have died at Kobe Univ. and Kobe Univ. of Mercantile Marine.

Damages near JR Rokko Station looking at Kobe University

Kobe University's Action after the EQ Disasters

- Established RCUSS (Research Center for Urban Safety and Security) in May 11, 1996
- RCUSS is unique in its organization as it performs an integrated studies of the disaster mitigation.
- A multidisciplinary organization, consisting of urban planning, engineering(2), medical, geo-science, information, socio-economy.

Established RCUSS in May 11th, 1996

RCUSS(1996-2005): Multidisciplinary Research Groups

Director:

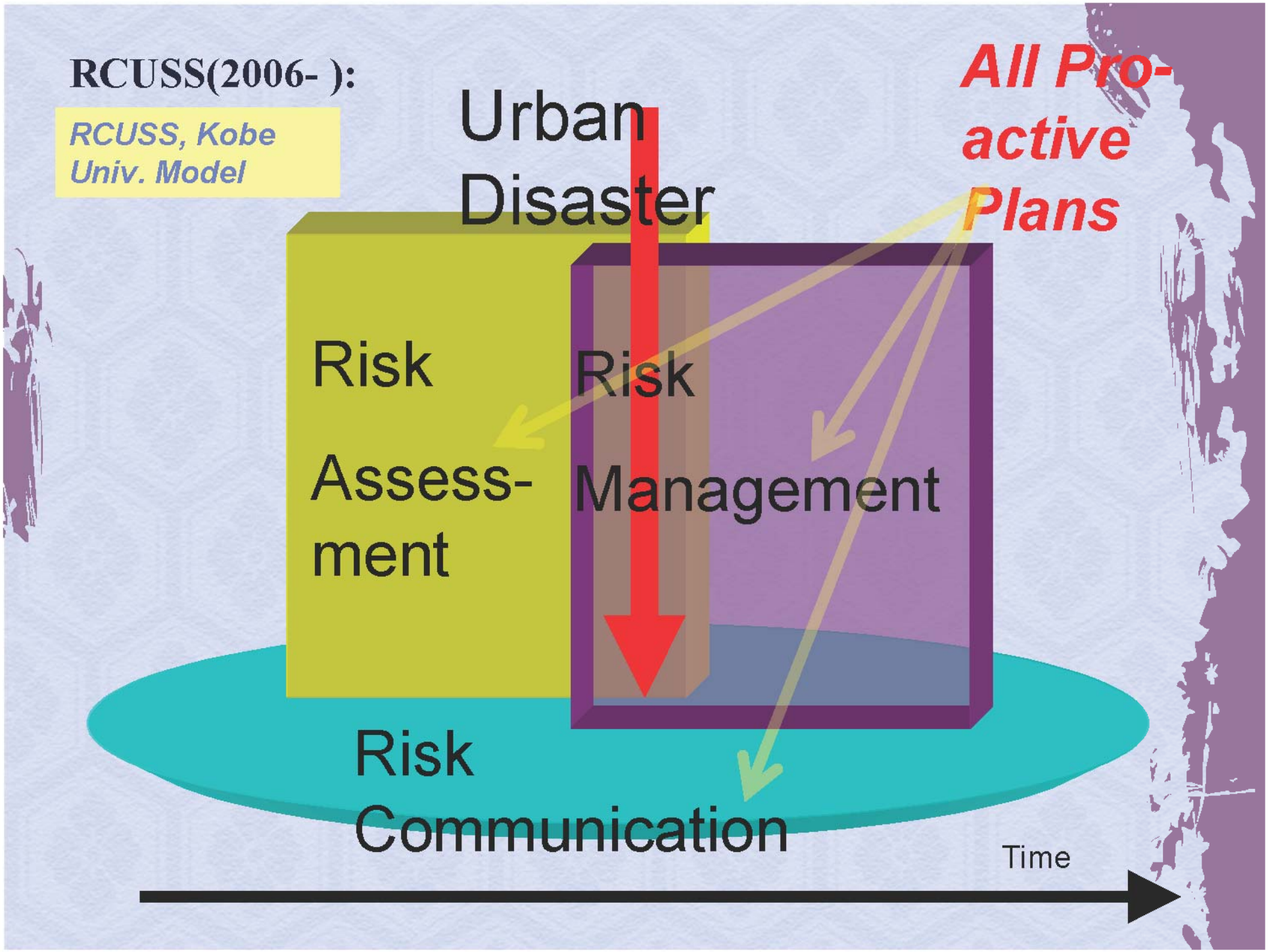
Prof. Usui

Deputy Director:

Prof. Okimura

Cooperative Staff; Vice presidents, academic staffs from various faculties, and schools etc.

- Division of Urban Structure Systems
- Division of Urban Infrastructure
  - Urban geo-structure research team
  - Urban geo-environment research team
- Division of Seismology & Earthquake Disaster Prevention
- Division of Health Informatics & Science
- Division of Urban Administration & Economy
- Division of Advanced Information Processing for Wide Area Networks
- Division of Urban Safety Management


RCUSS(2006-):
RCUSS, Kobe Univ. Model
Urban Disaster
All Pro-active Plans
Risk Assess-ment
Risk Management
Risk Communication
Time

Risk Assessment

- Technological Assessment: Fault rupture, Ground Condition, Local Site Effects, Structural Damage, Lifeline Network, Casualties, etc
- Sociological Assessment: Economical Impact, Social Impact, Psychological Effects, etc

Risk Management (Immediate & Long Term)

- Technological Management: Rebuilding of Infrastructures, Rescue Operations, Lifelines, Prevention of Secondary Disasters, etc
- Sociological Management: Community Recovery, Management of Economy & Society, Psychological Recoveries, etc

Risk Communications

- Technological: Disaster Information, Emergency Communication, etc
- Sociological: Disaster Education, Culture of Disaster, People's Awareness & Preparedness etc

Risk Studies and Tools

	Risk Assessment	Risk Management	Risk Communication
Hardware	Study on Fault, Seismic Motion, Geotechnical & Geophysical data, Aseismic Design of Buildings & Infrastructures	Rescue Robots, Evacuation Shelters for Tsunami & Earthquake	
Software	Damage Analysis, Network Analysis of Lifelines	Emergency Response, Rescue Medical Responses & Treatment, Health Monitoring. Reconstruction Town Planning, Economical Recovery, Legal issue, International Rescue & Cooperation	Emergency Communication, Disaster Information Sharing,
Human-ware		Volunteers, NPO & NGO, Community participation, Disaster Prevention Community	Education of Disaster Prevention, Culture of Disaster, Disaster Damages of Historical Monuments and Buildings

International Collaborations; e.g., 2006 Jogyakarta EQ

- KU dispatched 8 teams for reconnaissance and medical support

2004 Tsunami Recover: Build Better Urban Society

- Paradigm shift from disaster response to pro-active DRR has taken place ??
- Different strategy for urban DRR for different urban governance systems ??
- International collaboration among the Sumatra Tsunami affected countries → AIWEST-DR (Annual Int. Workshop for Sumatra Tsunami & Disaster Reduction, started in 2006- , 4th AIWEST-DR in Nov. 22-24, 2009 commemorating 5th year).

Education Towards Disaster Reduction

- 4 yr MOE project for Educational Good Practices: Creating A Culture of Disaster Reduction, Preparedness

- JICA Group Training Program (2004-2008)

JICA Group Training: “Mitigation Strategy for Mega-Urban Earthquake Disaster” (2004.10.12-11.26)

- Teaching and Training Specialists responsible for Mega-Urban Earthquake Disaster Mitigations
- 5 years program 2004 to 2008 with 10 participants from the world.

Mitigation Strategy for Mega-Urban Earthquake Disaster F.Y. 2004 November 26th
Japan International Cooperation Agency Hyogo International Center

JICA Training 2009-2011

- Continuation of 2004-2008 JICA Program
- 20 applications (10 in Spring and 10 in Fall)
- 4hrs./day x 6 weeks (5days) = 120hrs
- Classes and site visits on Risk Assessment, Risk Management, and Risk Communication
- No. Graduates = 54 (2004-2008) + 60 (2009-2011) =114 graduates

Outline of JICA Training

Training Chart

The state expected to achieve at the end of the training

OUTCOME

To reduce the earthquake disasters in large cities, understand the mitigation strategy composed of multidiciplinary approaches and plannings. Then examine the implementations of strategy in various countries and cities.

OUTPUTs needed to achieve the outcome

OUTPUT 1

Understand the risk assessment methods and examine the implementations of method in each country or city.

OUTPUT 2

Understand the risk management methods and examine the implementations of method in each country or city.

OUTPUT 3

Understand the risk communication methods and examine the implementations of method in each country or city.

ACTIONS needed to achieve each output

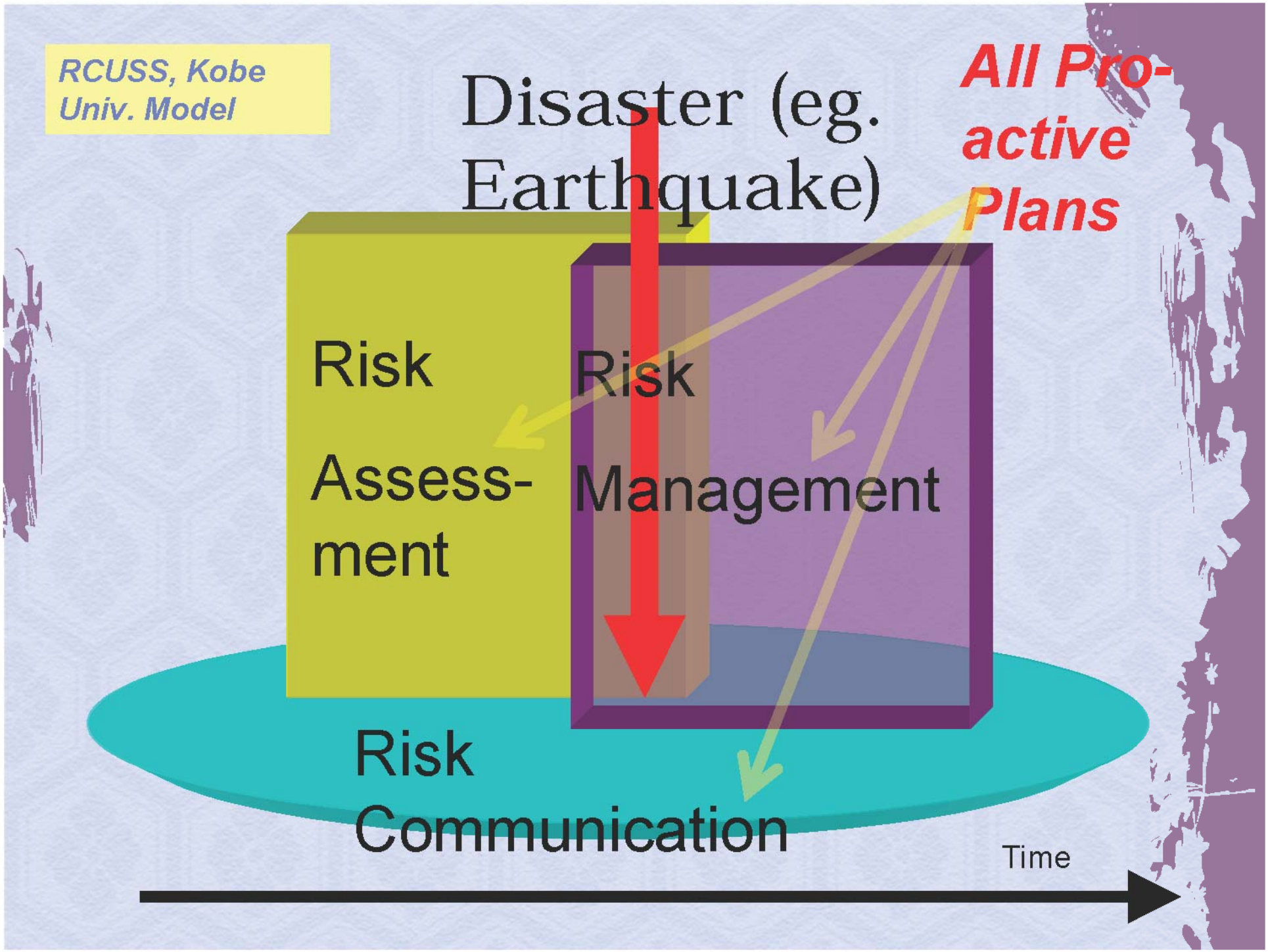
Lecture 1	Visits & Practices 1
Seismic Intensity and Faults	National Research Institute for Earth Science and Disaster Prevention (NIED)
Seismic Ground Motion and Seismic Hazard Maps	Public Work Research Institute (PWRI)
Building Codes and Hazard Maps	Earthquake Mitigation Research Center (EDM)
Lifeline Damages	E-Defense

Lecture 2	Visits & Practices 2
Sumatra Earthquake: Tsunami Damage and	Hyogo Prefecture Disaster Management Bureau
Risk Management Strategies	Kobe Disaster Prevention Information Center
Disasters and Public Health	National Research Institute of Fire and Disaster
Economics of Earthquakes	Disaster Prevention Center, Tokyo
	National Disaster Medical Center
	Hiroshima Prefecture Risk Management Office

Lecture 3	Visits & Practices 3
Sharing Disaster Information	Kobe Disaster Prevention Information Center
IT in risk communication and awareness raising	Hyogo Prefecture Disaster Management Bureau
International Cooperation in Managing Disasters	Disaster Prevention Center, Tokyo
	Building a disaster-resilient town, Sumida-ku, Tokyo
	"Town Walk" in Nagata-ku, Kobe

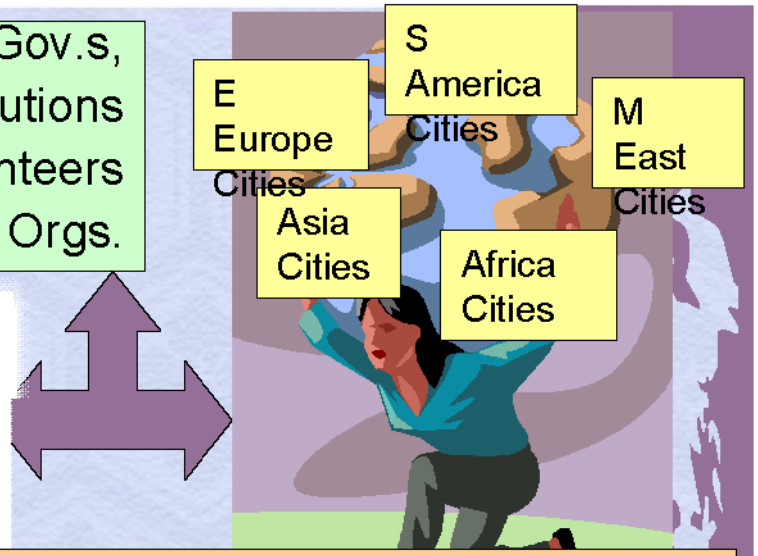
Kobe Univ. RCUSS Strategy for DRR

- We need to follow UNISDR & other Int. common strategy for DRR
- HFA (Hyogo Frame of Action) clearly states the importance of ***pro-active*** & ***holistic*** approaches.
- One of approach is to perform DRR by considering 1:risk assessment, 2:risk management, & 3:risk communication


RCUSS, Kobe Univ. Model
Disaster (eg. Earthquake)
All Pro-active Plans
Risk Assess-ment
Risk Management
Risk Communication
Time

Urban DRR

Stakeholders
- •Central & Local Gov.s,
- •Academic Institutions
- •NGO, Volunteers
- Professional & Indust. Orgs.



Discuss Concept, Framework, Implementation tools to achieve the UDRR based on Sumatra Tsunami, Sichuan EQ, or other disasters though the collaboration of organizations in Kobe

International Disaster Education and Supports

1. Concept: Internationally Agreed DRR Goals
2. Academic Framework: Integrating Social, Natural, Human, and Medical Sciences and their approaches
3. Implementation Tools: Human resource, teaching material, institutional accreditation, and activities

Propose the Kobe Initiative (Concept & Activities) to the UN & Global DRR System to achieve Global UDRR partnership

Kobe Univ. (Research Coordinator)

- JICA Hyogo
- ADRC
- Hyogo Prefecture
- Kobe City
- WHO Kobe
- UNISDR
- UNCRD
- UNEP, IRP, & others
- Int. Academic
- NGO:EMI

Alliance for Urban DRR Kobe

- Alliance of various institutions in Kobe to promote Urban DRR internationally
- Discuss an integrated approach among those institutions for disaster education and supporting activities.
- Web site to disseminate all related activities of these institutions.

Alliance for Urban DRR Kobe

- RCUSS, Kobe Univ. tries to collaborate with others on Urban DRR through a framework of Risk Assessment, Risk Management, and Risk Communication.
- International collaborations are needed to promote creating an international standard for the Urban DRR framework, and also producing more competent UDRR professionals.