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# From Research To Action:
## Through a
## Realistic, Doable, Usable and Socio-economic and Culturally Acceptable Actions

***Mohsen Ghafory-Ashtiany***
***International Institute of Earthquake Engineering and Seismology (IIEES)***
***Tehran, Islamic Republic of IRAN***

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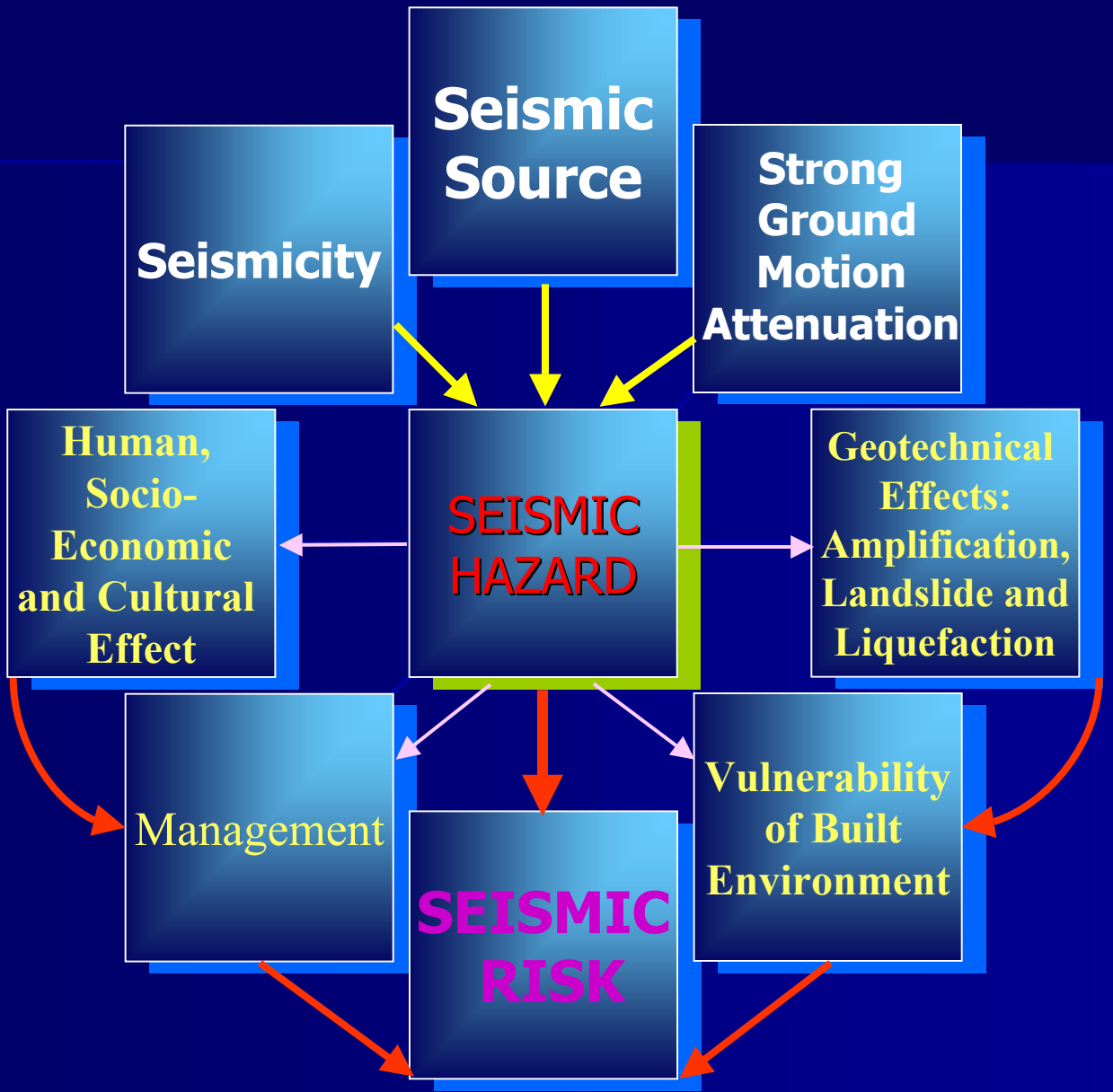
# Statement of the Seismic Risk Problem

- ✓Problem or Facts: High Seismic Risk in Most of Developing Countries
- ✓Challenge : Earthquake Risk Reduction and Control with the Objective of Saving Human Life and Resources
- ✓Role of Scientists: To Develop an Effective and Comprehensive Program for Risk Reduction, Reliable Assessment of Hazard, Provide Required Know-How and Provide Doable and Effective Solution
- ✓Role of People, Engineers and Decision Makers : Believe on Risk Reduction and To Implement the Know-How

# Earthquake Cause and Effect



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$$\text{SEISMIC RISK} = \frac{\text{Seismic Hazard} \times \text{Vulnerability} \times \text{Value}}{\text{Management}}$$

Reduction and Control of Seismic Risk in any given area (specially urban are) as a complex problem, requiring the integration of knowledge and the collaboration of experts from many disciplines.

The problem of Seismic Risk Reduction will not be solved just by the acquisition of the required knowledge through research. Research must be accompanied by the necessary technological developments and the implementation of the knowledge and the development in practice; as well as a good management.

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# What Has Been Done

Even though the work has been done so far were very important and useful, but they have not solved the problems and have not successfully reduced risk.

Thus we need to develop Realistic, Doable, and Socio-economic and Culturally acceptable programs and Effective Implementation.

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# What Needs To Be Done?

With the Consideration of:

1. Level of people awareness and their capabilities.
2. Economic condition of people and lack of having luxury economy.
3. Economic capabilities are used for immediate needs rather than for long-term activities related to seismic safety.
4. Government's priorities are set for rapid development and sometimes without consideration to seismic safety issues.
5. Lack of patient for long term work among the policy makers.
6. Lack of law and code enforcement in small cities and rural area.
7. Lack of full use and benefit of the technical knowledge in daily life.
8. Lack of strong and authoritative organization for implementation of the risk reduction programs.

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# What Needs To Be Done?

- Translation of current know-how into simplified options which can answer the socio-political and economical concerns. This will require not only a multi-disciplinary approach, but also a comprehensive educational program for those that are involved in the implementation of the seismic risk reduction actions.

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# What Needs To Be Done?

- Good management and performance is the key and major controllable factors in Risk Reduction Program.

- Finally, a **D**oable **I**nitiative and **M**omentum for **E**arthquake **R**isk **R**eduction **(DIMER)** is required.

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# Challenges to Reach: DIMER

- Changing Public Policy and Practices
- Defining Acceptable and Affordable RISK
- Making SEISMIC SAFETY a Priority and Culture
- Meeting the NEEDS and REALITY
- Building Internal Capacity
- Putting scientific knowledge into USABLE, Simple, Affordable and Doable form

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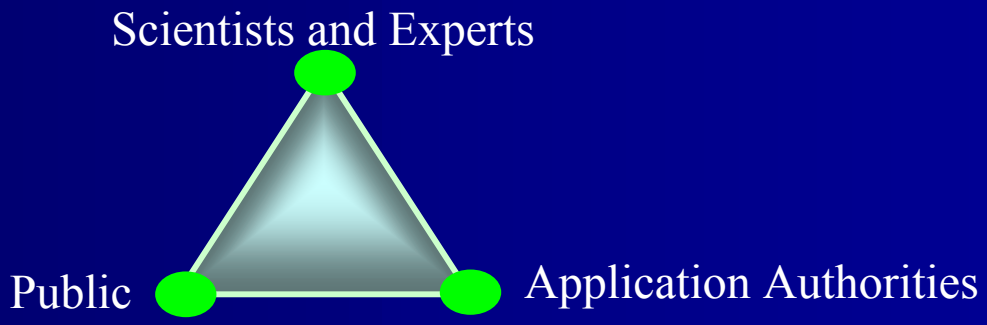
# Challenges to Reach: DIMER

- Translate Safety to Economic, Social and Human Value.
- Creating partnerships and cooperation between the scientist, engineers, builders, people and officials.
- Communicate the Risk to the Public.



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# Challenges to Reach: DIMER

- Building AWARENESS and MOTIVATION
- Create Citizen Response Teams
- Defining and clarifying the accountability and the responsibilities of the decisions and actions.

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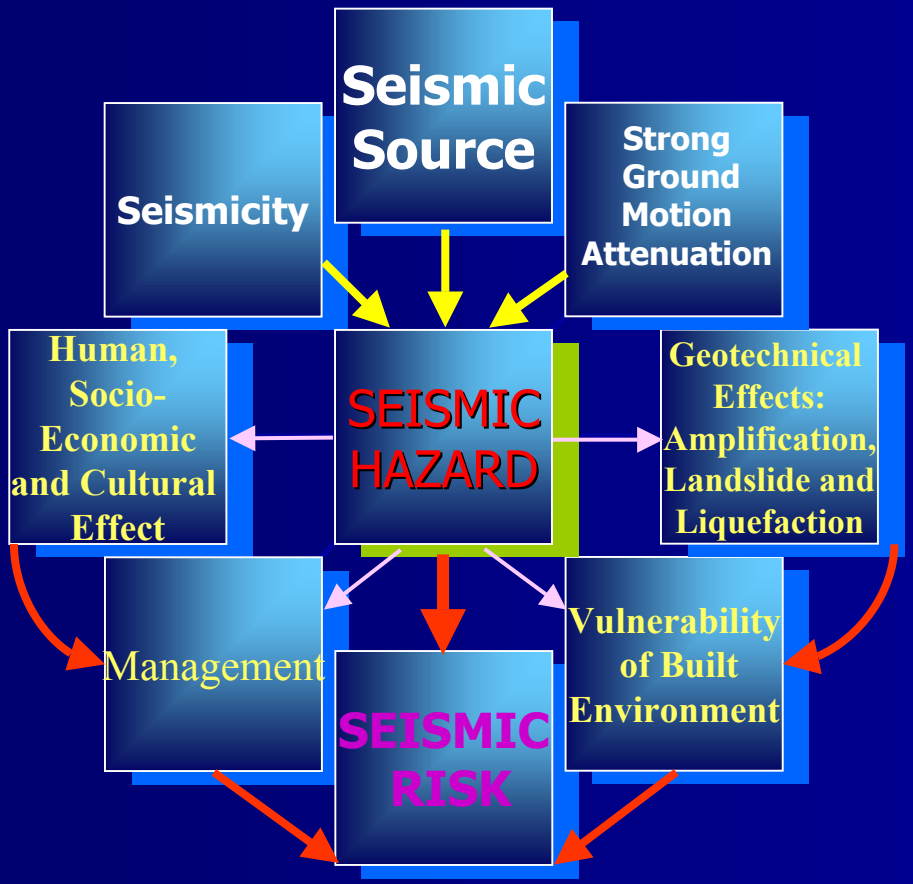
# Conclusion

1. We need to see the total picture of earthquake from its source to its effects and impacts.



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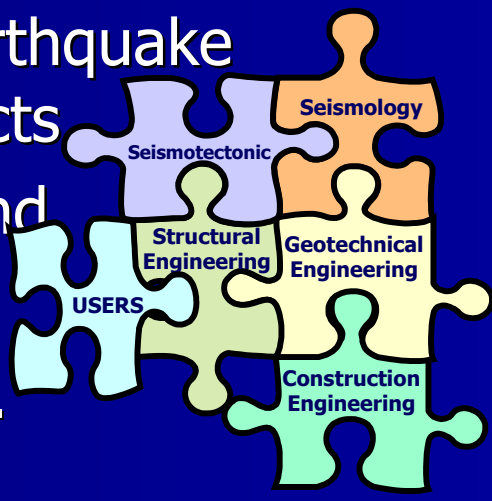
1. We need to see the total picture of earthquake from its source to its effects and impacts
2. We need to see what we have done and what needs to be done effectively in order to solve the "Earthquake Puzzle".



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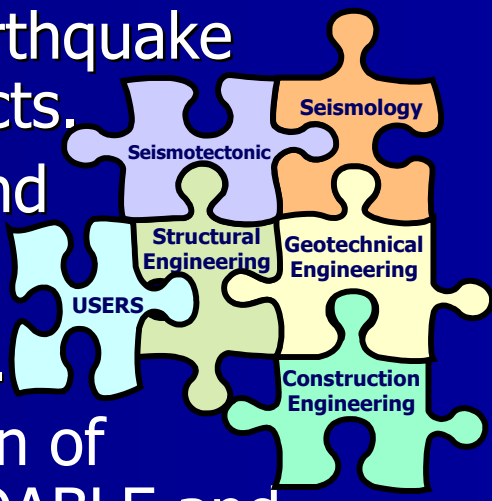
3. The Puzzle can be solved by integration of knowledge into practice by offering DOABLE and USABLE solutions in order to be put on the ground as well as collaboration of experts from many disciplines and GOOD MANAGEMENT.



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4. To BE PATIENT and Built Internal Capacity.