



# Mechanism and mitigation of earth fissure in China

Chang'an University Jianbing Peng

e-mail:[dicexy\\_1@chd.edu.cn](mailto:dicexy_1@chd.edu.cn)

April. 2017



# Background

**A geo-hazard phenomenon of rupture in the surface soil.**

**A world-wide geological disaster, especially in the USA and China.**



**USA**



**Saudi Arabia**

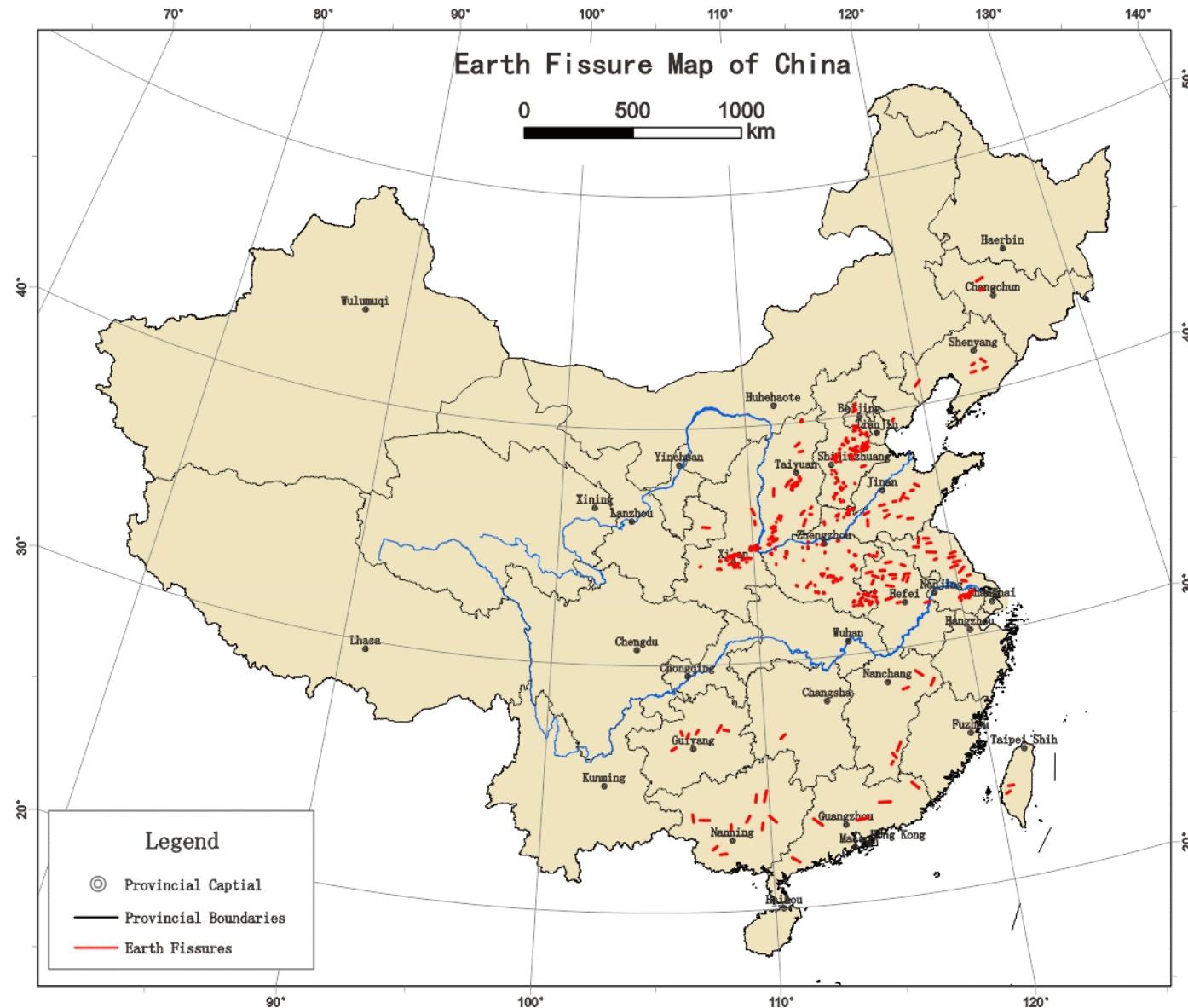


**Mexico**



## Background

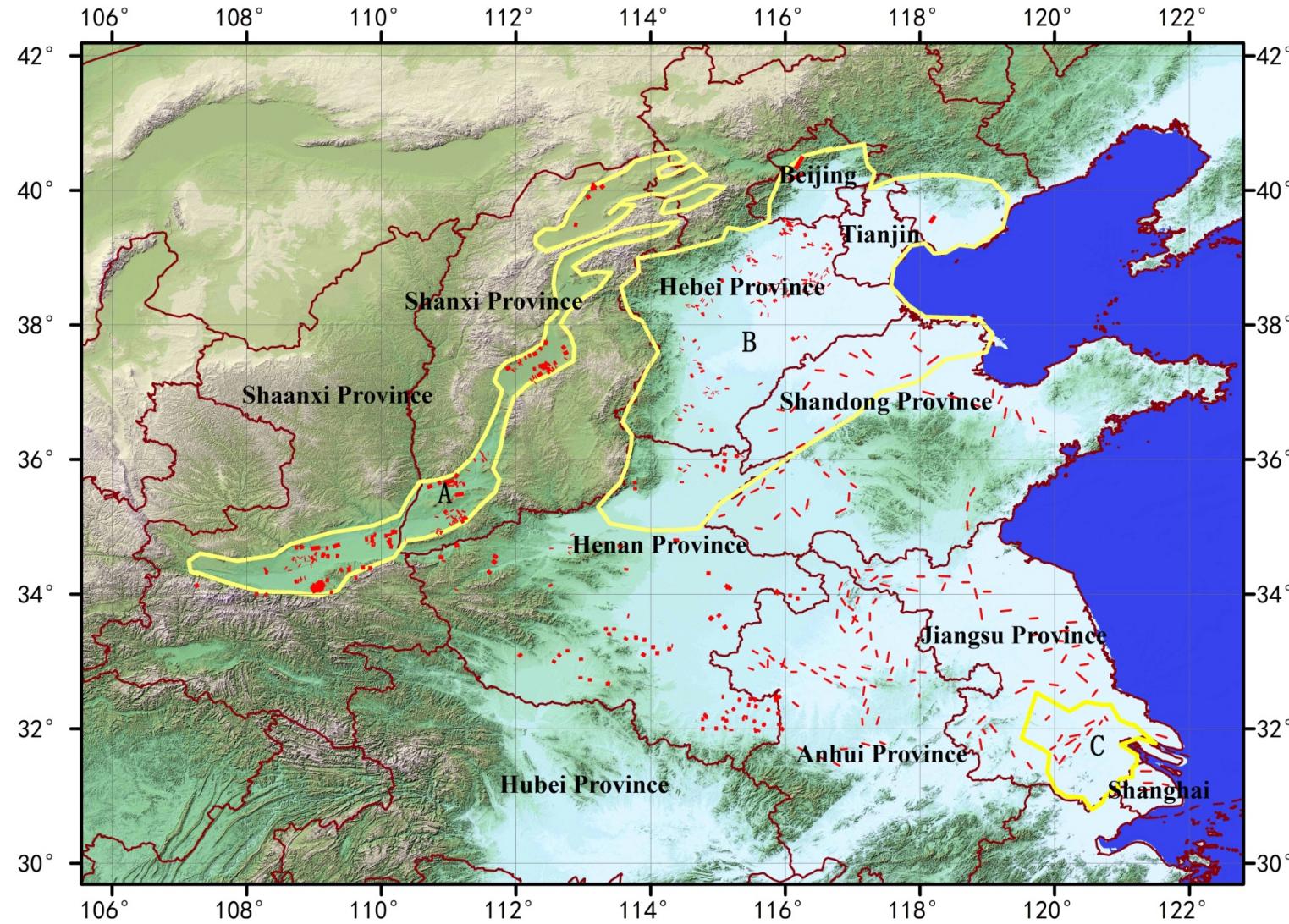
## The main distribution of earth fissures in China





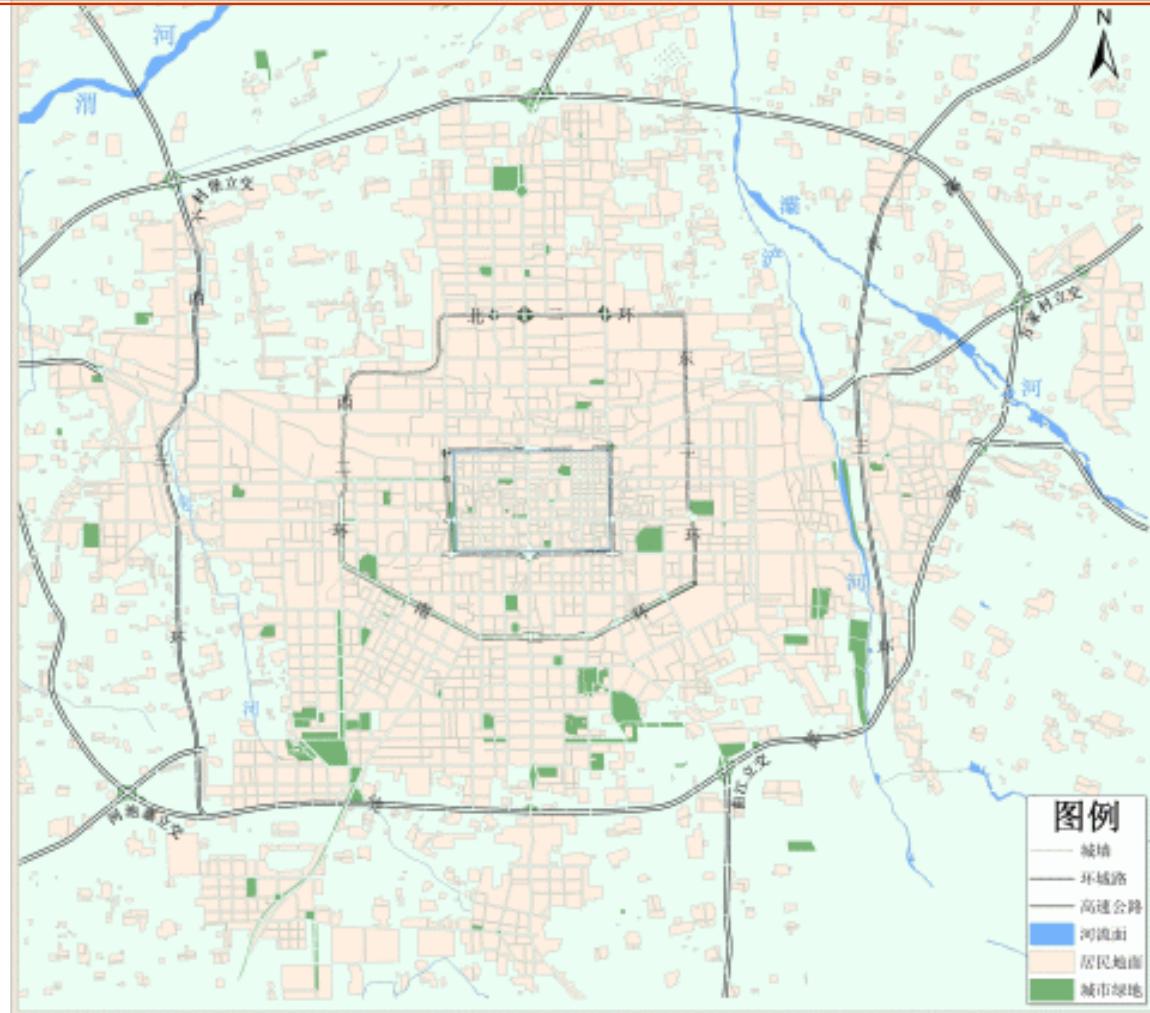
# Background

Earth fissures are main distribution in North China Area, especially in Fenwei Basin.



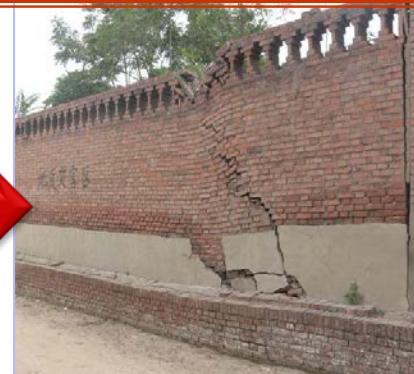
# Background

With similar directions as NEE and approximately, 14 earth fissures are dividing the city. These fissures cover an area of more than 270km<sup>2</sup> and extend more than 170km in length.



# Background

**Great economic loss caused by ground fissures up to tens of billions Yuan in China!**



**Qi County in Shanxi Province**

**Qingxu County in Shanxi Province**



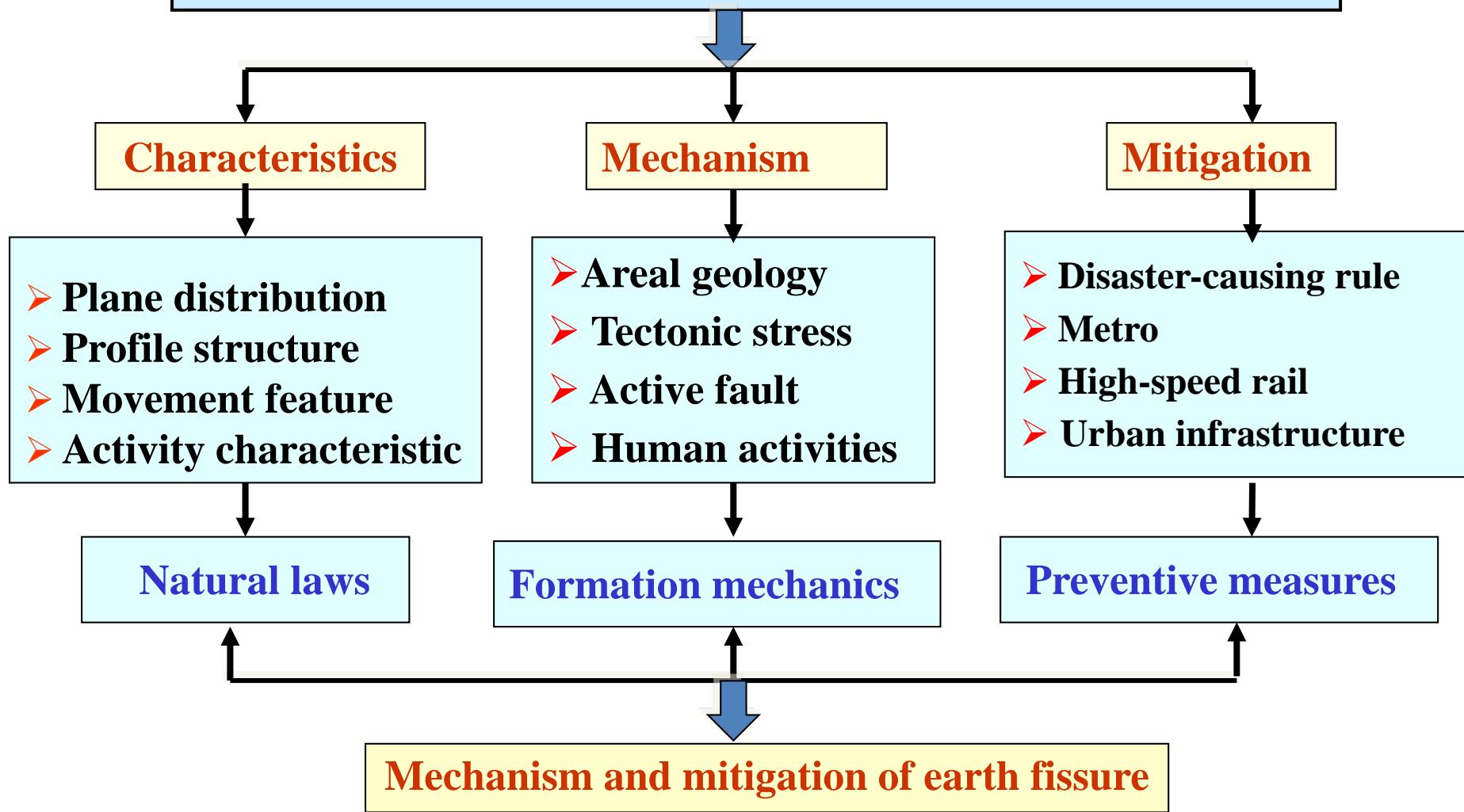
**Kouzhen Village in Shaanxi Province**

**Beiqijia Town in Beijing**



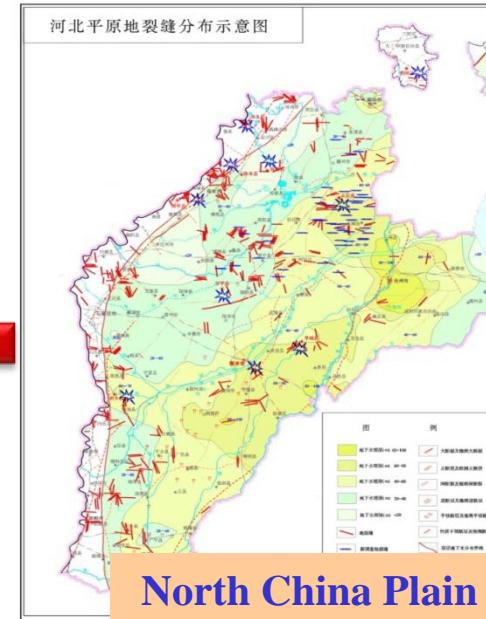
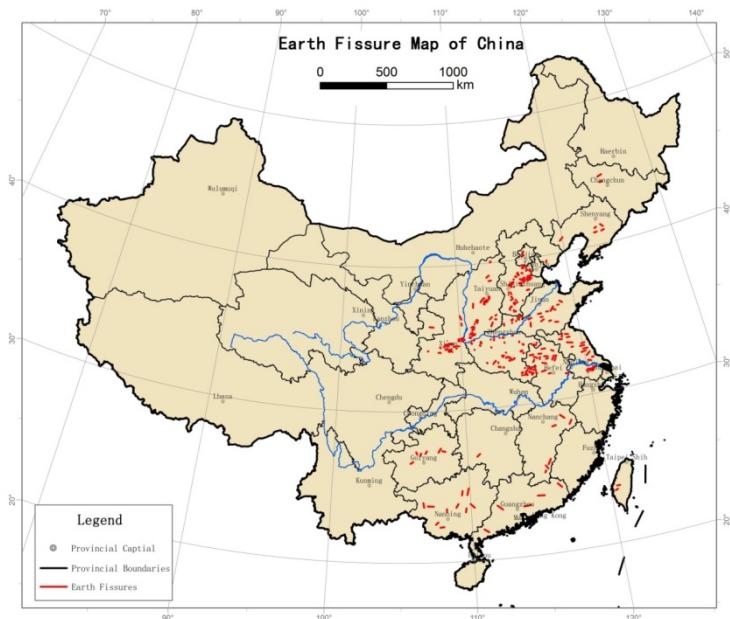
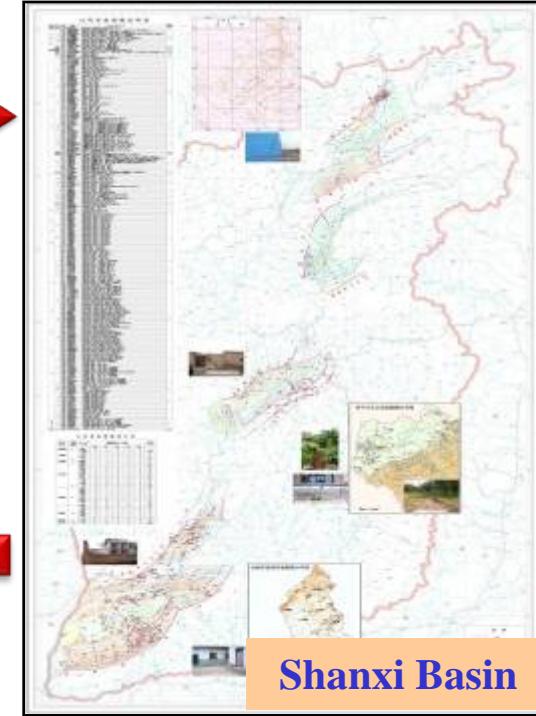
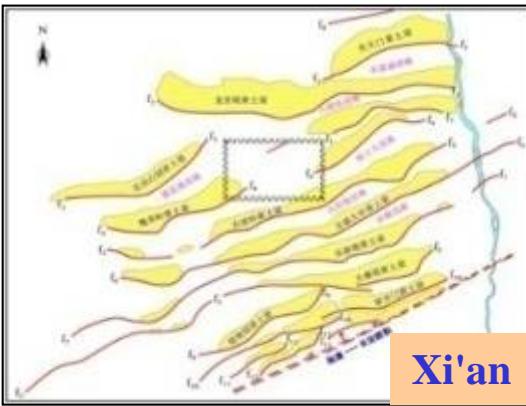
# Research idea and method

Investigation、Exploration、Monitoring、Test、Physical simulation、Numerical simulation、Theoretical analysis、Prevent practice





# Background



Earth fissure research trilogy of Xi'an, Fenwei Basin and North China Plain has been completed.