Webinar: Inventory of MRV systems

March 19th, 2023

Welcome to this introduction to the MRV solutions inventory!

1 THE "4 PER 1000" INITIATIVE – 10'

2 MRV TOOL CONTEXT – 25'

3 INVENTORY DEMO – 10'

4 Q&A– 15'

Paul Luu
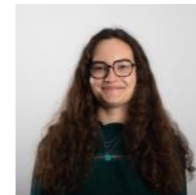Executive Secretary

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THE INTERNATIONAL "4 PER 1000" INITIATIVE: SOILS FOR FOOD SECURITY AND CLIMATE

The "4 per 1000" initiative was launched at the COP21 with an aspiration to increase global soil carbon stocks by 4‰ (or 0.4 %) per year as a theoretical compensation for the global net emissions of carbon by anthropogenic sources.

On December 1st 2015,
more than **160 signatories**
of the declaration of intent (31 countries).
Today more than **800** Partners & Members

4‰ is **inspiration**, an **orientation** rather than a **numerical target**

The Goals of the Initiative

Align with the United Nations' Sustainable Development Goals.

Increase carbon sequestration in soils as organic matter, for:

- Increasing food security
- Adapting agriculture to climate changes
- Mitigating climate change

Through :

- An **Action Plan** and
- A **Scientific Program**

Pursuing the **Sustainable Development Goals** adopted by the United Nations
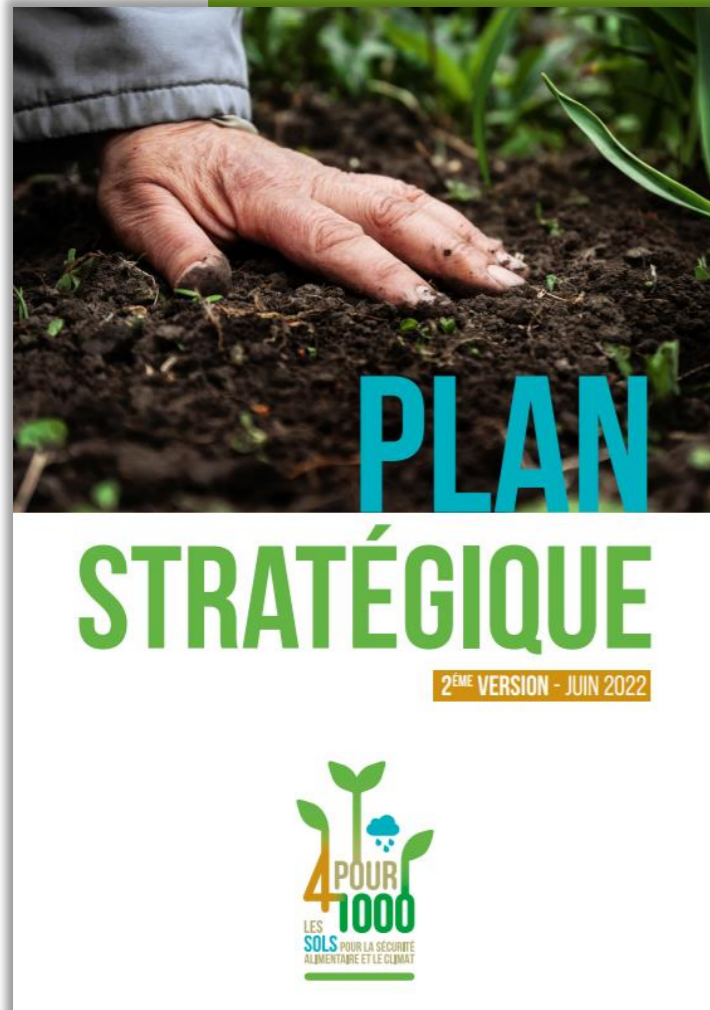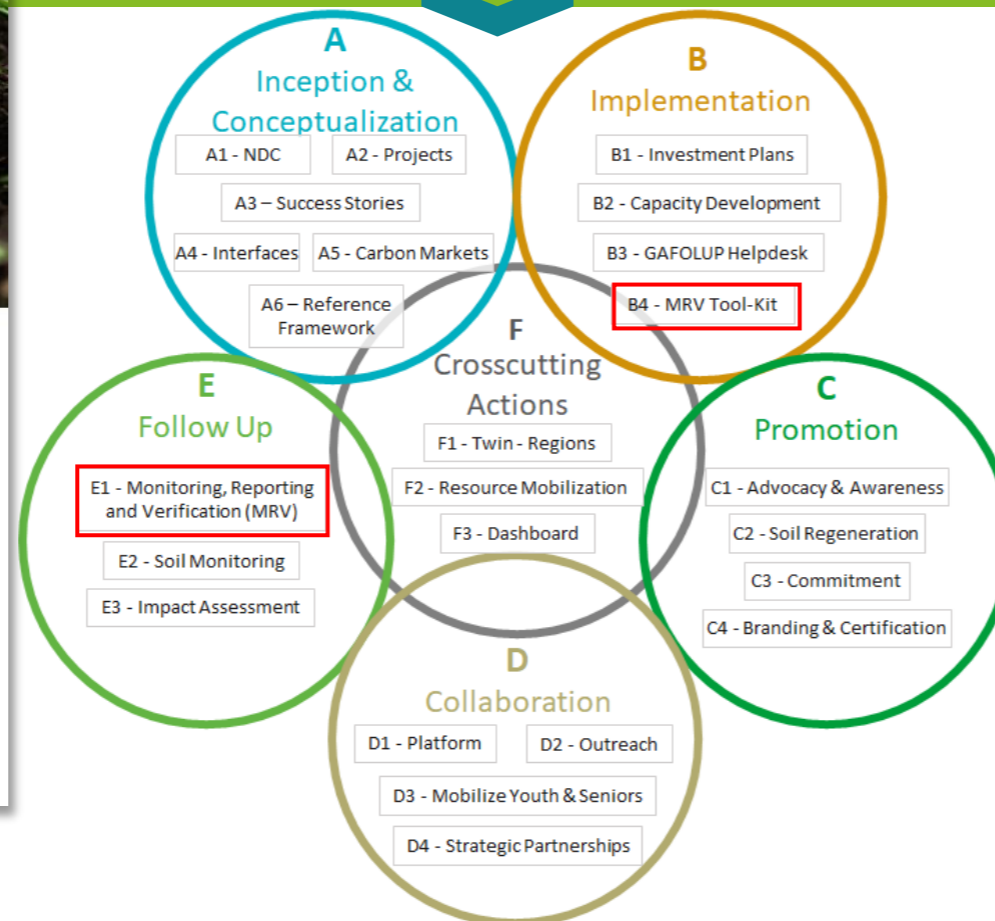
THE "4 PER 1000" STRATEGIC AMBITION AND PLAN

Our ambition is to encourage land users to move towards a diversified, productive, resource-efficient and highly resilient agriculture and forestry based on appropriate management of natural resources, in particular land, soils and water, strengthening farming activities and the global economy ensuring sustainable development.

Guiding Principles :

6 goals & 24 objectives

A — Inception & Conceptualization
- A1 - NDC
- A2 - Projects
- A3 – Success Stories
- A4 - Interfaces
- A5 - Carbon Markets
- A6 – Reference Framework

B — Implementation
- B1 - Investment Plans
- B2 - Capacity Development
- B3 - GAFOLUP Helpdesk
- B4 - MRV Tool-Kit

F — Crosscutting Actions
- F1 - Twin - Regions
- F2 - Resource Mobilization
- F3 - Dashboard

E — Follow Up
- E1 - Monitoring, Reporting and Verification (MRV)
- E2 - Soil Monitoring
- E3 - Impact Assessment

C — Promotion
- C1 - Advocacy & Awareness
- C2 - Soil Regeneration
- C3 - Commitment
- C4 - Branding & Certification

D — Collaboration
- D1 - Platform
- D2 - Outreach
- D3 - Mobilize Youth & Seniors
- D4 - Strategic Partnerships

VISION 2050

Worldwide healthy and carbon-rich soils to combat climate change and end hunger.

MISSION 2030

Provide a supportive framework and action plan to conceptualize, implement, promote and follow up actions, on Soil Health (SH) and Soil Organic Carbon (SOC), through an enhanced collaboration between stakeholders of the "Agriculture, Forestry and Other Land Use (AFOLU)" sector, in line with the United Nations (UN) Sustainable Development Goals (SDGs).

Source : 4per1000 strategic plan

NEEDS FOR MRV TOOLS

As organisations increasingly commit to decarbonization strategies, operationalizing them becomes challenging, highlighting the need for effective tools whose choice depends on multiple and context-specific criteria.

COMMITMENTS

Committing and setting targets is the first building block
-
More and more organisations are committing to **decarbonization targets**.

Companies with approved targets (well below 2°C)

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Companies with approved targets (1,5°C)

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

OPERATIONAL CHALLENGES

The struggle comes when organisations attempt to roll out the decarbonization strategies.
-
How to **measure, monitor, verify and report on the environmental impact of low carbon practices** anywhere and over long-time frames ?

TOOLING AS A MUST

Organisations equip themselves with **a MRV tool** to deploy at scale low carbon triggers such as agroecological practices with **adapted financial and human resources**
-
How to **select the right tool** ? What are the key questions and **characteristics** of each tool to decide which one corresponds to the organisation's context ?

TOOLING IS A MUST

Organisations utilize MRV solutions to accelerate and scale deployment of their agroecological strategies, enabling efficient quantification, tracking, and funding of sustainable practices alongside farmers.

1 Quantify the environmental impact of the agroecological practices

Quantify the impact of the environmental services provided by agroecological practices using MRV tools.
More specifically measure carbon sequestration in soils, greenhouse gas emissions and soil health.

2 Track progresses on the deployment of agroecological practices

Monitor progress on the deployment of agroecological practices on field with farmers (e.g. track cover crop deployment)

3 Support farmers transition in the deployment of agroecological practices

Objectify and manage the financial incentives and technical support linked to the adoption of agroecological practices and associated environmental performance for farmers, but not only.

THE PROPOSED INVENTORY

Deloitte has developed an inventory of MRV solutions that aims to simplify the decision-making process for organizations by compiling existing solutions, detailing their specificities.

What the inventory is :

- A way to **simplify decision-making** by identifying criteria that **differentiate tools** and by characterizing each tool according to these criteria.

- A collection of **information shared by tool developers but not verified by Deloitte nor "4per1000"***.

- An **initial building block** of a larger process where the company will develop its **decarbonization strategy**, focusing on **agricultural levers** and the tools needed to support it.

- **Accessible to everyone** via the "4 per 1000" website.

MRV solutions Inventory

What the inventory is not :

- A **comparison of MRV solutions**.

- A set of **recommendations on the MRV solution** that should be prioritized in your usage context.

- A guide for determining **the relevance of using an MRV solution**, as each organization must evaluate its specific context need independently.

A FOUR-STEP METHODOLOGY MOBILIZING EXPERTS

The criteria were identified following a series of interviews with experts then the tool providers were asked to share their information on these criteria.


1 Interviews with experts to gather recommendations on definitions and key criteria

2 State of the art of existing initiatives to ensure the uniqueness of our work

3 Interviews with tool providers to challenge our criteria and consolidate feedbacks

4 Questionaires sent to additional tool providers to fill in our inventory

Identification of relevant differentiation criteria

Creation and completion of our tool

THE AGREED DEFINITION OF MRV

The definition used in this work is the ORCaSa* one, stating that a MRV is intended to **monitor** the processes for quantifying the impact of a project on climate change mitigation, **report** results and activity data to stakeholders, and **verify** the veracity and accuracy of results by external parties.
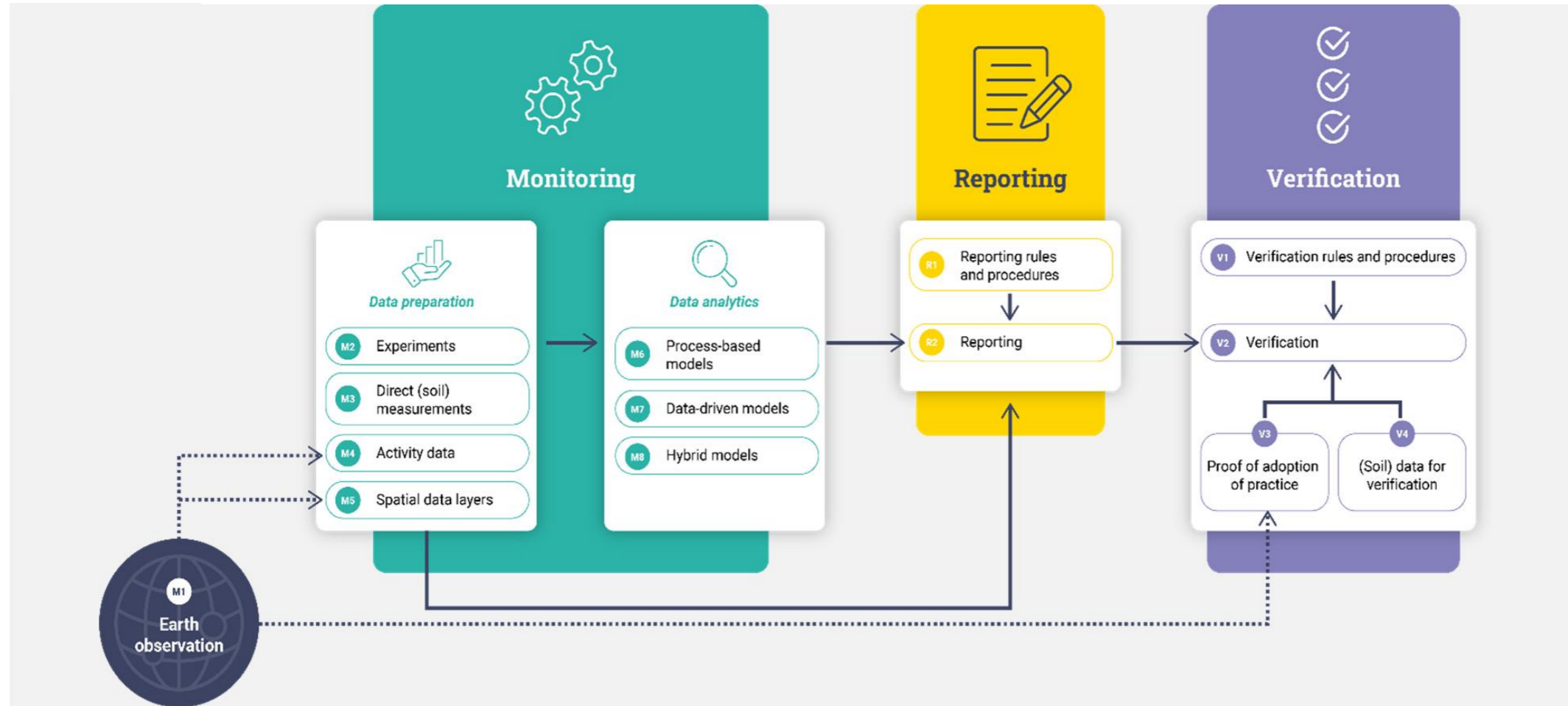
* ORCaSa deliverable 4: Schematic representation of components, building blocks and information flow for an adaptable and scalable MRV system.

THE SELECTION OF CRITERIA

Out of these 48 criteria, we have highlighted the ones that are directly connected to one of the key questions that we advised to address when selecting the most suitable tool for a specific context.

Topic	Key Questions	Key criteria
Scale	○ Which geography is the tool calibrated for?	Geographical scale
	○ For which agricultural commodities/practices is the tool adapted to?	Precise AFOLU sector
Monitoring – Input	○ What are the data inputs required by the tool ?	Data input type
Monitoring - Process data	○ What is the precision of the data output by the tool? *The quality of the data depends on the input data - in a model, there can be various data qualities depending on what is being examined*	IPCC Tier
Reporting	○ Does your tool calculate the amount of carbon stored in the soil?	Main indicators - tCO2e stored
	○ Does your tool propose a scenario analysis?	Proposed action plan
	○ Can the MRV tool be used to meet requirement for carbon credit certification schemes?	Carbon credit
Verification	○ Does the verification phase/step rely on adoption of practices (earth observation) or through soil sampling verification?	Verification
Business model and other	○ Does the use of the tool include a cost?	Business model
	○ Does the tool allow interoperability with other database/Application Program Interface /Farm System Management systems to ease the data collection phase ?	Interoperability

Choosing a tool is the best combination of these key criteria

THE FULL SCOPE OF CRITERIA

The listed tools are characterized against 48 criteria that help describe tools' general considerations, monitoring functionalities, reporting functionalities or verification functionalities.

General information

- ❑ Owner / Company
- ❑ Tool name
- ❑ Website
- ❑ Creation date of the tool
- ❑ Latest release of the tool
- ❑ Number of releases
- ❑ Main users
- ❑ Short description of the tool

Scope

- ❑ Geographical scale
- ❑ Sector (AFOLU, agriculture, forestry)
- ❑ Precise agricultural sector

Monitoring – Input

- ❑ Experiments
- ❑ Direct (soil) measurements
- ❑ Activity data
- ❑ Spatial data layers

Monitoring - Process data

- ❑ Modelling
- ❑ Calculation methodology
- ❑ Transparency
- ❑ IPCC Tier

Reporting

- ❑ Lag time
- ❑ Main indicators: $tCO2_{eq}$ emissions/reduction , $tCO2_{éq}$ stored, OM amount
- ❑ Other indicators: Spatial resolution, frequency, temporality; GHG included
- ❑ Uncertainty measurement
- ❑ Scenario analysis: + reference scenario type
- ❑ On-field advisory
- ❑ Carbon credit: standard and methodology

Verification

- ❑ Verification rules and procedures
- ❑ Proof of adoption practice– Earth observation
- ❑ Direct (soil) measurement for verification

Business model of the tool

- ❑ Fees/Free
- ❑ Business model (if fees)

Other

- ❑ Interoperability
- ❑ Device accessibility and availability
- ❑ Support and easiness of use

Key

🟩 *Criteria related to the monitoring pillar*	🟪 *Criteria related to the verification pillar*
🟨 *Criteria related to the reporting pillar*	⬛ *Criteria related to general elements*

GOVERNANCE

MRV tools are constantly updating, and the array of available solutions is constantly expending therefore a quarterly update is necessary to keep the inventory up to date.

The MRV solution inventory will be updated every quarter.

Three methods are available to editors to proceed to this update:

1

For new MRV tools:

- Editors will have the option to download the blank version of the tool, fill in the grid, and then submit it to 4per1000

- New MRV tools will be added every 3 to 4 months

2

For already referenced MRV tools:

- Editors will have the possibility to update information by downloading the blank version of the tool, adjusting the previously provided information, and submitting it to 4per1000

- Updated information will be incorporated every 3 to 4 months

3

For MRV tools to be removed from the inventory:

- Contact 4per1000 to request their deletion

THANK YOU

To the interviewees for sharing their knowledge

To the tool providers for providing information and making it accessible to all

To "4 per 1000" for the opportunity to develop this inventory

To Deloitte Sustainability France for their pro bono work

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To every other contributor for your participation

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