Regional Pilot Studies

MACSUR Workshop
Braunschweig, June 5-7, 2013
MACSUR approach

1. Inventory of data sets and models; benchmarking and improvement of models; ensemble model runs
2. Advancement across two themes tested on methodological case studies
3. Questions of impact answered by regional pilot studies (linked to stakeholders) across three themes
4. Scenarios defining boundary conditions for all themes
   - climate change, land use, CAP strategies
   - level of uncertainty acceptable to stakeholders
Boundary Conditions

• Proposal: Close to AgMIP scenarios
  – Would help to integrate MACSUR work into AgMIP
• Baseline: SSP2 under present climate
• Counterfactuals (what-if assumptions)
  – SSP3 under present climate
  – SSP2 with RCP8.5
Grand regions

• 4 different grand regions
  – where the consequences of climate change are felt
  – where we can identify (similar) mitigation potential and promising adaptation strategies

• high degree of reflecting climate change

• incorporating natural resources (e.g. water and soils)

• diversity of European farming systems
Regional Pilot Studies

- simultaneous and interlinked development of a common conceptual framework with actual models and model links
- assessment of impacts
- identify effective and efficient adaptation and mitigation measures and potential consequences
- joined by regional and European Representative Agricultural Pathways (RAPs)
- extending existing research
Countries of confirmed [suggested] Regional Pilot Studies

• Southern Europe
  – Italy [Oristano] (Pier Paolo)
  – [Israel (Uri tbc)]
  – [Spain (Martin B. ⚜️)]

• Africa (Floor)

• Pan-European studies
  – inventory of planned studies (Floor)

Regional Pilot Studies extend existing studies, mostly at county scale (NUTS2-3), within the countries mentioned above.

• Northern Europe
  – Finland (Heikki)
  – Norway (Klaus M.)
  – [Sweden (Heikki ⚜️)]

• Central Europe
  – Germany [Brbg.] (Peter)
  – Poland (Waldemar)
  – Austria (Martin S.)
  – [France (Gianni ⚜️)]
  – UK (Eric/Eli)
Question to be answered by all Regional Pilot Study

- What would be the different contributions of different European adaptation strategies to global food security until 2050 at different scales (farm to EU) while keeping the GHG targets?
  - What investments?
  - What are the implications?
  - What are the effects of extreme events?
Template for Regional Pilot Studies

- Name of region
- Contact person
- Description of area
  - Specific issues
  - Farm-types covered
- Models available and planned to be applied
  - Identification of input needed from other models
- Challenges with respect to climate change
- Adaptation measures
  - Important to this region
  - To be included in the modeling exercise
- Stakeholder involvement
Adaptation measures that may be considered

- water management
- irrigation
- drainage
- species/varietal choice
- plant breeding
- changed planting/sowing dates
- crop rotations
- alternative tillage methods
- pest management, weeds
- housing of livestock
- land consolidation
- management of feeding and reproduction of livestock
- structure and scale production adjustment
- crop insurance
- exit from agriculture
- climate alertness
- political regulations at various administrative levels
Scheduling

- meeting results in next newsletter
- model partners identified by end of June
  - send filled questionnaire to M. Köchy
- agreement on regional Representative Agricultural Pathways (rRAPs) by September 2013
- regional stakeholder workshops in October 2013
  - sample output and RAPs presented, prioritization and form of output
- TradeM workshop November 2013
- output presented at mid-term meeting, April 2014
- improvement for final conference April 2015
Stakeholders

• pilot studies suggest output metrics/indicators

• regional Workshops in October 2013
  – prioritize indicators with respect to importance of reducing uncertainty, prioritize from output

• stakeholders are informed about intermediate results, capacity building at mid-term (April 2014)
Output

- adequately and consistently addressing uncertainty in climate change modelling
- high level of integration (like a tool)
- addressing stakeholder issues
  - adaptation,
  - mitigation,
  - maintain or increase food yield,
  - quality,
  - nutritive value,
  - disease load,
  - low-carbon economy,
  - implementation of climate change mitigation policies