



**SCAR-AE Workshop to launch the
process to develop the SRIA, 29.04.22
MEETING MINUTES
AGROECOLOGY**

Karme Petrutis & Iiri Raa (SCAR TST AE) | 07.06.2022

Introduction

Date: 29 April 2022

Place: Online, Zoom

Total no of registered/participants: 132 (registered); 100 (participated)

Organized and invited by: SCAR-AE co-chairs Nicolas Tinois, Torsten Rødel Berg and Benjamin Sánchez Gimeno, in cooperation with DG AGRI

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Minutes of Meeting by: Karne Petrutis & Iiri Raa (SCAR Agroecology TST)

Nicolas Tinois (SCAR-AE co-chair) welcomed the participants, introduced the rules, agenda and objectives of the meeting. The main objective of this meeting was to gather input and views from a wide range of stakeholders in view of the preparation of the partnership's SRIA, which is being prepared under the coordination of the SCAR-AE.

Participants included SCAR-AE members, observers representing different initiatives, partnership's country contact points, representatives from other SCAR working groups, Horizon 2020 projects related to agroecology, ERA-NETs, JPIs, research infrastructures, representatives of Living Labs and other partnerships, as well as colleagues from different DGs of the European Commission.

1st Presentation: SCAR Strategic Working Group on SCAR-Agroecology - by N. Tinois, SCAR-AE co-chair

SCAR-AE and its main organization, members and mission were shortly presented. The main objectives of the SCAR-AE were introduced:

- ✦ To prepare the concept of the candidate partnership on agroecology Living Labs (LLs) and Research Infrastructures (RIs). The dossier link https://ec.europa.eu/info/files/european-partnership-accelerating-farming-systems-transition-agro-ecology-living-labs-and-research-infrastructures_en
- ✦ Was distributed before the meeting.
- ✦ To develop the AE Strategic Research and Innovation Agenda (SRIA) for the partnership.

2nd Presentation: Introduction to partnership, timeline and process - by S. Gaona Saez, Research Programme Officer, DG AGRI

S.Gaona Saez gave her thanks for the commitment for those stakeholders, who were involved in the partnership development from the beginning, more than two years ago with the organisation by DG AGRI of a series of webinars to launch the process. Many of those stakeholders are still very actively involved in the process, which shows their commitment, but also the importance of the subject. The main elements of the process were highlighted and the current Horizon Europe 2021-2027 program structure, including the Pillar 2 and Cluster 6.

The new approach to the European R&I Partnerships was also introduced, which is more strategic, coherent, impact-driven and larger compared to Horizon 2020. The aim is to overcome fragmentation of research efforts and to gather resources, ideas and views from a wider range of public and/or private partners. There will be three forms of implementation (co-fund, co-programmed, institutional).

The AE partnership, as well as some other candidates were briefly introduced. The importance of finding the synergies and linkages between different partnerships in the SRIA development process was highlighted.

An insight to the process of the partnership and SRIA development was given. In 2020, first exchanges on concepts, objectives and tasks of the partnership were shared. A new SCAR strategic working group on agroecology was established and started officially in January 2021. Partnership proposal/dossier was co-created in 2021-2022 and finalized in March 2022. The dossier is available on EC website: https://ec.europa.eu/info/files/european-partnership-accelerating-farming-systems-transition-agroecology-living-labs-and-research-infrastructures_en

Based on the dossier, the Commission has officially asked MS and Associated Countries financial commitments to support the partnership. Replies were expected by the 30th of April 2022.

The AE SRIA will be co-created during 2022, building on the partnership's proposal and past/ongoing research findings. Identifying synergies with other partnerships and missions will be part of the process. The first draft will be put for public consultation in summer 2022 and the final draft expected to be ready by the end of 2022. At the same time, the Horizon Europe 2023-2024 work programme is planned to be ready for inter-service consultation by mid-2022 and published by the end of 2022- beginning of 2023.

3rd Presentation: The candidate European partnership 'Accelerating farming systems transition: Agroecology living labs and research infrastructures' - by N. Tinois, SCAR-AE co-chair

N.Tinois presented the current dossier, i.e., partnership proposal. The dossier describes the concept of the future partnership, but it is also the framework document, which is used for preparing the AE SRIA. The dossier is also important for the MSs to prepare for their financial commitment document as well as for different stakeholders to consider their future role in this partnership. It is also the basis for the European Commission to prepare the topic for the partnership, to be included in the Work Programme 2023-2024.

The 18-month long dossier-preparing process was briefly described, departing from the EC input paper, a series of webinars organised in 2020 and cooperation with 3 CSA-s (ALL-Ready, AE4EU and SMS) & FACCE-JPI. The scientific community, SCAR-AE delegates, country contact points (CCP), task forces (TFs), national mirror groups, other partnerships, soil mission, several other stakeholders, and other SCAR WGs were also involved in this process.

The partnership will focus on 1, 2 and 3 of the 5 levels of Food System transformation, but is also considering the other levels and the systematic approach/transformation. As many definitions already exist, SCAR-AE decided not to make a new one, but to agree on common guidelines.

The agroecology Living Labs (LL) are considered to be the appropriate instruments to trigger the AE transformation. The general key elements of LLs, as well as the specific features of AE Living Labs were briefly presented.

The intervention logic of the dossier, including the vision for 2050, as well as the long-term, mid-term and operational objectives (including R&I activities and research on Living Labs and so) were also presented. Again, the importance of the linkages and touching-points with other partnerships, missions and partners were highlighted.

4th Presentation: Developing the SRIA of the candidate European partnership 'Accelerating farming systems transition: Agroecology living labs and research infrastructures'- by B. Sánchez, SCAR AE co-chair

The SRIA core team is set up under the SCAR-AE with the task to develop the partnership's SRIA. The team was introduced. Compulsory design and elements of SRIA with 4 blocks and broad consultation process were presented. The WS is the official kick-off of the consultation process, but there will be many other opportunities to interact and contribute to the discussion.

The importance of previous work carried out both under the SCAR-AE Task Forces, and interactions with other groups were particularly stressed and several input examples were presented. Overlaps with previous and ongoing research projects should be avoided.

In 2022 the following broad steps are either completed or foreseen:

- ✎ The SRIA's Core Themes have been preliminary identified.
- ✎ The concrete research needs and activities have been categorized according to those Core Themes.
- ✎ Relevant activities to be performed by the LLs & RIs have been identified.
- ✎ The research needs and activities will be structured.
- ✎ Core themes will be finalized.
- ✎ Workshops and surveys will be organized.
- ✎ Public consultation will be carried out.
- ✎ Draft will be revised and finalized by the end of the year 2022.

Living Labs (LL) and Research Infrastructures (RI) will be in the center of this conceptual framework, because they are the key for the activities that will be developed in the partnership. Around the central LL and RI there are the current four core-themes and their sub-elements. The four Core Themes and cross-cutting issues were introduced:

- ✎ Agrosystem redesign and innovations: ecosystem services and other benefits of agroecology transitions.
- ✎ Integration in and implications for the agrifood value chain (both upstream and downstream elements).
- ✎ Levers for integrative R&I supporting AE transition: Tools for integration of social, economic, technological, and environmental dimensions (Living Labs, Lighthouses, models, serious games, deliberation, etc.)
- ✎ Measures, including policy, supporting transition.
- ✎ Cross-cutting issues: Agroecology Living Labs and Research infrastructures as instruments for agroecological transition; Metrics and monitoring framework for the assessment of agroecological transitions.

The objective of the breakout-group discussions was to gather views and ideas in relation to those 5 themes and topics.

5th Presentation: Portfolio Analysis - by K. Petrutis, Thematic Coordinator at SCAR AE Thematic Support Team (TST)

The 4 main objectives of the SCAR framework contract, as well as the vision, organization and the AE TST team were briefly presented. The process of the portfolio analysis was explained:

- ✿ The project contents, outputs and inputs from the previous work will be collected, summarized and analysed.
- ✿ Some of the Horizon 2020 project teams will be contacted to gather additional information.
- ✿ The results of the portfolio analysis, as well as an overview of the R&I needs/gaps will be developed and presented.

It was also informed that the list of the 30 Horizon 2020 projects were already selected together with the AE Co-chairs and EC representatives. The list was presented during the workshop.

Breakout sessions and plenary - by N.Tinois, SCAR-AE co-chair

Six breakout groups (BO) were organized to gather the views and ideas from the participants. Each BO had one of the Core Themes presented by B. Sánchez during the morning session of this WS. Discussions were organised in two separate sessions and the following questions were put forward as a frame for the discussions:

- ✿ Why is it important that this topic is a priority area to be addressed by the partnership?
- ✿ What are in your view the main R&I needs in this field? How can they be best addressed? Please prioritize, which are the most urgent ones/low-hanging fruits.
- ✿ (Optional) Do you have any other R&I need from other topics to suggest? Please prioritize, which are the most urgent ones/low-hanging fruits.

The detailed results of the 6 BO working groups can be found in Appendix of this report, but some of the key messages from the WG-s were as follows:

Core Theme no 1. Agrosystem redesign and innovations: ecosystem services and other benefits of agroecology transitions

We need to know and agree the scales and targets. Different stakeholders, situation, regions, and goals should be considered and involved. Holistic, inclusive, diverse, practical, multifunctional, viable ... were the main keywords under this Core Theme.

The R&I gaps and needs were emerging from the key-words: i.e.; need for AE-specific, farmer/practical-oriented, interdisciplinary (incl. both economic, environmental and social dimension), multifunctional, both applied and fundamental R&I, but also valorisation and more practical use of previous research were in focus. Many questions and ideas aroused: i.e., How to upscale/down-scale/cross-scale; how to measure, evaluate and fund AE transition/ecosystem services/sustainability; need for better models, metrics; better use of big data and so.

Core Theme no 2. Integration in and implications for the agrifood value chain (both upstream and downstream elements)

It is crucially important to find more systemic approach, interaction and involving more actors to foster the change. There is a need to facilitate integrated, holistic approach, which would secure traceability in the system and create synergies, but also find very practical solutions (help farmers) and arise larger awareness in the society.

In R&I, the focus should be on farmer's needs, including different scales. Mapping the situation, finding the (agronomic and other) challenges/solutions and major transition constraints, but also new business models should be researched and innovated on along the value chain and together with different stakeholders in the system.

Core Theme no 3. Levers for integrative R&I supporting AE transition: Tools for integration of social, economic, technological, and environmental dimensions (Living Labs, Lighthouses, models, serious games, deliberation, etc.)

We could learn from other countries and partnerships and use also common approaches, must understand regional/country differences, and have holistic views. The real transition and use of new tools require new skills from different stakeholders. More dynamic LLs and LHs enable to bring together different actors and interests to build trust, appreciation, and long-term action.

LLs and their connection with R&I should be researched on. LLs learning effects, innovation efficiency, trust, co-design, and their impact on policy-instruments should be better understood and researched on. The LLs should be primarily linked to the communities and farmers! The researchers are there to support the farmer. The risk of both the farmers as well as researchers should be considered. More flexibility, failures and changes of R&I activities/projects should be accepted. Broad and complex impact of the LL/LHs should be monitored and evaluated.

Core Theme 4. Measures, including policy, supporting transition

It is important to map the situation and find the consensus. There is a need for more clear communication, but also dialogue/debate around AE and its integration and cooperation with many other initiatives (f.ex. CAP, COP27, FADN, COP15 CBD and so). The farmer and consumer should be in the centre. AE may offer solutions for bridging social, economic, and environmental dimensions.

R&I needs and gaps were related to the facilitation of the integrated landscape/territorial planning, practical research on representative farms/models and social dimensions. How to develop agricultural policy based on a social dialogue? Data ownership, trust and security are crucial, at the same time the existing big data should be used much more effectively by researchers. We need to know, what is the best concept to attract farmers and other partners and which support schemes attract them most? New institutional designs, which could facilitate multi-actor involvement and policy decision-making should be explored and developed.

Cross-cutting issues: Agroecology Living Labs and Research infrastructures as instruments for agroecological transition; Metrics and monitoring framework for the assessment of agroecological transitions

Cross-cutting metrics support the other Core Themes, give feedback and context. The definition and objectives of the AE (transition) need to be clear and commonly understood and the key-indicators are needed for science-based evaluation. However, the non-measurable indicators/metrics are challenging. Sustainability of the LS/LHs, the long- and middle-term goals and characteristics of LLs were also under discussion. LLs can tackle complex issues with a wide range of stakeholders and expertise. Co-creation, participative approach and trust are the keys for the success of LLs.

Under the R&I discussion, the issues of different expectations, compromise, the 3-dimensional indicators of the transition, LL/LH dynamics, big data ownership and governance were raised. The farmers should be in the centre! Operational/practical/usable and comparable metrics/criteria defining transition success are needed. Holistic approach, collaboration, multidimensional context and diversity (geography, starting points) are of crucial importance.

Territorial and regional planning should be included in the partnership, as well as in to the research agendas.

After the 2 breakout and 2 plenary sessions N.Tinois thanked all the participants for their valuable effort, expertise and contributions. The participants were also asked to fill in the evaluation sheet of this workshop to get their feedback. The feedback will be used to improve the future events. The preliminary results of this evaluation were shared during the workshop. Also, the next steps were reminded:

- ✎ The presentation slides will be distributed to the participants.
- ✎ WS report will be published on the SCAR webpage.
- ✎ SCAR-AE working group web-meeting will be held on 10.06.22.
- ✎ Probably in the early summer and autumn 2022, more workshops on the SRIA development will be organized to gather more input from the stakeholders.
- ✎ The ideas from the 29.04 WS will be gathered, and the public consultation will be started in early summer 2022.
- ✎ The SRIA must be finalized by the end of 2022.
- ✎ The future partnership will also perform updates to the SRIA.

Appendixes

The main results from the BO sessions

Core Theme no 1. Agrosystem redesign and innovations: ecosystem services and other benefits of agroecology transitions

Why is it important?

- ✎ There are different approaches to re-innovation and transition – we need to agree, what are we actually targeting? Large scale is usually more resource efficient, but small scale/ fragmented is often more environmentally friendly.
- ✎ Climate, morphological, regional situations and goals should be taken into consideration, as well as ALL the farmers and other important actors should be involved in this transition.
- ✎ We should focus on agrobiodiversity (including animal husbandry, leguminous and perennial crops), but also natural biodiversity, interlinks, trade-offs, mixed practices, diversity in business models and economy (including f.ex. perennial, biomass, industrial crops, solar panels and so). However, good metrics are missing today!
- ✎ Multifunctional approach is very important – we should not only focus on food security, but the systems should be re-designed so that the entire ecosystems would not disappear. AE should aim at balancing different expectations and give tools, take into consideration the planetary boundaries
- ✎ AE farming system should consider soil microbiome and soil health, including both upper and lower/deeper soil-layers
- ✎ New principles and political support are needed for crop breeding sector, which would support the AE transition (f.ex. not only focus on high yields, but reduced water consumption, nutrient needs, mixed cropping).
- ✎ We rely on external input from mineral fertilizers, we export negative impacts to the south, the “narrative” that the EU has to feed the world: all of those topics should be explored even more and better solutions should be found.
- ✎ We have no answers, how to internalize positive and negative externalities? What is the real price of agrological products and who will pay for the negatives? How to pay farmers for the ecosystem services they provide?

- ✎ Also, the AE farming system should be economically viable so that the farmers would be capable to access resources like credit, loans and retain capability to control.
- ✎ The continuous public and consumer involvement is very important, because the mind-set and behaviours are constantly changing.

R&I needs:

- ✎ Need for AE-specific research: multifactor and food system approach, agro- and food biodiversity, diversity in general, preserving environment; healthy soils, animals so.
- ✎ Breeding for AE conditions, varieties suited to low-input agriculture and farmers should be satisfied with them (stakeholder involvement is very important!)
- ✎ The research on C-farming, C-compensation. How to incorporate those to policies?
- ✎ Interdisciplinary research on sustainable and resilient soil management of soil organic matter, soil-microbiome research for low-input agriculture.
- ✎ Multifunctional landscapes, trade-offs. Research on how AE practices decrease greenhouse gas emissions and influence climate change?
- ✎ Scaling issues: how to cross-scale, upscale and downscale? How to incorporate those to policies?
- ✎ Ecosystem services, including funding for those services: soil sampling, new technologies, evidence, monitoring programs, best tools.
- ✎ Modelling: data integration to develop/validate models (incl. social studies). Select issues/models to identify gaps.
- ✎ Data: remote-sensing, satellite control, cooperation with other partnerships in this.
- ✎ Interdisciplinary research: how to evaluate the sustainability of the farms?
- ✎ Find out and valorise what is already there, not necessarily add more info and data.
- ✎ Need for both fundamental and applied research and to get research results to those who really need it.
- ✎ Projects and initiatives should be realistic, efficient and focused. People should be understood and able to follow the information.
- ✎ The research should be systemic and holistic approach is important!
- ✎ The process should be inclusive, bringing together diff. stakeholders
- ✎ Human aspects, social dimensions, foresight studies, visionary and future-perspective, impact assessment are very import. Involve people directly interested and influenced.
- ✎ The role of knowledge is important: consumer awareness, education and research of AE (training for farmers, knowledge-exchange between stakeholders, co-produce both qualitative and quantitative data).

Core Theme 2. Integration in and implications for the agrifood value chain (both upstream and downstream elements)

Why is it important?

- ✎ Foster synergies with other partnerships (f.ex. food system) and avoid duplication.
- ✎ We need more systemic approach, interaction and involving more actors to foster the change.
- ✎ It would help the farms to adapt and focus on constrains, as well as find solutions.
- ✎ Business models are an important part of value chain (sustainable project management).
- ✎ We need more communication among actors (brokers to facilitate integrated approach). Holistic view would help to secure traceability and to create synergies, to create a climate for AE. Transparency is also very important here.
- ✎ Comprehensive knowledge of the entire value chain to know how to foster change.

- ✎ Biodistrict: define a common frame for crops, short value chains, security product sales. Something similar: cluster to put together actors from value chain.
- ✎ Topics to address:
 - additional costs for AE/transition, but also benefits for the environment;
 - consider both short and long value chains;
 - focus on bad performance value chain and how to exceed AE threshold;
 - LL/LH for demonstration. AE transition supported by LL to move forward;
 - consider the size of the farms;
 - comprehensive understanding of different inputs along the chain;
 - food system is not designed for AE in terms of circular economy, consider seasonality, diversity of food products (species, varieties);
 - it takes time to adapt/develop AE/organic sector in supermarkets.

R&I needs:

- ✎ Focus on farmer's needs.
- ✎ Identify measures to manage gradual transition to AE, by identifying LLs across Europe and establish a network to identify major constraints and share them (with help of life cycle assessment (LCA), decision support systems and so).
- ✎ Research for both small and large size farms.
- ✎ Transition to AE: new business models/ strong assessment for AE, changes in other components of the chain.
- ✎ AE-specific food system design: circularities, seasonality, food products diversity.
- ✎ Research on soil/crop/food/animal microbiome: need for parameters to check/monitor transition to AE.
- ✎ Research on breeding systems (i.e. introducing new legumes).
- ✎ Ecosystem of value chains and adaptability/needs of agroecology.
- ✎ Mapping, modelling, defining current trends of the food system and identify what is favourable/ not favourable for AE, where are the internal and external bottle-necks, find success stories.
- ✎ Both basic and applied research is needed.
- ✎ Synergies among value chains are needed to boost AE.
- ✎ ICT applications/tools on AE at lower level (closer to farmers), cooperate w/AG data.
- ✎ ICT in traceability: facilitate flexibility, anticipation.

Core Theme 3. Levers for integrative R&I supporting AE transition: Tools for integration of social, economic, technological, and environmental dimensions (Living Labs, Lighthouses, models, serious games, deliberation, etc.)

Why is it important?

- ✎ To optimize efforts and do not duplicate: learn from the successful levers from other countries (e.g., LLs) or other parts of the partnership (e.g., serious games) and use common approaches, but also understand region/country differences.
- ✎ Integrating social, economic, environmental and technological aspects (= have holistic approach) will help to involve different actors and achieve real impact.
- ✎ Target audience that the Partnership wants to reach to be defined. The most effective tools for doing that should also be identified.
- ✎ LL enables to bring together different actors and different interests. Trust building and appreciation will be the keys. In order to do this, de-risking for the actors has the crucial importance: not just for the farmers, but also consider the risk for the researchers (because such research might

be less beneficial in terms of publications and so). Trust building might be different in different parts of the world!

- ✎ Need to allow things to go wrong and learn from those. The framework should accept failures: partnership frame and fundings should be flexible, partners should be able to leave/come or be part of the project over its length.
- ✎ Projects are time limited, but the LLs are long-term: different projects may interact with the LLs for part or all of the project lifetime and LLs will evolve over time as trust builds between actors.
- ✎ The approaches need to recognize the complexity of the topic!
- ✎ Serious games with holistic approach may be just one tool in increasing or building new mediation capacity: used for learning process and raising awareness, but also for networking, building scenarios, advance impact in society etc. It depends on whom we would like to target.
- ✎ (Soft) Skills development is needed: process facilitation, co-innovation, transdisciplinary research, multi-method approach.

R&I needs:

- ✎ 3 different layers were identified when looking at LL/LH in AE transition:
 - What is needed to make AE transition?
 - What is the impact expected from LL/LH?
 - Paradigm change / shift.
- ✎ What research will help the LLs/LHs to be followed or better understood?
 - Empowerment /learning effects
 - Innovation efficiency they are providing
 - Transformation of the behaviours of the actors / trust
 - Co-production / co-design between the different stakeholders
 - Policies and the impact of policy from LLs/LHs.
- ✎ Need to keep LL and R&I close. LLs and their connection with R&I should also be researched on.
- ✎ Research on, how the LLs are working. Need to remember that LLs should be primarily linked to the communities and farmers. Researchers are there to support the farmer and intervening in a very dynamic way.
- ✎ Researchers need more flexibility in the LL projects and need to build on the farmer's needs. Researchers can pick up problems/questions raised in LLs.
- ✎ LL as continuous process, integrating different projects at different stages and different timings.
- ✎ For actors / stakeholder: setting up a strategy to link different projects together, identify the different needs in the frame of different LL area; LL giving an overall coherence between the different projects, and helping them working together.
- ✎ Evaluation and monitoring: consider also the additional impacts of the LL/LHs which they could help to achieve (in addition to funding aspects also side-impacts).
- ✎ Innovation need: research assessment system should be changed (inter / trans-disciplinary, practical research). Not only assessing the publications!
- ✎ Social learning should be integrated as an activity of the LL/LH: social interaction evaluation, citizen science, interlink all the actors, pattern of success;
- ✎ To connect social and bio-physical level, including scaling up to food systems:
 - Matrix emerging on horizontal line have innovation practices / impacts / Vertical: level you are working on (LL, actors...): find out the innovation needs from there.
- ✎ Territorial aspect: how to use LL for upscaling aspects? How to achieve transition in a larger scale or broader region.
- ✎ Is it possible to create LL that are not only focused on AE practices, but also on the policy aspects?

- ✎ Political science to be brought in LL / LH: bring political scientists as actors, the policy makers are the end-users instead of farmers? "Physical place" for it would be the government buildings - to change the angle of looking at LLs.
- ✎ Identify successful patterns amongst LL / LH and let Project leaders learn from it → would not be a good idea to give a "definition" of a LL, must keep experiment and dynamic options.

The partnership/members from around the EU could help to target indicators (bringing policy to science and science to policy) as well as the research for nutrition aspects: the linkage between AE products/food and nutritional entry.

Core Theme 4. Measures, including policy, supporting transition

Why is it important?

- ✎ Need for a survey of initiatives in order to map the situation and find the consensus, which would enhance the overall concept and its implementation.
- ✎ Landscape planning approach to ensure that we will reach out in a targeted way by identifying priority areas to implement agroecological measures: geo-spatial instruments, locate demand for agroecological products, land use structure, agro-climatic conditions, local needs, possibilities for crop rotation and other practices.
- ✎ Need for more clear statement and communication regarding the concept of agroecology and its integration with initiatives F2F, Biod. strategy, CAP interventions.
- ✎ Need for further explanation and communication, dialogue and debates to enhance agroecology. Put the farmer and consumer at the centre and be more practical.
- ✎ Social dimension: AE could help to bridge the divide, for example polarization between organic and conventional farming, organic and integrated production, urban-rural, the generational, culture and food traditions.
- ✎ Better policy integration is needed and the implementation is challenging.
- ✎ Agroecology may offer solution for bringing the economic element into the environmental discussion, acting as a balanced concept between economic and environmental sustainability of farming. Create a dynamic where economic viability is preserved, and environmental performance is enhanced.
- ✎ FADN farms are representative across EU, they could play a lighthouse role.
- ✎ Future FSDN (Farm Sustainability Data Network) could highlight the positive outcomes. The network could be further developed and be central to the future partnership. The farms participating could be offered more recognition, preferential access to certain CAP elements. Their involvement is thus recognized and rewarded. Combine various CAP interventions, not only area based schemes, but also promotion policies. Local farmers supplying local schools while implementing CAP schemes for climate and environment.
- ✎ An agricultural data partnership, which could provide revenue for farmers if data is monetized. It creates credible, robust data to base policy upon and gain farmers trust to share their data - key for successful implementation of agroecology measures.
- ✎ International policy discussion COP27 - highlights the contribution of the food system transformation to climate, as well as the true value of food. All these trends could be connected with agroecology and make it a transformation demonstration case.
- ✎ COP15 CBD recognizes agroecology and could drive the biodiversity objectives.
- ✎ Cooperation: The Coalition on Agroecology is seeking for MS's support and asks for joining. Our AE partnership could play a role in supporting in such different coalitions.
- ✎ Need for policy recommendations and new AE value chains for regions in order to boost innovation at regional level. Need to get the necessary incentives or funding programs and structures for regions to apply AE practices.

R&I needs:

- ✎ Need to find the best specifications of geo-spatial information system to better facilitate integrated landscape planning.
- ✎ Agroecological transition takes place in the regions - we need territorial planning which is linked to cultural habits/preferences.
- ✎ Social dimensions (also gender and culture): include people in the research process.
- ✎ Big data approaches of AE global transitions. Collection, storage but also making knowledge out of the collected data, ready to use by end-users.
- ✎ Deep knowledge is needed. Representative farms have a knowledge gap regarding how would their farm look like if engaging in an AE approach, their balance sheet as well as what impact would they achieve? Practical examples are needed. Modeling could help to predict.
- ✎ Open social innovation processes/social dialogues are needed, how to bring relevant actors together and find solutions to common challenges. Also - how to develop agricultural policy based on a social dialogue?
- ✎ Availability/transparency of data implies a capacity of calculating the value of the farm. FADN data is published in an aggregated way, based on individual farms. Data ownership is crucial. Farmers are not rewarded for sharing data. How to overcome the reluctance to share data? Could this be incentivized by offering certain incentives? Access to CAP combination of measures?
- ✎ The Partnership could include model/pilot transitions? Triggering, accompanying, modeling such transitions. Per region? Per farm type? LHs and LLs has a role here?
- ✎ Identify and valorize existing statistical surveys/sources e.g. Integrated Farm Statistics (former FSS), Agric. data space, European Joint Partnership on Soil - the tasks are to find out, what kind of soil information is available in the MS's? How well is it harmonized? How well are they developed? Integrate various data sources: LPIS, WFD data. LUCAS survey on agricultural soils could also be connected. Innovate how different tools could work together and how can they be integrated?
- ✎ Research, innovation and testing on how to ensure the best connectivity, communication and inclusive decision making within the AE systems; what is the best concept to attract farmers and other partners, what support steps attract them?
- ✎ Identify innovation approaches to make various sectors cooperate - ensure a coherent approach. Research the organizational level in order to include everyone and implement a multi-actor, inclusive approach, breaking the silos.
- ✎ Intervention logic: Who would move first? How could the process be orchestrated? Systematic approach - which building blocks, sequence of actions and interrelations.
- ✎ Explore new institutional designs that facilitate multi-actor involvement in a wide range of sectorial governance and policy decision-making domains through co-creation, and the sharing of best practices.
- ✎ Use FADN network, research best ways to measure, report and verify environmental farm data. How to describe well, measure, verify and well reward AE farms and practices.

Cross-cutting issues (Agroecology Living Labs and Research infrastructures as instruments for agroecological transition; Metrics and monitoring framework for the assessment of agroecological transitions)

Why is it important?

- ✎ Compared to traditional experimental farm, LL approach involves wider scale (e. g. experimental farm with one plot of field under versus a LL with the whole area).

- ✎ There is already well-established methodology for LLs, however there are different LL-s (e.g. definition in ENoLL urban areas) and there still is the need for a common understanding on the definition of AE-LLs; also need criteria to identify AE LLs.
- ✎ New concepts are often diluted when replicated and take various forms. What would be provisions provided that LL lead to the outcomes?
- ✎ What is the expected outcome/deliverable/result and what are the drivers behind?
- ✎ How to explore incentives? (Why stakeholders join?)
- ✎ Concern - does LLs meet its objectives? We have to establish common methodological approach, but we have different climatic regions, social, economic conditions, how do they work under different conditions in achieving the final goal?
- ✎ In industrial scale no touch with final consumers, but LLs allow greater dialogue.
- ✎ Questions remain: How important it is to change the perspective from farmer's side? The role of food in society?
- ✎ LLs can tackle complex issues with a wide range of stakeholders. Wider social and food system, bringing together local people, diverse stakeholders, which includes and has to include mix of expertise.
- ✎ Co-creation and participative approach are the keys to achieve the goals, but this needs to be built up also for the stakeholders.
- ✎ LLs provide co-creation in dynamic steps for stakeholders to engage them. Linking group is important! Interest to common goal is related to each member of the group.
- ✎ Timing - maturity of LLs is needed to ensure that we bring quick advances with AE
- ✎ The scale - at which scale are we talking about? The small-scale is the best when linking environment and social systems.

- ✎ Cross-cutting metrics are important, because they should support other Core Themes and feedback to them, also making sure that via measurement the partnership is on track, also that there is the multidimensional spatiotemporal context (geographic differences □ differences between territories and time frame: long term goals (2030, 2050) vs. short term follow up (2-3 y))
- ✎ Challenges for indicators/metrics: a need for science-based socio-economic and environmental indicators, funders really need KPIs for evaluation, the objectives of sustainable agriculture/AE need to be clear and there should be a common understanding how to measure the performance of LLs.
- ✎ How to cope with intangibles of the indicators/metrics: "non-measurable" mind-set changes of stakeholders, connecting LLs, involve stakeholders and improve collaboration?
- ✎ For whom and which purpose is served in data collection (keep objectives in mind)?
- ✎ Input and output indicators: impact on what is measured or for whom and why?
- ✎ Conceptual issues, challenges and needs of LLs and RIs: are innovations taken up by LLs and translated to practise/scaled up; how will LLs survive after 7 y of partnership (are they sustainable); context and co-creation process is important (but how could we measure/monitor/evaluate this); we have long term goals (2050) but what about intermediary steps on shorter term; the partnerships as well as LLs and RIs should enable reaching 2030 and 2050 goals.
- ✎ We need to have metrics to evaluate the AE transition:
 - Farmers should be in the centre, also for the indicators!
 - Basics: minimum yield, yield stability and quality of food produced.
 - What is the starting point of a LL □ maturity of LLs should be taken into account when measuring? Different LLs on different territories, starting points!
 - No agreement on framework/tools (e.g., FAO framework) - need for a common conceptual framework/tool to measure AE transition.
 - We do not have indicators for assessing LLs and RIs' performance in the AE domain, but there are clear characteristics of LLs. Have also basic metrics: number of groups/SH

involved in the LL, number of activities, and number of trainers/trainees. However, this does not cover everything. In addition, we do not know how to measure the percolation of methods developed in LLs to farms (quantitative indicators?), indicators should be tailored to the territory.

R&I needs:

- ✎ Research agendas: should the research be more demand-driven? LLs would enhance the AE development, but at the same time the AE should be fed by fundamental research. Relationship between fundamental and applied research. Dilemma how it is carried out in LL conditions?
- ✎ Issue of data ownership and data governance. Enabling digital solutions is important, but data governance is an issue. Data has to be protected very well to bring trust on systems. Next step would be that researchers will use the open and available data.
- ✎ Transformation of FADN to FSDN. The aim of the FSDN is to try to fill up gaps while keeping FADN's strengths. If we manage to establish more environmental variables and proxies for adoption of certain agricultural practices, it would enhance our data bases to have meaningful evaluations. Needs and expectations from the partnership to be placed to the working process of FADN transformation to FSDN.
- ✎ Metrics are needed to define transitions' success. Have to define the criteria - what is LL for AE.
- ✎ Local specificity should be considered, but also the common metrics should be set which enable comparison. F.ex. the FAO - TAPE-Tool: explore in which extent this can be adapted in EU context.
- ✎ Metrics are important for scaling up. Need to explore conceptual framework. Metrics should be operational, practical and usable for farmers.
- ✎ Farmer should be in the centre both in R&I needs as well as also for the indicators
- ✎ Quality management should be applied to LL research infrastructure.
- ✎ Important characteristics: holistic approach, multidimensional context, diversity (geography, starting points).
- ✎ There are different levels, either R&I needs for AE transition or for monitoring? F.ex. accountability (does partnership work?) Is AE transition sustainable? To whom are we reporting? Trade-offs!
- ✎ What are the expectations of different stakeholders? First need to identify all needs and expectations of different stakeholders (which would be research on itself!) Not all needs can be met simultaneously, importance of compromise. Very difficult to align: see diversity (maturity, regions, starting point ...)
- ✎ Holistic approach is important, but there should be different (coherent) sets of indicators for different elements (either for LLs, AE transition, different stakeholders (funding, farmers, ...). The question remains: what is a successful transition?
- ✎ We need research that combines indicators and tools in different domains! Need for an inventory of indicators:
 - Environmental: what should we focus on in particular? (soil health, water quality, pesticide use...). Which proxies do we have and can we use? Should be internationally aligned (e.g. OECD protocols). Measuring cannot become a burden! Old data (latest field data from 2018-2019). Need for data quality standards and harmonization of data to compare!
 - Social: interactions between SHs? Benefits in social terms: how do we measure this? Change in mind-set? Incentives to promote this interaction.
 - Economic: are there elements missing (indicators)?
- ✎ Need for inter/transdisciplinary indicators: soil quality, C, GHG, ... (scattered, only a small part of the reality); should be good link between LLs and RIs and the partnership itself; how to communicate results?

- ✿ AE transition: R&I needs? What are the different tools? Different integrations of social/economic/environmental domains (what is the accent? compromises inevitable). Not highly important, they are multidimensional, the framework is more important. How will these tools be used?
- ✿ Dynamics of the network of LLs and RIs: How should this operate? Some fail, some succeed. Important to assess this with indicators, what elements should be considered, and which basis will be decided that LL must stop in the network/substitute?
- ✿ Heart of LL is collaboration: implementation of concretion approach (this should be key indicator as well with the highest priority!), knowledge transfer, capacity building, initial structure should be there (also for RIs), even if result is not satisfactory (cocreation remains most important!), even if failure: there is an output, or a methodology can be still useful. We must see everything in an integrated way!
- ✿ The question remains: what is a successful co-creation method?

Territorial and regional planning (including participative planning and co-design of territory) should be included in the partnership, as well as this should be stressed in research agendas. To close the cycles, there is a need to go beyond the farm. For scaling up from farm level to territorial level - there is a need to have visualisation of those landscapes. The territorial planning should be done in advance and there should be clear understanding, what is included. However, the question remains: what constitutes "landscape" in different regions?