Fanjingshan National Natural Reserve
Facts, Stories, Feelings and Thoughts

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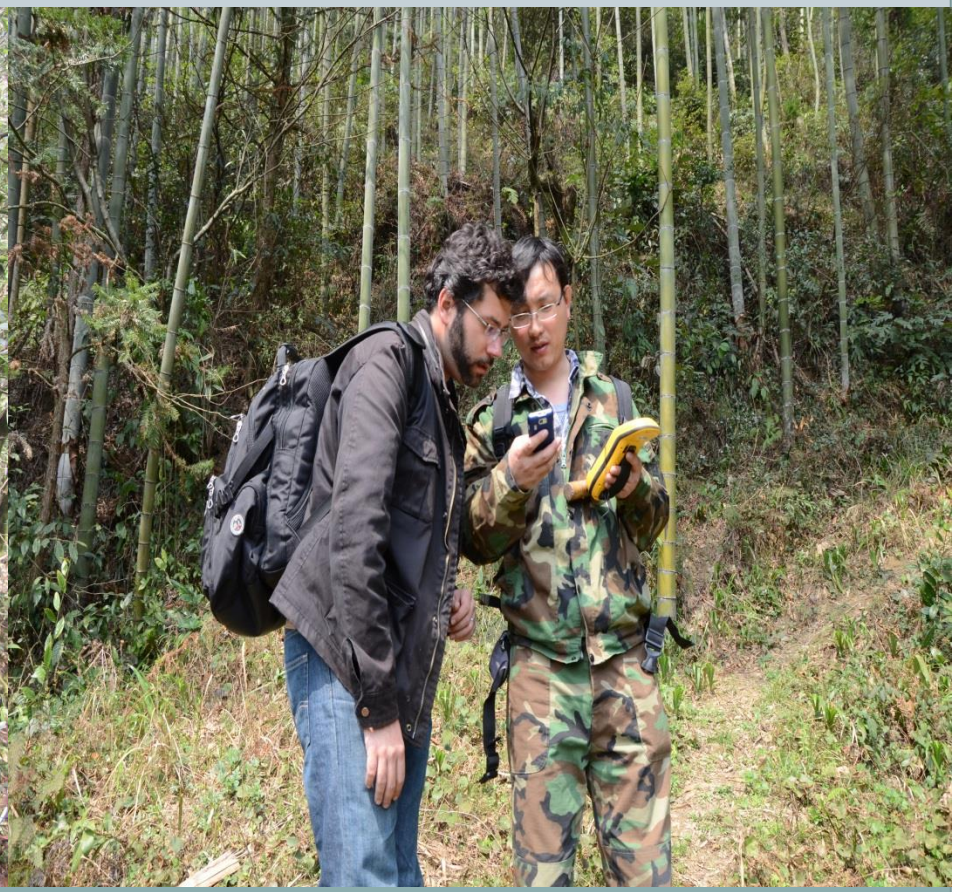
Field Work
March – May 2013

- Participatory mapping
- 21 households

Field Work
March – May 2013

- Vegetation Survey
- 28 plots



Field Work
March – May 2013

- Social survey questionnaire pre-test
- 22 households of household survey
- 2 interviews of community survey

Proud Muddy Boots Geographers

Proud Muddy Boots Geographers

Population and Demographics

- 16000 inhabitants living in the reserve (2012)
- 13500 inhabitants in 2003
- Three autonomous counties
- Seven townships
- 23 administrative villages
- Two major minority groups: Miao and Tujia
- About 70% local residents are minorities

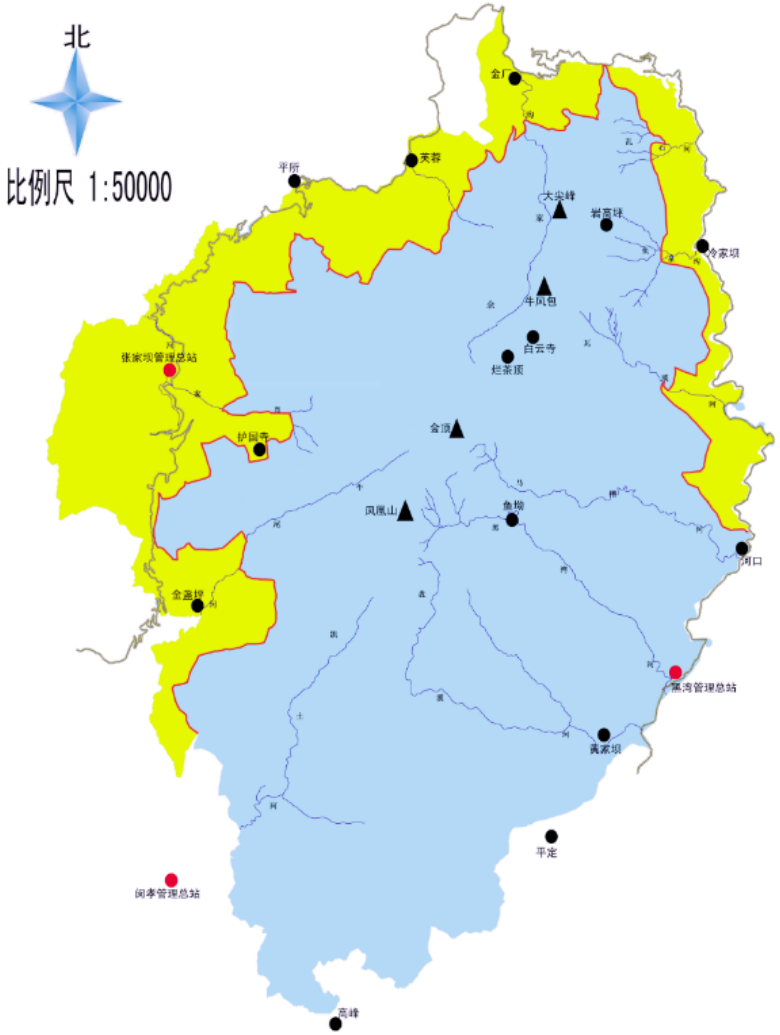
Population and Demographics

- 37.85 persons per square kilometers (2012)
- Population density by comparison
  - China: 144 (2010)
  - Japan: 339 (2012)
  - US: 38.82 (2010)
  - Texas: 37.87 (2010)
  - Yellowstone national park: 0.1
- Relatively high population density among natural reserves/parks
- More human activities and therefore more possible impact on the environment
- More management issues
- Cultivated area per person: 0.6 mu (0.04 hectare) (*county level data*)

Population and Demographics

- Birth rate: 13.12‰ (*county level data, 2010*)
- Mortality rate: 6.75‰ (*county level data, 2010*)
- Natural increase rate: 6.38‰ (*county level data, 2010*)
- Estimated Natural increase rate in 1979: 15‰
- Natural increase rate by comparison
  - China: 5.28‰ (2010)
  - Japan: -2.42‰(2012)
  - US: 5.45‰ (2010)

Infrastructure and Transportation



Infrastructure and Transportation

Infrastructure and Transportation

- 20% households possess motor vehicles (estimated)
- Only two natural villages have no road access
- 100% households have electricity
- 100% households have access to running water
- Mobile phone signal covers all villages and 90% of mountain areas
- No Garbage disposal stations

Other Social-economic facts

- literacy rate: 90% (*county level data, 2010*)
- High school or higher education 16% (*county level data, 2010*)
- Average income: $770.81 per person per year (*county level data, 2011*)
- China's gross national income per capita: $4,940 (World bank, 2011)

Human impact on the environment

- Firewood

- Charcoal

Human impact on the environment

Human impact on the environment

Human impact on the environment

- Roads

- Pesticides and fertilizers

Human impact on the environment

- Timbers

Monkeys

Monkeys

Does the environment have impact on human?

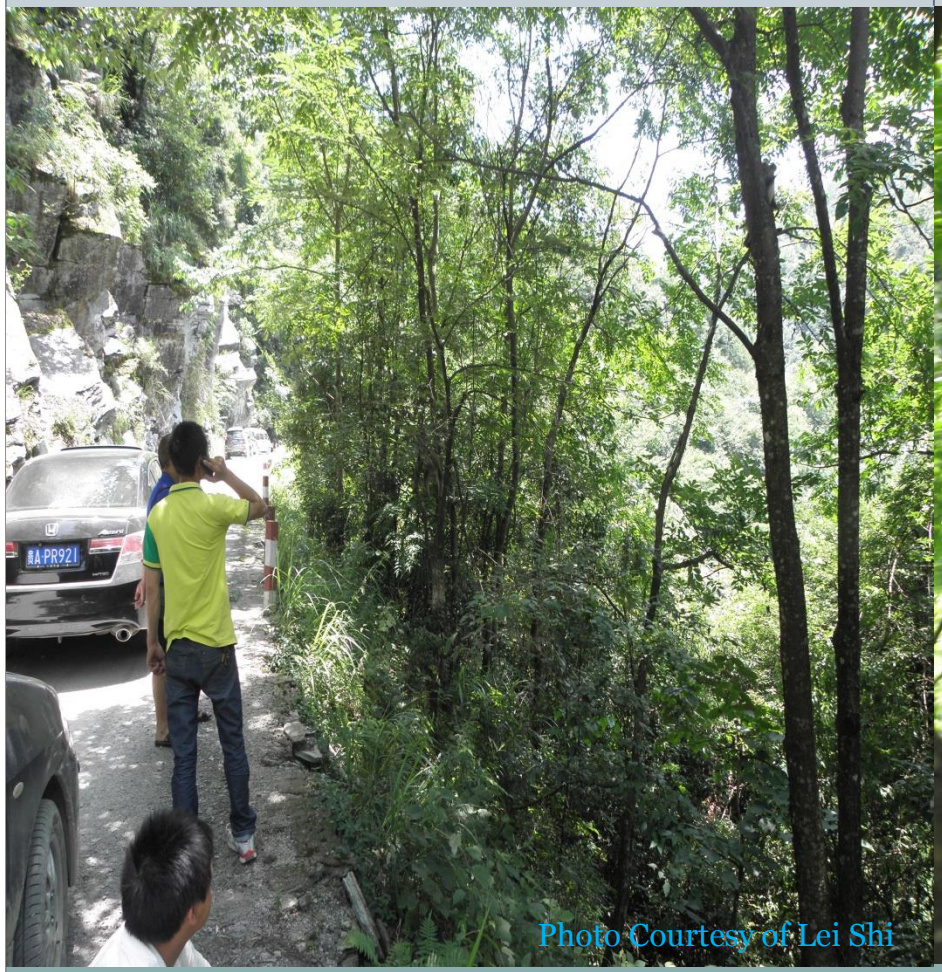


Photo Courtesy of Lei Shi

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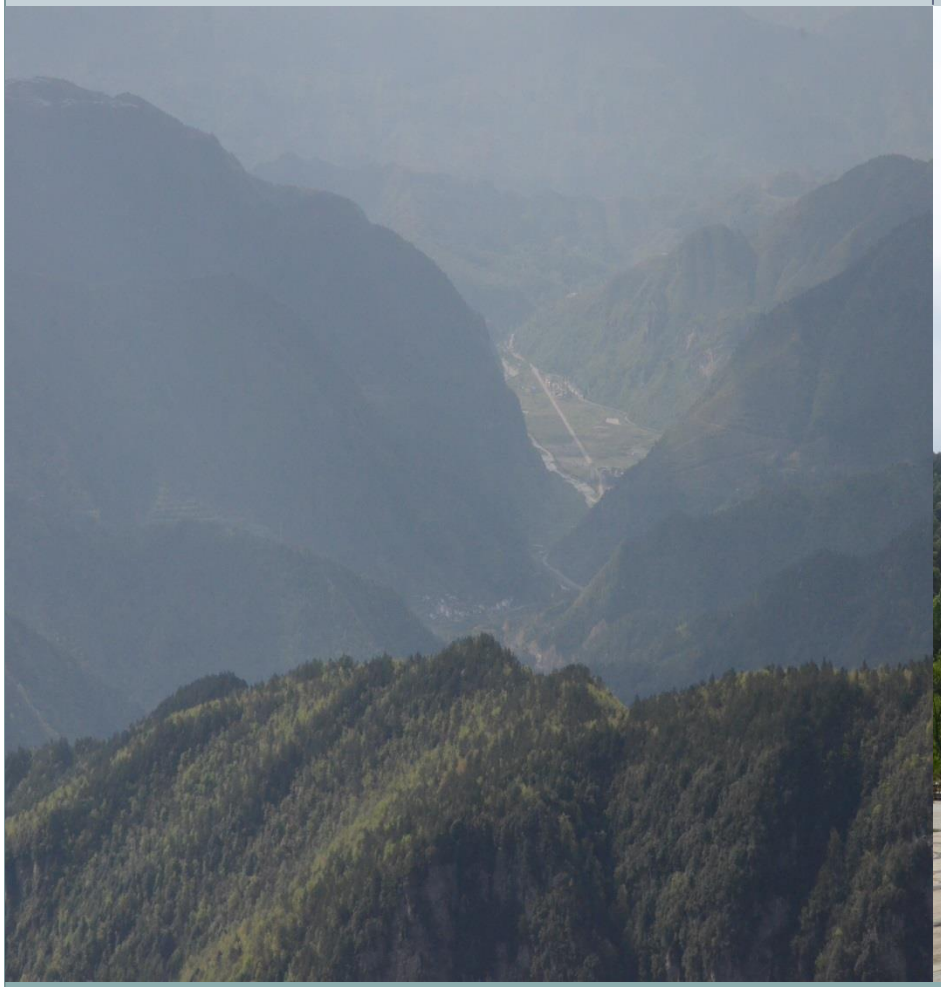
How to reduce the tension between human and natural?

- Laws and regulations
- Payments for Ecosystem Services (PES)
- Ecological migration
- Small town development plans

Small town development plans



Human well-being VS the environment

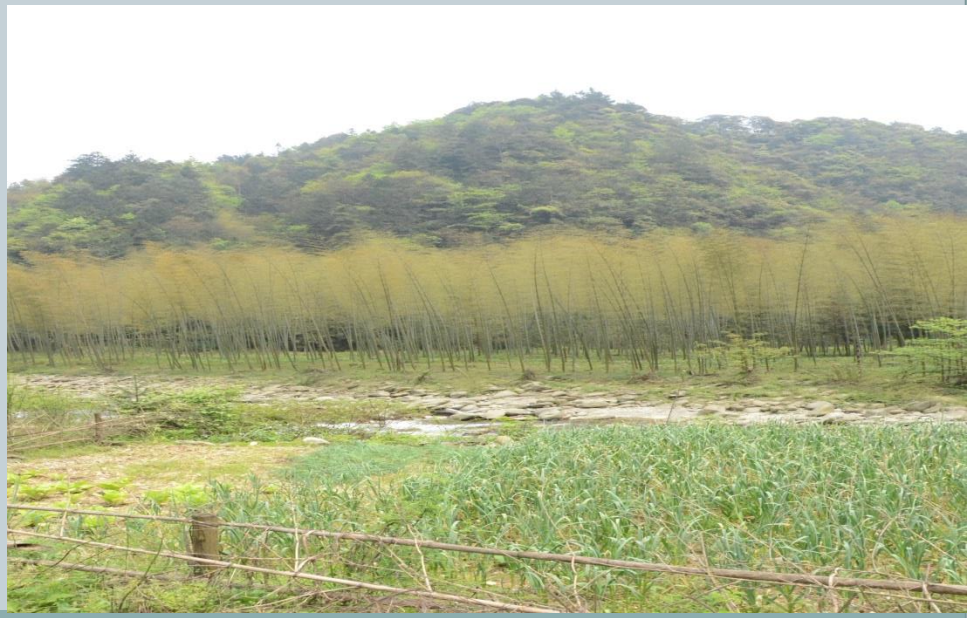
- Speak for indigenous people?
- FNNR is indigenous people's habitat, too?
- Is human being a link in food web?
- Does human's existent in the area contribute to biodiversity?

Human well-being VS the environment

Helping indigenous people is helping the environment

- Researchers and policymakers: should not only think how to preserve the environment, but also think from human well-being perspective
- Better and more sustainable PES policies
  - Bamboo story
  - Compensation story

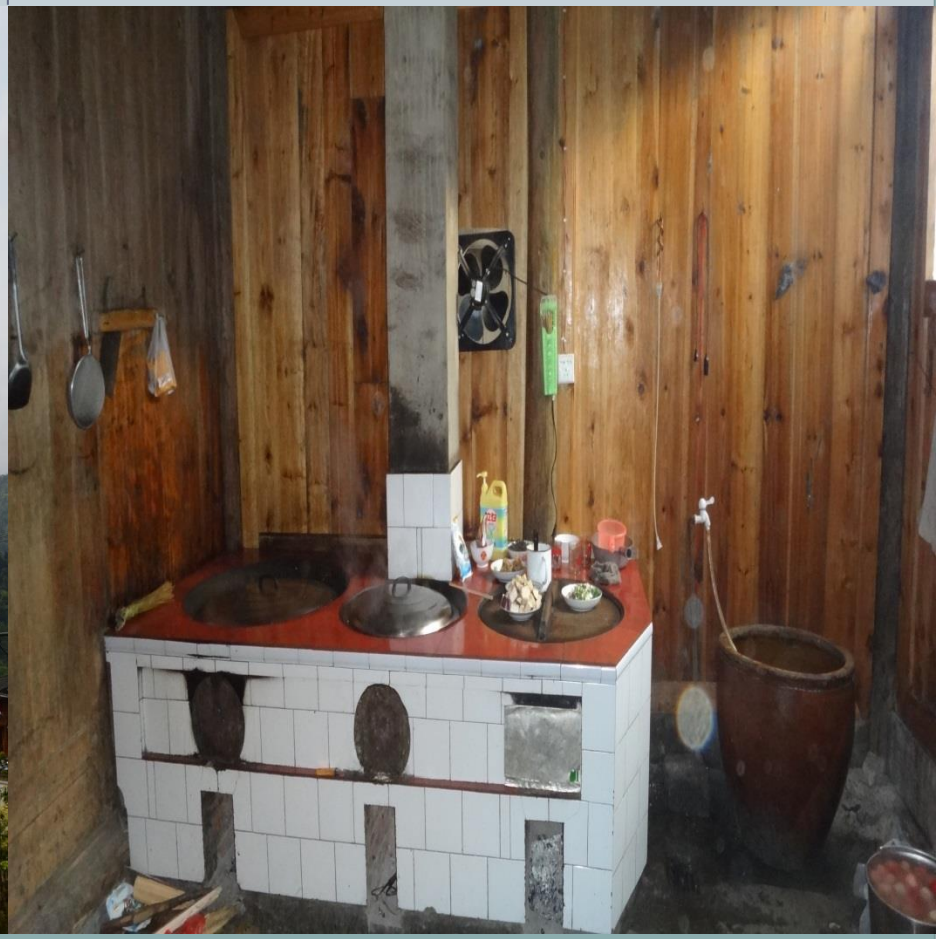
  (cash, 150kg/mu/year, 1998)



Helping indigenous people is helping the environment

- Not just set up regulations
- Provide with solutions as well
- Otherwise, possibly more tension and more human impact
  - Charcoal follow up
  - Revenge on monkeys

Helping indigenous people is helping the environment



Helping indigenous people is helping the environment

Thank You