



Simulating Grazing Dynamics of Ungulates for Climate Adaptation strategies in West Inner Mongolia (EU-FP6 ADAM Project)



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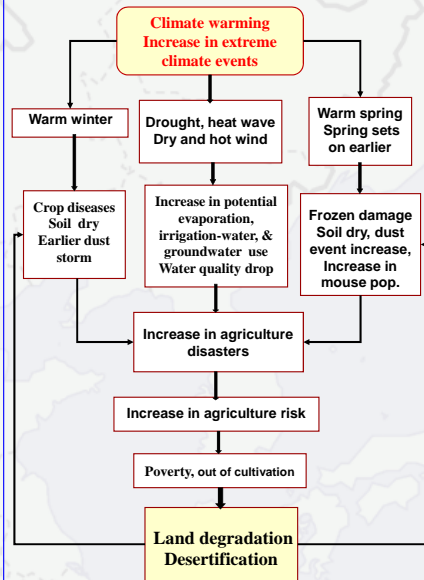
West Inner Mongolia belongs to inland arid-zone with three deserts
Ann. precip.: 40-200mm



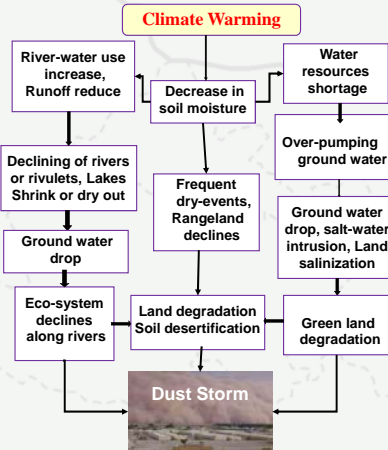
Adaptation and Mitigation

- Grazing-ban, periodic or rotation-grazing
- Control grazing; no goat-grazing
- Enclosure, stall-fed animals
- Grass-ring construction
- Forage grass base construction
- Eco-immigration
- Transfer strategy
- Supply job other than relieving
- Develop industry and mine
- Aerial seeding
- Artificial rainfall enhancement
- Grain for green
- Conservation zones
- Shelterbelt woodland
- Birth-control
- Control emigrants outside
- Multi-family-organized free grazing
- Camel conservation zone
- Natural forest conservation
- Hydro-engineering construction
- Updating irrigation system
- Greenhouse construction
- Plastic film mulching in farmland
- Drop irrigation, ground pipe-line net
- No over-water-consumption crop
- No over-water-consumption facilities
- Adaptation water price
- Water-use permission policy
- Recycling water use
- Heihe River water-reallocation project

Climate Change Impacts on Agriculture



Climate Change Impacts on Eco-system and Water Resources



Climate Policy Assessment—Participatory, Analysis & Modelling

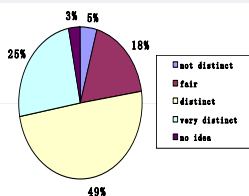
ADAM Policy-option Appraisal Frame



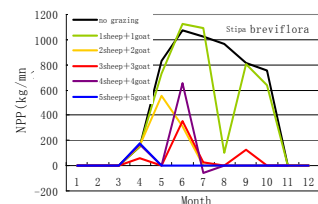
Improper human activity

- Illegal land cultivation
- Over-use ground water
- stock ing goats
- Urbanization
- Illegally take medicine- plants
- Illegally cut trees
- Illegally use river flow
- Over-grazing
- improper afforestation

statistical analysis



Animal grazing dynamics



Result: Proper grazing is necessary for vegetation regeneration and reduction of fire risk in west Inner Mongolia grassland.



Questionnaire statistics: 74% of 132 sheets agree with grazing-ban against land degradation in west Inner Mongolia (Dai et al. EU FP6 ADAM project final report, 2009)

