**The response of agricultural systems to climate and integrated assessment across spatial scales**

A CCAFS science meeting parallel session chaired by Santiago Lopez Ridaura and Andy Challinor

The session aims to improve our understanding of why and how the results of agricultural assessments vary with the spatial scale of the analysis. The key question is at what spatial scales can we make robust impacts and adaptation statements?

***Outline***

Indicators of agricultural sustainability at a range of spatial scales must be integrated in order to have a coherent evaluation of current and future, or alternative, agricultural systems. Analyses at different spatial scales are carried out for a range of purposes, and results can differ. This session will discuss:

* Methods for developing indicators and multi-criteria analysis at a range of scales
* The reasons for differences in the response of agricultural systems across spatial scales
* The aggregation of data and analysis from different spatial scales
* The quantification of trade-offs and synergies.

The strategic value of this session is in its analysis of methodology, with a view to developing specific CCAFS relevant tools (e.g. Life Cycle Assessment and Scenario Analysis).

The session will include 3 presentations and time for discussion on the topics mentioned above. The ideal would be that each presentation tackles the articulation of scales of analysis (e.g. field/farm, farm/landscape, field/landscape) and their respective temporal scales of analysis.

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| **Time** | **Activity** | **Objective** |
| 10:15-10:20 | Introduction of participants | Make sure everyone knows everyone else (can be skipped) |
| 10:20-10:45 | Presentation and Q&A: An operational framework for the multi-scale analysis of scenarios for agricultural systems | Introduce topic and explore its potential for CCAFS briefly (preparing for session 12:30) |
| 10:45-11:10 | Presentation and Q&A: Assessing agricultural productivity at a range of spatial scales | Ditto |
| 11:10-11:35 | Presentation and Q&A: Investigating Competing Objectives in Small-holder Farming. An Example from the Gaza Province in Mozambique | Ditto |
| 11:35-12:30 | Group work (in groups of 3-5) to reflect upon:   * The most useful tools and approaches for developing indicators and multi-criteria analysis. For which actors and at which scales do these apply? * What are the reasons for differences in the response of agricultural systems across spatial scales? * How to aggregate data and analyses from different spatial scales? * How to quantify trade-offs and synergies?   40’ Group work  15’ Sharing group work together | Develop practical solutions for the near future, and inform the focused conversation that follows parallel sessions) |
| 12:30-12:45 | Plenary circle to share impressions about where this is going, and a sense of how this relates to social learning generally and to possible work to undertake specifically in different CCAFS regions  At what spatial scales can we make robust impacts and adaptation statements / at what level (of complexity) can social learning contribute to impact assessment and adaptation statements? | Determine how this session ties in with social learning and may use opportunities around it + prepare regional focused work session coming next |
| 12:45-13:00 | Preparing the flipchart for the feedback in plenary (aim at 2-3’ of presentation only) | Make sure sthg is ready to be shared in plenary session |

***PRESENTATIONS:***

Lopez Ridaura S. and Jat M.L. An operational framework for the multi-scale analysis of scenarios for agricultural systems.

David Lobell: Assessing agricultural productivity at a range of spatial scales (draft title)

De Pinto A. Investigating Competing Objectives in Small-holder Farming. An Example from the Gaza Province in Mozambique.