EU-China FAB Task Force
26/03/2019

Report session on Sustainable agriculture, ecosystem services and environment – how to manage the trade-offs

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Three questions...

1. Common challenges (EU-China)
2. How R&I can address them
3. Best way of jointly tacking these challenges/expected output
Overview of challenges from the EU and China

a. Agriculture 'led' by non-agricultural drivers
   • changes in consumer diets towards e.g. healthier or fast food patterns
   • supply chain pressures/opportunities e.g. agric. inputs cost, agro-ecological niche markets
   • Lags/disconnect between agriculture’s response and exogenous drivers e.g. pressure for cheap food linked to intensive agriculture and environmental protection/sustainability

b. Common environmental/food safety impacts of agriculture
   • Heavy metal pollution
   • Pesticides use
   • Food waste

c. Sustainable agriculture triggered by ('green') technology/innovation development (within biophysical boundaries)
Overview of challenges from the EU and China

a. Behavioural uptake of technological and social innovation
   - Farmers/smallholders/agricultural households
   - Adoption behaviour to internalise environmental externalities & encourage production of environmental and social benefits/public goods influenced by
     - education and information
     - state/private (stakeholders) carrot/stick incentives*

b. Behavioural change through capacity building & training/education of (entry) farmers to sustainable agricultural practices
   - Attention to weight of state/private advisory/extension services
   - 'demonstration villages'

*carrot incentives missing especially in China
Overview of challenges from the EU and China

- Agricultural/food systems complexity requires
  - Systems approach
  - Multi-criteria/multi-scale assessment of non-market cost/benefits of agriculture
  - Harmonisation of methodologies, standards, indicators, typologies
  - Harmonisation of data – different sources, difficult/inaccurate aggregation/analysis
- Scaling up/transferability of data & methodologies & interventions (environmental management/planning)
  - from local (e.g. nonpoint source pollution)
  - to regional/national/transboundary (e.g. climate change)
Overview of challenges from the EU and China

- Climate change resilience, vulnerability, impact on farming systems
- Multi-actor/stakeholder cooperation
- Multi-level governance and policy priorities – 'focus on interventions that work' (evidence, data)
- Rural-urban
  - Policy tensions
  - Labour migration
  - Land use/demand
  - Urbanisation impact on diet, access to key micronutrients
How R&I can address these challenges in both EU & China

a. Monitoring, data, indicators, standards and multi-criteria/multi-level modelling
b. Technological development
c. Transdisciplinary research
d. Behavioural analysis research
e. Systems impact assessment*
f. Comparative assessment of different farming typologies, ecosystems services

*Learn from mistakes (e.g. EU past focus on intensive/profit focus farming) and good practices (current EU focus, 'demonstration villages') can serve as lesson to Chinese agriculture to help jumping a few 'unhealthy' steps towards sustainable agric.
How R&I can address these challenges in both EU & China

- (Adaptive) policy relevant research
- Embedding climate change adaptation into research agenda
- Meteorological risks and extreme weather events
- Rural & urban interactions
- Agricultural – environment nexus

a-k – harmonised R&I between EU and China through collaborative design & implementation of R&I programmes
Expected impact

a. Resilient farming systems
b. Lower environmental footprint/climate change
c. Increase nature contribution to people*
d. Enhance entrepreneurial innovation
e. New technologies
f. Revitalisation of rural areas
g. Relevant rural and agri-environmental policies
h. Improve agriculture's contribution to SDGs

*new term for ecosystems services
Thanks!
谢谢！