CLIMATE CHANGE CONCERNS FROM A REINSURER'S PERSPECTIVE

Climate change calls for efficient risk management in agriculture

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climate change
» status quo

Source: IPCC, AR4, 2007

we are in it …
• +0.74°C in the last 100 years

we are behind it …
• man-made forcings >90%

![Graph showing temperature anomaly over years](image-url)
climate change

逻辑

- First we observe,
- Then we reason.

50-year perspective

650,000-year perspective

Source: IPCC, AR4, 2007
consequences for global agriculture
» do we have to worry?

OECD/FAO's view …
• we increase yields,
• plough more land,
• while need less.

Source: FAO/OECD, 2009
consequences for global and US agriculture
» climate matters, but weather does more

'extreme' is relative …
• move the average,
• and we find the same odds to be 'extreme'.
consequences for global and US agriculture
» climate matters, but weather does more

'extreme' is relative …
• move the average,
• and we find the same odds to be 'extreme'.

- less light rain
- more heavy rain

likelyhood
light rain average heavy rain

previous climate
new climate
consequences for global and US agriculture
» winners & losers (1)

another bad news is …
• extremes cause instability everywhere,
• mainly it's about anomalies of water supply or frost.

Source: CCSP, 2008
agriculture – a risk-prone industry …
• e.g. soybean yields in IA,
• mirrored by RMA loss costs.

Source: NASS, RMA, 2010
consequences for global and US agriculture
» winners & losers (3)

agriculture – a risk-prone industry …
e.g. drought conditions in October 2007.
risk management
» from risk mitigation and adaptation to risk transfer

mitigation
[reduce man-made forcings, cap & trade?]

adaptation
[breeding/biotechnology, practices, water management]

transfer
risk transfer
» public interest & private means

- public interest: strong agricultural sector, food security, renewable energy supply, sustainable environment, carbon footprint

- USDA assuming its responsibility for the sector through an effective risk management system utilizing private sector resources

- private sector's role is
  - distribute, administer, assess losses, improve
  - taking risk (by providing access to competitive risk capital),
  - providing insurance platforms.

- Munich RE has assimilated the RMA model into 'SystemAgro' and is assisting agricultural sectors worldwide in adopting and adapting 'SystemAgro'
risk transfer  
» maximize private means

to optimize the contribution from private means (agents, insurer, reinsurer)

- make maximum use of private sector's risk capital (include future loss years in public budgets, no obligatory quota share, transfer larger portion of risk (loss and gain)),

- reduce agents' competition for underwriting gains by adjusting rates and limiting agent commissions (rather than redistributing underwriting gains),

- make the system simpler (less complicated risk sharing, less reference prices),

- provide stability of the system (maintain a sufficient level of A&O reimbursements, less frequent changes in SRA, rules).