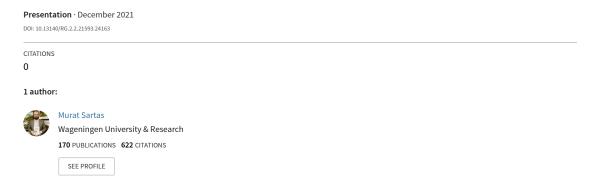
#### Enhancing Knowledge Management Performance of Research and Innovation Interventions through Science and Community of Practices



Some of the authors of this publication are also working on these related projects:



The European Forum for Agricultural Research for Development (EFARD) View project

Scaling Readiness Assessment of the Innovation Portfolio of International Center for Agricultural Research in the Dry Areas View project



Strengthening Knowledge Management for Greater Development Effectiveness in the Near East, North Africa, Central Asia and Europe



Enhancing KM Performance through Science and Community of Practices

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15<sup>th</sup> December 2021, International Center for Agricultural Research in the Dry Areas (ICARDA)











### **Overview**



- 1. Overview of 2021
  - Science of Knowledge Management
  - Science of Innovation and Scaling
  - Enhancing partners and empowering youth through Community of Practices
- 2. Learnings and Reflections
- 3. Questions and Answers

### Science of KM - Evidence Synthesis

- An collaborative process for Evidence Synthesis
  - Consultation with and Capacity building of Scientists on Evidence Synthesis Method
  - Consultation with and Capacity building of Scientists on Evidence Synthesis Tools
  - Publication of the Evidence Synthesis
     Method in an Academic Journal
  - Finalizing the Evidence Synthesis
  - Publishing the Evidence Synthesis in a journal
  - Asked to be editor for a special issues on Human-Machine Hybrid approaches





Perspective Paper

#### A Human Machine Hybrid Approach for Systematic Reviews and Maps in International Development and Social Impact Sectors

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Abstract: The international development and social impact evidence community is divided about the use of machine-centered approaches in carrying out systematic reviews and maps. While some researchers argue that machine-centered approaches such as machine learning, artificial intelligence, text mining, automated semantic analysis, and translation bots are superior to human-centered ones, others claim the opposite. We argue that a hybrid approach combining machine and human-centered elements can have higher effectiveness, efficiency, and societal relevance than either approach can achieve alone. We present how combining lexical databases with dictionaries from crowdsourced literature, using full texts instead of title, abstract, and keywords, and using metadata sets can significantly improve the current practices of systematic reviews and maps. Since the use of machine-centered approaches in forestry and forestry-related reviews and maps are rare, the gains in effectiveness, efficiency, and relevance can be very high for the evidence base in forestry. We also argue that the benefits from our hybrid approach will increase in time as digital literacy and better orthologies improve elobality.

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#### 1. Introduction

Information and communication technologies have made significant advances in the last decades and disrupted science and other knowledge sectors. Many mathematical problems waiting to be solved for centuries are solved using more efficient algorithms and increased computing power. Artificial intelligence became commercially viable, and standard tools using machine learning have been developed in space, technology, and medical research. Many tools and techniques for analyzing unstructured data have been developed and commercialized at scale. However, the changes in systematic review methodologies and tools in international development and social impact sectors have been much slower. There are many missed opportunities to increase the effectiveness, efficiency, and societal relevance of systematic reviews and maps in international development and social impact sectors.

Systematic reviews and maps are gaining momentum in forestry and forestry-related fields such as ecosystems services and zoology in the last decade. There are about 140 systematic reviews and maps related to forestry in Scopus and the Web of Science Skim

\*\*rengthening Knowledge Management

\*\*r Greater Development Effectiveness

in the Near East, North Africa,

Central Asia and Europe



#### Leveraging Semantic Analysis for Faster and Better Systematic Maps and Reviews

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#### QUALITATIVE ANALYSIS Using NVIVO

with
An ICARDA Use Case:

An ICARDA Use Case:
Leveraging Semantic Analysis for Faster and Better
Systematic Maps and Reviews

Dr. Murat Sartas (ICARDA)

17th February 2021, International Center for Agricultural Research in the Dry Areas (ICAI







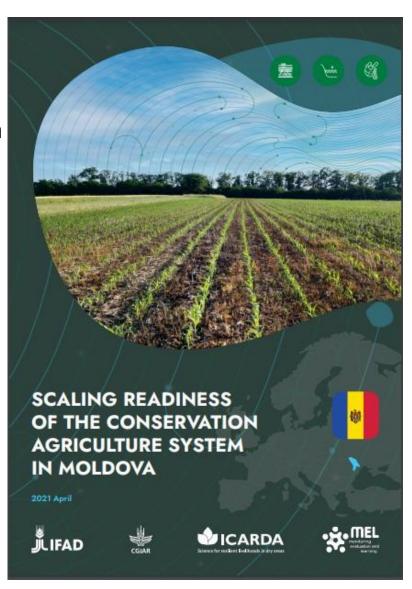




### Science of Innovation and Scaling

- Scaling Readiness of Conservation Agriculture Systems in Moldova
- Scaling Readiness of Natural Resource Governance Framework in Sudan
- Scaling Readiness of Conservation Agriculture Systems in Moldova??











### Science of Innovation and Scaling

- Consultation with local partners
- Dissemination in multiple platforms
- Engagement in different platforms
- Interest from
  - IFAD colleagues
  - FAO colleagues
  - Partners from Morocco
    - Request to do it for Morocco



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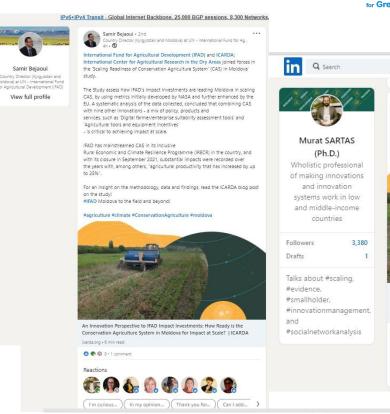
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# Explore

Messages

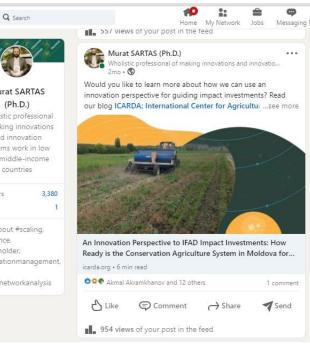
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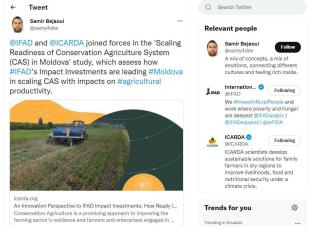
☐ Lists

Profile

· More







# Enhancing partners and empowering youth through Community of Practices

Strengthening Knowledge Manageme for Greater Development Effectivene in the Near East, North Afri

- Terms of References (4) for Knowledge Management Platform (2020)
- CoP's kicked off
- ODK Survey Event Log for SKIM to monitor and study the engagement with partners
  - Types of Events
  - Interaction Format
  - Utilization of SKIM KM tools
  - Utilization of other KM tools
  - Participation Trends
- Training on CoP
  - Youth-driven process
  - Further request for mentoring youth



### Learnings and Reflections



- There is an interest from science community for research and learning at the intersection of KM and innovation and scaling
  - Offer for being an editor for a special issue on evidence synthesis
- The intersection of KM, innovation and scaling can improve the performance of development interventions (E.g. the issue of technologies at the shelf)
- There is significant space for IFAD, CGIAR (and FAO) collaboration for understanding innovation and scaling of Conservation Agriculture
- There is a major grassroot youth movement in Morocco that demand mentoring and support in community of practices and community engagement
- We need to pay more attention to demand-driven processes in KM. Products are only a part of the picture.

### Questions and



- What should be the focus of the Morrocco Scaling Readiness Study? (Conservation Agriculture, Youth or Market arrangements?)
- What is the best way to further advance science collaboration between IFAD, CGIAR and other key KM partners?
- How can we better respond to the backstopping and mentoring demand of local partners and be flexible in our work? Can we innovate new modalities to support them?

### SKIM

Strengthening Knowledge Management for Greater Development Effectiveness in the Near East, North Africa, Central Asia and Europe



## Thank You!









