



Cluster1: Governance, Institutional and Policy Frameworks for Risk Reduction

**Thematic Session 1.10:
Addressing Root Causes of
Vulnerability of Human
Settlements in Megacities**

**EMI, UN-HABITAT, Kobe
University, PDC**

Stakeholders' involvement in Identifying and Implementing Risk Mitigation Options – Experience from Nepal

Amod Dixit

General Secretary & Executive Director

www.nset.org.np



RELATIVE VULNERABILITY INDICATORS FOR EARTHQUAKES (BCPR/UNDP 2004)

1. Armenia 7653
2. Islamic Republic of Iran 1,074
3. Yemen 758
4. Turkey 346
5. Afghanistan 228
6. **India 211**
7. Italy 175
8. Russia 145
9. Algeria 109
10. Mexico 103
11. **Nepal 75**

1. India 211
2. Nepal 75
3. Pakistan 39
4. Bangladesh 1.49

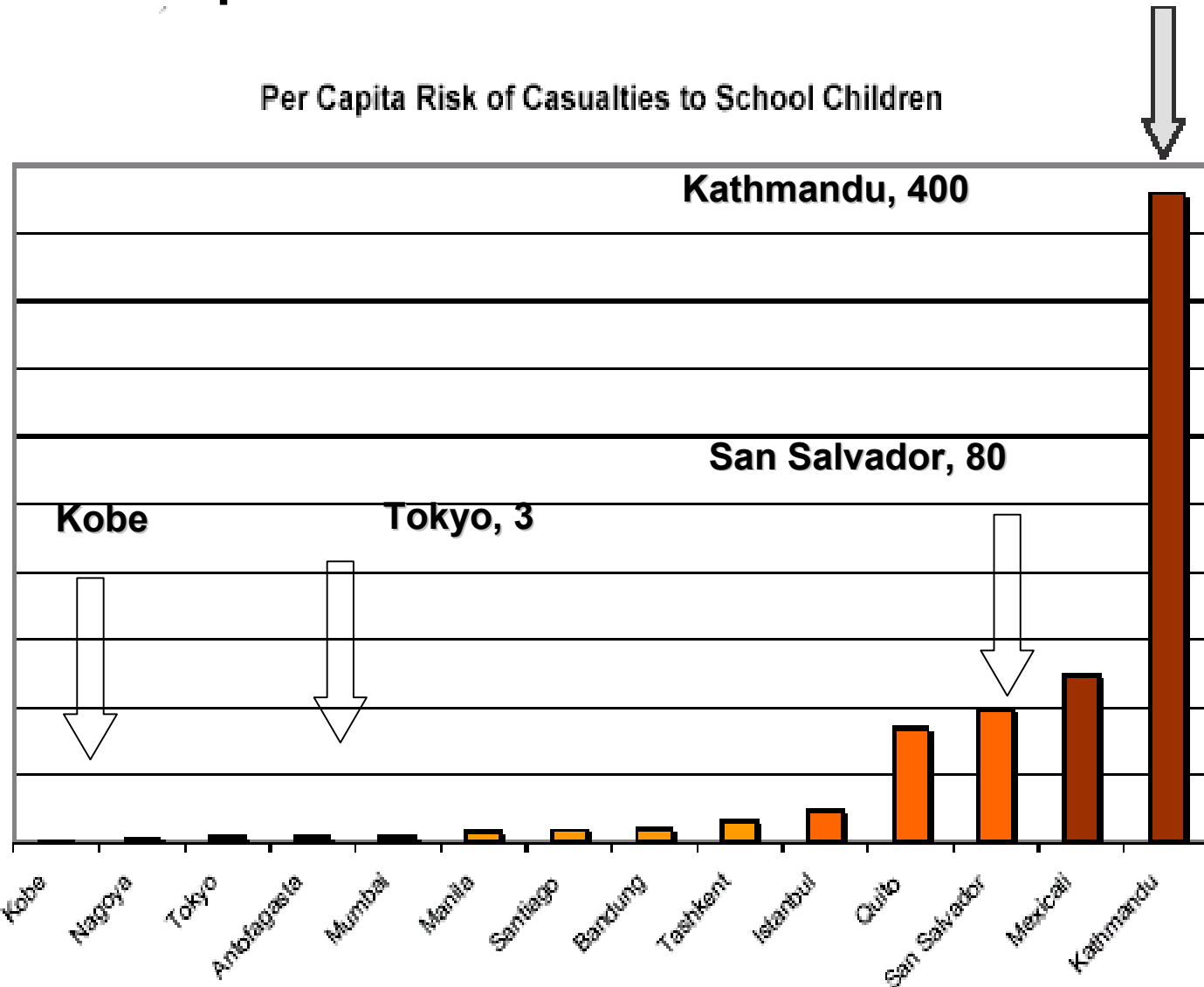
Japan 9

Costa Rica 2.91

United States of America 0.97



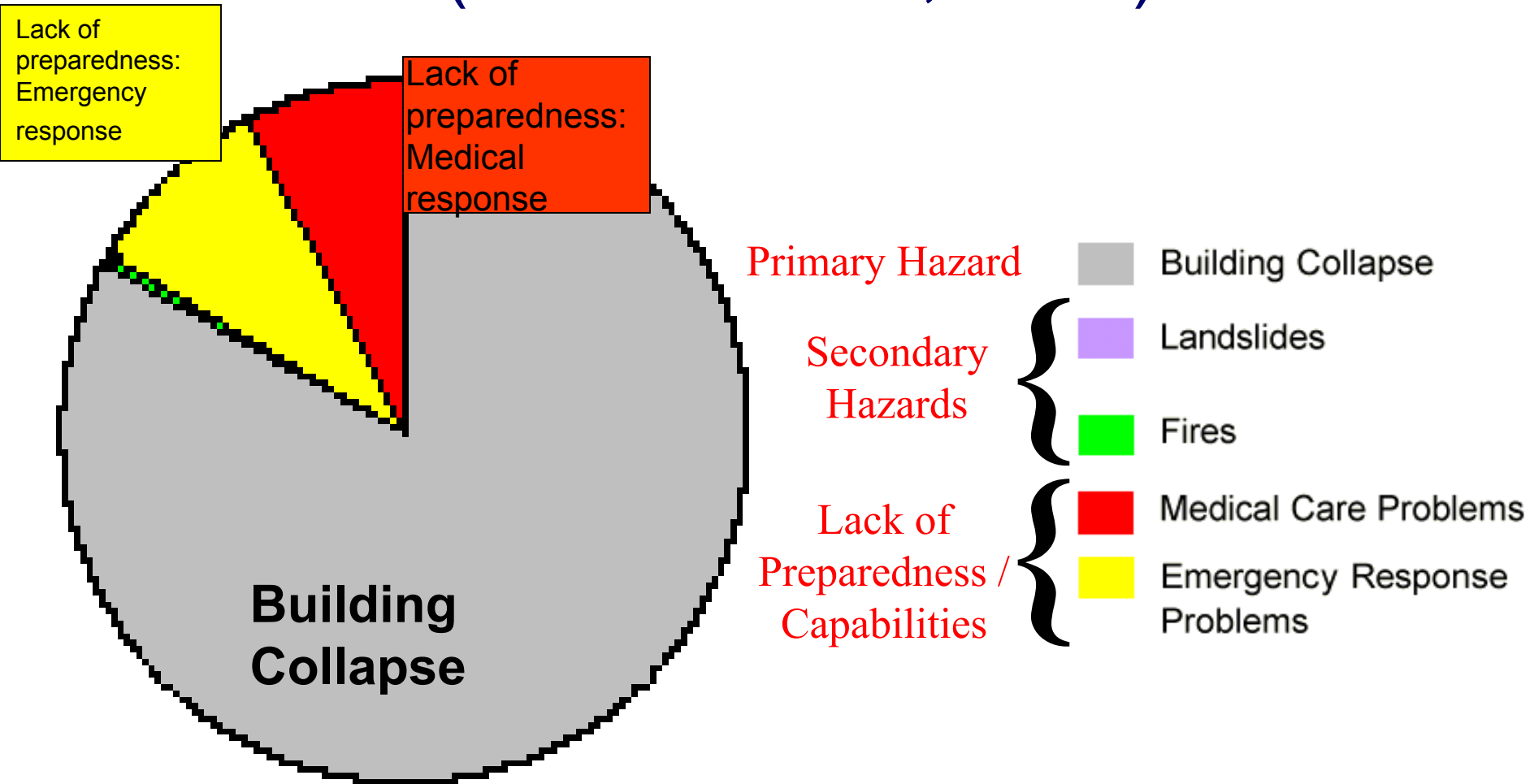
Per Capita Risk of School Casualties



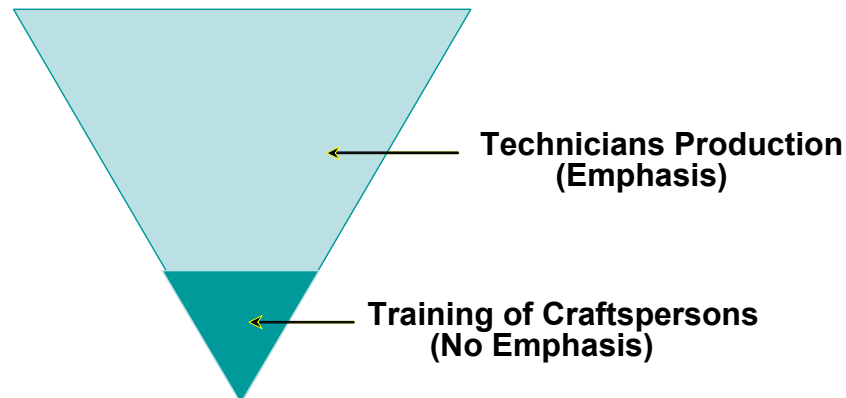
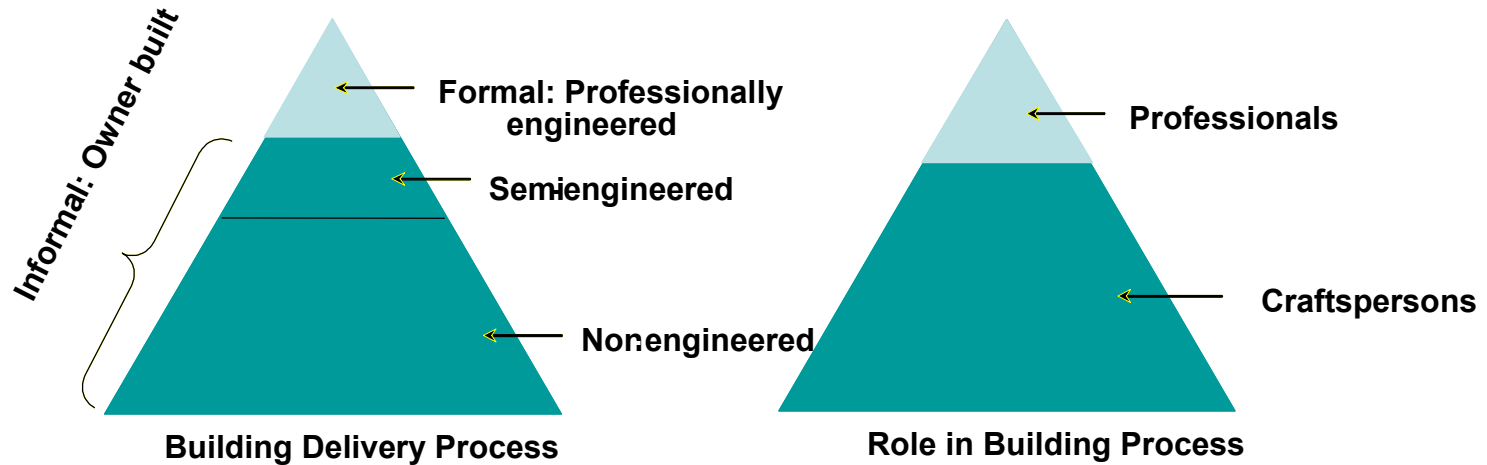
Source: **GESI, UNCRD**



Sources of Earthquake Risk in Kathmandu (source: GESI, 2001)



Building Production Mechanism: Demand for CBDM Programs



Resource Input to Influence the Process

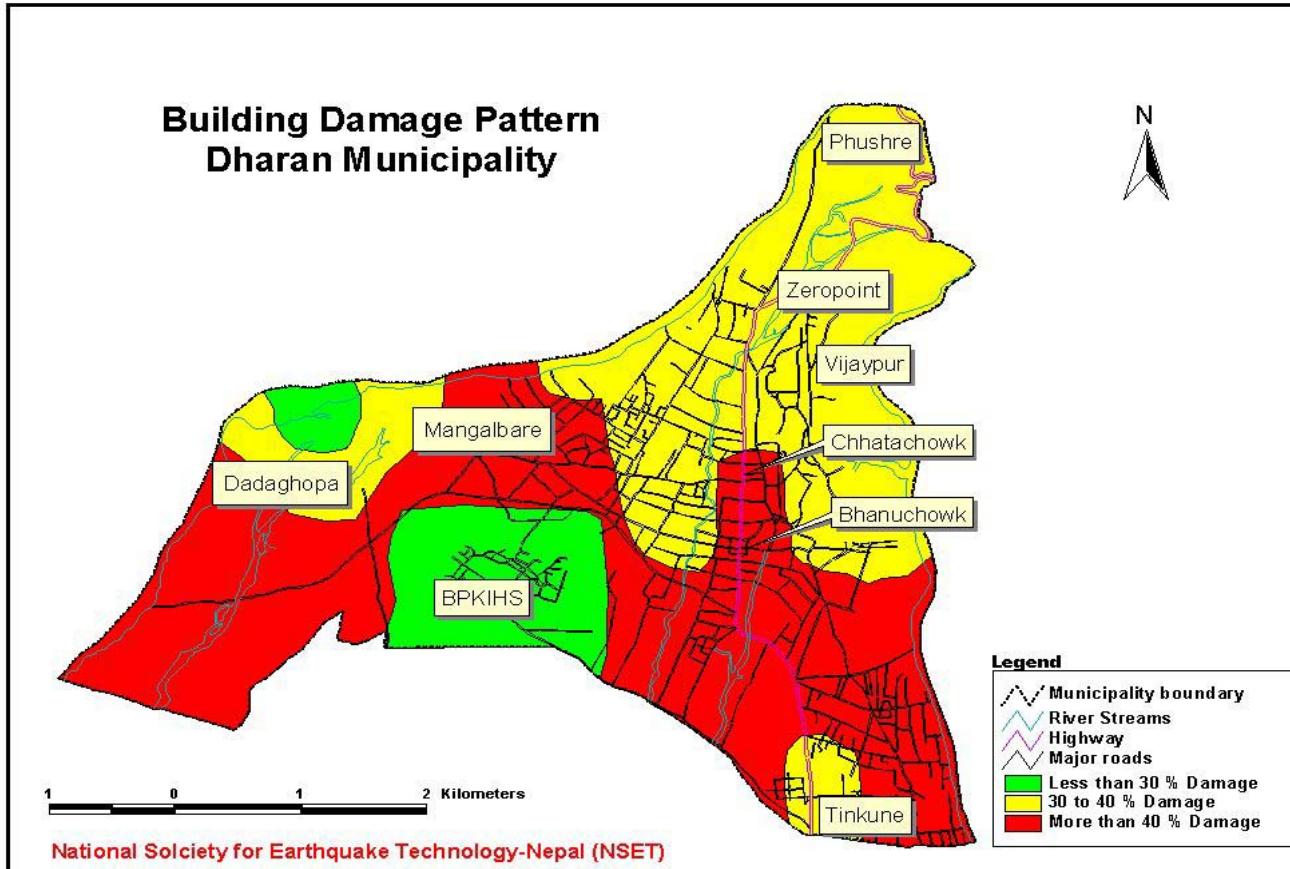


Community-based programs of NSET

- Most of NSET's programs are community-based
 - Although the start in 1997 was not so!
- Earthquake Damage Scenario and Action Planning
- School Earthquake Safety Program
- Awareness Raising Program, and
- Municipal Earthquake Risk Management Program
- Community-based Preparedness
- Institutional Development program
- All gradually grew into initiatives with ever-increasing participation by the communities involved

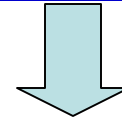


Preparation of Earthquake Scenario: More a motivating Tool than a scientific data



RADIUS

Scientific Data



Language
known to all
stakeholders

Basis for Discussion and Planning

ACTION PLANNING



**> 85 institutions involved in Action Plan Development
Commitments expressed**

Doable Actions

Action Planning



Vyas Municipality

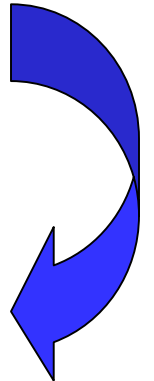


SCHOOL EARTHQUAKE SAFETY PROGRAM



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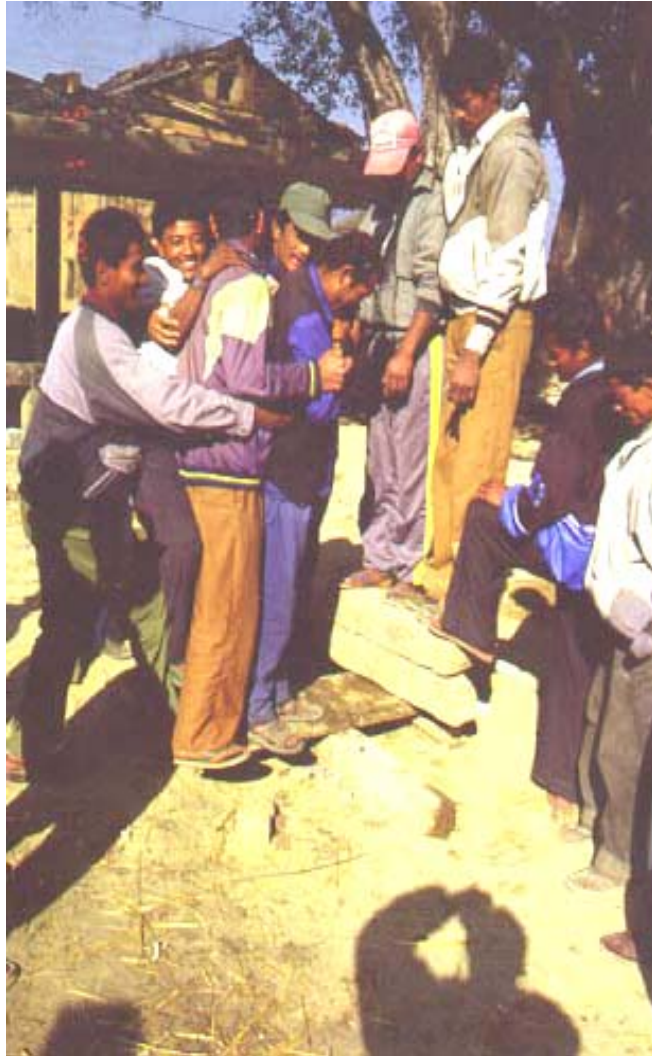
Involvement of all



Remember: School is a part of



School Earthquake Safety



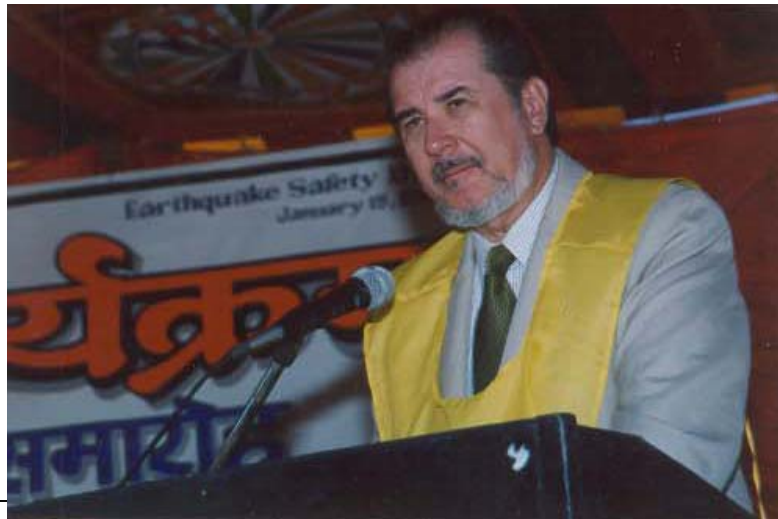
Convincing the Parents!



Disaster Risk Reduction Culture: At Community level



EARTHQUAKE SAFETY DAY



EARTHQUAKE SAFETY DAY

Shake Table Demonstration



Working With 58 Municipalities

Scenario

**RADIUS
TOOL**

Action Plan

SESP

Implementation

Replication

58 MUNI

M & E



NSET Signed MoU with LSMC

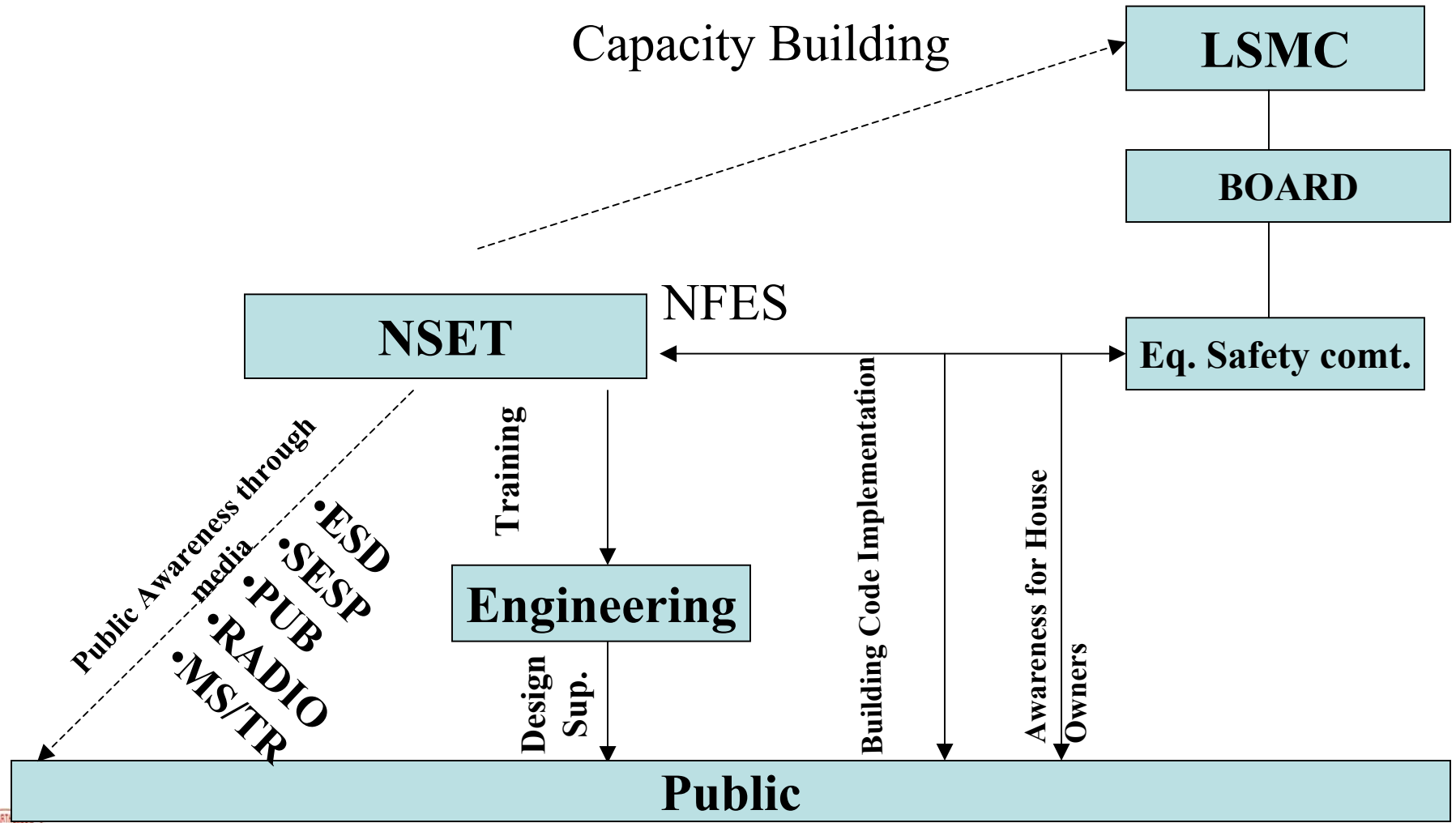
Activities

- ⑩ Weekly orientation program
- ⑩ Technical assistance for preparing guideline for building permit process
- Training/seminar to municipal engineers
- ⑩ Assistance on training programs on earthquake resistant construction organized by LSMC
- ⑩ Providing 1/10 model building with earthquake resistant features
- ⑩ Technical support for construction of full-scale demonstration model



Building Code Implementation at LSMC

Capacity Building



Orientation to House Owners

General Orientation on Earthquake Safety Measures

And

- ⑩ To make understand and accept the importance of the safety of the building in which the owner is investing
- ⑩ To make prepared to pay or spend a little extra for the safety
- ⑩ To suggest to hire qualified or experienced designers and skilled tradesmen



Disaster Management Committees at Ward level are effective!



Disaster Management Planning at Ward Level: Volunteers



Community Response



Mexico Earthquake



Pre-positioned Emergency Rescue Stores (PPERs)



Lessons Learned

- All activities should be based upon the participation of all stakeholders including community
- Consider lack of state-of-the-art knowledge and low awareness level
- Understanding the nature of community is important
 - Priority (May be high for recurrent/frequent hazards but not for infrequent/rare occurrence hazards)
 - Generally, do not have strong inertia
 - But need to develop trust
 - Low-tech approach
 - Less complexities in implementation
 - Transparency



Lesson Learned

- Share responsibilities with communities:
NO SINGLE INSTITUTION CAN DO EVERYTHING ALWAYS!
- Involvement of Stakeholders Challenging but most necessary
 - Understand ground root realities
 - Transfer ownership of concepts and programs
 - Develop synergy
- **There is no other way!**



Lessons Learned

National Development Process

