

Senior Expert Contributions to OneCGIAR Program Development **Eco-regional approaches** Netherlands-CGIAR Partnership



Prepared by: **Bas Louman** (Tropenbos International) and **Ken Giller** (Wageningen University & Research)

The aim of this two-pager¹ is to provide input for the OneCGIAR investment plan. Notably to identify key research challenges within the OneCGIAR impact areas, how these areas interact with Dutch policy priorities and how the challenges could be addressed / strengthened.

The relevance of strengthening regional innovation systems

International conventions and agreements recognize the importance of national efforts in addressing global challenges, many of which require local solutions. This is reflected, for example, by requesting countries to express their intentions in national plans for the implementation of agenda 2030, for biodiversity conservation or in the national commitments related to the Paris Agreement. Current evidence² indicates, however, that for the Agriculture Forest and Other Land Uses sector, cross border environmental (e.g. water or air pollution, water availability), socio-economic (e.g. migration, energy) and policy (e.g. trade agreements influencing the exchange of food) interactions occur that influence the basis for adaptation, mitigation, conservation and development actions. Past experience shows that many promising CGIAR initiatives and interventions tend to work in separate locations, in isolation of each other, which precludes understanding of synergies and trade-offs.

Understanding these interactions requires a transdisciplinary regional system approach that recognises and explores the differences between countries that arise due to current and past policies, governance and cultural contexts. International independent research centers are well placed to guide and facilitate such an approach, but less well suited to ensure continuous processes of innovation appropriate to the regional conditions. Thus, their work needs to be embedded in regional innovation systems: four dimensional platforms³ where science, policies and practice meet. The One-CGIAR proposes to work in ecoregions that are defined according to key climate threats to agriculture (their figure 1 of the strategy). Within these ecoregions, “successful initiatives will need to be deeply embedded in innovation systems at national and regional levels, involving private, public and civil society sector partners” (strategy p 25).

¹ This two-pager is an initiative of Senior Experts within the NL – CGIAR research programme. This programme is funded by the Ministry of Foreign Affairs of the Netherlands as part of the Strategic Partnership between the Netherlands Government and the CGIAR and it is implemented by NWO-WOTRO Science for Global Development.

² E.g. Ellison, D., C. E. Morris, B. Locatelli, D. Sheil, J. Cohen, D. Murdiyarto, ... and C. A. Sullivan (2017). Trees, forests and water: Cool insights for a hot world. *Global Environmental Change*, 43, 51–61. Nhamo, L., B. Ndelela, C. Nhemachena, T. Mabhaudhi, S. Mpandeli, and G. Matchaya (2018). The water-energy-food nexus: Climate risks and opportunities in southern Africa. *Water*, 10(5), 567.

³ Ibrahim, A., and A. Marah (2018). A comparative analysis of national innovation systems' structures and their developmental impacts (Evidences from BRICS countries). *Научный журнал НИУ ИТМО. Серия «Экономика и экологический менеджмент»*, (1). Propose four dimensions of such systems: infrastructure that facilitates the production dissemination and exchange of knowledge and technology; legal, legislative and institutional; educational; innovation. (January 2021)

The challenge

The very broad ecoregions proposed by One-CGIAR currently do not have regional agricultural and natural resource related innovation systems or existing platforms are weak in one or more dimensions (infrastructure that facilitates the production dissemination and exchange of knowledge and technology; legal, legislative and institutional; educational; innovation). The challenge for One-CGIAR is, therefore, to be a leader in transdisciplinary agricultural and natural resource related system research, while at the same time ensuring that this research is locally relevant and helps to enhance the capacities of regional innovation systems to lead such research and ensure translation and application of results.

In some regions, elements of regional innovation systems do exist and One-CGIAR could build on these. It is not the role of One-CGIAR to create or strengthen such systems directly, it should play a role in filling one or more of the following knowledge gaps:

- What are the main development opportunities, challenges and processes in the region that require a regional approach?
- What (and where) changes are needed to ensure that such processes contribute to ensuring food security, reducing poverty while having reduced negative social and environmental footprints?
- What are the drivers of change in the countries of the region, what policies or strategies are in place to promote such change and how do these interact between countries?
- How could regional collaboration support the necessary changes?

Approach

The systems transformation approach described by Marc Verdegem and Peter Oosterveer already proposes a number of elements that are also relevant for the ecoregional approach:

- Join regional innovation system partnerships relevant for regional land use and natural resource related processes, or, if they do not (yet) exist, actively establish a regional multi-stakeholder policy-platform.

- Actively engage in a relevant array of technical, biological and social science disciplines, defined in consultation with CGIAR and local partners and ensuring interaction around specific regional processes.
- Provide research-based capacity building (MSc, PhD training) of staff in local partner organisations or CGIAR Centres.
- Contribute to a system-wide approach.

The success of an ecoregional approach, however, also depends on the buy-in of non-research partners which may require an effort by the One-CGIAR to secure additional support (possibly led by a non-research partner) to strengthen the enabling conditions for such participation, for example by the implementation of a regionally relevant development and conservation project that can build immediately upon the first research results. In addition, it will require investments that go beyond single project cycles.

Synergies

Several Dutch research organisations (e.g. TBI, KIT, VU, WUR), often in collaboration with Dutch development organisations (SNV, IUCN, Solidaridad) and CGIAR partners (e.g. through the CRPs such as FTA, CCAFS, RTB), have already strong experience in working with local multi-stakeholder platforms in the design and implementation of research, applying a system approach and strengthening the science-policy interface.