Available resources for OGs: information and training material, support tools and advisory services

"The future of EIP-AGRI Operational Groups: challenges, opportunities and existing support services"

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NUTRI-KNOW, Coordinator

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NUTRI-KNOW: Available resources for OGs

- **Meta-Database on nutrient management**
  - *containing the outcomes from 12 OGs and their alignment with farmers' needs, current policy framework and cost benefit analysis compared with current scenario*
- **Inventory of current nutrient management practices**
  - *to broader the screening of practices beyond the 12 engaged OGs*
- **Kit of practice-oriented material**
  - *targeting farmers and practitioners (booklets, audio-visual material, infographics, leaflets, factsheets).*
- **Massive Open Online Course (MOOC)**
  - *together with farming and agricultural schools including educational material targeting farmers and practitioners*
- **Community of Practice (CoP) on nutrient management**
  - *platform to bring together practitioners sharing common concerns and working collectively to reach individual and group goals*
- **Results Amplification Methodology (RAM)**
  - *to accelerate a broader replication of the knowledge and experience obtained*

Meta-Database on nutrient management

Containing the outcomes from 12 OGs and their alignment with farmers' needs, current policy framework and cost benefit analysis compared with current scenario

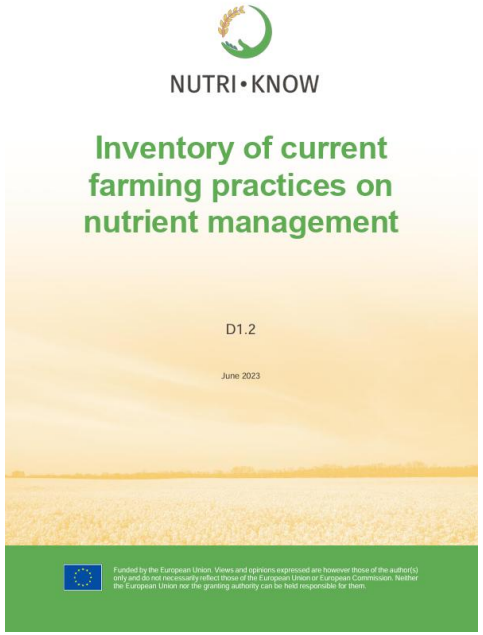
Name of the OG	**Development of a slurry concentrator with continuous total nitrogen data collection**
Project partner	UVIC-UCC
Short description of the OG	The pilot project reduces the costs of management of livestock waste by applying a new process from which the slurry coming directly from the farm will be separated into two phases, a first semi-liquid phase with the most of the organic fraction, the nutrients and the larger particles and a second liquid phase with low nutrient concentration. The differentiated management of the two phases will allow to minimize transport costs as well as the optimization of the application of nutrients in the soil, both from an agronomic and environmental point of view.
Keyword category	Farming equipment and machinery; Fertilisation and nutrients management
Partners involved	AGRÀRIA PLANA DE VIC I SECCIÓ DE CRÈDIT; FEDERACIÓ DE COOPERATIVES AGRÀRIES DE CATALUNYA (FCAC); **FUNDACIÓ UNIVERSITÀRIA BALMES (UNIVERSITAT DE VIC - UNIVERSITAT CENTRAL DE CATALUNYA)**; GRUP SOLUCIONS MANRESA
Region, country	Catalonia, Spain
Duration	November 2015 - September 2017
Status	Finalised
maturity level	near to practice
Total budget	270.967 €
Main objectives	The main objective of the pilot project is to reduce the costs associated with the management of livestock waste.
Methodology	This OG implements a new process that separates the slurry into two phases: a semi-liquid phase containing the majority of the organic fraction, nutrients, and larger particles, and a liquid phase with a low nutrient concentration. The differentiated management of these two phases allows for minimized transport costs and optimized application of nutrients in the soil, benefiting both agronomic and environmental aspects.
Keyword categories	Farming equipment and machinery; Fertilisation and nutrients management
Tangible results categories	Technology
Relevant value chain steps	Processing Technologies
Main outcomes	The concentrator prototype used in the project demonstrates successful outcomes. It effectively obtains diluted and concentrated effluents from pig slurry, with the concentrated phase retaining the majority of phosphorus and nitrogen. The system enables continuous monitoring of conductivity and exhibits low energy consumption. Technologically and economically viable, it provides significant benefits to farms and cooperatives in terms of efficient manure management.
Key performance	The innovative nutrient concentration technology employed in the project achieves impressive results. It concentrates 85-95% of total solids, 45-55% of total nitrogen, and 85-95% of phosphorus initially present in a unit volume of raw slurry, reducing the volume by 20-30% while retaining the concentrated liquid fraction. This concentration process is cost-effective, minimizes additional emissions, and requires minimal energy consumption. As a result, transport costs are reduced, and the economically viable export of nutrients to non-vulnerable areas becomes feasible while ensuring environmental sustainability.

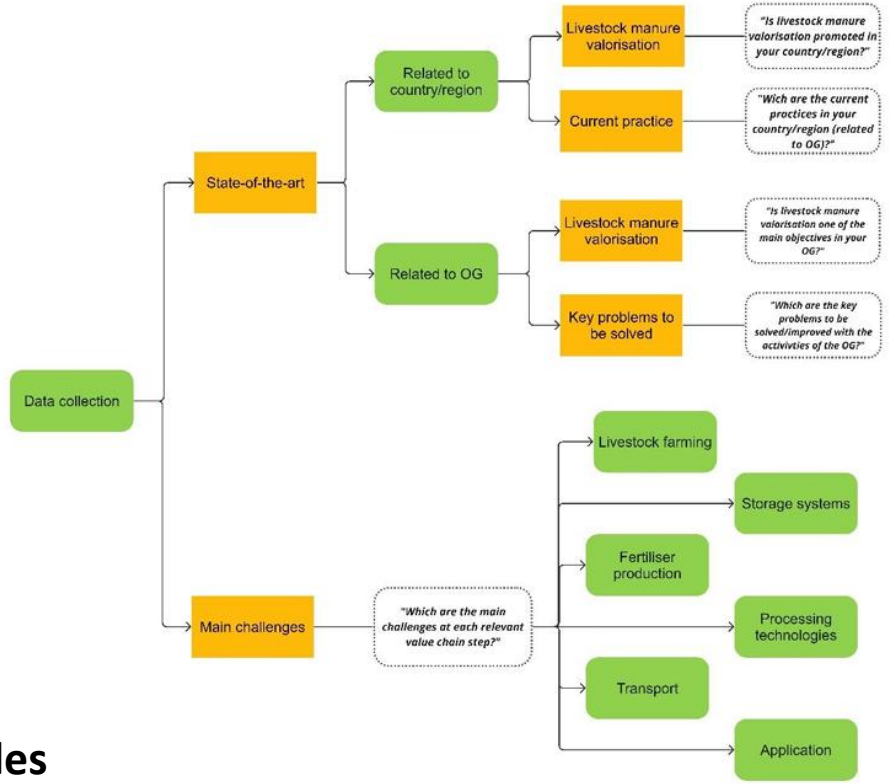
Stakeholder evaluation (D1.3)	Knowledge produced	(8/10) Provides in-depth and expert-level knowledge with extensive and comprehensive data. Also gives well-defined and actionable steps for implementation. The knowledge can be applied in various relevant contexts with some adaptation. The information is broadly applicable but may require adjustments to suit specific scenarios.
	Economic viability	(6.7/10) The technical and financial feasibility of the innovation is well-supported and realistic. The technical requirements can be met, and financial resources can be secured with reasonable effort. Despite offering a transformative market opportunity for end users through its revolutionary technology and innovative business model, its market impact remains limited. This is due to the developing company's lack of resources and capacity to bring the concentrator to market.
	Alignment with law and policies	(6.5/10) The technology is fully aligned with all relevant law policies and regulations. It has a minor impact on nutrient management policies. No special authorization from legal authorities is required to implement the technology.
	Social Benefits	(5.5/10) The technology has a moderate impact on society, it may contribute to notable social improvements and address certain societal challenges. There are some efforts to engage stakeholders on the technology's social impact. However, engagement is sporadic or limited to specific groups.
	Environmental Benefits	(5.2/10) The technology makes a valuable contribution to environmental sustainability efforts, although its impact is not considered revolutionary for the environment.
linked document		D1.3 Results of the cost-benefit and sustainability analysis
Stakeholder comments (D2.1)	Awareness of the OG activities	1.95/5 (low) 14 of the 22 respondents to the questionnaire have little knowledge of the OG; 1 of them had heard about the OG; 3 indicated that they knew some of the OG activities; 2 knew the OG objectives and activities and another 2 knew very well about the OG (being part of the consortium)
	Effectiveness of the OG outcomes	3.05/5 (moderate) The 16 respondents to the questionnaire indicated the outcome of this OG is relevant and useful in some of their agricultural activities
	Challenges in implementing the OG outcomes	- Additional investment is needed; -Lack of confirmed results/successful cases: - Lack of information on the cost structure; - Difficult to obtain the permit.
	Legislative needs for implementation of the OG outcomes	- Nutrient use and management in crop and livestock production; - Fertiliser manufacture & trade: - Treatment of animal manure and organic wastes;
linked document		D2.1 Matchmaking of OG outcomes with market and policy
	Farmers Related (Farming trade union, Farmers association, Professional	Associació de Joves Agricultors i Ramaders de Catalunya (JARC): https://jarc.cat/ Unio Pagesos Catalunya (UP): https://uniopagesos.cat/ Federació d'Agricultors Viveristes de Catalunya: http://www.viveristes.cat Granges Terragrisa Agrària Plana de Vic i Secció de Crèdit, SCCL: https://www.planadevic.cat/cat/ Cluster Bioenergia de Catalunya (CBC): https://www.clusterbioenergia.cat/es/biogas/ Spanish Biogas Association (AEBIG): www.aebig.org Group of experts in the treatment of livestock waste (GETDR):

www.nutri-know.eu/operational-group/

Inventory of current nutrient management practices

- *to broader the screening of practices beyond the OGs engaged to NUTRI-KNOW*





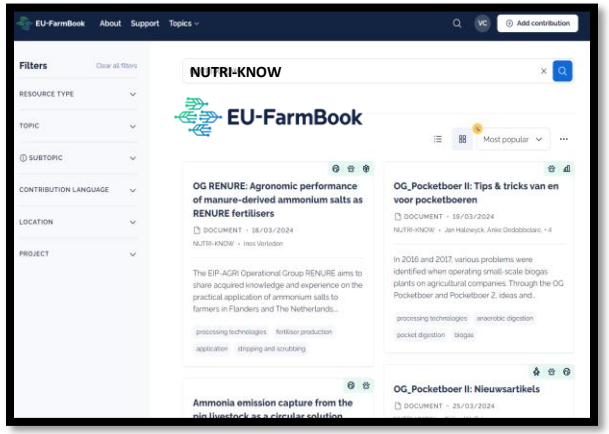
www.nutri-know.eu/resources/#deliverables

Kit of practice-oriented material

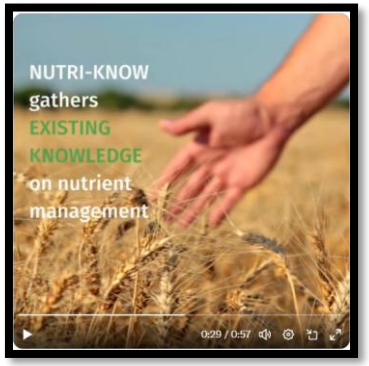
Practice Abstracts

Factcheets

Materials available to EU open repositories such as EU-Farmbook

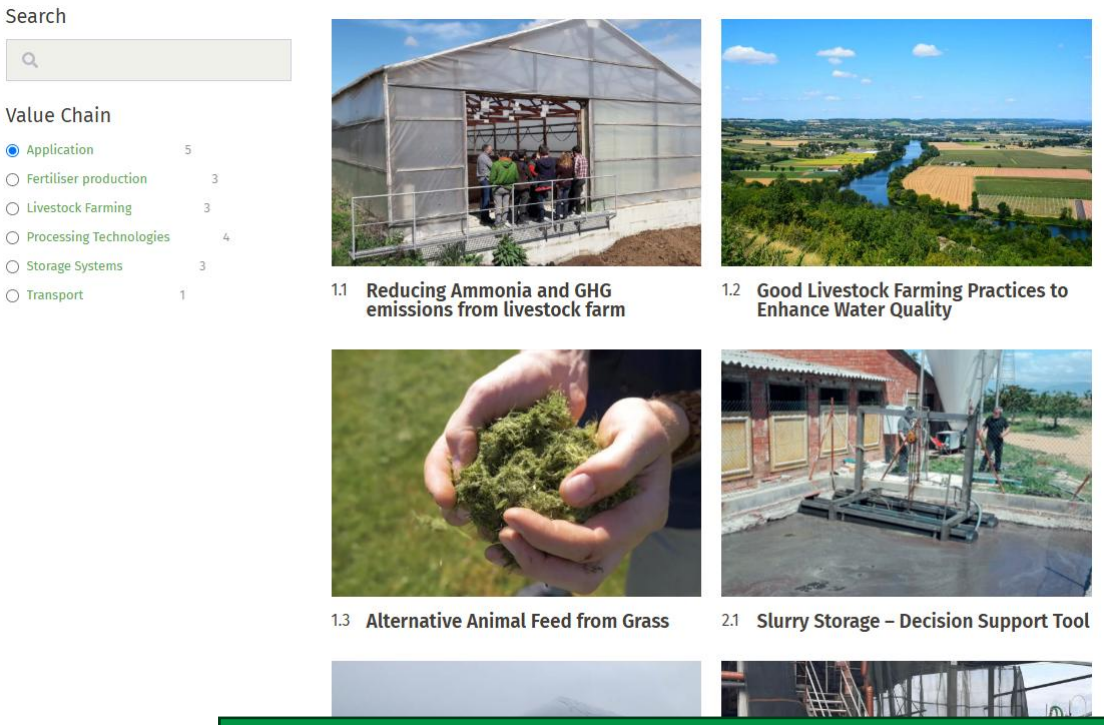


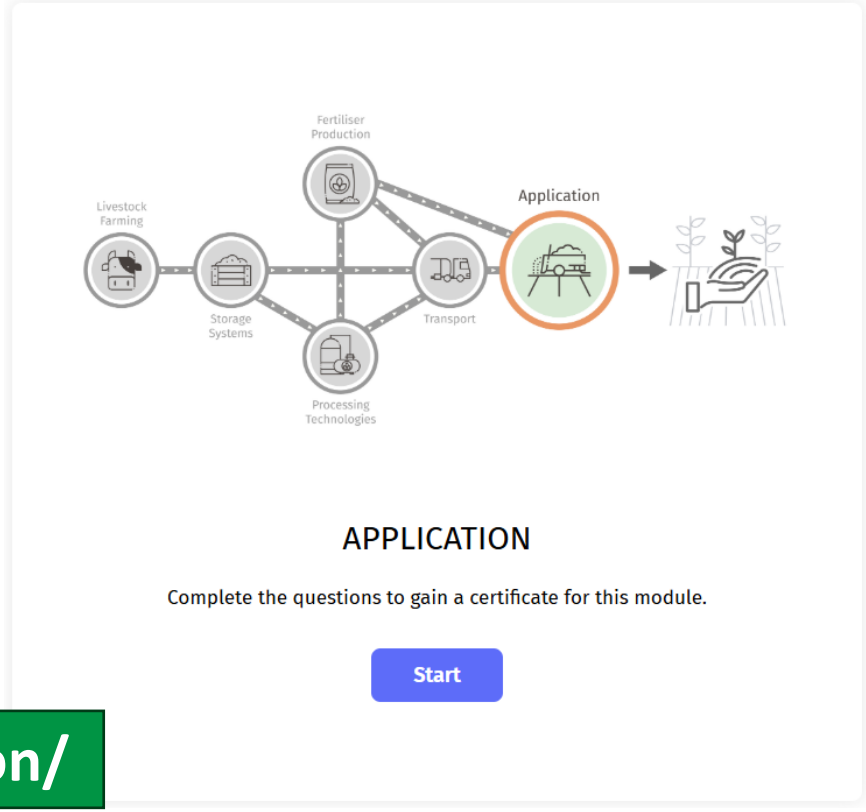
Short-videos



Massive Open Online Course (MOOC)

- *together with farming and agricultural schools including educational material targeting farmers and practitioners*

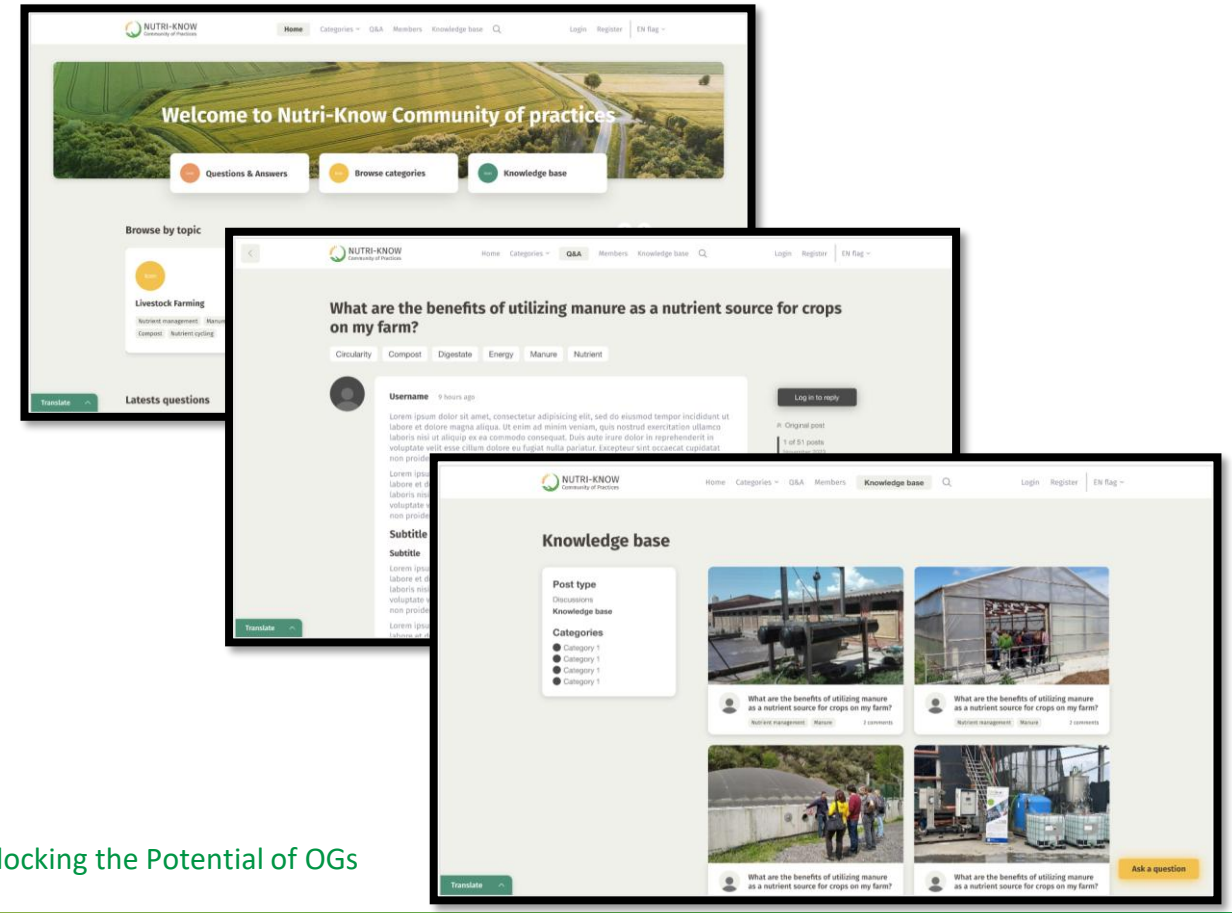




https://www.nutri-know.eu/lesson/

Community of Practice (CoP) on nutrient management

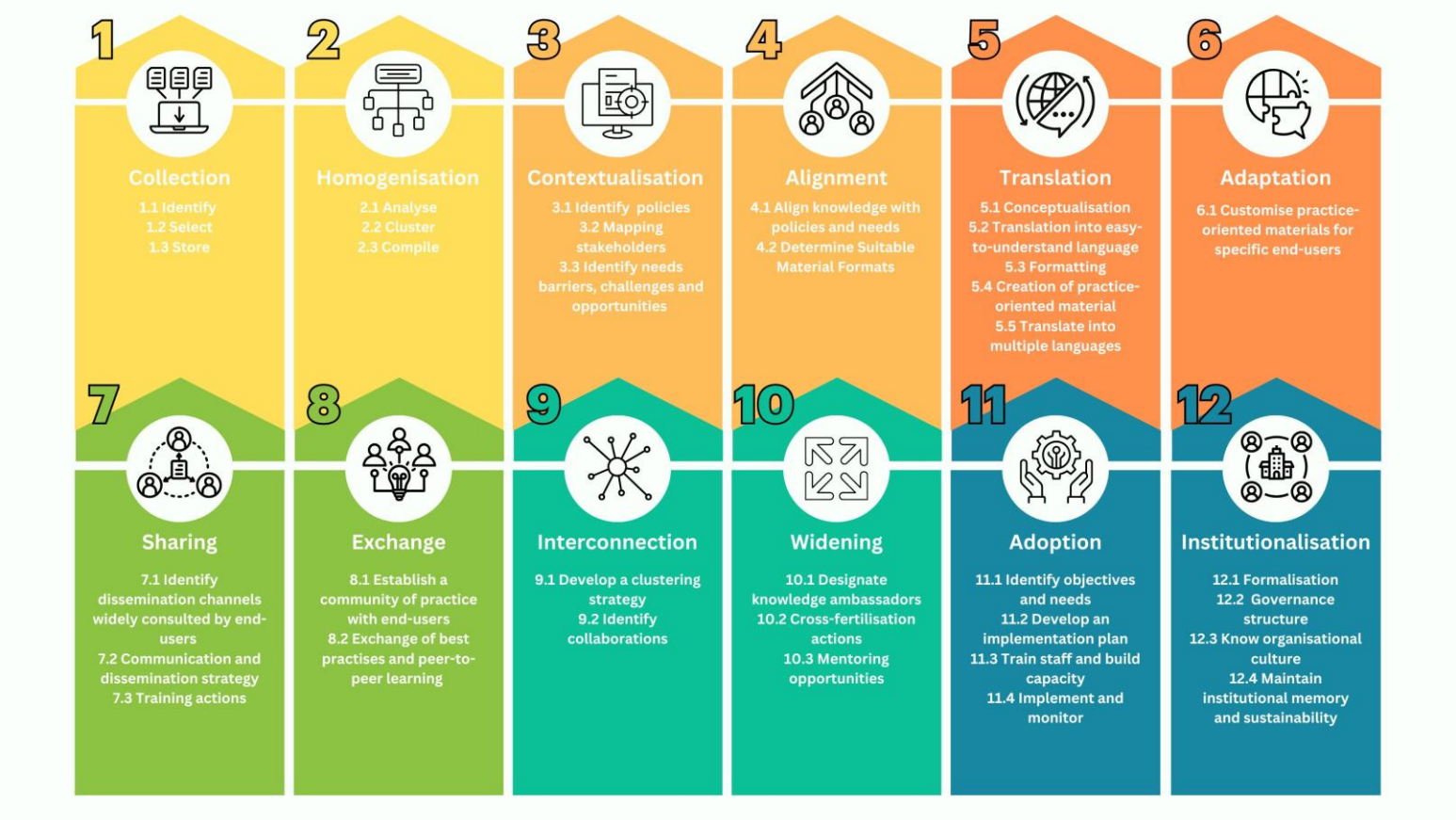
- *platform to bring together practitioners sharing common concerns and working collectively to reach individual and group goals*



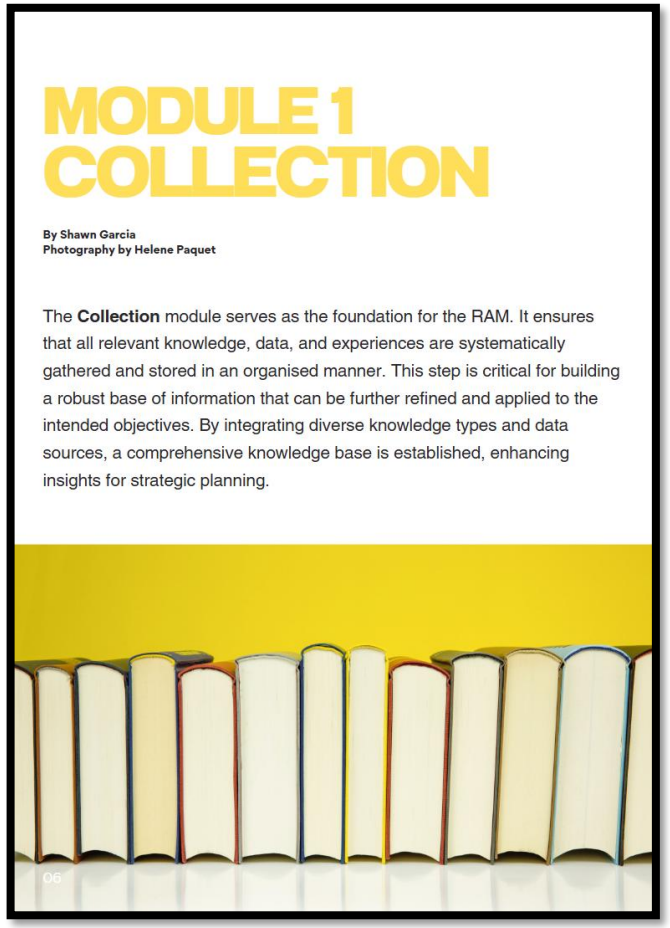
https://cop.nutri-know.eu/

Results Amplification Methodology (RAM)

- *to accelerate a broader replication of the knowledge and experience obtained*



Results Amplification Methodology (RAM)



MODULE 1
COLLECTION

By Shawn Garcia
Photography by Helene Paquet

The **Collection** module serves as the foundation for the RAM. It ensures that all relevant knowledge, data, and experiences are systematically gathered and stored in an organised manner. This step is critical for building a robust base of information that can be further refined and applied to the intended objectives. By integrating diverse knowledge types and data sources, a comprehensive knowledge base is established, enhancing insights for strategic planning.

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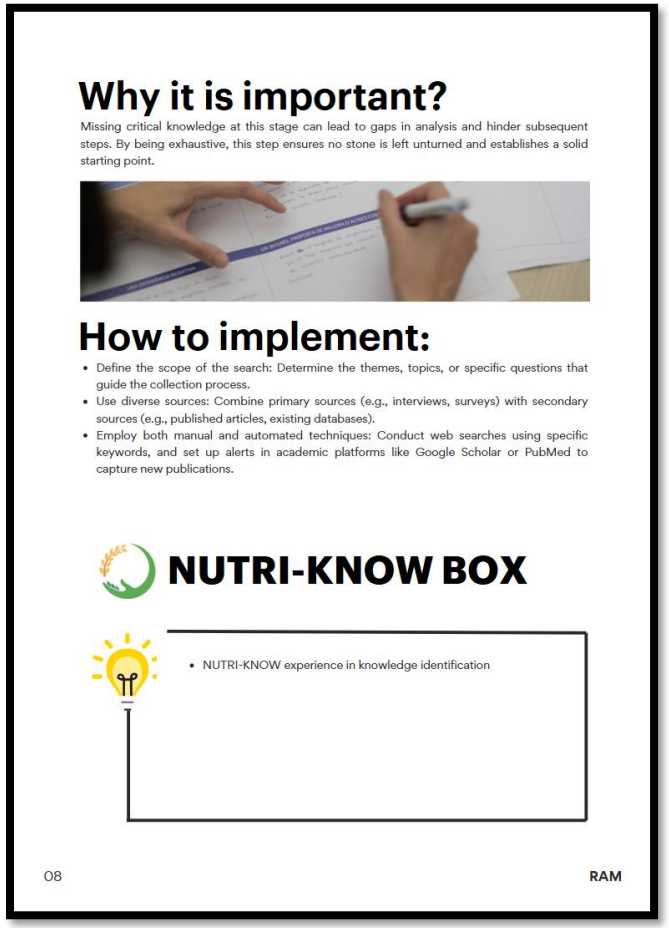

Why it is important?

Missing critical knowledge at this stage can lead to gaps in analysis and hinder subsequent steps. By being exhaustive, this step ensures no stone is left unturned and establishes a solid starting point.

How to implement:

- Define the scope of the search: Determine the themes, topics, or specific questions that guide the collection process.
- Use diverse sources: Combine primary sources (e.g., interviews, surveys) with secondary sources (e.g., published articles, existing databases).
- Employ both manual and automated techniques: Conduct web searches using specific keywords, and set up alerts in academic platforms like Google Scholar or PubMed to capture new publications.

NUTRI-KNOW BOX

- NUTRI-KNOW experience in knowledge identification

08 RAM

BECOME A VALIDATOR

https://forms.gle/xQ3WZkSnJtAF5jCdA

Why contribute?

✔ Access the RAM framework and share your valuable feedback

✔ Help shape a methodology that could become a standard for knowledge amplification

✔ Position yourself at the cutting edge of EU innovation & governance practices in agri-food and rural development

Click to become a RAM Validator and contribute to this exciting step forward: Validation Form – RAM methodology

Thank you!

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