

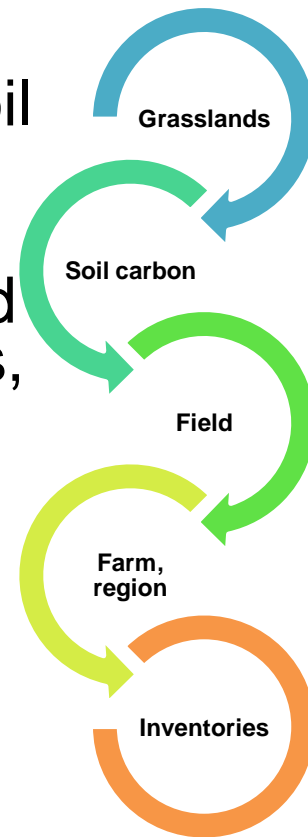
Integrative Research Group

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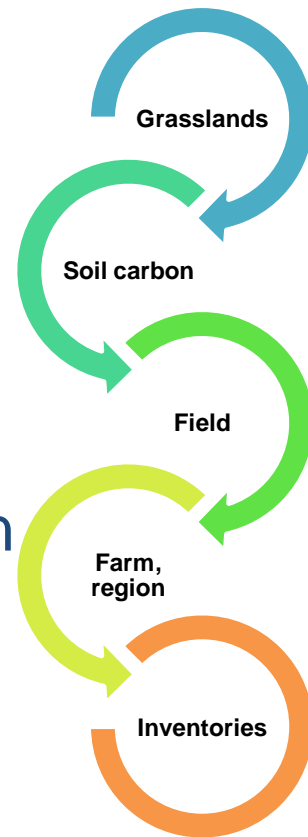
Integrative Research Group: Recent key achievements

- *IRG, a group recently adopted by the Council in 2015*
- Five research networks established: field-scale modelling, farm to regional scale modelling (new), soil carbon (new), inventories, grassland
- First annual meeting (Rome, January 2017) attended by 34 participants from 16 Alliance member countries, partners and invited experts
- IRG experts provided leadership to two flagship proposals:
 - Soil Carbon Sequestration
 - GHG Inventories



Integrative Research Group: Recent key achievements

- *Soil carbon network: C-MIP*, testing soil carbon models on a global network of long-term bare fallow sites (launched)
- *Field scale network: GHG-MIP* (in revision, Global Change Biology), showing that the median of 3-4 simulation models predicts within experimental error N_2O emissions and yields of crop rotations and grasslands at 10 sites across 4 continents.
- *Farm-Region*: first global map showing organic carbon inputs to soils required to reach the 4 per 1000 target (presented at COP23, Marrakech)
- *Coordination of international cooperation* for soil carbon sequestration research (CIRCASA project, 17 countries) funded by European Commission



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Main ambitions 2017-18

- *Grasslands network*
 - With Uruguay, GEF and World Bank, pilot project on SCS in degraded grasslands,
 - With FAO, LEAP and GEOGLAM, estimating baseline soil organic carbon (SOC) stock change in global grasslands,
- *Soil carbon network*
 - With CGIAR, synthesis of long-term soil carbon sequestration (SCS) data by practice and study of SCS impacts on yields,
- *Field scale network*
 - GHG mitigation options in arable crop rotations and grasslands tested by model intercomparison
- *Farm and Region network*
 - Farm data base showing GHG and soil carbon balance (meeting supported by Canada)
 - With IIASA lead, global impacts of land degradation and climate change on soil carbon and yields by 2050

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Main ambitions 2017-18

- IRG supports upscaling through data synthesis and modeling activities and through inventories improvements
- **Upscaling of soil carbon and GHG emissions and improved inventories** are needed to support **national action plans** (e.g. *Nationally Determined Contributions NDC's*)
- **Main ambition:**
 - Facilitating the use of research to improve estimation and reporting of options for soil carbon sequestration and reduced GHG emissions/intensity in national actions*
- **IRG & network meetings** during 17-19 January 2018 in Paris (host: France) to plan work to address the NDC goal and flagship projects with resources
 - Include a 1-day symposium to **share country experiences of designing and using research for planning NDCs and other national plans** (summary scientific publication planned)