



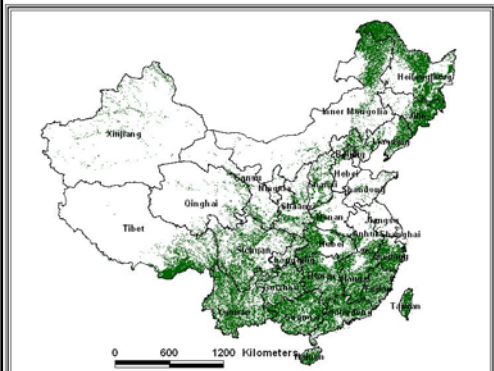
Collective Forest Tenure Reform in China

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World Congress of Environmental and Resource Economists
Istanbul, Turkey
June 28-July 3, 2014

 RESOURCES FOR THE FUTURE


Forests in China



- 22% forest cover
- 210 million hectares

Forest Tenure in China

- Two ownership types
 - State
 - Managed by state forest enterprises and farms
 - 40% forest area and 68% volume
 - Collective
 - Village collectives
 - 60% area and 32% volume
 - Growing share of timber production
 - Diversified management schemes

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Two Rounds of Collective Forest Tenure Reform

First Round: 1981-1986

- Encouraged by agricultural tenure reforms (1978-1984)
- Slower and shifting process, varying progress among provinces
- By 1987, 30+ million hectares distributed to 57 million households
- North relatively successful, growing concerns in the south (large harvests, declining forests)
- Concerns stalled the reforms stalled in the late 1980s

Second Round: 2000-

- Fujian declined the 1st round reforms, initiated the 2nd round
- 2003-2007, 14 provinces announced new reform policy
- In July 2008, Central Government Reform Policy
- By 2010, 20 provinces with reform policies

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What's New in the Second Reform Round


- Fujian
- From local initiatives to national consolidation
- Village autonomy in implementation
- Longer contracts, rich and strengthened rights
- Over 62 million hectares transferred from collective to household management by 2008
- Over 72 million households had certificates for forestland use.

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Significance of the Reform

Important step toward completion of rural land reform

- 120 million ha of registered agricultural land
- 167 million ha of registered forestland owned collectively (~60% nat'l total)
- Reform affected 147 million ha forestland
- Livelihood of ~70 million rural households

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Potential Impacts

Forest Management

- Incentives for farmer and private sector investment
- Better protection
- Higher productivity

Farmer Livelihood

- Income
- Labor allocation
- Capacity to invest

Social and Political Stability

- Equity
- Relationship between farmers and government
- Village governance



Evidence of Reforms' Impacts

Two rounds of extensive surveys

- Peking University's College of Environmental Science and Engineering
- Leader: Jintao Xu

First round of surveys in 2006/7 in eight key provinces

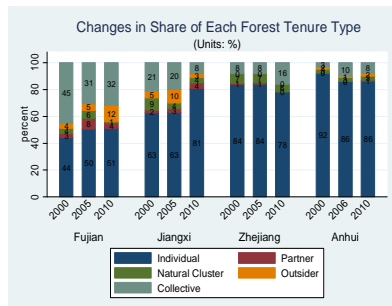
- Township governments
- Forest authorities
- Household interviews

Second round of surveys conducted during the summer of 2011

- Repeat the first round data collection



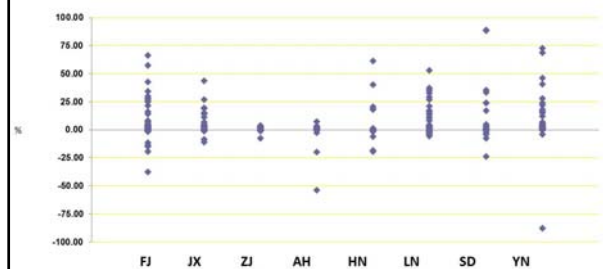
Progress of Reform (2000-2010)



- The reform altered forest tenure structure in China.
- But no uniform results across provinces and villages



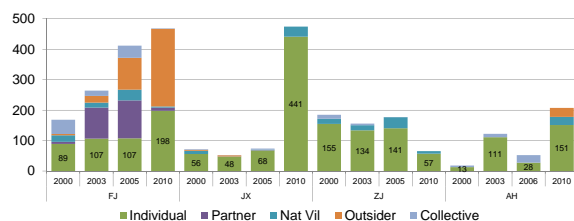
Substantial Variation Across Villages



% share change in individual management (2000-2006), by province



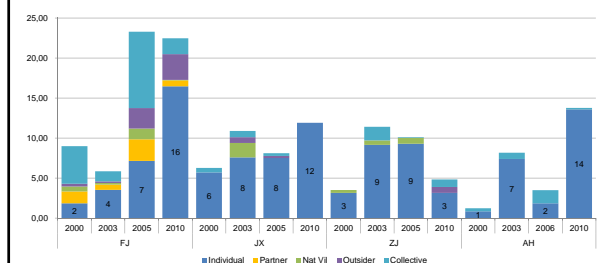
Annual Harvest by Villages (m3)



Timber production increased significantly in reform provinces (FJ=Fujian, JX=Jiangxi, ZJ=Zhejiang, AH=Anhui)



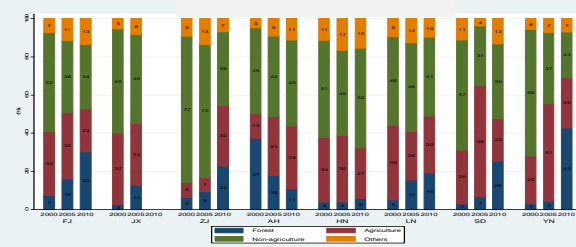
Annual Forestation by Villages (ha)



Forestation has increased, most in reform provinces



Income by Source in 2000-2010 (ag, non-ag, forest)

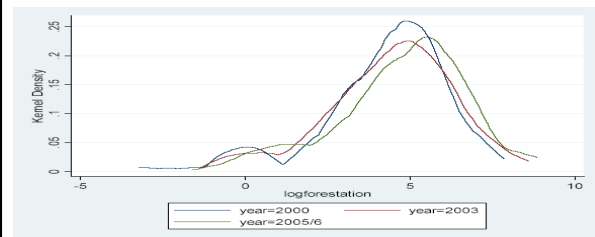


Forest income

Per capita income has risen overall, but the share of forest income increased in major reform provinces (FJ, JX, ZJ, LN, YN)

Impact on Forestation: Econometric Analysis
Xie, Berck and Xu 2012

Figure 1: Distributions of log (Forestation)* in each year



As a result of the reforms, villages increased forestation by 17 ha (a 150% increase from no reform to reform)



Forestland markets (Ji, Siikamäki, Xu, in press)

Markets for forestland as part of the reforms

- Help address inefficiencies due to initial allocation (most villages distributed forestland equally between all village households)
- In practice, ownership seldom transacted when allowed

Study approach and key results

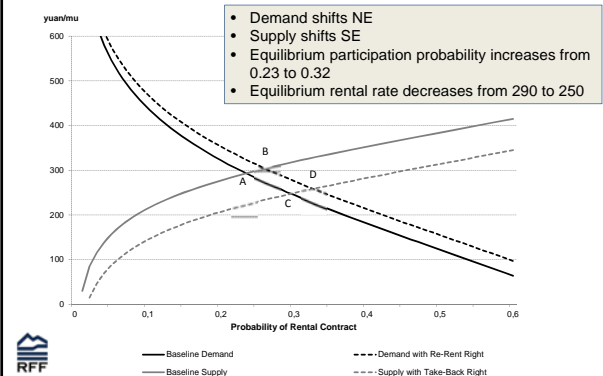
- Examine the drivers of post-reform forestland markets
- Choice experiments to estimate forestland supply and demand
- Contract as a bundle of attributes (rent, length, tenant and landlord rights)

Key results

- Evidence consistent with thin land markets
- Strong preference by households for individual, not joint, management
- We estimate, for example, that establishing (i) right re-rent by the tenant and (ii) right to re-claim by the land lord after the contract period could increase market participation by 40% while also lowering the equilibrium rents by 10%



Strengthening Markets: Right to Re-rent and Right to Take Back Combined (Ji, Siikamäki, Xu, in press)



Implications for Other Developing Countries

Choice between community and individual management is case dependent and dynamic

Reform in China sets precedents in many ways for developing world

- Social experiment in individualization
- Lessons to improve resource management

Reforms and their consequences vary by country, but both needs and opportunities exist for learning



Remaining Policy Challenges

Raising forest productivity

- Demand for forest products exceeds domestic supply and rising
- Relatively low stock per ha
- Ambitious goal of 40 million ha afforested by 2020

Increasing forest contribution to green growth

- Carbon sequestration (10% industrial emissions and up)
- Bio-energy (negligible so far)
- Replacing coal, steel and concrete (reversal of traditional development trend)

Modifying constraining forest policies

- Logging restrictions
- Poor protection of property rights

State forest reform with major obstacles

