Community Survey - Africa

Soil Information Professionals Community of Practice   31 May 2023

Presenters:

- *Rik van den Bosch, Director of ISRIC*
- *Emily Toner, Community Manager at ISRIC*
- *Kirsten Wagenaar, Community consultant, Bind*

Meeting agenda

- Welcome and introductions by chat, Emily (10 mins)
- Share background of community of practice concept, Rik (15 mins)
- Share community survey results, Emily (20 mins)
- Explain community development approach, Kirsten (10 mins)
- Gauge interest on overall concept and core group membership, Emily (5 mins)

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Welcome and introductions

When you see this symbol, please respond in the chat!

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Welcome and introductions

Please share in the chat:

- **Your name, organisation and country**

- **What is your expectation of this meeting?**

CULTIVATE A COMMUNITY OF PRACTICE FOR SOIL INFORMATION PROVIDERS

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Vision for a soil information Community of Practice

- **Share ideas** and strengthen each other's work

- **Provide collective leadership** guiding discussions and professional development

- **Innovate** for soil information system development

- **Co-develop standards** for all aspects of the soil information workflow

- **Strengthen interdisciplinary connections** (between field-based scientists and computer-based soil scientists; between developers and users of soil information)

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Why supporting national-level institutes?

National soil institutes:

- have access to large quantities of underutilized **legacy data**;

- have **deep understand of the soils** (needed to assess accuracy and appropriate use);

- have the ability to **generate new data** through soil monitoring;

- **are connected to end-users** and therefore understand what is needed (use cases) and of how to provision data;

- **Serve governments who prefer to rely on products made by their own institutions** (for land use planning, national reporting and creating sustainable soil and land management policies).

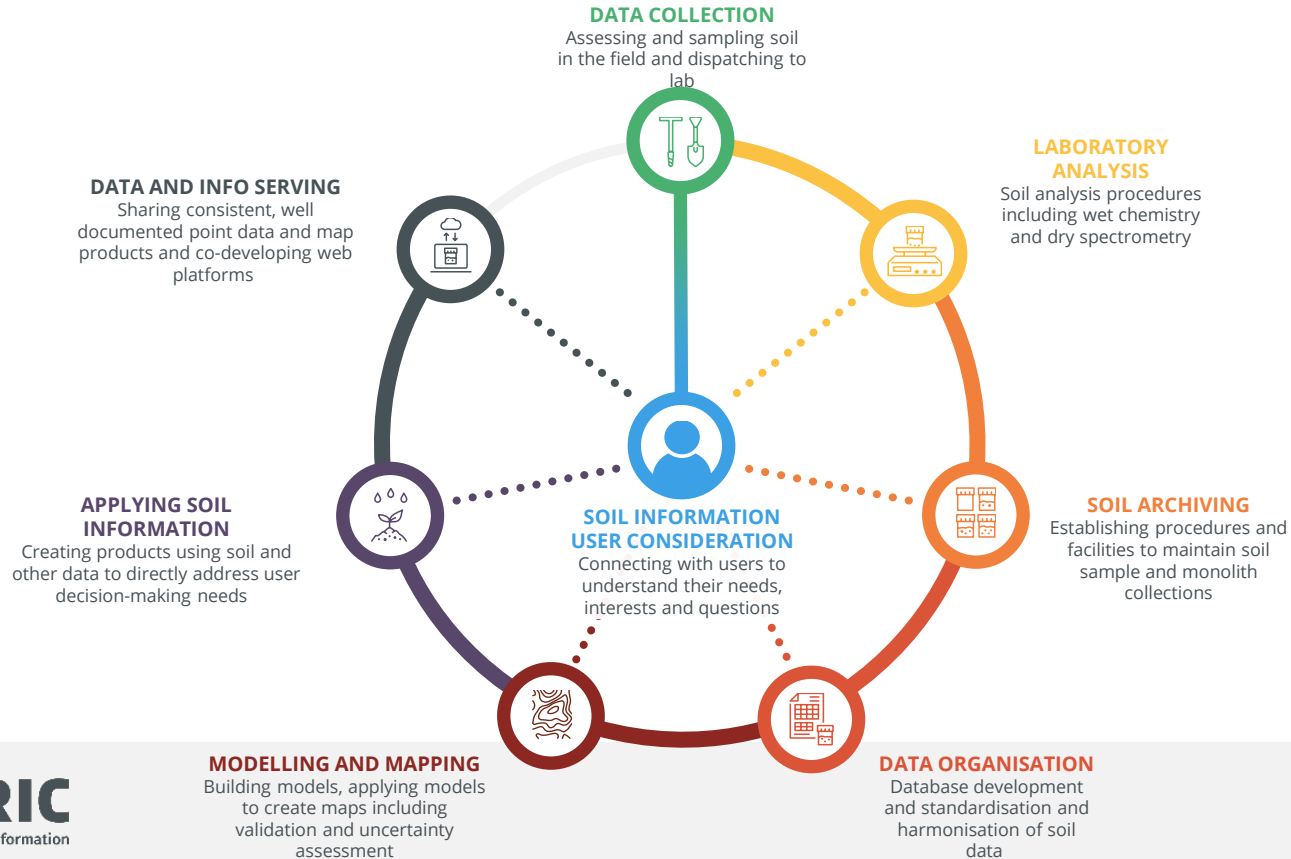# Background on community of practice concept

- Focus of this community of practice:
  - national-level
  - soil information producers
  - in Africa

Domain: soil information workflow

- Every community of practice has a **<u>domain</u>**:
  - the shared area of interest

- The **<u>practice</u>** part of a "community of practice" refers to:
  - Shared experiences, methods, stories, tools, ways of addressing recurring problems—in short a shared practice—within the domain

- For this community of practice, the domain and practices focus on:
  - **Soil information workflow**

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SOIL INFORMATION WORKFLOW

DATA COLLECTION
Assessing and sampling soil in the field and dispatching to lab

LABORATORY ANALYSIS
Soil analysis procedures including wet chemistry and dry spectrometry

DATA AND INFO SERVING
Sharing consistent, well documented point data and map products and co-developing web platforms

SOIL ARCHIVING
Establishing procedures and facilities to maintain soil sample and monolith collections

APPLYING SOIL INFORMATION
Creating products using soil and other data to directly address user decision-making needs

SOIL INFORMATION USER CONSIDERATION
Connecting with users to understand their needs, interests and questions

DATA ORGANISATION
Database development and standardisation and harmonisation of soil data

MODELLING AND MAPPING
Building models, applying models to create maps including validation and uncertainty assessment

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Community survey results

- Purpose of the survey:
  - Understand who would be interested in this new community of practice
  - Look for the gaps in our professional community (avoid duplicating existing networks, working groups, etc.)
  - Identify areas of potential

- 24 questions, in English

Community survey results

- Who received the invitation?
  - 116 people identified by ISRIC as "national-level soil information producers in Africa"

- Who responded?
  - 126 people from 26 countries

Country
Benin
Burkina Faso
DRC
Djibouti
Egypt
Eswatini
Ethiopia
Gabon
Ghana
Kenya
Lesotho
Libya
Madagascar
Malawi

Countries cont.
Mauritania
Morocco
Namibia
Niger
Nigeria
Rwanda
Senegal
South Africa
Tanzania
Tunisia
Uganda
Zambia
Zimbabwe

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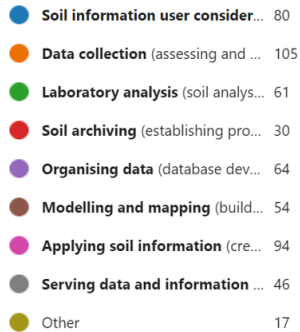World Soil Information

Community survey results

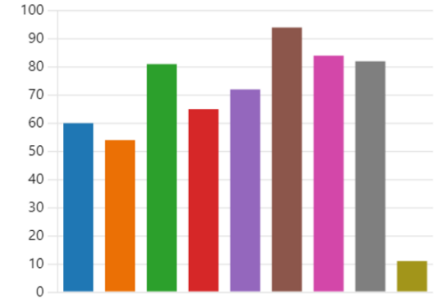Community of practice survey respondents

Community survey results

3. In which areas of the soil information workflow do you carry out your own work most often?

🔵 **Soil information user consider...**	80
🟠 **Data collection** (assessing and ...)	105
🟢 **Laboratory analysis** (soil analys...)	61
🔴 **Soil archiving** (establishing pro...)	30
🟣 **Organising data** (database dev...)	64
🟤 **Modelling and mapping** (build...)	54
🩷 **Applying soil information** (cre...	94
⚪ **Serving data and information** ...	46
🟡 Other	17
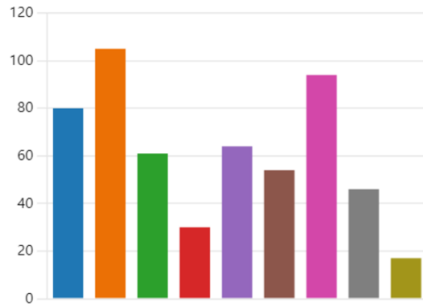
5. In which areas of the "soil information workflow" does your organisation want to further develop?

🔵 User needs assessment	60
🟠 Data collection	54
🟢 Laboratory analysis	81
🔴 Soil archiving	65
🟣 Organising data	72
🟤 Modelling and mapping	94
🩷 Applying soil information	84
⚪ Serving data and information	82
🟡 Other	11

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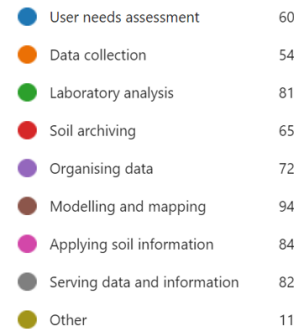
Community survey results

Top developments in soil information that interest the community

(mentioned 10+ people as most interesting area):

➢ Digital soil modelling and mapping (36)

➢ Soil spectroscopy and spectrometry, infrared and proximal soil sensing (16)

➢ Use of remote sensing and GIS in soil survey and other applications (10)

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Community survey results

Additionally, much interest in how to apply soil information on various topics:

➢ Integrated soil and nutrient management (15)
> ➢ Fertilizer application (7)
➢ Climate change and soil carbon sequestration related applications (5)
➢ Policy applications (5)
➢ Land management (7)
> ➢ "Soil modelling for erosion"

"...use of models and decision support tools, machine learning and developing algorisms in order to extract the values of the big data system and improving the quality of decision making."

Community survey results

Largest challenges respondents face in producing soil information are:

- Resource limitations (59) related to
  - Laboratory analysis (25)
  - Facilities and equipment in general (16)
  - Financing (13)
  - IT infrastructure (6)
- Knowledge and skill building (22)
- Data availability and quality (16)
- Making soil data useful (applying soil information) (12)

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Community survey results

There is a very high level of enthusiasm for international collaboration. Top reasons mentioned for this were:

➢ Sharing knowledge on advanced technologies, innovations and lessons learned

➢ Creating an avenue for professional networking

➢ Enabling development of standards and harmonization

➢ Presenting a better picture when executed regionally

100% of respondents were interested to contribute to this new community of practice!

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Community survey results

The **most important thing a community of practice could provide** to these professionals in order to be useful is:

➢ Sharing of knowledge, expertise, new developments and latest advancements (54)

➢ Training and workshops (22)

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Community survey results - summary

- Response was very positive about the idea of the community of practice

  - There must be some gaps, because people are saying yes we need this.

- So, what are we going to do with these insights?

  - You are open to sharing information, networking internationally, participating in trainings

  - Let's find **clusters** of opportunity and build the next steps together.

    - Topic and skill-based

    - Maybe location-based

- Key point: not just an ISRIC training program, this will be an ISRIC-supported collaborative space where everyone's expertise is needed

If you have a reaction, please place in the chat!

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Community development approach

- Paint a picture of how communities work, the dynamics,

- Share in the chat: what is your experience with community?

- What are your three main topics that you really search for knowledge, interaction, network?

- How do see your own role in this community? Share knowledge, reactor, expert, networker (think of 4-5 roles and they can choose)

Community characteristics

- Distinctiveness

- Homogeneity

- Closeness

- Self sufficiency

- Sense of belongingness (we feeling)

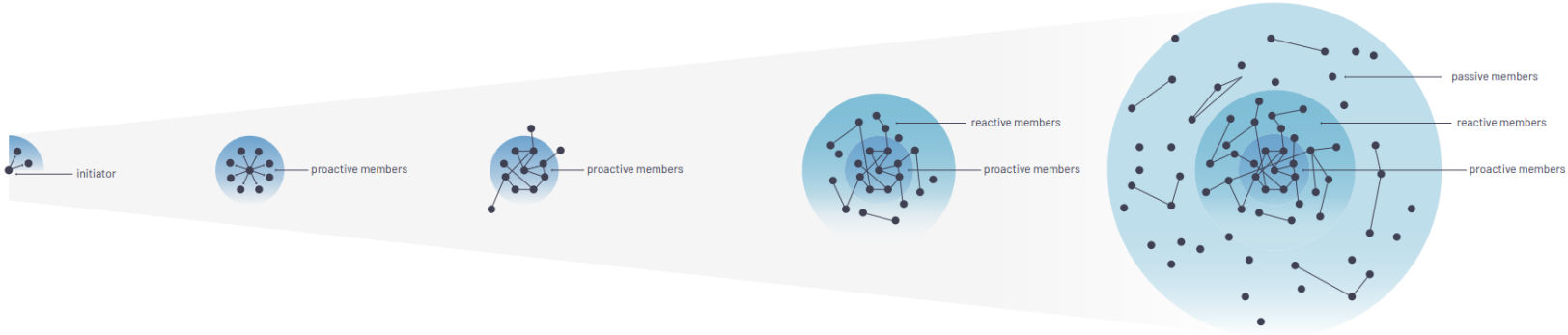- Solidarity or sense of togetherness

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Question

Please answer in the chat:

- What is your experience with (digital) community?

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Community development approach

passive members

reactive members

proactive members

reactive members

proactive members

reactive members

proactive members

proactive members

initiator

getting proactive members involved

GO: establish a need for connection

connecting proactive members

facilitating existing members, recruitment and onboarding of new members

realign and improve

time

4 - 6 months

1 concept

2 assessment

3
4 proactive members
involvement of management

5
6 strategy
tooling

7 activation calendar

8 go live

9 guiding proactive members + start of activation calendar

10 large-scale recruitment

11 content moderation and community members

12 optionally new/complimentary concept and community goal

13 furthering company wide involvement

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Community development approach

Percentage Active Members

1% creators

90% consumers

9% responders

Community development approach

Levels of Participation

1. **Inform:** (blog, newsletter, social media, interviews)
2. **Consult** (vote, rate, share, respond)
3. **Involve** (events, brainstorming, ask questions, answers)
4. **Collaborate** (wiki, write blogs, make vlogs)
5. **Manage** (Take responsibility, ambassadorship)

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Question

Please answer in the chat:

– **How do see your own role in this community?**

  – For example: Knowledge sharer, reactor, expert, networker, other

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Gauge interest to be involved

Please answer in the chat:

- **On a scale from 1-5, how interested do you now feel about being involved in this community of practice?**

  - 1 = I'm not interested anymore

  - 5 = This is exactly what I was hoping for, I am excited!

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Gauge interest to be involved

Please answer in the chat:

- Which topic or skill would you want to focus on in this community of practice?

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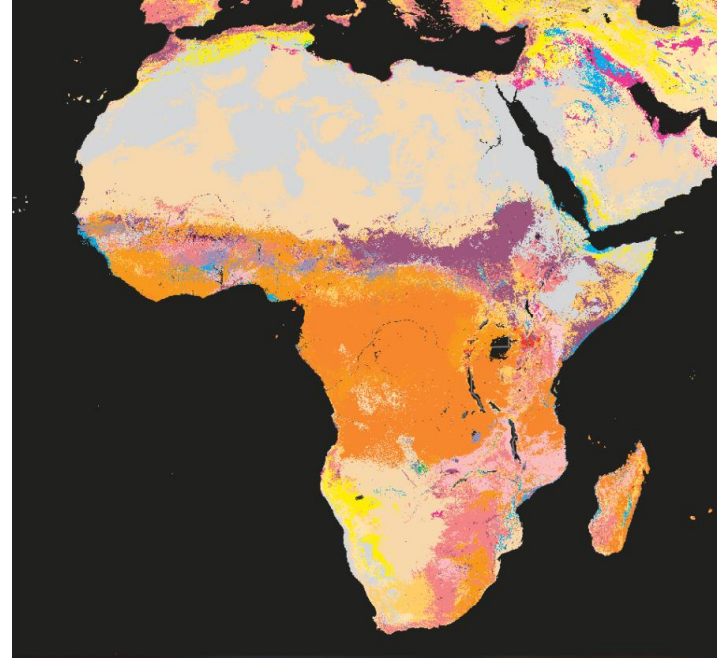World Soil Information

SOIL INFORMATION WORKFLOW

Gauge interest to be involved

Please answer in the chat:

- What type of aggregation would you suggest for this community?

  – By topic

  – Geography

  – Something else?

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Gauge interest to be involved

Please answer in the chat:

- For a text group, which app do you prefer?
  - WhatsApp
  - Telegram
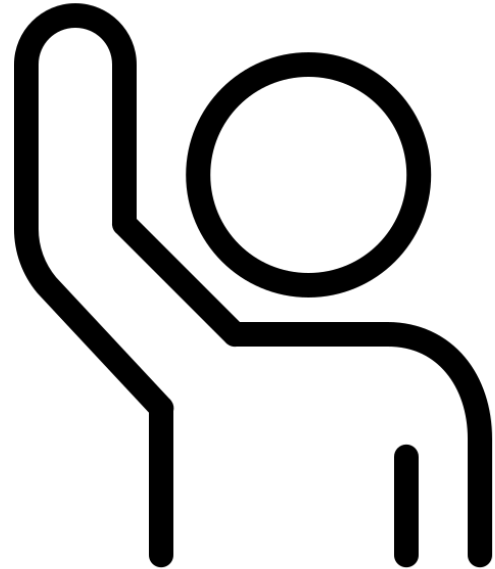 - Other? Please explain.

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Gauge interest to be involved

Please answer in the chat:

- If you volunteer to help organize this community, please put your name and email in the chat!

Gauge interest to be involved

Next meeting:

- End of July

- Topics:
  - how to organize the community of practice and
  - tools for connecting

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Thanks for participating! Questions?

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