Block 3 Poster 5

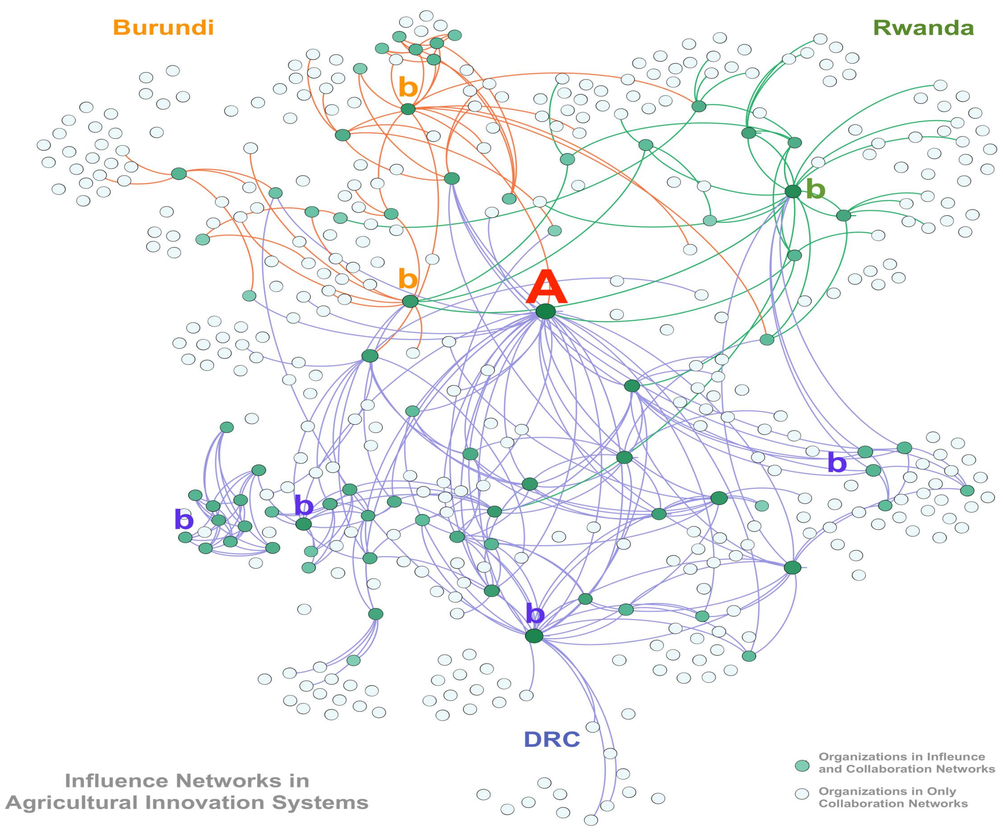
Social Network Approach for Guiding and Leveraging R4D Investments

RESEARCH PROGRAM ON Roots, Tubers and Bananas

DESCRIPTION OF APPROACH FOR SCALING

Social network analysis (SNA) is a comprehensive approach to identify and target critical scaling stakeholders in a comprehensive manner. It not only considers the characteristics of individuals but also whom they connect[1] for knowledge, seeds, money and solving problems. SNA is applicable to scaling strategies of all technologies where the connections between constraints, innovations and stakeholders matter.

Figure 1: Only some of the organizations in the collaboration networks (green dots) can catalyze change in Agricultural Innovation Systems. SNA identifies these organizations that can trigger change. To improve scaling across the countries organization "A" has the highest value for investment. In specific countries "b"s offer a higher return. Number of specific country targets depends on the characteristics of the networks in that country.



INTERMEDIATE USERS & STAKEHOLDERS

SNA offers different benefits to a set of diverse users. Primary users are R4D investors and managers aiming to improve effectiveness and efficiency of the R4D intervention as a whole. SNA provides them evidence on the current status of performance functions of existing innovation architecture such as information exchange, access to funds and influence relations (Figure 1). It also provides guidance to internal and external assessment of R4D interventions by measuring and visualizing the impact of the intervention on these performance functions.

MAIN STAGES

SNA for guiding and leveraging R4D investments consists of

1) scoping key stakeholders
2) administering a short survey
3) baseline network analysis
4) interim short surveys
5) dynamic network analysis

EVIDENCE OF EFFICACY

SNA is a novel approach in agricultural innovation systems for R4D interventions. However, in the last few years our team has used SNA in Burundi, Uganda, DRC, Rwanda, Tanzania for guiding scaling strategies of different interventions. Recently our SNA approach was adopted by different global organizations (Figure 2). In addition, SNA as a scaling decision support tool was published in leading journals in agricultural sciences (Figure 3)

Figure 2: Global R4D Programs Using Social Network Approach for Guiding R4D Investments.

Through GIZ in Zambia

CDAIS
CAPACITY DEVELOPMENT FOR AGRICULTURAL INNOVATION SYSTEMS
FAO, AGRINATURA
Angola, Bangladesh, Burkina Faso, Guatemala, Honduras, Laos

CGIAR RESEARCH PROGRAM ON Integrated Systems for the Humid Tropics
CGIAR Burundi, Democratic Republic Congo, Rwanda

Figure 3: Recent Publications on Using Social Network Approach for Guiding R4D Investments.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OPEN ACCESS PEER-REVIEWED RESEARCH ARTICLE

Social network analysis of multi-stakeholder platforms in agricultural research for development: Opportunities and constraints for innovation and scaling

Frans Hermans, Murat Sartas, Boudy van Schagen, Piet van Asten, Marc Schut

Published: February 6, 2017 • http://dx.doi.org/10.1371/journal.pone.0169634

Agricultural Systems
Volume 145, June 2016, Pages 165–176

Sustainable intensification of agricultural systems in the Central African Highlands: The need for institutional innovation

Marc Schut[a, b], Piet van Asten[c], Chris Okafor[d], Cyrille Hicintuka[e], Sylvain Mapatano[f], Nsharwasi Léon Nabahungu[d], Desire Kagabo[g], Perez Muchunguzi[c], Emmanuel Njukwe[a], Paul M. Dontsop-Nguezet[d], Murat Sartas[a, b], Bernard Vanlauwe[h]

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http://dx.doi.org/10.1016/j.agsy.2016.03.005

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CRITICAL GAPS AND NEXT STEPS

We operationalize SNA approach by using Learning System for Agricultural Research for Development (LESARD), a data management system for innovation networks.[2] LESARD utilizes short surveys and applies them using google and open date kit (ODK) forms in mobile devices. It uses Gephi for analyzing and visualizing networks. SNAs potential contribution to scaling can be capitalized more effectively by further integration with broader scaling approaches such as scaling readiness that uses evidence on innovation readiness and use for formulating stakeholder strategies.

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[2] Sartas, M., Schut, M., & Leeuwis, C. (2017). In press. Learning System for Agricultural Research for Development Interventions (LESARD) - Effective Documenting, Reporting and Analysis of Performance Factors in Multi-stakeholder Processes. In O. I. (Ed.), Integrated Systems Research for Sustainable Intensification of Smallholder Agriculture. Ibadan: Earthscan.

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