

A Discussion on Post-disaster Reconstruction of Wenchuan



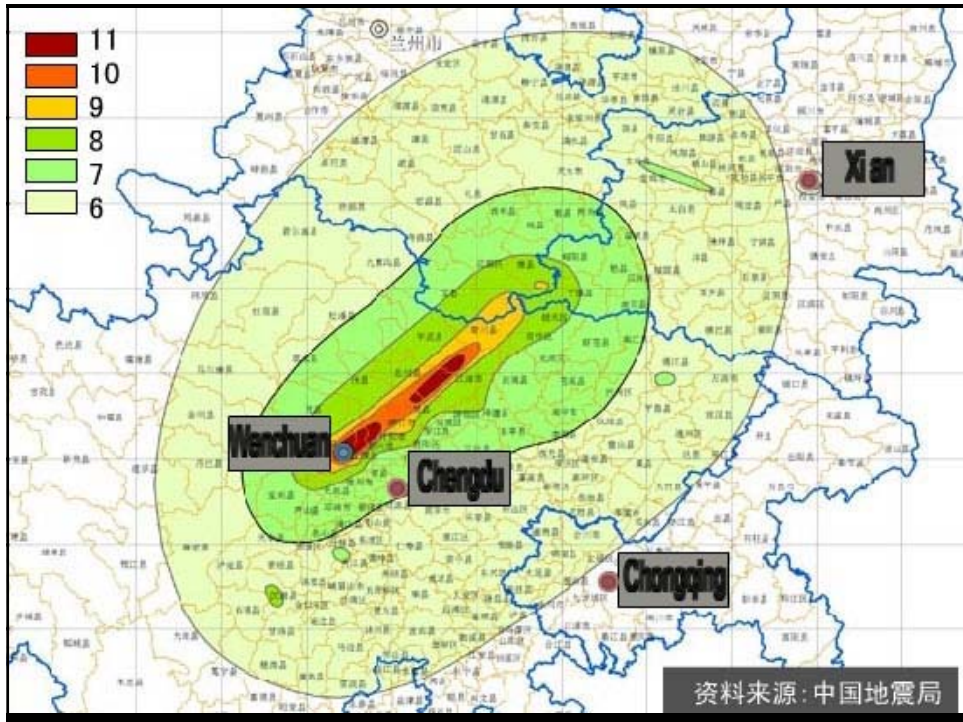
Beijing Tsinghua Urban Planning & Design Institute

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Post-disaster reconstruction ---- a new topic of planning

2004——The Indian Ocean tsunami
2005——Hurricane Katrina of America
2008——Wenchuan Earthquake of China

No matter natural disaster or man-made damage, how should human beings conduct rescue and post-disaster reconstruction?

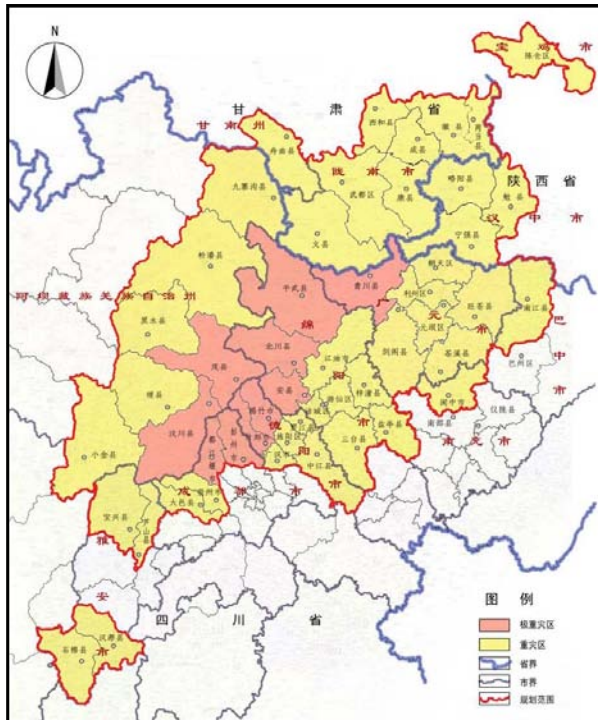




The main contents of our work

- Master plan of post-disaster reconstruction
- Urban system
- Rural development
- Infrastructure
- Facilities
- Productive forces and industry
- Market Service system
- Ecological environment renovation
- Disaster prevention and reduction
- Land use

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The scope of planning

- 51 counties (cities, districts)
- 132,596 square Km
- 19,867,000 people (at the end of 2007)

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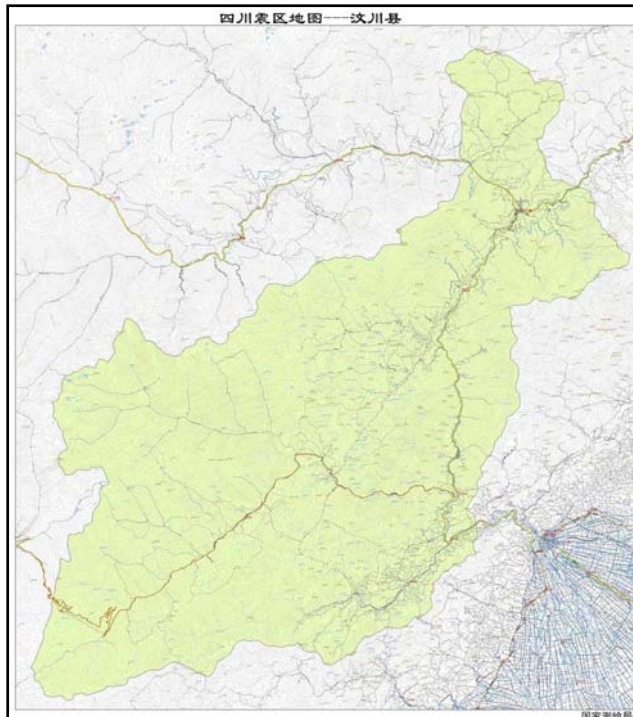
Get a scientific understanding of the disaster

- The earthquake of Wenchuan measuring 8.0 on the Richter scale and reaching a maximum intensity of 1.1 degrees has the following three features:
 - Widely affected areas and huge difference in the environment;
 - Serious damage and heavy casualties;
 - Complex geological conditions and serious secondary disasters.

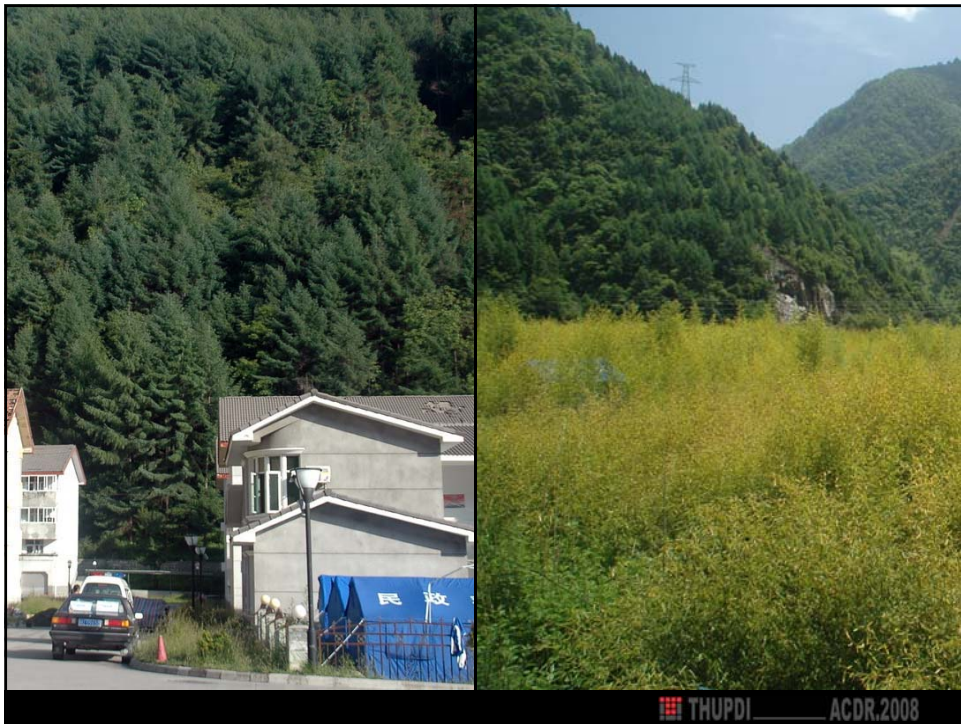
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Subdivision of the disaster areas

- **Low mountain regions:**
 - High-impact from earthquake
 - Low-impact from geological disasters
 - Low-impact of Ecological problem
- **Deep valley regions:**
 - High-impact from earthquake
 - High-impact from geological disasters
 - Low-impact of Ecological problem
- **Highland regions:**
 - Low-impact from earthquake
 - Low-impact from geological disasters
 - High-impact of Ecological problem



Wenchuan county

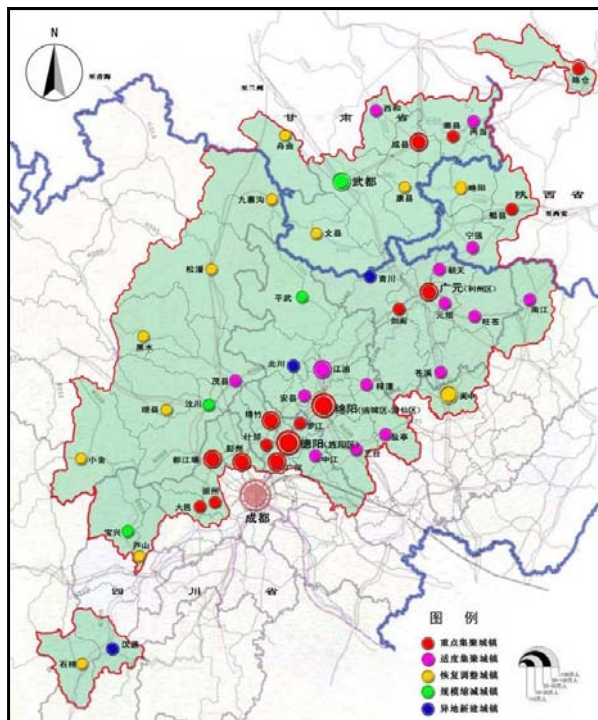




Different responses to different regions

- **Low mountain regions— Recovery and development**
 - Dense population
 - Well-developed transportation and good urban construction conditions
 - Further concentrated development
- **Deep valley regions—Turnaround strategy**
 - Existing problems in its original social and economic development
 - Transition of development strategy
 - Rebuild the harmonious relations between man and nature
- **Highland regions—Disaster relief and poverty alleviation**
 - Sensitive natural environment
 - Smaller population density
 - Ecological protection and Severe poverty solving

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Types of rebuild towns

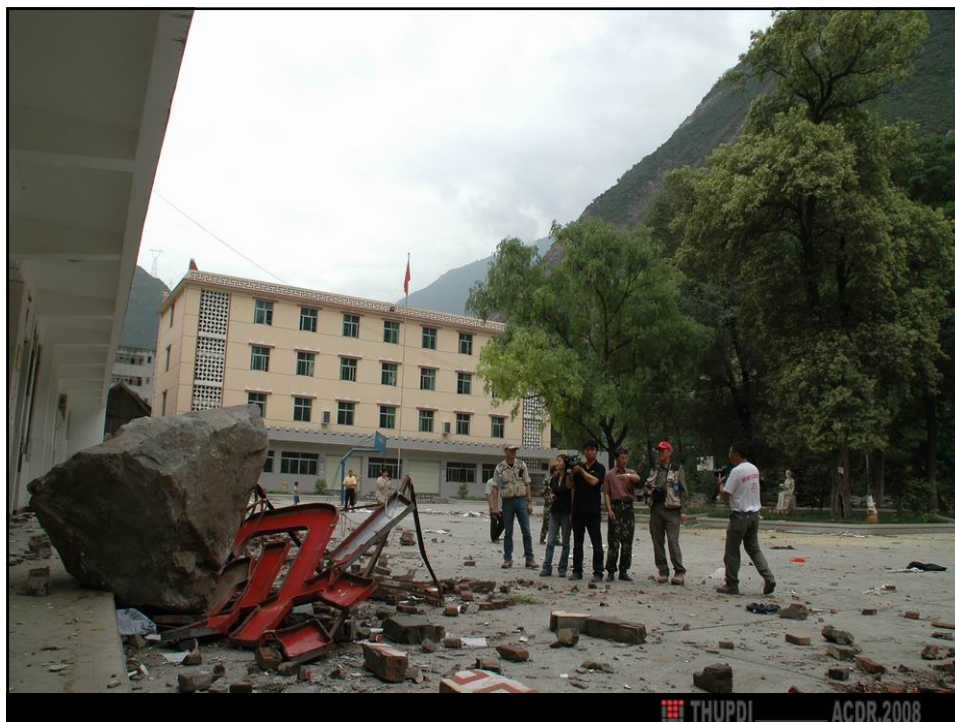
- prioritized development
- appropriate development
- restoration and reconstruction
- reduction of size
- site relocation and new construction

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Different Schedules to different regions

- **The pace of reconstruction is very important**
 - Restoring infrastructure ;
 - Providing temporary and permanent housing;
 - Resuming production and commercial activities;
 - Keeping the social stability.
- **Deep valley regions--- Should not be blind pursuit of speed**
 - A long process to verify the loss and geological disasters;
 - The path of development needs a fresh look at the process;
 - Avoid mistakes in decision-making and huge waste.

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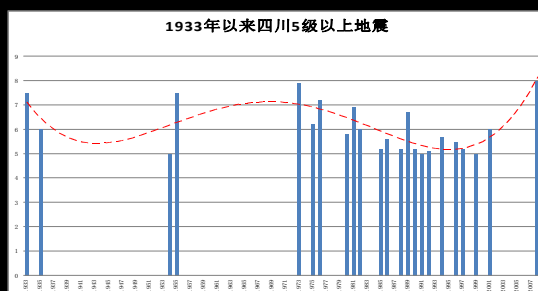
Wenchuan County is the zone of extremely high-risk of secondary disaster

- Only two to three years after will collapse fixed reduce;
- Landslides will be very serious within 5 to 8 years;
- Mud-rock flow will enter a highly active phase after the earthquake in 10 years. And that will be serious disasters during the reconstruction.
- From " A study on assess the resource capacity of the earthquake hit areas in Wenchuan "

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Rebuild the relations between Human and nature

- Conflict between man and nature is one of the important reasons which caused the enormous loss in the disaster. Reshape a harmonious relationship between man and nature is the fundamental to avoid a repeat of the disaster.
 - Earthquakes with Magnitude greater than 7 have happened 8 times in the range of 200km from the epicenter.
 - In the last century, a strong earthquake occurred every 30 to 40 years in this area .



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Attention to the “Black Swan”

- **Black Swan**---Rare and unpredictable event which is unexpected but changes all. It shows that the knowledge we gain from observation or our experience is with serious limitations and vulnerabilities.
- However, almost everything in our social life is generated by those rare but significant impact vibrations and leaps.
- Almost all major disasters have the "Black Swan" features:
 - Rarity;
 - Impact Resistance;
 - Predictability after the event;

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Legal and Policy Support

- **Government guidance:**
 - To have a sense of risk
 - To have emergency Reserve
- **public participation:**
 - Post-disaster reconstruction must be careful to properly handle, otherwise, it will cause new problems and trigger a new disaster.
 - Social assistance will help rebuild disaster areas. However, it still depends on the people of disaster areas to create a better future.

Thanks!

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