



EOTEC DevNet NETWORK INTELLIGENCE: Understanding the Earth observation capacity development network

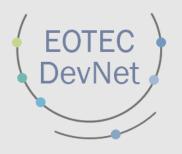
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WITH TECHNICAL CONTRIBUTIONS FROM DR. MURAT SARTAS

EARTH OBSERVATION TRAINING, EDUCATION, AND CAPACITY DEVELOPMENT NETWORK

October 2023

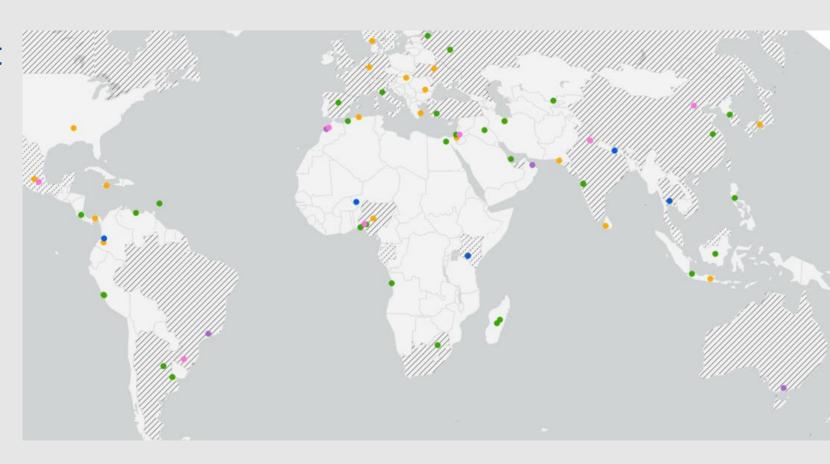
Presentation outline



- I. Aims of EOTEC DevNetNetwork Analysis
- i. Early Results

Next Steps

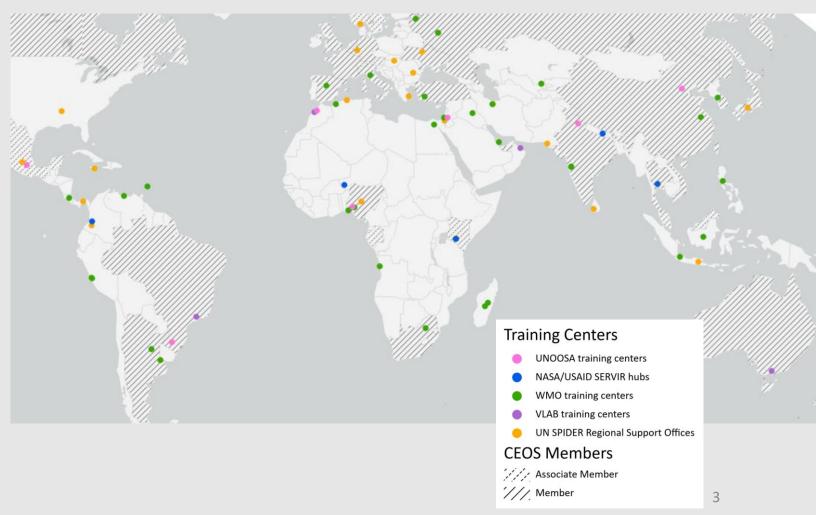
Methodology in detail



I. Aims: Why multi-stakeholder network analysis?

The Earth Observation Capacity Building Stakeholder Landscape is highly complex...

- Many organizations
- Multiple networks
- Global scope
- Multi-dimensional and geographically-specific needs
- Ever-changing technologies
- Trade-offs between goals



DevNet

I. Aims: Why multi-stakeholder network analysis?

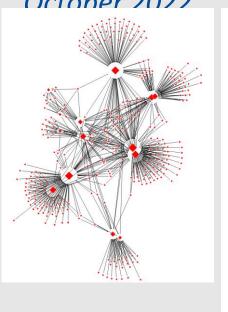
- Improve collaboration among EO-capacity building providers
- Foster exchange of capacity-building resources
- Reduce duplication

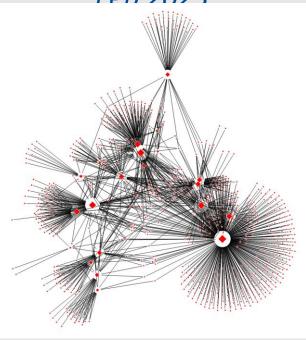


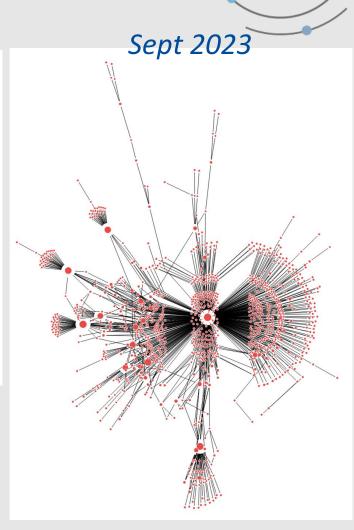


II. Early results









Both:

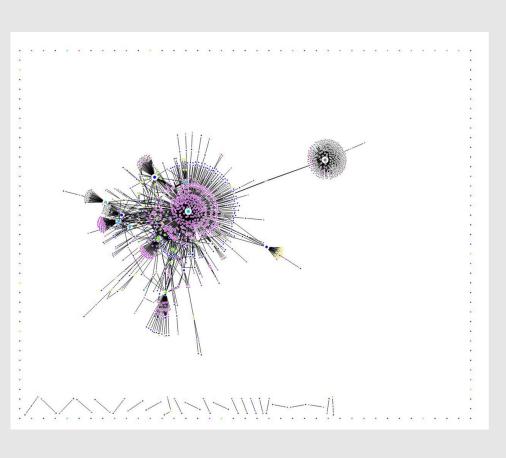
- Extensively (94 entities)
- Intensively (882 new connections)

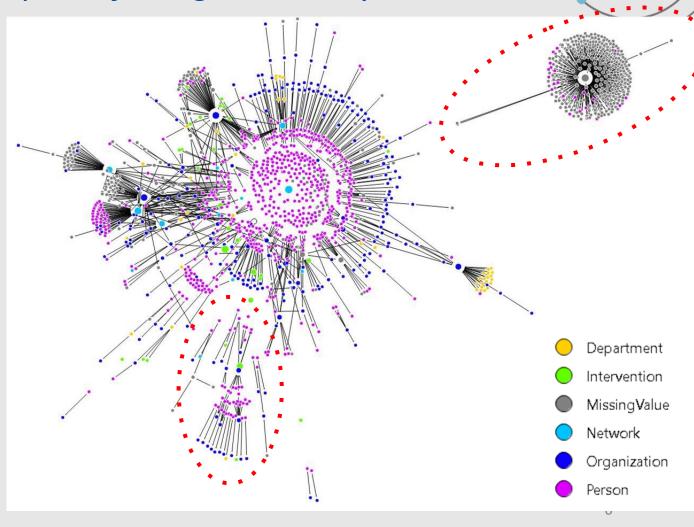
EOTEC

DevNet

II. Early results

But EOTEC DevNet remains a small part of the global ecosystem





III. Next steps

Expand analysis beyond on our network to understand the EO capacity building landscape



- Expand detail of data collection. Information on the individuals and their actual and potential role is not articulated yet. The articulation can provide intelligence for high granular action to improve the performance of EOTEC DevNet and all earth observation capacity building ecosystem
- Extend data collection beyond EOTEC internal documentation. Although it includes information about the organizational member of networks constituting EOTEC DevNet, majority of the network information about EOTEC DevNet networks and larger ecosystem was not included in the analysis. Therefore, the extrapolation results to the overall ecosystem should be done very cautiously. To better understand the ecosystem, data from the engagement of constituent networks prove very high value.
- Update and prepare dashboards for key stakeholders

III. Next steps

Build a dashboard to answer key management questions



EOTEC DevNet STATUS Board			
How many people are involved in EOTEC DevNet Activities?			721
How many regular participants are involved in EOTEC DevNet activities?			274
How many organizations are currently involved in EOTEC activities?			340
How many countries are represented in EOTEC activities? (UN Country Classification)			81 of 248
How many regions are represented in EOTEC activities? (UN Sub-region)			14 of 18
How many GEO/CGMS/WMO/UNOOSA/CEOS network participants are active in EOTEC DevNet?			12
How many new connections have been established thanks to the activities of EOTEC DevNet?			882
Which organizations and people are most active and key in EOTEC Web Page Stats		###	
DevNet activities?	1. Markov Olaharanan & Giraha	Unique Visit	###
World Meteorological Organization National Aeronautics And Space Administration	Martyna Stelmaszczuk-Górska Jorge Del Rio Vera		
Committee On Earth Observation Satellites	Kenneth Mubea	Total Engagements	###
United Nations Platform for Space-based Inform	Adrian Guzman	Social Media Engagements	###
5. SERVIR	5. Sydney Neugebauer	Likes	###
What themes and service types	are most actively worked within the	Likes	###
EOTEC network?		Shares	###
1	1.	Data Sources	
2. education - general& science - general	2. Education & Research	Engagement Types	
3. education - general	3. Education	UN Regional Classification	
 drought management 	4. Coordination	ILO Occupation Classification	
		II O Occupation classifica	ation

Real time answers to key network management facts, e.g.:

- Direct Outreach (people and organizations)
- Scope (countries and regions)
- Value added (Unique EOTEC DevNet Contribution)
- Key people and organizations
- Focus themes and service activities of the network
- Social media outreach and engagement
- Web page outreach and engagement

Approach



- Social network analytics
 - 20 Data tables from events, email lists...
 - Rigorous data validation via internet
 - Exploring 20+ Statistics and 100+visualizations
- Supporting management decisions while conducting research
- Combining statistics with visualizations



Effects of multi-stakeholder platforms on multi-stakeholder innovation networks: Implications for research for development interventions targeting innovations at scale

Murat Sartas 1,2,3 e, Marc Schut 1,2, Frans Hermans 4, Piet van Asten 5, Cees Leeuwis

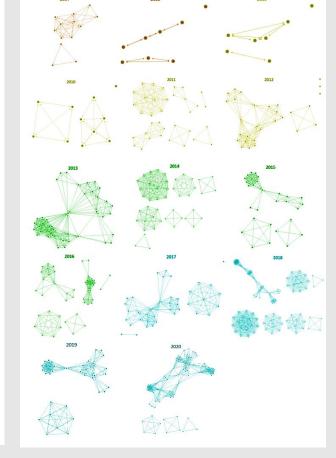
1 Knowledge, Technology and Innovation Group, Wageningen University, Wageningen, The Netherlands icerational institute of Troical Agriculture (IITA), Kigali, Rwanda, 3 Swedish University of Agricultural noes (SLU), Rural development and natural resource management, Uppsala, Sweden, 4 Leibniz Institut for Agricultural Development in Transition Economies (IAMO), Halle (Saale), Germany, 5 International

Multi-stakeholder platforms (MSPs) have been playing an increasing role in interventions aiming to generate and scale innovations in agricultural systems. However, the contribution of MSPs in achieving innovations and scaling has been varied, and many factors have been reported to be important for their performance. This paper aims to provide evidence on the contribution of MSPs to innovation and scaling by focusing on three developing country cases in Burundi, Democratic Republic of Congo, and Rwanda. Through social network analysis and logistic models, the paper studies the changes in the characteristics of multistakeholder innovation networks targeted by MSPs and identifies factors that play significant in the initial years of implementation. They show that some of the intended next users of ity. They also indicate that not all the factors of change in innovation networks are country common factors explaining changes in innovation networks across countries and across dif ferent network functions. The study argues that investigating multi-stakeholder innovation network characteristics targeted by the MSP using a network approach in early implementation can contribute to better performance in generating and scaling innovations, and that funding can be an effective implementation tool in developing country contexts.

Stakeholder involvement is essential to overcome complex agricultural and environmental problems and achieve development outcomes. Multi-stakeholder platforms (MSPs) are seen as

wations_at_scale/6282686. Funding: This work was carried out under the

Agricultural Livelihoods in Central Africa (CIALCA)



Approach



1. Collect Documents

Members provide datasets and documents about the people in the network, their involvement, the events they organize and the documents they produce.

04 EOTEC DevNet 01 03 Network Intelligence 02

4. Strategize

Global Task team and secretariat discuss the feedback, update their strategy, and identify the most important network management questions to generate insights and strategize

3. Share and Receive Feedback

EOTEC DevNet Secretariat

shares the results and collects the feedback from the global task team and other members.

2. Process the Information

Network intelligence research team curates, organizes and analyzes the data

Data management process

EOTEC

Dataset

Based

Compiling Data Sets

Data Set Curation

Batch import to database

Learning Data
Collection Process

Exploring interactive dashboards

Form based

Entering data one by one via survey

Data Quality Assurance Batch import to database

Protocol: What is a social data network?

- SNA data are the dots, lines between dots and their attributes
- Dots and lines are too many, what matters is the key network management questions
 - What are the existing collaborations and partnerships between stakeholders?
 - Who are the key stakeholders and partners?
 - What is the geographical distribution of stakeholders and partners?
 - What are the main topics and trends?
 - How do different stakeholder groups (academia, industry, government) contribute?
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Annex: Social Network Data Collection and Curation Protocol

for

Generating High-Quality Social Network Analysis Data for Effective, Efficient and Inclusive Earth Observation Networks

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Protocol: What is a social data network?

- (dots) entities
 - person
 - department
 - organizations
 - networks
 - network of networks
 - interventions, i.e. project, program etc.
- attributes
 - professions
 - age
 - sex
 - base location
 - •
- the key is to decide whom are we interested in learning and influencing



Advanced Management Filters

Department

Intervention

Network

Organization

Person

Professions

Professions

Academic Manager

Advisor

Assistant Professor

Associate Professor

Data scientist

Director

Engineer

Expert

General Manager

Geologist

Manager

Meteorologist

Pedologist

Principal Researcher

Professor

Researcher

Senior Expert

Student

Technician

Protocol: What is a social data network?

- (lines) engagement options
 - team membership
 - manager
 - secretariat
 - membership
 - staff
 - event participation
 - management meetings
 - trainings
 - courses
 - publications
 - reports
 - research papers
- attributes
 - specific engagement types
- the key is to prioritize which relationships are more relevant and informative



Advanced Management Filters

Engagement Type

Email group

Entity

Event participation

Network membership

Work or service support

Specific Engagement Types

Specific Engagement Types

Co-chair

Contributor

Drought group membership

Flood Tracker Demo

Global Task Team

Member

Regional communities of practice - Floods Working Group

Regional communities of practice - Task Team

Regional community of practice

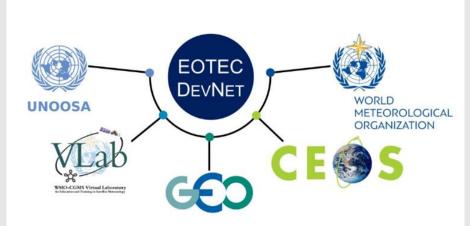
Regional flood group membership

Secreteriat

Terms of data provision and use

- Data-for-Analytics Use Model
 - provider of data agrees to share their data in exchange for access to the analytics generated from that data (to create incentives to provide data)
 - for a period of time (to create incentives to update data)
 - can be done at various levels; with EOTEC DevNet, its constituencies, or any other entities (to customize to the management needs)





Annex: Terms of Provision and Use of Social Network Data

for

Generating Comprehansive and Up-to-date Social Network Analysis Data for Effective, Efficient and Inclusive Earth Observation Networks





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