

The Integrated Systems Analysis and Modelling Group (iSAMG)

The Integrated Systems Analysis and Modelling Group (iSAMG) of the Drylands is being established. The preparation of the group formulation is underway by the [Agricultural Livelihood Systems Expert](#) who has been appointed by the CRP Dryland Systems on January 11th 2015 in iterations with the Program Management Unit, Action Sites coordinators and scientists from partner Centres (PC) who are conducting or are knowledgeable of systems research. The preparation includes the drafting of the [Generic Impact Pathway](#) driven by integrated systems research, a strategy paper on integrated systems analysis and modelling for supporting sustainable transitions of agricultural livelihood systems (on-going), and the structure and functions (via the term of references) of the iSAM working group across research regions and partner Centers of CRP-DS. The Terms of Reference below is a draft under review by action sites coordinators (ASCs) and to be approved by the RMC meeting on April 6th 2015 in Patancheru, India.

Group structure and members

The group is structured to engage (1) PC and (2) National Agricultural Research Systems (NARS) on the integrated systems research mainstream of CRP-DS through the related research activities on (3) CRP-DS's research sites/transects. Thus, these three domains should have representatives in the ISAMG. The iSAMG includes three types of members:

- ISAM focal point members from partner NARS (preferable from action sites but also depending on availabilities)
- ISAM focal point members from PCs
- Primary researchers who are leading and/or operating integrated systems research activities in selected sites of CRP-DS

In addition, the [Unit Head of Geo-informatics at the Overarching Program](#) is also a member as he, together with the [Agricultural Livelihood Systems Expert](#), will coordinate the geo-database development of extrapolation domain, options-by-context, modeling tools and use cases across global dryland.

Each PC will ensure that each appointed staff will have the required time and resources as part of the POWB. Names and profiles of iSAMG members will be published on the CRP Dryland System website once approved by the RMC.

The iSAMG will be connected to a wider network of scientists in other CRPs and outside CGIAR who are active and interested in co-learning on integrated systems research for enhancing systems research capacity at global scale. This DS's network of external partners is being formulated and will be updated to this ToR.

The members should have the following knowledge, skills and attitudes:

- Extensive knowledge in systems research mainstreaming in agriculture and natural resources management, or

- Extensive expertise in the development or use of systems methods or tools - which can be for narrative/conceptual or quantitative systems analysis/ modeling/ assessment/ synthesis - ideally in a research-in-development setting, or
- Experience in coordinating, supervising integrated systems research projects in agriculture or natural resources management;
AND
- Motivated to engage in innovative integrated systems research to find solutions to *inter alia*, food insecurity, land degradation, gender inequities
- Interested in contributing to co-learning process to *build capacities in integrated systems research in both PCs and in NARS.*

Co-chairs

To ensure the strategic coherency at CRP level and the equal-footing of PCs and NARS partners, the ISAMG will be co-chaired by the Agricultural Livelihood Systems Expert at the CRP-DS's Overarching Program, elected representatives from PCs (1 person) and partner NARS (1 person).

Functions/responsibilities

The ISAMG will work as an *open community of development and practices* in its science field. *Co-learning* and research progresses of ISAMG members mean those of CRP-DS. Meanwhile, the working group as-the-whole will serve as an advisory body for the CRP-DS [RMC](#). The functions of ISAMG include:

- Providing scientific and strategic advises on in the development and implementation of integrated systems research within the CRP-DS.
- Encouraging the engagement of disciplinary (biophysical, economic and social) scientists into integrated systems research thereby *enhancing interdisciplinarity*.
- Sharing experiences, tools, and findings across sites and would help ensure synergies and cross-site comparison within the CRP on integrated systems analysis, assessments (ex-ante and/or ex-post, considering trade-offs/synergies driven from interventions), synthesis, scaling out and up towards achieving the CRP's IDOs.
- Assisting system-based participatory/transdisciplinary research processes towards enhancing co-learning on integrative actions to improving productivity, efficiency, adaptability and equity of agricultural livelihood systems and minimize their environmental externalities in CRP-DS target areas.
- Circulating news, successes and aspects of the integrated systems approaches taken by the CRP-DS within PC and partner NARS, between CRP-DS and other CRPs (especially systems CRP) and from CRP-DS to CO.
- Exchanging experiences, findings in ISAM with other systems CRPs.
- Advising the CRP-DS coordinator on developing systems-related criteria and indicators for effective monitoring and evaluation to pursue efficiency, effectiveness and sustainability of CRP DS.

- Establishing and maintaining close contacts with other strategic/cross-cutting theme leaders (i.e. Gender, Capacity Development, Communication, Monitoring and Evaluation) to ensure the holistic, systems-based approach is taken coherently.
- Producing collective publications as grey literature and ISI papers on integrated systems research (e.g., concept/method/tool development, applications, reviews and result-based synthesis).
- In collaboration with the 'Geospatial Unit', serving as a repository for the data, tools and protocols besides enhancing the capacity of all partners in use and application of system analysis models and tools.
- Carrying periodic evaluation of progress on systems research and the achievement of impacts based on which updates the protocol, procedures as well as the impact pathways.

Activities and deliverables

The ISAMG will manage CRP-DS's integrated systems research through the following activities and deliverables:

- Meet once a year in-person for specific actions of the annual CRP-DS POWB as Integrated Systems Research Strategy, and hold virtual consultations, if and when needed;
- Systematically update the Integrated Systems Research Strategy and its action plan, as required by the CO and CRP-DS PMU.
- Jointly develop *framework and templates for result-based synthesis* of ALS analysis and modeling across CRP-DS action sites.
- Facilitate collecting CRP-DS Integrated Systems Research publications from 2011 to 2014, in order to establish one comprehensive publications and related databases;
- Facilitate the preparation of a comprehensive annual report of all integrated systems research conducted in the 5 FPs;
- Produce and exchange systems methods and tools for ex-ante analysis of proposed interventions, extrapolating the site specific results to the target areas.
- Facilitate the assembling of all CRP-DS integrated systems research surveys and datasets from its starting year (2012), including options-by-context databases.
- Review annual CRP-DS work plans for integrated system research activities in CRP's action sites and draft the recommendations for each action site.
- Assess and advise on capacity building needs for integrated systems research for both PCs and third partners.

List of *current* ISAMG members (continued to be updated)

Name	Representative for			
	PC focal point ¹	Involved action site in flagship region	NARS partners ²	CRP-DS Overarching Program
Quang Bao Le				ALS Expert (chair ³)
Chandrashekhar Biradar (ICARDA)				Unit Head Geo-informatics
Yigezu Yigezu (ICARDA)	ICARDA	North Africa & West Asia Central Asia		
Aymen Frija (ICARDA)		North Africa & West Asia		
Mohamed Mekki (NARS)			University of Sousse, Tunisia	
Benli Bogachan (ICARDA)		Central Asia		
Botir Dosov (ICARDA)		Central Asia		
Thiagarajah Ramilan (ICRISAT)	ICRISAT	South Asia		
Kumar Shalander (ICRISAT)		South Asia		
Patrice Savadogo (ICRAF/ICRISAT)	ICRAF	West African Sahel & Dry Savannah		
Augustine Ayantunde (ILRI)		West African Sahel & Dry Savannah		
Lance Robinson (ILRI)	ILRI	East and South Africa		
Mohammed Said (ILRI)		East and South Africa		
Lulseged Desta Tamene (CIAT)	CIAT	East and South Africa		
Cecilia Turin (CIP)	CIP	South Asia		
Sikhalazo Dube (ILRI)		ESA region		
Fed Atieno (Bioversity)	Bioversity	Bioversity focal point in ISAM		
Akmal Akramkhanov (ICARDA)		Coordinator of Aral Sea site, CA region		

¹ Focal point of IWMI is to be determined (tbd).

² More NARS representatives will be identified by ASC after April 10th 2015, depending on availabilities.

³ Co-chair from PCs and NARS will be identified in, or after, the working group meeting on April 10th 2015.



RESEARCH
PROGRAM ON
Dryland Systems

The CGIAR Research Program on Dryland Systems aims to improve the lives of 1.6 billion people and mitigate land and resource degradation in 3 billion hectares covering the world's dry areas.

Dryland Systems engages in integrated agricultural systems research to address key socioeconomic and biophysical constraints that affect food security, equitable and sustainable land and natural resource management, and the livelihoods of poor and marginalized dryland communities. The program unifies eight CGIAR Centers and uses unique partnership platforms to bind together scientific research results with the skills and capacities of national agricultural research systems (NARS), advanced research institutes (ARIs), non-governmental and civil society organizations, the private sector, and other actors to test and develop practical innovative solutions for rural dryland communities.

The program is led by the International Center for Agricultural Research in the Dry Areas (ICARDA), a member of the CGIAR Consortium. CGIAR is a global agriculture research partnership for a food secure future.

For more information, please visit

drylandsystems.cgiar.org

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