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Report on lessons learned from "Exploring new modalities for collaboration alignment" Feeding the AU-EU long-term partnership in research and innovation on food and nutrition security and sustainable agriculture (FNSSA)

Mokhtar Sellami, Stéphanie Truillé-Baurens, Soumia Bouchouk, Henning Knipschild, Isabelle Hippolyte, Jean Albergel, Manel Boutouis, Nicobert Elouga, Jean-Michel Sers, Katharine Troeger

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Report on lessons learned from “Exploring new modalities for collaboration alignment”¹

***Feeding the AU-EU long-term partnership in research and innovation
on food and nutrition security and sustainable agriculture (FNSSA)***

LEAP-Agri EraNetCofund project, Grant Agreement ID:727715, Funded under H2020-EU

*Coordinated by AGENCE NATIONALE DE LA RECHERCHE (France)
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¹ **Disclaimer:** The content of this report reflects only the author’s view. The European Commission is not responsible for any use that may be made of the information it contains.



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List of Acronyms

| | |
|-------------|---|
| AEI | Agencia estatal de Investigación (Spain) |
| ANR | Agence Nationale de la Recherche (France) |
| BELSO | Belgian Federal Science Policy Office (Belgium) |
| BLE | Federal Office for Agriculture and Food, Germany) |
| CCSE | Climate Change and Sustainable Energy |
| CIRAD | Centre de coopération international en recherche agronomique pour le développement (France) |
| CSIR-STEPRI | CSIR-Science and Technology Policy Research Institute (Ghana) |
| DSI | Department of Science and Innovation (South Africa) |
| FCT | Fundação para a Ciência e a Tecnologia (Portugal) |
| FNRS | Fonds de la Recherche Scientifique (Belgium) |
| FNSSA | Food Nutrition Security and Sustainable Agriculture |
| FONRID | Fonds national de la recherche et de l'innovation pour le développement (Burkina Faso) |
| HLPD | High Level Policy Dialogue |
| INIA | Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (Spain) |
| IRD | Institut de recherche pour le développement (France) |
| LEAP-RE | Long-term Europe-Africa Partnership on Renewable Energy |
| MESRI | Ministère de l'Enseignement supérieur, de la Recherche et de l'Innovation (Sénégal) |
| MESRS | Ministère de l'Enseignement Supérieur et de la Recherche Scientifique (Algeria) |
| MINRESI | Ministère de la Recherche Scientifique et de l'Innovation (Cameroun) |
| MOEST | Ministry of Education Science and Technology (Kenya) |
| NRF | National Research Foundation (South Africa) |
| RCN | Research Council of Norway, Norwegian Ministry of Education and Research (Norway) |
| STISA 2024 | Science, Technology and Innovation Strategy for Africa 2024 |



Introduction:

Research and innovation (R&I) feature high in both the African Union's and the European Union's agenda. While the African Union "Science, Technology and Innovation Strategy for Africa 2024" (STISA-2024) places science, technology and innovation at the epicentre of Africa's socio-economic development and growth, European investments in R&I are seen as a means to help Europe to compete globally and improve the daily lives of people.

Under the AU-EU partnership, both continents have also confirmed their commitment to strengthen R&I collaboration and partnership to address common or complementary society challenges.

The EU's main tool to support such collaborative efforts is the Horizon Europe Framework programme which will run over the period 2021-2027. This programme, which builds on the previous R&I framework programmes, also integrates new instruments such as "missions" and "European partnerships" which aim at finding new R&I research funding instruments and innovative ways of collaboration involving all stakeholders (from consumers to industry) as partners.

In this context, it will be important to understand how new joint research and innovation (R&I) mechanisms can support research and development activities.

Under the Horizon 2020 framework programme (H2020, 2014-2020), ERA-NET was a funding instrument designed to support public-public partnerships by 'tops-up' funding for single joint calls and transnational actions. It was designed to increase substantially the share of funding that Member States would dedicate jointly to challenge driven research and innovation agendas.

Since Horizon Europe will put in place new and up to date instruments for scientific partnerships, the question is to understand which alternative joint mechanisms could support joint transnational research and development activities, especially with a view to avoid redundancy with other existing instruments while fostering complementarity with other initiatives.

The ERA-Net co-fund principle which aimed at developing and strengthening the coordination of public-public research programmes (P2Ps) was one of the formulas for developing EU-AU research partnership.

This was particularly the case for the AU-EU collaboration in Food, Nutrition Security and Sustainable Agriculture (FNSSA) with the H2020 projects LEAP-Agri and FOSSC or the recently launched LEAP-RE project in the framework of the collaboration on Climate Change and Sustainable Energy.

Since the co-fund principle will no longer be supported in its current form under the Horizon Europe programme, a questionnaire was developed in WP6 task 6.5 with the aim to "identify alternative mechanisms of joint support for R&I complementary to joint calls between public research funders for lasting collaborations".

Through an online survey, African and European partners were invited to share their experience with LEAP-Agri and the lessons learned in order to develop suggestions for a strategy that would promote the partnership forward by evaluating and identifying mechanisms to sustain collaboration and innovation in the FNSSA field.

All 24 partners of the LEAP-Agri consortium were asked to share their opinion which is highly valuable since, apart from being partners in the project, most of them also represent national agencies or funding bodies with solid experience in financing FNSSA's R&I activities. The participants shared their own experience in the field, either through LEAP-Agri or other similar co-funded projects such as ERAFRICA. On this basis, they provided inputs regarding the important aspects of collaboration mechanism and ideas on alternative instruments capable of taking the FNSSA R&I partnership to the next level.

In order to gather the views from a wide range of stakeholders, 5 LEAP-Agri other partners (research organizations, SMEs, etc. involved in additional activities) were also invited to participate in the survey.

From the 29 partners consulted, 26 participated to the survey. Although some partners identified themselves in their replies, the questionnaire was anonymous so it is not possible to account accurately on the number of funding partners versus other partners among the respondents.

This survey consists of three parts:

1. Feedback based on the LEAP-Agri experience of ERA-Net co-financing
2. Identify critical success factors for funding joint research and innovation activities
3. Questions and suggestions for developing alternative instruments to conduct joint R&I activities more effectively.

This report is organized in three main parts: part one is about the organisation of the survey and the contribution from the participants. The second part articulates the analysis of the replies and comments of the participants. Finally, the last part highlights the most relevant recommendations that emerged from this survey for supporting further AU-EU collaboration.

The lessons learned and the recommendations will hopefully contribute to the dialogue on the future of the LEAP-Agri network and will be included in the final document of the strategic partnership framework, combining the results of the different work packages, developed under the leadership of the coordination of LEAP-Agri (WP1).

The results of the survey can also help decision-makers assess the strengths and weaknesses of co-financing instruments such as the ERA-Net type of action, explore other R&I support mechanisms complementary to calls, their added value and their potential for reproducibility on a larger scale.

This survey complements the results of deliverable 6.2 of WP6 which explored the options for the development of a joint EU-AU research and innovation (R&I) programme in the medium and long term in the field of food and nutrition security and sustainable agriculture (FNSSA).

²“Development of a medium to long term joint research and innovation agenda”, 79 pages

1 SYNTHESIS OF THE SURVEY PHASE

1.1 Partners' participation to the survey

In order to facilitate participation to the survey « **Exploring new modalities for collaboration and alignment** » designed by the LEAP-Agri team, questions were submitted through the dedicated web portal “sondageonline.com”.

The survey phase was carried out in three steps during the period April 7 - August 4 2021, and at the end of the survey, 26 contributions were collected:

- Out of 26 participants, **almost two thirds represent** European partners, while 35 percent represent African partners (fig 2).

The participation rate by country is shown in the map (Fig.1):

- The higher the concentration of the color, the greater the representation of the country and vice versa. Yellow represents the one country that did not participate (Egypt)
- France is the most present with the contribution of 4 institutions, then Netherlands, Spain, Germany and South Africa with 2 institutions by country, while the other partners did not exceed one institution by country.

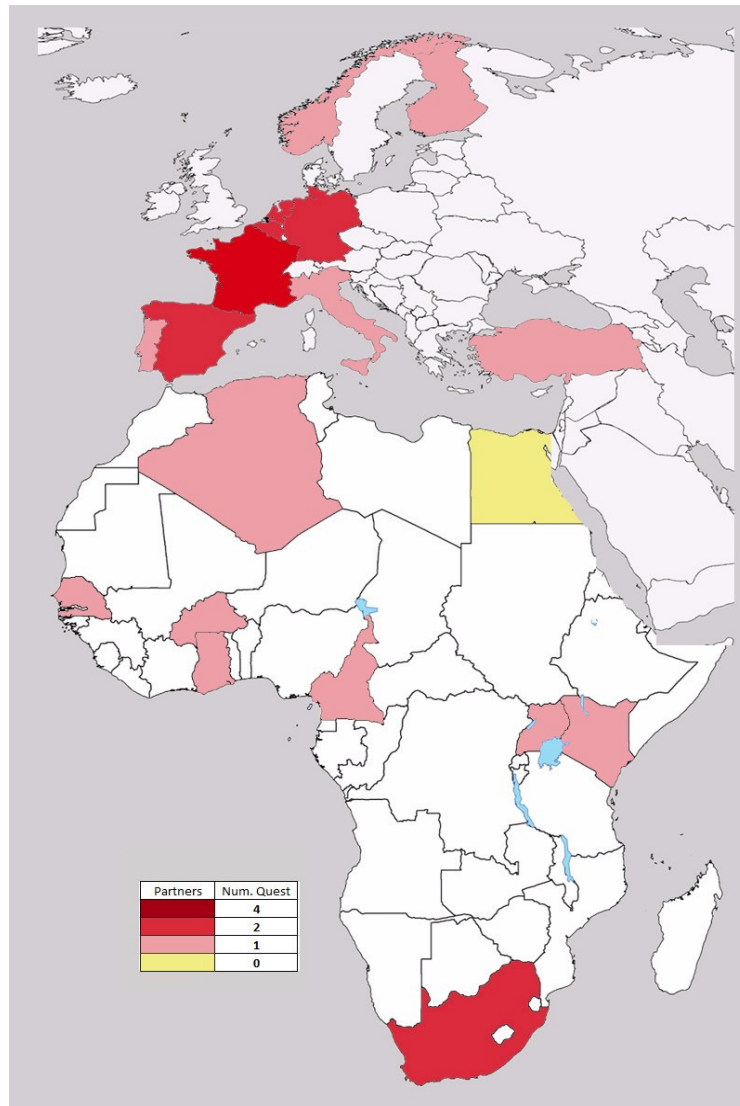


Fig 1: countries and organizations participating to the review

List of participants (Agencies, Ministries, Research organizations) to the review process:

- Agencia estatal de Investigación – AEI (Spain)
- Fonds de la Recherche Scientifique - FNRS (Belgium)
- Federal Office for Agriculture and Food - BLE (Germany)
- Ministry of Education Science and Technology - MoEST (Kenya)
- Centre de coopération internationale en rechercheagronomique pour le développement CIRAD (France)
- Institut de recherche pour le développement – IRD (France)
- Agence Nationale de la Recherche – ANR (France)
- Belgian Federal Science Policy Office – BELSPO (Belgium)
- Ministère de l'Enseignement supérieur, de la Recherche et de l'Innovation - MESRI (Sénégal)
- Science and Technology Policy Research Institute - The CSIR-STEPRI (Ghana)
- Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria - INIA (Spain)
- Ministère de l'Enseignement Supérieur et de la Recherche Scientifique - MESRS (Algeria)
- Fundação para a Ciência e a Tecnologia – FCT (Portugal)
- Research Council of Norway, Norwegian Ministry of Education and Research – RCN (Norway)
- Fonds national de la recherche et de l'innovation pour ledéveloppement – FONRID (Burkina Faso)
- Department of Science and Innovation - DSI (South Africa)
- National Research Foundation – NRF (South Africa)
- Ministère de la Recherche Scientifique et de l'Innovation du Cameroun – MINRESI (Cameroun)
- Ministry of Science, Technology & Innovation – MoSTI (Uganda)

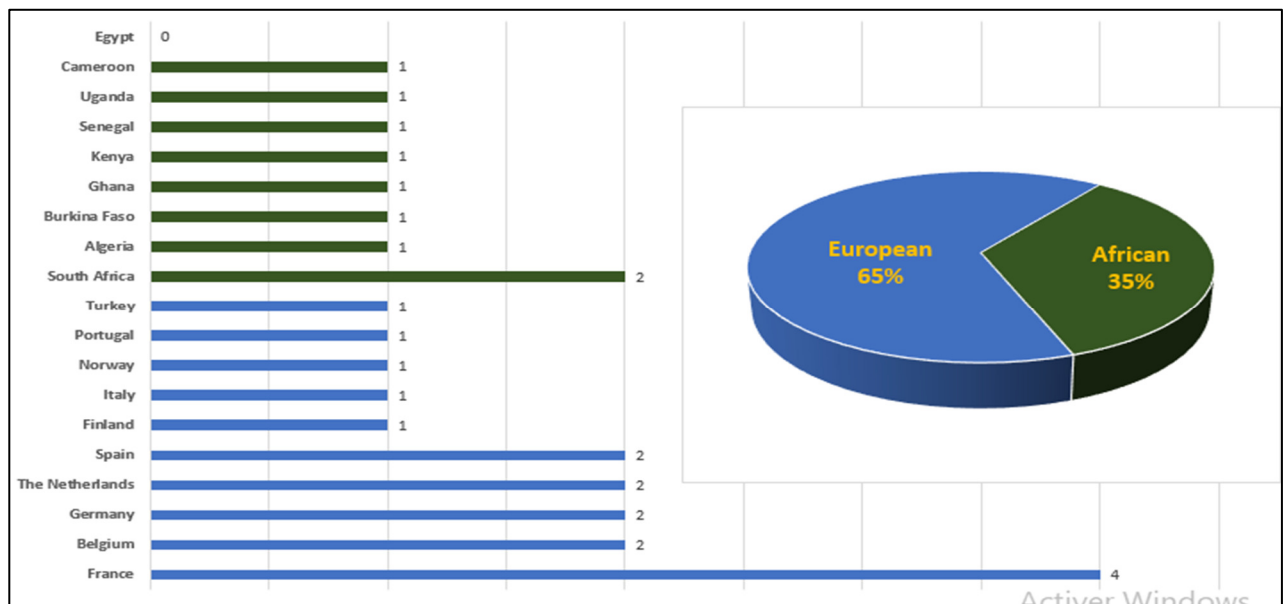


Fig 2: Number of institutions participating to the survey by country

1.2 Answer rate per institution/country

While 23 respondents out of 26 answered 60 % to 100% of the questions, three have a response rate of 16 % to 40 %. The more detailed answers come from:

- Ministry of Education Science and Technology - MOEST (Kenya)
- Institut de recherche pour le développement – IRD (France)
- Department of Science and Innovation - DSI (South Africa)
- The CSIR-Science and Technology Policy Research Institute - STEPRI (Ghana)

It is important to remember that the survey was anonymous to allow the partners to express all their opinions. Indication about the name of the institution was optional at the end of the survey.

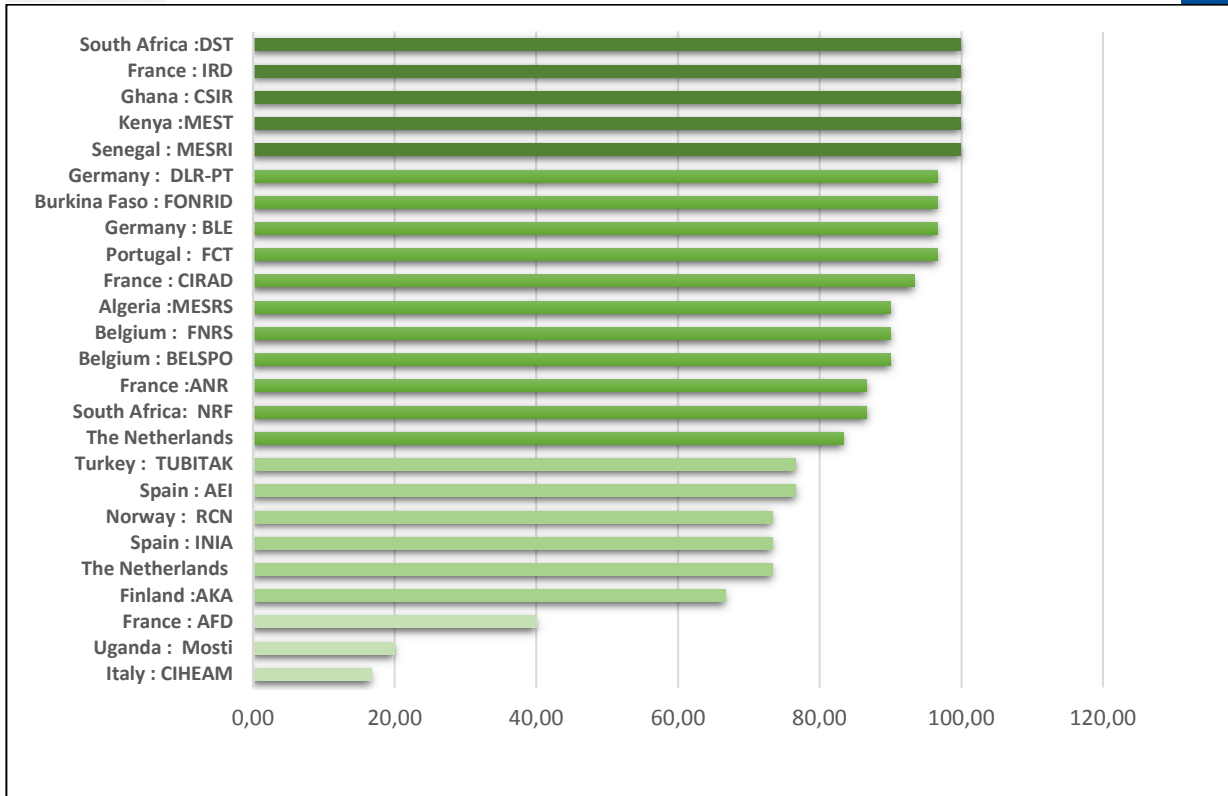


Fig 3: Rate of answers to the question by institution

1.3 Answers rate per question

The fluctuating curve illustrate the fact that main questions have registered a large contribution while follow-up questions where further comments were requested registered a weaker rate of contributions.

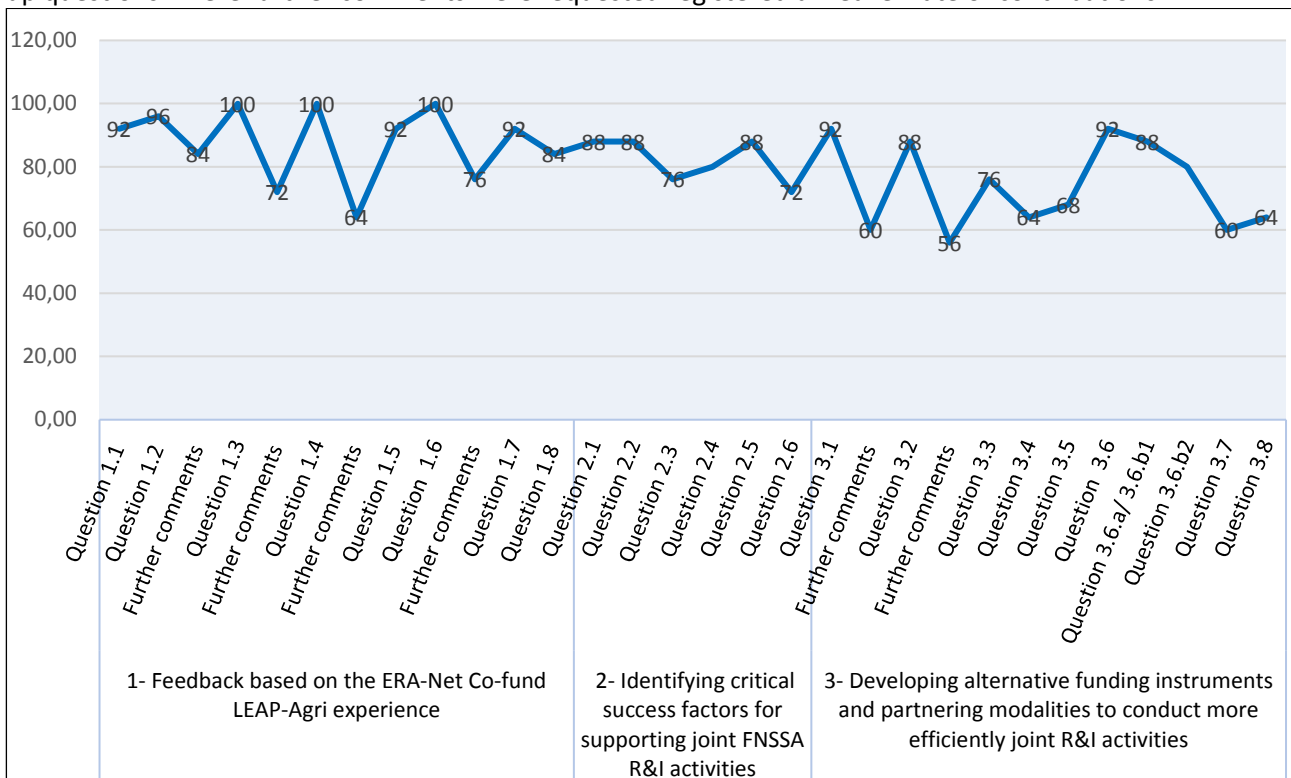


Fig 4: Rate of answers given to each question

Participants gave more information in the feedback of the ERA-Net co-fund mechanism and in developing alternative funding instruments than in the identification for supporting joint FNSSA R&I activities.

Partners showed great interest to questions related to the LEAP-Agri ERA-NET co-fund mechanism programme (part I of the survey), with 3 questions answered by all the participants:

- 1.3 To what extent are you satisfied with the setting of the LEAP-Agri call?
- 1.4 The evaluation procedures of the Leap-Agri proposals and institutions' evaluation criteria
- 1.6 Opinions about the extent of the ERA-Net Co-fund mechanism

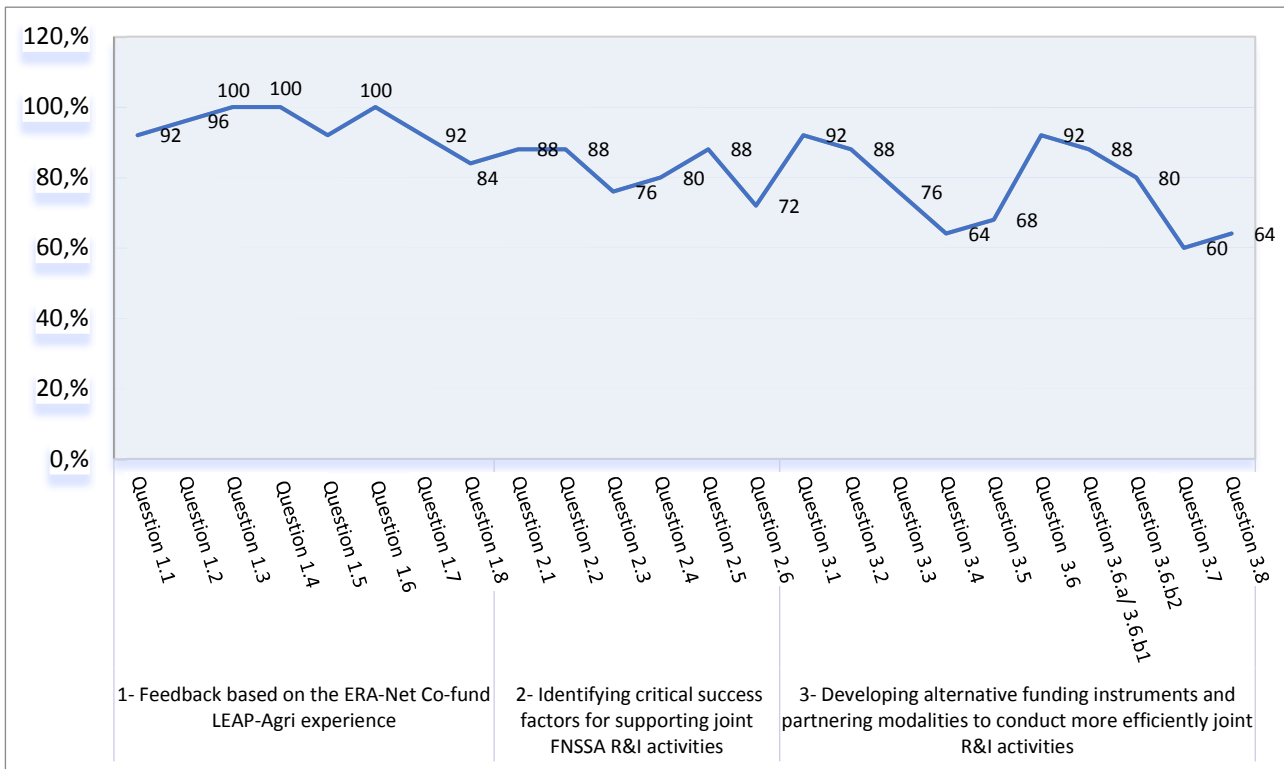


Fig 5: Answer rate per question without further comments

1.4 Conclusion

In general, the participation was effective in terms of respondents' number and the coverage of the different questions composing this survey. It gives us sufficient materials to deepen the understanding and the perception of the partners regarding this important project.

It was necessary to renew three times the website subscription to push partners to participate to the survey. This operation took three months. Contact and discussion with projects managers were necessary to reach the final results. Unfortunately, Egypt did not participate despite many promises and the anonymity of the survey. We therefore miss an opinion that would have helped to better understand the discrepancies and correct any misunderstandings. Uganda, which is also very involved with a large number of projects, responded to the survey but with limited effective contribution to this analysis due to the fact that MoSTI only replaced the former Ugandan agency UNCSST in 2020 and therefore had only 6 months of ERA-Net experience at the time the survey was launched. In the next section we will discuss the analysis of the results. It is important to understand that it is difficult to relate all the contributions and we made abstraction of some comments which in our view are not ethically correct, because expressed only by one anonymous partner. It remains possible to have access to the source documents if necessary. We think that these opinions are without effect for the continuation and the future of the EU-AU FNSSA R&I collaborations.

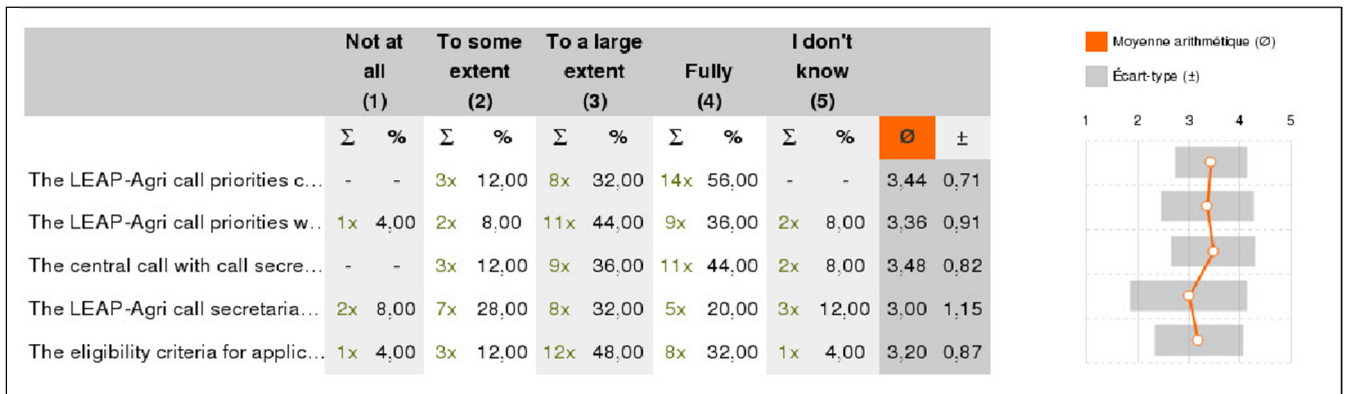
2-ANALYSIS OF THE RESULTS OF THE SURVEY

In response to the survey, the partners expressed a diversity of opinions which cannot be easily summarised. This section therefore seeks to capture the main feedbacks received.

2.1 Feedback on the priorities and set up of the LEAP-Agri call

Upon analysis of the replies to the questions of the survey related to the LEAP-Agri call, the following observations can be made:

- In terms of alignment of the priorities of the LEAP-Agri call with the priorities and programmes of the participating agencies/organizations, on average 82% of partners are (largely to fully) satisfied. Some African partners went further by indicating that they are even in line with the government's agenda of development
- Some respondents expressed their satisfaction about the fact that the setting of the call was based on large preliminary discussion and that the process was transparent
- It was suggested that more efforts could have been done in terms of promoting cross-cutting priorities.
- Other respondents shared their view that the relevance of topics to national research needs was not a prime concern as participation in the project responded mainly to a networking concern to allow students to finalize their research in partnership with European teams
- Nearly half of the partners did not express their entire or large satisfaction with the management of the central call by the LEAP-Agri call secretariat and its role in helping to form a consortium and a partnership
- The eligibility criteria for applicants were considered satisfactory



2.2- Feedback on the evaluation procedures of the LEAP-Agri call

The evaluation procedure, which was carried out through an international expert panel was considered as a mechanism guaranteeing the independency of the assessment process and corresponded to what most respondents expected for such a R&I funding scheme.

The selection of relevant European and African experts was acknowledged as having contributed to the quality of the evaluation.

Besides, **70 %** of the participants declared similarities between the evaluation criteria and procedures used under the LEAP-Agri call for proposals and those used by their own institutions.

Some respondents indicated that evaluation within their own institutions valued more scientific excellence but less the impact aspects, while others considered the LEAP-Agri evaluation has putting emphasis on excellency in research, but less on the potential of projects to address local needs with adequate capacity development skills and involvement of national actors.

2.3 The benefits of the ERA-Net Co-fund mechanism

The ERA-Net Co-Fund mechanism is considered as a good instrument to encourage researchers from the Africa and Europe to engage in a joint research project to address societal challenges with shared duties and responsibilities. In other words, the mechanism creates a space for international research collaboration.

By doing so, it is seen as facilitating the alignment of research topics among different countries, at supporting the construction of networks, and ensuring a better visibility of research teams involved at the international level.

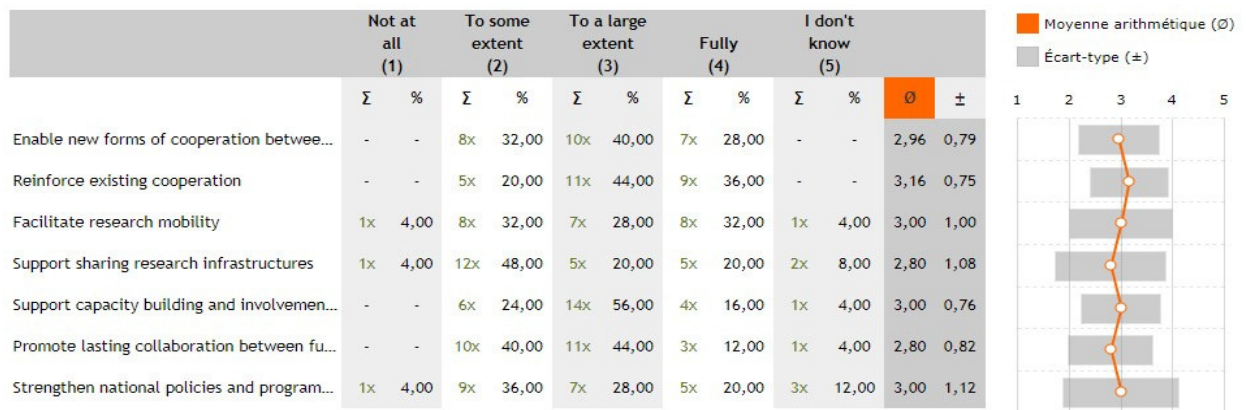
Through their comments, partners noted benefits associated to this mechanism, but also raised some of its limits.

With slightly different satisfaction levels (European partners overall being less satisfied with the effectiveness of ERA-NET mechanisms compared to African partners), partners underlined that the ERA-Net Co-fund mechanism was most effective in:

- reinforcing existing cooperation between European and African researchers and research institutions (81%);
- supporting capacity building and involvement of target groups (73%);
- enabling new forms of cooperation between Africa and Europe (69%);
- facilitating research mobility (58%);
- promoting lasting collaboration between funding agencies (58%).

On the contrary, aspects which were considered less effective included:

- Strengthening national policies and programmes (50%);
- Supporting sharing research infrastructures (42%).



Besides, apart from those dimensions, respondents highlighted other benefits of the ERA-Net mechanism which is seen as:

- strengthening partnership among researchers
- enhancing coordination and synergies between national, African and EU programmes to FNSSA;
- allowing collaborative research by comparing several realities which, in turn, contributes to improve research quality;
- promoting interdisciplinarity and encouraging a large stakeholders' involvement;
- contributing to improve national research project monitoring mechanisms (feedback from African partners);
- having supported the alignment of procedures and supporting transparency at the European level ;
- facilitating the leverage of additional funds.

2.3.1. The limits of the ERA-Net Co-fund mechanism

Overall, the ERA-Net Co-fund mechanism is criticised for its lack of flexibility which makes it difficult to reconcile two requirements: i) scientific excellence and relevance criteria and ii) need to respect and optimize the mobilization of the funding available for each contributing country.

More specific feedbacks relate to:

- the complexity of the rules and procedures governing the ERA-Net Co-fund mechanism was pointed at. The ERA-Net was in particular considered inadequate for funding agencies without experience on launching, managing and funding transnational calls for proposals;
- Some respondents indicated that this complexity led to misunderstandings within consortia, with the consequence that not all partners understood and assumed their roles and responsibilities;
- The co-fund mechanism has also been a source of complexity and some partners did not understand that a financial commitment had to be fulfilled before the top-up portion of the funding could be disbursed;
- The fact that in-kind resources are not considered as eligible was pointed at as a weakness;
- The ERA-Net Co-fund mechanism does not take into account the heterogeneity in national funding regulations in support of research projects. Concretely, this caused practical problems of timely simultaneous release of funds from all partners involved in projects (because of different starts of fiscal years for instance). In some cases, delayed national funding by some funding parties led to disjointed research activities;
- difficulties relating to management and administrative bottlenecks (also referred to as “bureaucratic obstacles”) of the programme were highlighted;
- The mechanism is not seen as providing the conditions required to sustain longer term cooperation;
- It was stressed that African countries could only benefit from this type of cooperation if they are positioned at the same level of funding and can rely on local scientific infrastructures.
- Instead of “black boxes”, a separate administration budget may have been better.

Due to the significant impact of the Covid-19 pandemic on some activities, especially those related to research mobilities, capacity strengthening and collaboration which were important elements of the programme, some partners stressed that it was difficult to assess the partnership, because of those specific circumstances.

2.3.2 Flexibility of the ERA-Net Co-fund in reinforcing AU-EU R&I cooperation

On the overall assessment of the flexibility of the ERA-Net Co-fund, the answers are mixed.

The ERA-Net co-financing mechanism was seen as allowing some flexibility to adapt to changing circumstances (e.g. pandemic case; management of start-up delays, lack of national funding pledge, extension of the deadline, the transfer of the budget) though it was underlined that the changes were done at a high administrative cost. Most partners indeed stressed the complexity of the EU procedures which were seen as making changes difficult and time consuming: the lack of flexibility to shift budgets between partners from different countries was pointed at, as well as the fact that the approval by the EC of the project extension or of changes within the consortium took long.

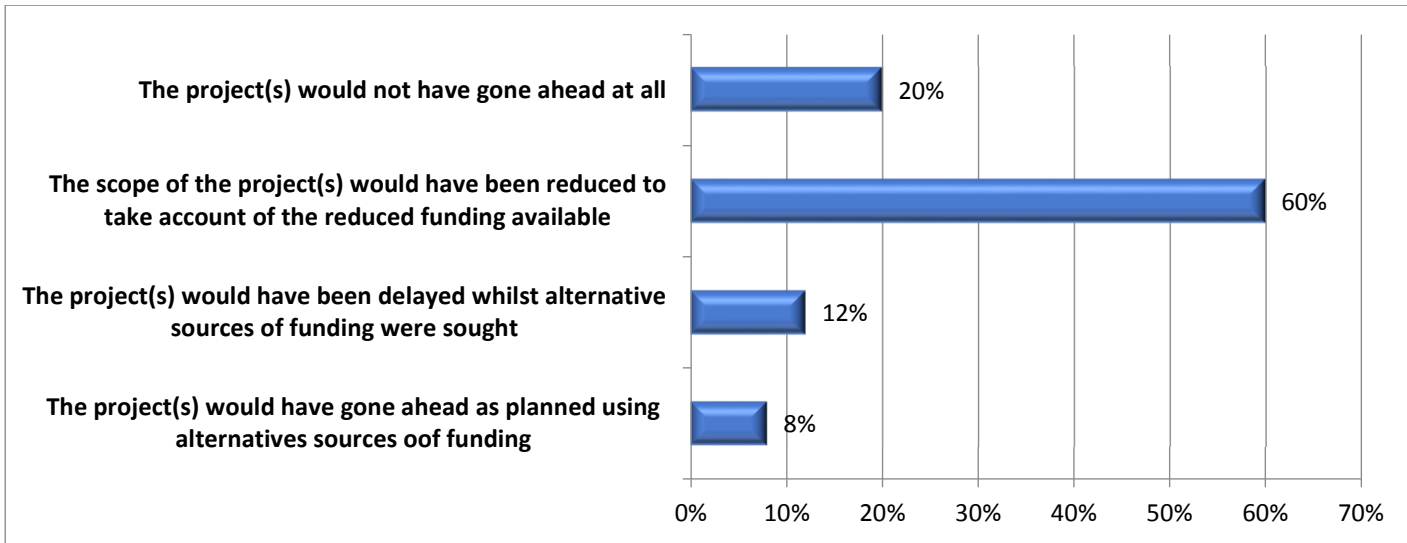
Besides, the inability to sanction or exclude defaulting partners was seen as restricting overall flexibility and adaptability.

However, it was also recognised that the possibility to adjust within the national research teams was further limited by the fact that it also depended on the regulations and budgetary constraints of the respective national funding agencies. In addition, since individual projects depended on several funding agencies, making synchronized adjustments was made more difficult.

It was felt that tailored solutions should have been allowed for more complex partnerships.

2.4. Importance of EU funding (‘Top-up’) to projects

The importance of EU funding ('Top-up') to LEAP-Agri projects was stressed by the respondents as 60% of them shared their view that, without EU funding, the scope of the projects would have been reduced to take into account the funding available while 20% replied that the projects would not have gone ahead at all.



It was also highlighted that, without that 'Top-up', fewer projects would have been supported and African participation would have been much more limited, especially for institutions having low financial capacity, as research teams supported by strong funders could rely on their own resources to pre-finance research activities.

The 'top-up' is also seen as having stimulated the participation of funding agencies, especially those from countries with limited financial capacities which benefited from the "leverage" effect of the top-up. Besides, the "unit costs" was seen as being useful in covering the costs of the call management (secretariat, recruitment of experts, evaluation, ranking exercise, ...).

Some issues associated with this top up co-funding mechanism were pointed at:

- The significant delay in the release of the top-up due to the default of one partner drastically affected the projects that could not conduct their activities when partners were not able to pre-finance the top-up for their researchers.
- The lack of funding from some of the agencies was a major handicap in the start-up and implementation of projects, and it was mainly due to a misunderstanding by these agencies of their commitments.
- The fact that the AU was not required to contribute to the funding was considered a gap in the design of LEAP-Agri.
- The amount was sometimes seen as too limited for a contribution to a research project and some respondents called for a minimum amount to be determined.
- Some respondents perceived the top-up mechanism as not being equitable and as favoring those who attract many projects, while disadvantaging those who have less national funding. However, others saw the top up as an opportunity to 'level' financial contributions, thus contributing to a sense of true partnership.

2.5 Collaboration aspects between consortium partners and the role of the ERA-Net Co-fund mechanism in promoting cooperation sustainability

The co-financing mechanism was seen as an opportunity for networking with institutions with extensive experience in scientific research and technological development.

But in general, most partners underlined that the sustainability of cooperation and partnership depends on availability of financial resources, trust, communication and equity between partners in the North and South.

Regarding the contribution of the ERA-Net Cofund mechanism to the sustainability of cooperation between partners, the following elements were put forward:

- Cooperation requires adequate funding (“community money”);
- The wealth disparity generated challenges in finding a good division of costs between partners of different countries;
- African researchers are often dependent on external resources to integrate into European teams and projects but lack of national funding is likely to remain a problem for African agencies;
- the duration of each project (three years) is deemed insufficient for R&I projects cooperation sustainability;
- the funds made available are mainly used to finance the core activities of the project rather than to facilitate activities related to the future and sustainability;
- In some cases, it was noted that there was a “race for new projects” rather than consolidating the achievements of ongoing or completed projects. For example, the ERANet Cofund call for projects arrived before the end of ERAfrica and the ERAfrica partners preferred to invest efforts in the new call rather than in the consolidation of the efforts engaged under ERAfrica;
- In addition, the protection of intellectual property against participants with less economic power is always compromised;
- Once partners have experience working together on topics of joint interest, they are likely to work together if other opportunities arise or they will pro-actively look for new funding opportunities to continue their collaboration.

In order to overcome those limitations and to promote cooperation sustainability and long-term sustainable partnerships, several suggestions have been made:

Suggestions for maintaining a sustainable partnership

- Longer preparation phase so that all partners (especially 'newcomers') understand the collaboration mechanism and the commitments partners it implies
- Encourage **fairness and equity** for long term partnership
- Provide a **platform** for continuous engagement between partners;
- **intensify communication** efforts to foster **mutual understanding** and **mutual trust**
- Involve better funding organizations **in budget management and project monitoring**;
- A flexible **coordination infrastructure** for changing future alliances of funders;
- Propose early information and well explained options for sustained funding (via **blend mixing funding /investment models** combined with **NDICI tools**);
- An **intermediary meeting with private actors** (to enhance the innovation and joint business development);
- Create a '**healthy food systems fund**';
- A **knowledge management and communication framework**
- A long-term monitoring and evaluation concept

3 IDENTIFYING CRITICAL SUCCESS FACTORS FOR SUPPORTING JOINT FNSSA R&I ACTIVITIES

Based on their experience of the ERA-Net mechanism, the partners shared their observations about the aspects that would help stakeholders engage in future cooperation.

3.1 Most important characteristics for an effective cooperation in the FNSSA

The respondents to the survey shared their views about the most important characteristics of an effective cooperation between funders and researchers to jointly address relevant problems related to FNSSA. For the sake of stressing commonalities and differences, the views shared by African and European partners are presented first, while the views of the African partners and European ones are presented distinctly below:

| |
|---|
| <p>Joint African-European suggestions</p> <p>Need for clear rules of engagement:</p> <ul style="list-style-type: none"> • transparency, respect, trust, shared vision, common agreement on procedures and a real commitment from preparation to the end; • promote a fair and ethical partnership; • ensure effective and transparent communication, with more exchange of information and agendas; • regular update about projects' current situation (the researchers should give periodic reports); • engage the researchers during the project implementation process through an effective monitoring process, and promote research that has an impact; • identify research topics that are aligned to national properties in a regional / international context. <p>In terms of funding requirements:</p> <ul style="list-style-type: none"> • funding stability and long-term; • flexibility within the funding instruments. |
| <p>Suggestions from African Partners</p> <p>At the organizational level:</p> <ul style="list-style-type: none"> • having an established call secretariat over the longer term; • having a continuous rotating secretariat; • allow flexibility during the implementation phase. <p>in terms of research promotion:</p> <ul style="list-style-type: none"> • allow feedback mechanism; • sharing experiences, results and valorisation of results; • ensuring mobility for researchers in training abroad; • access to research infrastructures (smart farms); • increase the number of projects to be funded and expand the research fields of intervention. |
| <p>Suggestions from European partners</p> <p>Horizontal aspects:</p> <ul style="list-style-type: none"> • external evaluation of the impact (by other actors); • respect for the freedom of the researcher and peer review evaluation (not by the funder); • flexibility in the procedures and in the expected results; • good understanding of political and scientific expectations of funding agencies by researchers; • support from policy makers; • mandatory participation by all partners in key meetings (physical or virtual). <p>In terms of promoting equity and cooperation:</p> |

- common mechanism and rules to articulate the cooperation;
- seamless flow of information between the network, the funders and the researchers;
- define a common R&I agenda (goals and roadmaps to reach these goals);
- strengthening links between the end user of the research and all other stakeholders; involved in implementation of research;
- ensure a co-responsibility, co-leadership and co-funding.

3.2 Feedback on experiences with and/or perceptions of other funding instruments

The respondents shared their views of the key features of the other instruments of which they have experience.

They reported that bilateral funding mechanisms were more effective because they enable funding institutions to collaborate more closely and to solve more easily problems faced in the calls or projects. Bilateral projects are also seen as allowing for a better recognition of in-kind contributions.

But it was also acknowledged, that while multilateral funding is more demanding, it also has greater potential for wider participation. It was therefore felt that bilateral funding can help lay the ground for long-term partnerships which may benefit from multilateral funding at a later stage, as experience is needed before engaging in a more complex joint funding process.

It is also reported that more established collaborations that have run over several years work more smoothly because partners are familiar with the procedures and long-lasting collaboration is felt as deepening research and avoid opportunistic collaboration.

Compared to the LEAP-Agri mechanism that concentrates mainly on research funding, other innovation funds are seen as allowing integration of research and innovation with practical implications.

Other feedback on specific instruments was also provided:

- The DeSIRA initiative was referred to as having interesting characteristics such as the fact of being co-constructed with national authorities, of promoting systemic and context-specific approaches instead of mono-disciplinary approaches, of encouraging innovation through research at all levels (technical, social, institutional) and of strengthening capacities of local research organizations through a strong and lasting partnership with their European counterparts.
- EJP mentioned as being interesting in so far as, besides the internal call for project, it also proposes activities in favor of research community such as knowledge generation, organisation, dissemination. Besides, in this scheme, in-kind national funding contribution is an advantage
- One partner (CIRAD) shared the example of its own mechanism, the partnership platforms (PP), which gathers several institutions working together in the long term under a joint governance and allows partners to provide in kind and in-cash resources (human, material and financial resources) to achieve common objectives, and also to mobilize additional resources from other funders.

2.3. Conditions and adequate funding instruments required to leverage additional financing from other funding partners

Overall, it is felt that a strong collaboration between partners is necessary for them to work together over the long term, i.e. prepare actions, implement them and reflect on them afterwards and prepare more actions. Similarly, the importance of partners sharing clearly defined goals and roadmaps is underlined.

It was also indicated that, once a project has started, it is complex to include another funder that may have other requirements. If a funder is interested, it might be easier to join during a follow-up phase.

The respondents emphasised that due attention should be paid to the importance of the in-kind contributions (researchers and research-infrastructure, networks, contacts to practice), which in should be an eligible contribution in research instruments and calls. Indeed, though in-kind contributions are usually difficult to quantify and may be considered as “second-rate contributions”, they are easier to mobilise in countries with less resources it is felt that such contributions play an important role and that there should be a procedure for evaluating in-kind contributions.

It was also highlighted that international calls for proposals are often “one shot” initiatives and that it would be interesting to propose some extending programs to higher TRL and closer to users. Once a project that is successfully implemented show results, it is also argued that the successful implementation is in itself the marketing credential to attract additional funding where necessary.

To illustrate this point that public funds dedicated to research can fuel market innovation, the example of researchers in Malaysia was given where they work with start-ups to enter the market and are allowed to profit from the young start-up’s income.

2.4. Conditions for a better inclusion of all relevant actors and better linkages between researchers, innovators and entrepreneurs, as well as end-users

Overall, it was felt that there is a need to involve other actors that are usually not involved in research and innovation.

One key condition to achieve this result would be to ensure that projects are developed in co-creation with those stakeholders. In this regard, multi-stakeholder approaches should be encouraged: research projects addressing a societal issue should be jointly designed together with the end-users, translated into scientific questions by the researchers who would collaborate with the entrepreneurs and innovators throughout the work.

Calls could thus include a requirement for transdisciplinary approaches that could bring together actors from practice and policy to work together on an issue from the beginning. Calls could also allocate funds specifically to allow experimentation/facilitation of multi-stakeholder activities with a view to incentivise the participation of entrepreneurs and end-users in research projects. The example of the Users-Led Process (ULP) approach developed by the PAEPARD project to better articulate users’ needs in a multi-stakeholder research and innovation (R&I) partnership was explicitly mentioned as an example to be looked at.

Participatory approaches based on consultation, exchanges, etc could also help integrate other actors (civil society, farmers’ organizations, businesses, decision-makers and donors) into research projects by enabling them to play a role in the co-construction of innovations with researchers. For instance, living laboratories, which are deeply rooted locally, are innovative and promising forms of action-research interaction piloted by civil society partners and involving researchers.

Promotion of a better inclusion of all relevant actors could also be done through different means. Different calls focusing on different aspects, such as research mobility calls, academia-industry partnership calls, calls on basic research, could be organized in an effort to cover a broader range of interests and priorities.

In the call themselves, criteria relating to scientific excellence could be adjusted to support the development of national research institutions that are not yet up to international standards.

In order to reach out to other actors, it was suggested that awareness raising and communication would be important. This could be done through activities aimed at target audiences (training, raising awareness, mobility), creation of public platforms with a strong dissemination power and stakeholder engagement, The respondents also proposed to organize innovation meetings, match-making events or B2B events. With regards to the interaction with entrepreneurs and innovators, creating incubators could help researchers. Entrepreneurs could be involved for commercialization of research products.

An online platform that would facilitate the identification of potential research partners or that would present research results in a way which is understood by actors of practice and policy-making. Apart from scientific

publications, the production of policy briefs would facilitate policy take up.

3.5. Critical conditions required to improve funding mechanisms for joint transnational R&I projects

In terms of the critical conditions required to improve the funding mechanisms for joint transnational R&I projects, participants highlighted aspects of various nature:

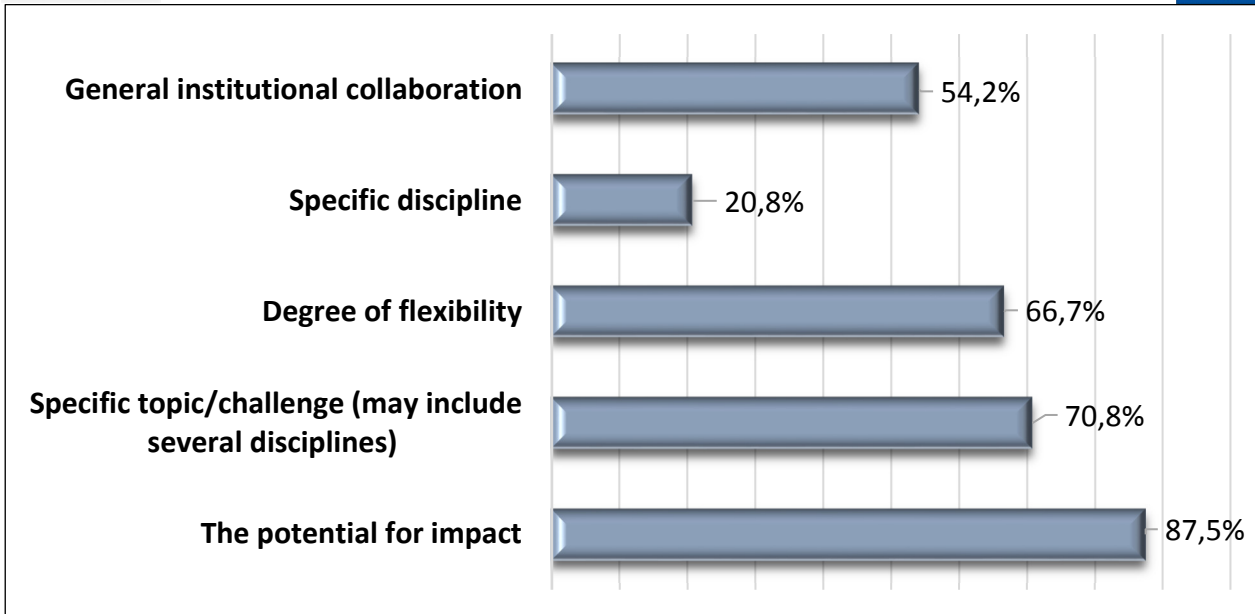
| | |
|-------------------------------|--|
| Organizational aspects | Need for a well-established governance structure (long-term secretariat) and common legal framework to have a long-term perspective |
| | Ensure the written commitment from funding parties |
| | Keeping the same objectives and the same expectations regarding the planned outcomes throughout the projects |
| | Importance of collaboration and co-creation |
| | Importance of mobility and face-to-face meetings |
| | Recognise the digital divide and do not expect the same services from partners in a country with a poor internet connection |
| Financing aspects | Importance of the stability of funding to create a long-term perspective |
| | Need to keep the funding mechanism understandable for all as the involvement of different partners should not lead to more complex rules |
| | The fluctuation of currencies must be taken into account right from the project design stage |
| | The variation of costs among countries should be taken into account, otherwise the funding mechanism would exclude participation of some organizations |
| | All funders should foresee a realistic budget. |
| | Funding for “coordination, research uptake and MEL” should be included into the budget of the programme |
| Research aspects | The IP matters need to be clarified to all applicants. |
| | Being aware of the potential of each national research communities for the topics proposed |
| | Research should be linked to the national priorities within a regional/international context |
| | Research should seek to have initiatives that could possibly be built on further into policy change or market |

3.5.1. Suggestions for developing alternative funding instruments and partnering modalities to conduct more efficiently joint R&I activities

Important aspects to be considered when developing and designing new funding instruments

Asked what would the most important aspects to focus on when developing and designing new funding instruments, respondents singled out the potential for impact as the most critical element.

More than half of the participants also underlined the importance of specific topic/challenge, degree of flexibility and general institutional collaboration.



Participants also mentioned other elements that they deem important to take into account in developing new financing mechanisms. Those feedbacks may be summarized as follows:

African-European joint suggestions

- fairness and equity among funding partners;
- flexibility in financing and possibility to extend funding in case of positive results;
- Strengthen the capacities of the actors of the projects under execution;
- Wide communication between partners & with end-users of funding instruments;
- simplifying selection procedures, administrative requirements and rules to encourage applications and limit the administrative costs of the selection process;
- Well established governance structure and common legal framework.

African Partners suggestions

- Need to align funding to identified priority areas and/or national priorities;
- availability of funding;
- a return on investment.

European partners suggestions

- Maintain a “portfolio” of funding instruments, each with its own characteristics and specificities (instruments focusing on impact at scale; other instruments supporting 'frontier research' activities which entail some risks and require some multidisciplinary/multinational approach, tailor-made instruments to support innovation processes including through supporting the development of adequate human resources capacities);
- Importance to develop a theory of change and a monitoring mechanism;
- Funding of the coordination and monitoring/evaluation aspects should be made available
- Avoid centralized approaches, bureaucratic top up;
- full commitment of partners and calls would be open to all but would be launched with those countries who can to meet their annual commitment in a given time;
- good knowledge of the scientific communities to which they are addressed;
- take into account the capacity of research organizations to manage this funding.

Relevance of the different components of funding mechanisms in supporting effective R&I activities

Regarding the relevance of the different components of funding mechanisms in supporting effective R&I, the element that was considered as most relevant among those proposed through the survey was the “publication

and joint implementation of research results”, while “transfer of scientific material and equipment for research” was ranked last.

| | Not at all relevant (1) | | To some extent (2) | | To a large extent (3) | | Fully (4) | | I don't know (5) | | Moyenne arithmétique (Ø) | | Écart-type (±) | | 1 2 3 4 5 | | | | |
|--|-------------------------|------|--------------------|-------|-----------------------|-------|-----------|-------|------------------|-------|--------------------------|------|---|--|-----------|--|--|--|--|
| | Σ | % | Σ | % | Σ | % | Σ | % | Σ | % | Ø | ± | 1 2 3 4 5 | | | | | | |
| Facilitating the integration of project-sp... | - | - | 3x | 13,64 | 9x | 40,91 | 4x | 18,18 | 6x | 27,27 | 3,59 | 1,05 | [Chart showing distribution for this row] | | | | | | |
| Planning and joint implementation of joi... | - | - | 1x | 4,55 | 10x | 45,45 | 10x | 45,45 | 1x | 4,55 | 3,50 | 0,67 | [Chart showing distribution for this row] | | | | | | |
| Exchange or hosting of scientific and tec... | - | - | 5x | 22,73 | 6x | 27,27 | 9x | 40,91 | 2x | 9,09 | 3,36 | 0,95 | [Chart showing distribution for this row] | | | | | | |
| Training of researchers and technicians a... | - | - | 4x | 18,18 | 5x | 22,73 | 12x | 54,55 | 1x | 4,55 | 3,45 | 0,86 | [Chart showing distribution for this row] | | | | | | |
| Exchange of scientific, technical and educ... | - | - | 5x | 22,73 | 9x | 40,91 | 8x | 36,36 | - | - | 3,14 | 0,77 | [Chart showing distribution for this row] | | | | | | |
| Joint organization of seminars, colloqui... | - | - | 4x | 18,18 | 10x | 45,45 | 8x | 36,36 | - | - | 3,18 | 0,73 | [Chart showing distribution for this row] | | | | | | |
| Publication and joint implementation of r... | - | - | 1x | 4,55 | 4x | 18,18 | 17x | 77,27 | - | - | 3,73 | 0,55 | [Chart showing distribution for this row] | | | | | | |
| Joint response to national, regional or int... | - | - | 3x | 14,29 | 8x | 38,10 | 9x | 42,86 | 1x | 4,76 | 3,38 | 0,80 | [Chart showing distribution for this row] | | | | | | |
| Transfer of scientific material and equip... | 2x | 9,52 | 9x | 42,86 | 4x | 19,05 | 5x | 23,81 | 1x | 4,76 | 2,71 | 1,10 | [Chart showing distribution for this row] | | | | | | |
| Any form of cooperation approved by the... | - | - | 3x | 14,29 | 8x | 38,10 | 7x | 33,33 | 3x | 14,29 | 3,48 | 0,93 | [Chart showing distribution for this row] | | | | | | |

However, when asked to come up with other suggestions, respondents also proposed that funds could be provided for open access publications, for investment in (joint or twinned) high quality research infrastructures.

Nearly 75% of respondents underlined the importance of involving the private sector and highlighted that this should be explored without compromising principles of social and environmental sustainability.

However, it was also indicated that the private sector' willingness to cooperate in STI may be constrained by:

- bureaucracy;
- insufficiency of funding resources, especially for small-scale producers or food manufacturers who do not finance their own research.

The suggestions that were made regarding the most important aspects of alternative collaboration and partnering modalities can be summarised as follows:

| |
|--|
| <i>African-European joint suggestions</i> |
| Private sector involvement: |
| <ul style="list-style-type: none"> • private sector should be involved in targeted "solution driven" calls to support research and should be involved in the definition of topics. • intellectual Property aspects have to be thought properly |
| <i>African Partners suggestions</i> |
| Develop collaboration by: |
| <ul style="list-style-type: none"> • allowing collaboration between Africa, Australia, Asia science granting council and the researchers of each country; • involving the local authorities and the communities concerned by the fields of research; |
| Facilitate access to funding by: |
| <ul style="list-style-type: none"> • strengthening partnership funds; • Ensuring that each partner will cover its own charges and expenditures; |
| In terms of research projects: |
| <ul style="list-style-type: none"> • strengthening of periodic evaluations; • extending the range of intervention areas. |
| <i>European partners suggestions</i> |

Developing Funding mechanism by:

- creating an Africa R&I fund;
- involving systematically investment banks;
- exchanging and learning about funding instruments of foundations and civil society organizations;
- using innovative financing mechanisms such as 'research tax credit'.

Strengthening coordination and communication by:

- creating partnership platforms and networks delivering need-oriented services for Stakeholders;
- Promoting a system of co-construction of projects, outside any competitive scope;
- institutionalised dialogue between science and end-users of science supported by services of a cooperation platform;
- facilitating dialogues and exchange of knowledge among researchers as well as among researchers and decision-makers.

3.5.2 Suggestion for key performance indicators to measure the effectiveness of new funding instruments

In terms of KPIs that could be used to measure the effectiveness of new funding instruments in reinforcing FNSSA R&I cooperation, the respondents proposed the following:

- Indicators relating to the scientific production, such as the number and quality of publications and patents obtained in partnership;
- Indicators relating to capacity building;
- Indicators about the partnership composition (diversity of actors participating) and about collaboration aspects (level of satisfaction of participating research teams and actors) during and after the completion of the project;
- Impact indicators could look at various dimensions, such as scientific, societal, business and market development impact. It could include the number of policy briefs produced that have led to changes in practices, impact on production, the standard of living or the environment. For impact indicators, SDG indicators could form the basis;
- Impact indicators (publications, dissemination activities, innovative products, policy relevance).

It was mentioned that indicators would depend on the TRL (technological readiness level): publications would be more adequate to measure R&I collaboration with low TRL, while assessment of higher TRL could be based on the number of patents, survey of users, number of dissemination tools, etc.

3.6 Modalities and interest to participate in exploration process for the identification of new funding instruments

It is noteworthy that almost all the participants (87.5 %) confirmed their interest to engage in the exploration of alternative modalities of collaboration and partnership outside of joint calls. One of the reasons mentioned by participants not to engage further is the limitation of their own organisation which can only participate in funding projects or the lack of resources.

For the respondents, the exploration process should be open and transparent. It was suggested that this could be done through brainstorming sessions which would bring together interested parties to develop a list of possible partnership instruments, under the mandate of an overarching network or through a conference focussing on innovative funding models including social corporate business actors, investment banks, crowd funding platforms.

3.6.1 - Adequacy of the existing facilitation mechanisms to cover current needs

In response to the adequacy of the existing facilitation mechanisms to cover current needs, it was stressed that projects mechanism could be complemented by other mechanisms such as staff exchange or twinning activities, mobility programmes like the Marie Skłodowska-Curie actions (MSCA scheme that fund doctoral education and postdoctoral training) or others such as living labs.

3. CONCLUSION

This report provides a synthesis of the replies to the survey that was developed in WP6 task 6.5 “Exploring new modalities for collaboration and alignment” with the aim to “identify alternative mechanisms of joint support for research and innovation (R&I) activities complementary to joint calls between public research funders for lasting collaborations”.

In a context where the ERA-Net co-fund type of actions are being replaced by new instruments for scientific partnerships under the Horizon Europe framework programme, under this survey, LEAP-AGRI partners were asked to share their experiences and the lessons learned from the ERA-Net LEAP-Agri as well as their experience of other research and innovation funding instruments in order to look into possible mechanisms that would support joint transnational R&I activities in the area of Food Nutrition Security and Sustainable Agriculture (FNSSA).

Comments from the 26 respondents to the survey shed some light on the strengths of co-fund instruments such as the ERA-Net type of action, as well as some of the difficulties in their implementation. From there, participants also highlighted the key elements that would be important to be taken into account in future alternative mechanisms.

The main take aways regarding the ERA-Net Co-fund mechanism can be summarized as follows:

| Strengths | | Weaknesses | |
|------------------|---|-------------------|--|
| Internal factors | <ul style="list-style-type: none"> • strengthens partnership between European and African researchers/ research institutions and reinforces existing cooperation; • ensures a better visibility of research teams involved at the international level; • topics of the call for proposals were chosen through a transparent participatory process and match with priorities of research organizations as well as FNSSA stakeholders, governments; • supports the alignment of research topics among different countries and, in particular, enhances coordination and synergies between national, African and EU programmes relevant to FNSSA; • promotes an interdisciplinarity approach; • participation of funding agencies was stimulated by the top-up mechanism (“leverage” effect); • supports capacity building; • enable new forms of cooperation between Africa and Europe. | External factors | <ul style="list-style-type: none"> • complex rules and procedures which generated misunderstanding about partners’ roles and responsibilities; • lack of flexibility which delayed or hampered changes required by circumstances; • evaluation of the proposals put more emphasis on research excellence than on the potential impact of projects (to address local needs with capacity skills development and involvement of national actors); • duration of the projects (3 years) not conducive for the establishment of long-term partnerships and cooperation sustainability; • in-kind resources not considered as eligible; • does not support sharing of research infrastructures; • no requirement for the African Union to contribute to the funding of the scheme; • disconnection of the role of the call secretariat and of the coordination of the consortium not helpful; • main focus on research funding and less on integration of research and innovation. |
| | <ul style="list-style-type: none"> • international research collaboration encouraged to address societal challenges; • FNSSA priorities key for European and African | | <ul style="list-style-type: none"> • different levels of funding among partners not conducive to longer term cooperation; • reliance of African on external resources to |

countries;

- increased interest for multistakeholders' approach;
- private sector' willingness to cooperate in STI with a view to business development;
- interest of African partner institutions to network with institutions with extensive experience in scientific research and technological development;
- multilateral funding has greater potential for wider participation than bilateral funding mechanisms.

integrate into European teams/ projects due to limited national funding;

- heterogeneity in national funding regulations in support of research projects hampering synchronized release of funds and leading to disjointed research activities;
- need for partners to be able to rely on local scientific infrastructures;
- issue of the protection of intellectual property, especially for participants with less financial resources;
- significant impact of the Covid-19 pandemic on some activities, especially research mobilities.

The implementation of LEAP-Agri therefore highlights the added value of some features of the ERA-Net co-fund scheme, while pointing at some of its limits.

The main conclusion that can be drawn for that experience is that it enabled new forms of cooperation between Africa and Europe and the **co-funding mode had a leverage effect for agencies' participation**. The **future modes of funding need to be built on a long-term vision to ensure equal participation of countries and institutions**. It also implies to design **more user-friendly and flexible instruments** so that administrative and financial rules can better support R&I collaborative activities.

In that respect, the respondents to the survey provide some highly relevant insights into the most important characteristics of an effective cooperation between funders and researchers in FNSSA:

Key recommendations regarding horizontal and organisational aspects:

- Partners to commit to key values to foster spirit of collaboration and partnership: transparency, respect, trust, equity, collaboration and co-creation;
- Set up a well-established governance structure (secretariat) and common legal framework to ensure stability;
- Define clear rules of engagement with agreement on procedures and a real commitment from partners, possibly in a written form;
- Ensure effective and transparent communication, with more exchange of information and regular updates (for instance through regular reports by researchers about projects' state of play);
- Strengthen the capacities of the actors of the projects under execution;
- Include activities relating to sharing of experiences, results and valorisation/dissemination of results.

Key recommendations regarding financial aspects:

- Ensure stable funding mechanism over time to create a long-term perspective;
- Keep the funding mechanisms understandable even if different partners are involved;
- Take into account the variation of costs among countries and the fluctuation of currencies in the funding mechanism;
- Facilitate the recognition of in-kind contributions (researchers and research-infrastructure, networks, contacts to practice) as eligible contribution in research instruments and calls;
- Foresee the possibility to extend funding in case of positive results;
- Exchange and learn about funding instruments, such as those of foundations and civil society organizations or other innovative financing mechanisms such as 'research tax credit';
- Encourage the involvement of investment banks.

Key recommendations regarding research aspects:

- Define a common R&I agenda, including goals and roadmaps;
- Promote research that has a potential for impact (develop a theory of change and a monitoring mechanism);
- Identify research topics that are aligned to national priorities in a regional / international context;
- Ensure respect for the freedom of the researcher and foresee peer review evaluation;
- Expand the research fields of intervention and foresee different instruments, such as staff exchange or twinning activities, mobility programmes for researchers, joint-labs and sharing of research infrastructures, etc;
- Extend research programmes to higher TRL and closer to users;
- Include funding for coordination, research uptake and MEL in the budget of the programme;
- Envisage provision of funds for open access publications, for investment in (joint or twinned) high quality research infrastructures;
- Clarify Intellectual Property aspects to all applicants.

Key recommendations regarding the involvement of other stakeholders:

- Promote multi-stakeholder co-creation of projects by strengthening the links with the end users (communities, farmers' organizations, civil society, local authorities), design the projects around their needs, translate them into scientific questions and collaborate with the entrepreneurs/innovators;
- Involve private sector in the definition of topics in targeted "solution driven" calls;
- Envisage to have different calls focusing on different aspects, such as research calls, academia-industry partnership calls, calls on basic research, in an effort to cover a broader range of interests and priorities;
- Foresee awareness raising and communication activities to facilitate stakeholder engagement (creation of public platforms, organization of innovation meetings, match-making events) and promote participatory approaches, for instance through living laboratories, which are promising forms of action-research interaction piloted by civil society partners and involving researchers;
- Establish a cooperation platform that would facilitate the continuous engagement between partners, support institutionalised dialogue between science and end-users of science and would allow to present research results in a way which is understood by actors of practice and policy-making;
- Envisage the production of policy briefs that would complement scientific publications and facilitate policy take up by decision makers.

While those key elements should help propose innovative funding models, this report also points at the fact that the exploration of alternative modalities of collaboration and partnership outside of joint calls would require further engagement. Most participants indicated their interest to participate in such a process and suggested that this could be done through brainstorming sessions which would bring together interested parties, under the mandate of an overarching network or through a conference focussing on innovative funding models including social corporate business actors, investment banks, crowd funding platforms.

In this sense, this report can be seen as a step in a wider process and complements Deliverable 6.1³ which explored options for the development of a medium to long-term joint research and innovation EU-AU agenda in the field of FNSSA. These two complementary reports underline the joint interest of researchers and funders

³ Albergel Jean, Elarabi T., Eldallal N., Elouga N., Gevaert M., Haffner S., Knipschild H., Mallet B., Matshediso T., Reigney Frédérique, Sellami M., Sers J.M., Tamboura H., Troeger K. (2020). Development of a medium to long-term joint research and innovation agenda : feeding the AU-EU long-term partnership in research and innovation on food and nutrition security and sustainable agriculture (FNSSA) : deliverable 6.1 by LEAP-Agri WP6. Montpellier : IRD, 79 p. multigr.
Identifiant IRD : fdi:010080159



in strengthening the bi-continental partnership on FNSSA, which has been prioritized by the EU-Africa high-level policy dialogue (HLPD) on science, technology and innovation (STI) with the adoption, in 2016, of the roadmap for the EU-Africa Research and Innovation Partnership on FNSSA. Since then, the relevance of this theme has been highlighted by the United Nations World Food Summit (2021) which stressed the importance of research partnerships at the international level to achieve the objectives of sustainable development.

4. Annex I Questionnaire

1- Feedback based on the ERA-Net Co-fund LEAP-Agri experience

This section is about identifying the strengths and weaknesses of the ERA-Net Co-fund mechanism based on the actual experiences of funding or non-funding partners of the LEAP-Agri project, both at programming level and implementing level. Your experience of this instrument, even if we know that it will no longer exist under the next EU research and innovation programme, will be beneficial in learning the right lessons from the past. Try as much as possible to answer all the questions asked because the more testimonials we have, the more reliable and substantial the results will be.

1.1 Based on your experience as partner of LEAP-Agri, what do you think about the ERA-Net Co-fund mechanism? For example, which advantages and disadvantages, benefits and shortcomings do the ERA-Net Co-fund mechanism have, particularly in view of reinforcing AU-EU R&I cooperation in the field of FNSSA as you see it? Please make 1 to 2 statements minimum.

1.2 How would you describe the importance of EU funding ('Top-up') to LEAP-Agri projects, that is to say if funding agencies had not received the Top-Up to fund national teams?

- The project(s) would have gone ahead as planned using alternative sources of funding
- The project(s) would have been delayed whilst alternative sources of funding were sought
- The scope of the project(s) would have been reduced to take account of the reduced funding available
- The project(s) would not have gone ahead at all

1.2.a (Further comments) on how would you describe the importance of EU funding ('Top-up') to LEAP-Agri projects, that is to say if funding agencies had not received the Top-Up to fund national teams.

1.3 To what extent are you satisfied with the setting of the LEAP-Agri call?

| | Not at all | To some extent | To a large extent | Fully | I don't know |
|--|------------|----------------|-------------------|-------|--------------|
| The LEAP-Agri call priorities correspond to the objectives and priorities of my organization | | | | | |
| The LEAP-Agri call priorities were sufficiently discussed among consortium members | | | | | |
| The central call with call secretariat as the way to manage the call | | | | | |
| The LEAP-Agri call secretariat Assisting consortium building and partnering | | | | | |
| The eligibility criteria for applicants to be appropriate and non- exclusive (to allow for broad participation from research and practice, including the private sector) | | | | | |

1.3.a (Further comments) In your opinion, to what extent did the setting of the LEAP-Agri call priorities seem adequate to your organizational priorities?

1.4 In your opinion, did the evaluation procedures of the Leap-Agri proposals correspond to what you would expect if you had to fund R&I projects based purely on your institutions' evaluation criteria and procedures? **(check one box)**

| | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Not at all | To some extent | To large extent | Fully | I don't know |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

1.4.a (Further comments) In your opinion, did the evaluation procedures of the Leap-Agri proposals correspond to what you would expect if you had to fund R&I projects based purely on your institutions' evaluation criteria and procedures?

1.5 Based on your experience did the ERA-Net Co-fund mechanism allow sufficient flexibility (i.e. was it possible to make changes and adapt the LEAP-Agri project to respond to changing needs or conditions, e.g.: time extension, budget transfers, coping with extreme situations like the pandemic, etc.)?

Briefly describe

1.6 In your opinion, to what extent did the ERA-Net Co-fund mechanism. (check one box per line):

| | Not at all | To some extent | To a large extent | Fully | I don't know |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Enable new forms of cooperation between Africa and Europe | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Reinforce existing cooperation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Facilitate research mobility | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Support sharing research infrastructures | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Support capacity building and involvement of target groups | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Promote lasting collaboration between funding agencies | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Strengthen national policies and programmes | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

1.6.a (further comments) From your perspective, which benefits did the ERA-NET Co-fund mechanism generate?

1.7 How satisfied are you with the collaboration among the LEAP-Agri consortium partners? How could the collaboration be improved? **Please make one to two statements minimum.**

1.8 In your opinion, to what extent did the ERA-Net Co-fund mechanism promote cooperation sustainability? What hampers and what facilitates the promotion of sustainable cooperation independent of EC-funding (among funders and researchers, among research funding organizations, sustained sources of funding)? Please make one to two statements minimum

2. Identifying critical success factors for supporting joint FNSSA R&I activities



The aim of this section is to capture the critical success factors that should guide the development of alternative joint R&I support mechanisms complementary to joint calls between public research funders to strengthen cooperation.

Lessons learned from prior initiatives such as LEAP-Agri but also other (transnational, bi- or multi-lateral) schemes in place are useful as some of them already work very well but are not necessarily credited to the EU-AU R&I partnership on FNSSA.

2.1 Please, briefly explain the three most important desirable characteristics of an effective cooperation between funders and researchers to jointly address relevant problems related to FNSSA.

2.2 What are your experiences with and/or perceptions of other transnational, bi or multi-lateral funding (cash or in-kind) instruments and which advantages do those offer? **Please explain briefly few interesting features**

2.3 In your opinion, which funding (cash or in-kind) instruments could enable a project/initiative to leverage additional financing from other funding partners? What hampers and what facilitates leveraging additional financing?

2.4 How could the inclusion of all relevant actors, especially those currently less represented in the EU-AU R&I partnership on FNSSA, less well endowed by financial resources and less well connected from Africa be improved?

2.5 What are your ideas about how to better link researchers, innovators and entrepreneurs, as well as end-users (e.g. multi-stakeholders approach)?

2.6 What are critical conditions to keep in mind when making improvements/changes to funding mechanisms for joint transnational R&I projects?

3. Questions and suggestions for developing alternative funding instruments and partnering modalities to conduct more efficiently joint R&I activities

This section aims to identify specific solutions to set up or strengthen existing instruments of effective cooperation outside the usual framework of joint calls. We believe that there is a whole range of instruments and possibilities, such as commissioned work/targeted funding, enabling and facilitation mechanisms (non-financial instruments as such) which are not sufficiently taken into account while they may also contribute significantly to the dynamics of R&I cooperation on FNSSA***.

***Indeed a number of resource pools are required in addition to finance, particularly in the kind of research support actions we perform. These are resources that all partners can bring to the table. They include in-kind contributions of time and research infrastructure, cost-saving possibilities for sub-contracting services, experience and knowledge, networks and contacts, political buy-in, strategic geographic position and many more.

3.1 When developing and designing new funding instruments, what are the most important aspects to focus on? **select from the list (multiple ticks possible)**

- Specific discipline
- Specific topic/challenge (may include several disciplines)
- General institutional collaboration
- Degree of flexibility
- The potential for impact
- Other

3.1.a (add further aspects) When developing and designing new funding instruments, what are the most important aspects?

3.2 Please rank the relevance of different components of funding mechanisms listed, supporting effective R&I activities:

| | Not at all relevant | To some extent | To a large extent | Fully | I don't know |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Facilitating the integration of project-specific research missions/ assignments | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Planning and joint implementation of joint or complementary research projects on themes of common interest | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Exchange or hosting of scientific and technical personnel for the implementation of joint programmes including support for their living costs | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Training of researchers and technicians as well as trainees, study missions and other forms of staff development | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Exchange of scientific, technical and educational information and funding for mobility / transportation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Joint organization of seminars, colloquiums and conferences | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Publication and joint implementation of research results | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Joint response to national, regional or international calls for tenders and search for national or international funding | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Transfer of scientific material and equipment for research or information purposes in different locations | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Any form of cooperation approved by the Parties | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

3.2.a (further comments) Which aspects and components of funding mechanisms are of relevance for supporting effective R&I activities

3.3 Do you have any other suggestions for alternative collaboration and partnering modalities? For instance, bringing the private sector as an alternative vehicle for the accomplishment of STI cooperation objectives.

3.4 How could alternative instruments be considered and acknowledged as significant contributions to the R&I cooperation on FNSSA?

3.5 In your opinion, what would be suitable key performance indicators to measure the effectiveness of new funding instruments in view of reinforcing FNSSA R&I cooperation?

3.6 Would you be interested to further engage in exploring alternative collaboration and partnering modalities



apart from joint calls? Yes No

3.6.a IF YES: What are your suggestions on how to design such an exploration process? What will be important to keep in mind? (For instance better consider the contributions of each partner, in cash and in kind).

3.6.b IF NO: What are the reasons to not be interested in joining a process of exploring alternative collaboration modalities?

3.6.b2 Do you think that already available facilitation mechanisms sufficiently cover existing needs?
Supplementary Comments

3.7 Do you have comments about this questionnaire?

3.8 If you want to state from which institution you are providing this feedback, please enter the name of your institution

End of the Questionnaire