

Future Selection of Additional CCAFS Target Regions

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Background

The original choice of the three target regions for CCAFS started from the understanding that South Asia and Africa are particularly vulnerable to climate change and deserving of priority attention¹. To summarise, of the various candidates in these two parts of the world, the decision to select three reflected a balance between two competing considerations: (i) working across contexts that are sufficiently heterogeneous to ensure that outputs and outcomes of place-based research have global relevance, and (ii) ensuring that sufficient resources are brought to bear to address the deliberately complex problems that CCAFS seeks to address. The initial region selection process sought to sample across the challenges of major hydro-meteorological shocks, significant climate-related environmental problems, and high rural poverty rates coupled with large populations dependent on rain-fed subsistence agriculture. Other factors included were the strength of national and regional climate institutions and processes that can support climate information for adaptation, the degree of CGIAR presence, overall progress toward food security goals, and opportunities for synergistic research with the potential for both immediate regional benefits and transferability beyond the regions. For the future, similar considerations could be applied. As before, projected future climate change is not likely to be a strong discriminator among candidate regions, as all regions are expected to warm, future rainfall trends are subject to considerable uncertainty, and changes in climatology are not likely to be detectable for the next ten years at least.

The CCAFS proposal indicates that by the end of 2011, two further target regions should have been identified for starting activities and baselines in 2012, and further regions need to be identified during 2012, with activities and baselines being initiated during 2013. CCAFS certainly has to “go global” relatively quickly, but whether bringing on board a further five regions in two years is feasible, without diluting research effort and finances, is a question that was raised by the ISPC in their February commentary on the CCAFS proposal. As a compromise

¹ The process is outlined in Förch W, Kristjanson P and Thornton P K (2011), *Initial Sites in the CCAFS Regions: Eastern Africa, West Africa and Indo-Gangetic Plains*, CCAFS Report, 74 pp.

the Management Team proposes adding a further two regions, rather than the further five mentioned in the proposal. The current three regions are not sufficient for a global program on climate change, agriculture and food security.

Selection criteria

A set of selection criteria were proposed at the CCAFS launch meeting in Nairobi in May 2010.

The most important are listed below, in order of priority:

- 1 Regions with hotspots of vulnerability and climate change;
- 2 Regions with high potential for innovation, adoption and impact;
- 3 High levels of poverty;
- 4 High potential for agricultural mitigation;
- 5 Lessons learnt can be used elsewhere;
- 6 Complementarities in terms of the portfolio of regions, so that CCAFS is global;
- 7 Global relevance of the region to food security and the environment;
- 8 Level of funding and research effort available for the region.

These criteria are reasonable, although their usefulness may differ; for example, it may be difficult to evaluate regions *ex ante* on the basis of criteria 2 and 5. Criterion 3 may refer to absolute numbers of poor people or to the density of poor people (or their dependence on natural resources, for example), but these are very different. In addition to the list above, several other criteria were identified during the Management Team meeting in Copenhagen in February 2011:

- 9 Any new region should have well-defined clients for the research outputs of CCAFS;
- 10 There should be resources available from regional partners;
- 11 CCAFS should be able to provide well-defined additional value and international public goods in the region;

- 12 The region should exhibit political stability;
- 13 There should be high potential for south-south learning opportunities;
- 14 The region should contain places in which vulnerability of food systems to climate change increases markedly to 2050 (or, conversely, CCAFS should consider areas that will still be supportive of agriculture and agricultural intensification, as suggested in the ISPC commentary on the proposal).

To simplify the selection of regions, it is proposed that the following short list of criteria be used (they are listed in order of priority):

1. Regions that complement the current regions in order to ensure that CCAFS is a global program (complementarities could relate to geographical spread, agricultural potential, coverage of agroecological zones, nature of the adaptation challenges)
2. Regions with high potential for pro-poor mitigation
3. Regions with hotspots of vulnerability and climate change;
4. Regions with high potential for innovation, adoption and impact;
5. Level of funding and research effort available in the region.

Other issues relating to a “region”

Some discussion will be needed on several issues, including the following two. First, clarity is needed on what a region is. If it refers to a large, more-or-less contiguous area, there are not that many candidate regions to consider: Southern Africa, West Asia-North Africa, Latin America and the Caribbean (distinctions could be made between lowlands and uplands, for example), South Asia excluding the IGP, South-East Asia, and East Asia, would cover the CGIAR mandate region. On the other hand, if a “region” is taken to be an assemblage of non-contiguous areas that share key characteristics or transferability potential, then this could include other types of region such as coastal systems, or small island states, for example.

Second, clarity is needed on what being a “CCAFS target region” actually entails. A key question will be whether we pursue site selection, baseline surveys, and scenario work (for example) as for the initial three regions, or whether there are more loosely-designed agglomerations of activities that can still address the purposes of the regional approach, and if there are, what these might look like. One could envisage two tiers of regional approaches within CCAFS, perhaps: a set of “core” target regions, in which a comprehensive approach is implemented (similar to that underway for the three initial target regions), and a set of “associated” regions in which less integrated research approaches could be undertaken ². This might allow a much broader set of activities to be undertaken within CCAFS, but at the expense of much reduced standardisation of approaches and some loss of ability to do inter-regional comparisons.

Vulnerability mapping activities

Theme 4 funded a vulnerability mapping activity in 2010, and the report of the work is in the process of being finalised (Ericksen et al., “Mapping hotspots of climate change and food insecurity in the global tropics”). This work is characterising vulnerability for the agricultural areas from latitude 35 °S to 45 °N, on the basis of the exposure of populations to the impacts of climate change, the sensitivity of food systems to these impacts, and the coping capacity of populations to address these impacts. For exposure indicators, several climatic thresholds are being used as proxies for climate change exposure (such as, areas where the length of the growing seasons is projected to decline by 5% or more to the 2050s, and areas where the average annual maximum temperature increases to more than 30 °C between now and the 2050s). For sensitivity, areas with a higher dependence on crop agriculture are assumed to be more sensitive to a change in climate. Percent cropping is used as a proxy for sensitivity, with areas having greater than 16% cropping (the mode for the global tropics) considered highly

² One possibility would be for such “associated regions” to be identified via some kind of bidding process, in which regions or centres submitted expressions of interest for undertaking activities (with potential co-funding) in particular regions.

sensitive. Chronic food insecurity is the proxy for coping capacity, and areas with values of stunting in children below the age of 5 above 40% are considered to have low coping capacity. Vulnerability domains are then mapped, and their area and current population calculated. This work should provide information that can be used as one input to compare and contrast regions with hotspots of vulnerability and climate change for a range of different exposure metrics. It will also be used, in an *ex post* fashion, to evaluate the choices that have already been made within CCAFS regarding regions and sites.

It is planned to take this work further in 2011-2012, to develop a dynamic framework for food system vulnerability that can ultimately be linked to the regional scenarios that are being developed, so that future projections of vulnerability can be developed for targeting purposes. As the ISPC proposal commentary points out, this would be a valuable public good output from CCAFS.

A proposed process for selecting further CCAFS regions

The process below is proposed for selecting further regions for hosting CCAFS activities in 2012 and beyond:

1. A document will be drafted outlining the selection criteria, the list of potential target regions, and the proposed process. This will be completed, after consultation with the Management Team and Steering Committee, by the end of April 2011.
2. This document, along with the global vulnerability assessment report, will be circulated to CG centre climate change contact points and key global partners, soliciting written comments before the June science meeting in Bonn. This will be done during April-May.

3. An activity will be designed to weight each candidate region according to the criteria using objective methods, if available, or expert judgment, if not. Where expert judgement is required, the following stakeholders will be consulted: (a) Contact points and 5-8 global partners; (b) the Management Team; and (c) the ISP. The design will be done during May-June, and implementation will be undertaken in August.

4 The results of these deliberations will be written up, including the shortlist of proposed regions, and circulated to partners for final feedback by October, allowing the Management Team to propose final selections the ISP in November.

The work will be under the general responsibility of Theme 4.2. In relation to the process itself, it is suggested that if there are several decisions to be taken, it would be best if these were taken all at the same time, rather than dragging out the region selection process. This may help to minimise potential criticisms (although it cannot avoid them altogether) from disappointed CG centres with strong attachments to particular regions and research agendas. In view of the ISPC comments, it is proposed that two new regions be selected during this process, but that implementation of activities in these new regions may need to be staggered between 2012 and 2013, for practicality.