

## Goal of Approach:

**The Adapting to Climate Change in China Project (ACCC)** aims to improve understanding and assessment of impacts, vulnerability and risk in key sectors in China to reduce exposure to loss and damage by integrating policy and research, national and subnational planning, social and physical science. The project supports evidence-based adaptation planning which takes into account current and future climate change and variability through access to relevant data, tools and information on climate impacts and risks for decision makers.

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## Main elements of the implementation strategy

The work is conducted through teams of interdisciplinary researchers across 3 provinces in China (Guangzhou, Inner Mongolia and Ningxia). The results are fed directly into provincial and national decision-making frameworks, including the 5 Year Plans and the National Adaptation Strategy drafting. The ACCC approach focuses on 5 core areas:

### Provision of robust impact assessment data through:

- producing higher resolution models but with fewer resources through multi-model approach - use of 5 model subset
- development of Regional Climate Models and simulations to show the current and expected climate in China, and what the impacts will be on key industries, water resources and disaster risk
- using and comparing different climate models to better understand uncertainties in China's future climate-
- communicating audience-relevant information to the research community, government departments and other stakeholders, including international sharing of experiences, research results and new methods
- building capacity to monitor current and projected trends
- consideration of multiple climate scenarios that explore a range of plausible future climates in order to better reflect the associated uncertainties
- launch of an English

### Methods for Assessing Risk and Vulnerability by:

- developing locally appropriate research methods for understanding exposure to loss and damage in key sectors (water, grassland/livestock, disaster risk reduction, agriculture, human health) in each of three case study provinces (Ningxia, Inner Mongolia, and Guangdong).
- developing a methodology to integrate risk assessments into national and provincial level planning processes.
- developing a common definition of vulnerability and risk for all partners:  
Vulnerability = f (exposure, sensitivity, adaptive capacity)  
Risk =f (hazard (likelihood and impact), vulnerability)

### Understanding and managing risk in development planning by:

- working directly with local and national government and key academic institutions in China for long-lasting partnerships and to bridge the gap between policy and research
- assessing the effectiveness of current adaptation policies and measures for rapid and slow onset events.
- exploring options for risk transfer, financial mechanisms and institutional arrangements to reduce exposure to loss and damage
- feeding recommendations into National Adaptation Strategy and sub national planning/policies

### Building Awareness and capacity building by:

- providing support to provincial partners in Ningxia, Inner Mongolia and Guangdong to develop and carry out assessments, analysis and policy formulation
- developing and agreeing to common methodology and language between academic disciplines
- writing and running training courses for disaster managers in local governments and communities, teachers and vulnerable populations (migrant workers, women, children and elderly people)

### Sharing knowledge and experience by:

- running activities across government departments in case study provinces and at national level through training workshops, participation in research and other learning platforms
- working with other developing countries under a South-South framework
- presenting key findings, policy recommendations and China's experience at key international conferences
- producing a series of key research highlights and case studies
- publishing a book to capture the overall experience of the project, due in late 2013

#### **Targeted beneficiaries**

Adaptation planners/implementers at national and subnational levels

#### **Any significant lessons learned**

1. Due to highly differential and localized impacts, there are no standardized methods for conducting vulnerability and risk assessments. Appropriate methods must be developed at local level.
2. Significant challenge in conducting vulnerability and risk assessments across diverse cultural and geographic areas- need for a common definition of vulnerability and risk across sectors.
3. Quantitative only models of vulnerability and risk can be difficult to construct if data for indicators are missing or of low quality.
4. Need to integrate quantitative and qualitative methodologies.
5. Community based vulnerability and risks assessments are time and resource heavy.
6. Need to develop future socio economic scenarios that combine with climate projections to produce scenarios of future risk for period.
7. Integration of research ideas and practices across disciplines and diverse array of actors takes time.
8. Vulnerability and risk assessment become more meaningful and likely to lead to change when they are linked to real life governance and policy processes.
9. Multi model climate scenario approaches are less resource intensive and allow users to plan for a range of outcomes.

#### **Resource requirements**

- Quantitative and qualitative data (RCM/community based approaches)
- Capacity building around interdisciplinary research collaboration, technical skills for vulnerability/ risk assessments and data collection
- Financial resource – 4 year project (5.8 million GBP)

#### **Potential for replication or scaling-up**

The ACCC covers 3 provinces in China. The 3 provinces reflect the diversity of China's economic development, population density, topography and climate. Therefore the methodology and lessons taken from this work could be replicated and shared with other regions and states.

#### **Any additional information**