

Poverty Reduction & Adaptation Practice

Experiences from Ningxia, China

Ma Zhongyu

Renmin University of China

Ningxia Development & Reform Commission

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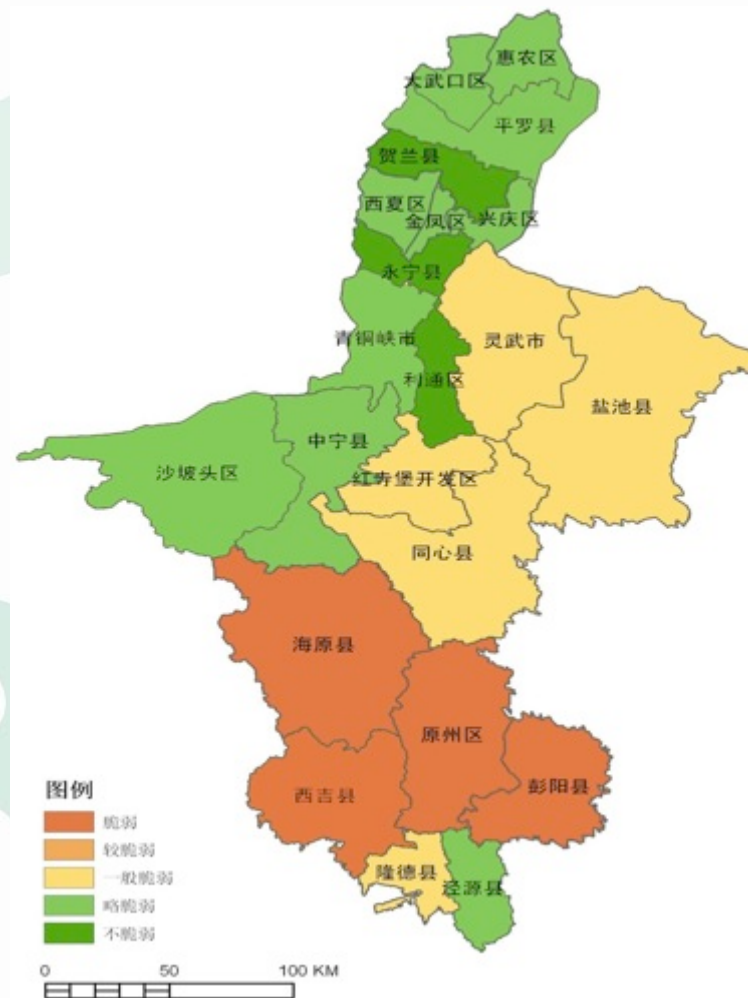
- General situation of Ningxia
- Fact recognized from climate change in Ningxia
- Impacts of climate change on Ningxia
- Practices of adaptation in Ningxia
- The realities and politics of adaptive decision-making

The Situation of Landscape & Social – Economic Development in Ningxia

- The Northern Oasis: area 29%; population 65%; GDP 88%; fiscal income 94%; access to water resources 72%
- The Middle Dryland: area 50%; population 16%; GDP 5%; fiscal income 4%; access to water resources 11%.
- The Southern Rainfed-land: area 21%; population 19%; GDP 7%; fiscal income 3%; access to water resources 17%.



- **The most vulnerable areas:** Haiyuan、Yuanzouqu、Pengyang and Xiji county.
- **General vulnerable areas:** Lingwu、Yanchi、Hongsiboqu、Tongxin and Longde county.
- **Vulnerable areas:** Dawukou、Pingluo、Yinchuan city、Qingtongxia、Shapotou、Zhongning and Jingyuan county.
- **Non-vulnerable areas:** Helan、Yongning and Litongqu county.



Human Carrying Capacity and Poverty Situation in Ningxia

- Human carrying capacity in middle and southern part is only 1.30 million of people, but its population is 2.30 million in 2010.
- The current poor people under the line of absolute poverty is 1.10million in 2010.



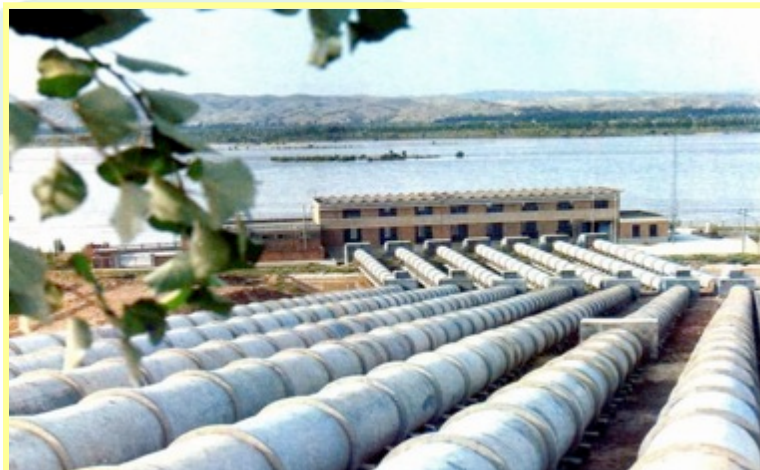
- The annual temperature has increased by 2.2 °C over the last 50 years.
- In the last 50 years the annual precipitation has gone down by 9.87mm every 10 years
- The precipitation isoline of 400mm, which is a division line between plantation and grazing, has moved 50 km south over the last 50 years

- Decrease in human carrying capacity and an increase of local poverty.
- Increase in the vulnerability of the ecosystem, including further desertification and soil loss.
- Drought and rainstorms have increasingly occurred in the middle dry area and southern mountain areas, which has a severe impact on agricultural and food productivity.
- The shortage of water resources for drinking has worsened in the middle and southern part of Ningxia.

- Relocation of population
 - 0.66 million poor people have been relocated over the last 30 years
 - The livelihood of immigrants has improved
 - Approximately 3 million *mu* of land has been returned to forest from cropland after emigration



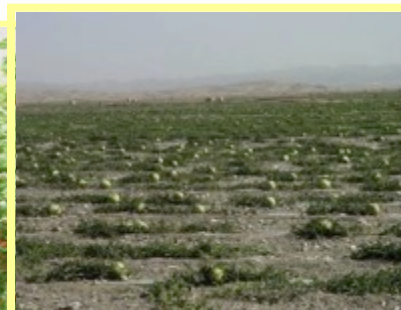
- Re-allocation of water resources
 - Diverting 0.73 billion m³ of water resources from the yellow river to the middle and south areas for irrigating and drinking
 - Converting 1.65 million *mu* of rain-fed land to irrigated land



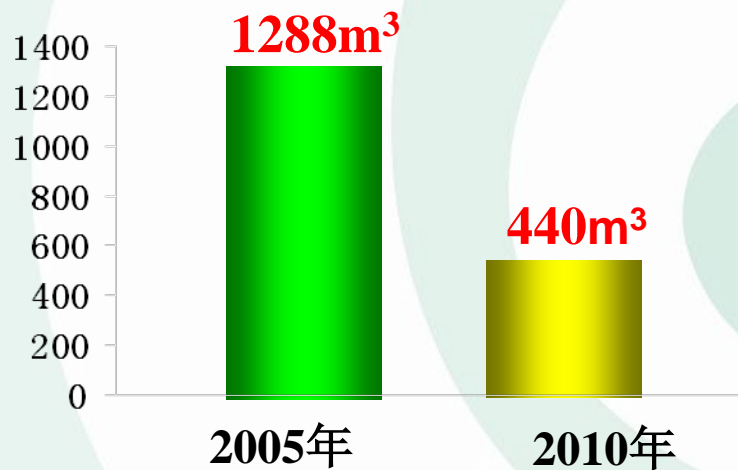
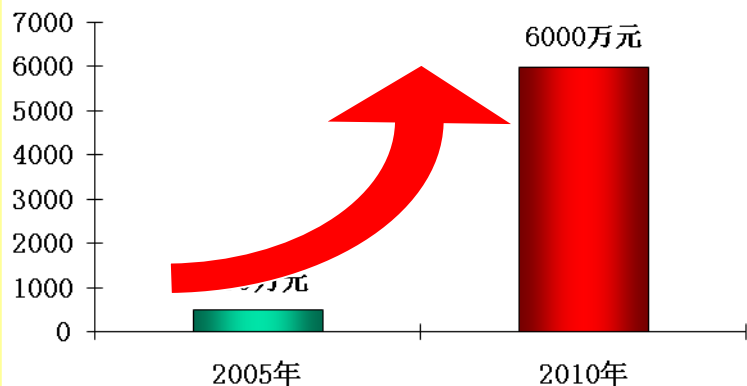
- Re-allocation of water resources
 - 2.05 million people received access to clean drinking water, including local people and immigrants



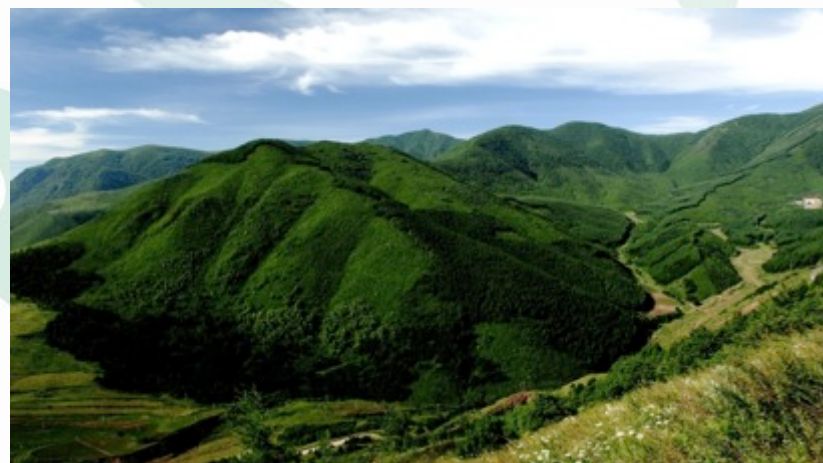
- Improved cropping system
 - Raising the ratio of high-value crop varieties
 - Using draught-resistant varieties
- Popularizing the “less tillage” and “no-tillage” system in rain-fed land



水资源费征收对比



- Controlling and reclaiming land lost to desertification and soil erosion
 - Implementing a natural forest protection program and returning steep cropland to use as forest land through afforestation. Having increased the forest by 4.88 million *mu* from 2005 to 2010.
 - Banning sheep grazing since 2003 in order to rehabilitate 36 million *mu* of degraded natural grassland.
 - Laying grass grids (made with wheat straw) on the desert in order to halt the movement of desert sand.



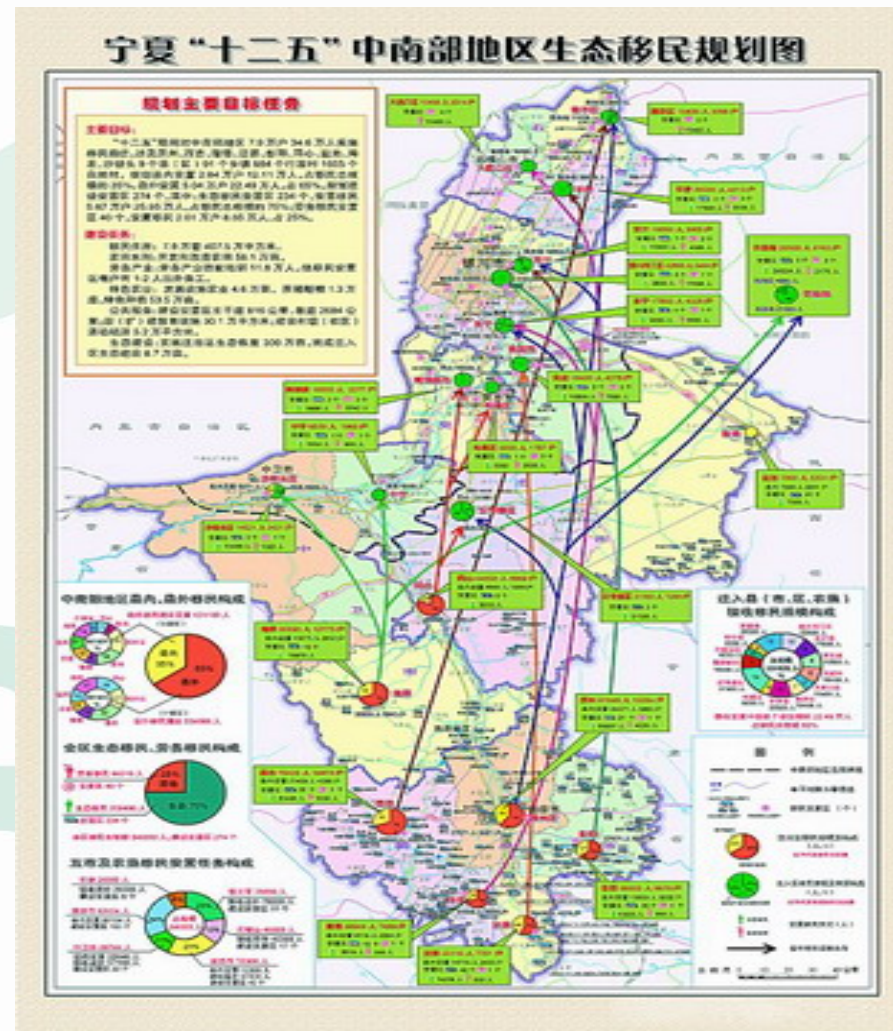
- Popularizing renewable energy use to improve the farmer's livelihood
 - Providing the solar oven, biogas and bioga utensils freely or subsidized for local farmers.
 - Developing wind and solar power with easy access for farmers in remote areas.



- Institutional arrangement of adaptation
 - Setting up the Provincial Leading Group of Climate Change Adaptation.
 - Working out and implementing the《Scheme of Adaptation for Climate Change in Ningxia》and《12th 5-Year Plan of Adaptation for Climate Change in Ningxia》etc.
 - Working out the policies and rules of investment and human resources arrangement corresponding to implementation of the above scheme and the 12th 5-year plan.

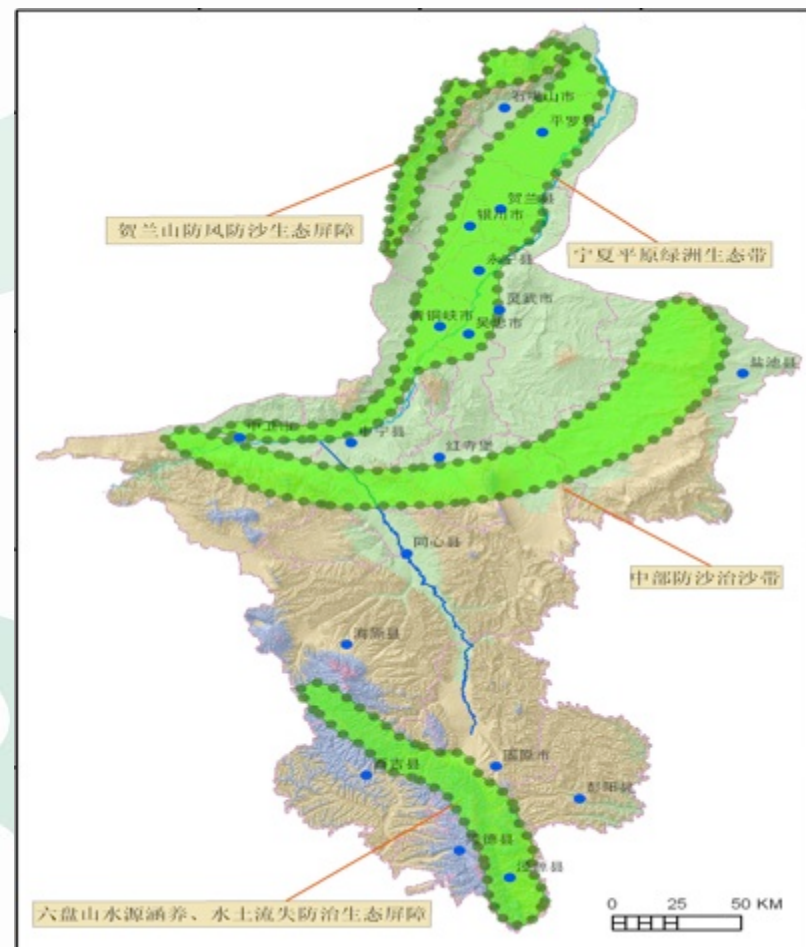
The Realities and Politics of Adaptive Decision-Making

- Another 0.35 million people are planned for relocation in the 12th 5-Year period.
- This program will be fully financed with 11.8 billion RMB Yuan.



The Realities and Politics of Adaptive Decision-Making

- Building a “two barriers and two belts” ecological security pattern in Ningxia.
 - Two barriers: Helan mountain in the north-most and Liupan mountain in the south-most, which will be covered with denser forest.
 - Two belts: Ningxia plain oasis and Middle wind-sand resistant forest belt, which will be covered with fruit forest and bushes.
 - State council and provincial government has zonified the middle and southern part of Ningxia into ecological protection zone, local people in the ecologically vulnerable areas will be gradually moved out of the region.



The Realities and Politics of Adaptive Decision-Making

- Re-adjusting the industrial pattern, raising the ratio of service and low carbon industries, especially improving the energy consumption pattern in Ningxia.
- Developing the wind power with production capacity aiming at 3 million kw and 5 million kw in 2015 and 2020 respectively.
- Developing Solar power with production capacity aiming at 0.6 million kw and 2 million kw in 2015 and 2020 respectively.



The Realities and Politics of Adaptive Decision-Making

- Improving land use and water resource management.
- Releasing 0.6 million of poverty-struck people out of the poor in 12th 5-Year Plan of Poverty Reduction, and the annual income of over 80% of the poor reaches to 3000yuan in Ningxia.
- Decreasing the energy consumed and CO₂ emitted per unit of 10 thousands RMB Yuan GDP by 15% and 16% respectively during the period of 12th 5-Year Plan.
- Capacity building of adaptation through training and education
- Awareness raising of adaptation through knowledge popularization and other participatory activities.

