Agropolis Fondation 2022 Call for Proposals (CfP)
[Ref. CfP 2202]

In partnership with

"Doctoral Fellowship"

TERMS OF REFERENCE

I- Context and background

In 2019 Agropolis Fondation launched the call "Agriculture-based solutions" with the overall objective of promoting agro-ecological transition for tomorrow's agricultures notably through its 3 crosscutting axes, namely:

- Axis 1: Agriculture and climate change: adaptation and mitigation;
- Axis 2: Conservation and sustainable use of biodiversity;
- Axis 3: Responsible production and consumption.

Since then, the COVID-19 crisis and the recent events in Ukraine have further emphasised the need to review agricultural models. The COVID-19 crisis has indeed highlighted the consequences of biodiversity loss[1], environment degradation and accelerated urbanisation[2]. Therefore, there is a need to jointly consider human, animal and environmental health[3]. More recently, the war in Ukraine has underlined the deep dependence of some Southern populations on cereals and other inputs produced in Europe. In this context, agriculture, forestry and other land-use activities are seen as both the main drivers of climate change[4] and biodiversity loss[5] and the basis for solutions based on the relocation of production and the development of agroecology[6] at many levels on spatial, temporal and jurisdictional scales[7].

Thus, global agriculture policies are now facing major challenges: nourishing and ensuring a good health to an increasingly urbanized world population that is expected to grow by nearly 2 billion by 2050, while responding to the major challenges of climate change and biodiversity loss. The most

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[1] Lajaunie, C., & Morand, S., 2021, Biodiversity targets, SDGs and health: a new turn after the coronavirus pandemic? *Sustainability*, *13*(8), 4353.

[2] Thoradeniya, T., & Jayasinghe, S., 2021, COVID-19 and future pandemics: a global systems approach and relevance to SDGs. *Globalization and Health*, 17(1), 1-10.

[3] The "One Health" concept summarises an idea that has been known for more than a century: animal health, human health, and environmental health are intrinsically intertwined and interdependent. The health of one affects the health of all. We envisage and implement One Health as a collaborative global approach to understanding and managing risks for planetary health and encouraging a more sustainable ecosystem balance (https://www.oie.int/en/what-we-do/global-initiatives/one-health/) Caron, A., Morand, S., Pedrono, M., Garine-Wichatitsky, M. D., Chevalier, V., ... & Binot, A., 2016, One Health and EcoHealth: the same wine in different bottles ? *Infection Ecology & Epidemiology*, 6(1), 30978.

[4] The latest Inter-governmental Panel on Climate Change (IPCC) report (https://www.ipcc.ch/report/srccl/) showed that agricultural, forestry and other land-use activities accounted for about 23% of total net anthropogenic GHG emissions.

[5] The last Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) report explained that more than a third of the world's land surface and nearly 75% of freshwater resources are now devoted to crop or livestock production (https://ipbes.net/news/Media-Release-Global-Assessment).

[6] Altieri M.A., Nicholls C.I., 2020, Agroecology and the reconstruction of a post-COVID-19 agriculture, *The Journal of Peasant Studies,* vol 47(5), 881-898

[7] Cash, D. W., W. Adger, F. Berkes, P. Garden, L. Lebel, P. Olsson, L. Pritchard, and O. Young. 2006. Scale and cross-scale dynamics: governance and information in a multilevel world. *Ecology and Society* 11(2): 8. [online] URL: http://www.ecologyandsociety.org/vol11/iss2/art8/

vulnerable populations are paying the highest price for these global transformations (climate change, strong dependence on globalisation). At the same time, there is a growing consensus on the importance of using the "food system" approach to address various segments of the food production, transformation and consumption[8]. Food systems also face increasing societal demand to become more responsible by reducing negative externalities on the environment and human health, among others. In particular, it is a way to better understand how the aforementioned crises are challenging the notions of food democracy, food insecurity and food systems inter-dependence in a globalised world.

Scientists play a key role in various reflections, discussions and actions which contribute to addressing the challenge of agro-ecological transition by promoting practices and solutions which conserve natural renewable resources and lead to more desirable socio-ecosystems. One way of achieving this is mobilizing research, higher education and training towards addressing the Sustainable Development Goals (SDGs). The aim is not only to show and study the ongoing transformations but also to develop agriculture-based solutions to address the SDGs and the positive and negative nexuses between them:

1) Veer away from conventional or high-input agriculture towards a more sustainable-oriented model, for a stronger contribution to the agro-ecological transition;
2) Support scientific excellence and training to fill Knowledge-Action Gaps and co-design desirable solutions with stakeholders in agriculture;
3) Address the Sustainable Development Goals (SDGs) in a crosscutting perspective and not in silos[9];
4) Promote new and/or scale up good practices (nature-based solutions, ecological intensification) and approaches for addressing the complex interactions of SDGs (e.g. sustainability science[10], transformative science[11], integrated, interdisciplinarity or participatory science, problems-oriented approach and solutions-driven approach).

II- Objectives of the call

The first objective of the call is to support young scientists by funding their PhD. Secondly, research teams are encouraged to apply and position themselves in at least 1 axis and, if possible, the nexus of 2 or 3 axes by: 1) identifying the best axis representing their field of research; 2) interrogating the stakes affected by their research work; and 3) interrogating the interactions and potential contradictions between SDGs and the Fondation's three cross-cutting axes.

Through the present call, Agropolis Fondation also aims to reinforce its network in priority on already addressed research topics and the link with ongoing projects funded by Agropolis Fondation, if not mandatory, would be deeply considered.

III- Thematic coverage

The scope of this call is to generate proposals addressing the various themes identified under each of the three crosscutting axes, which are fully aligned with Sustainable Development Goals, particularly SDGs 12, 13 and 15.

Axis 1: Agriculture and climate change: adaptation and mitigation

Under this axis, the aim is to understand the effects of climate change on agricultural systems (from genes to landscapes, from local to international levels, and from short-term to long-term) and to

[8] Mbow, C., C. Rosenzweig, L.G. Barioni, T.G. Benton, M. Herrero, M. Krishnapillai, E. Liwenga, P. Pradhan, M.G. Rivera-Ferre, T. Sapkota, F.N. Tubiello, Y. Xu, 2019, Food Security. In: *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems*.

[9] Wang, C., Guan, D., & Cai, W., 2019, Grand Challenges Cannot Be Treated in Isolation. *One Earth, 1*(1), 24-26. doi:10.1016/j.oneear.2019.08.005

[10] « Sustainability science is problem-driven, interdisciplinary scholarship that seeks to facilitate the design, implementation, and evaluation of effective interventions that foster shared prosperity and reduced poverty while protecting the environment. It is defined by the problems it addresses rather than the disciplines it employs. It thus draws as needed from multiple disciplines of the natural, social, medical and engineering sciences, from the professions, and from the knowledge of practice *». (Harvard Univ., 2008)*

[11] "A specific type of science that does not only observe and describe societal transformation processes, but rather initiates and catalyses them. Transformative science aims to improve our understanding of transformation processes and to simultaneously increase societal capacity to reflect on them" in: Schneidewind U., M. Singer-Brodowski, K. Augenstein, F. Stelzer, 2016, *Pledge for a Transformative Science: A Conceptual Framework*. Wuppertal Papers No. 191. Wuppertal Institut, p. 6.

explore/propose adaptation strategies and mitigation measures. Among the key issues, the following themes may be the subject of research and training proposals:

- Interactive biotic and abiotic stresses on plants, animals and other living organisms, and risks associated with political, social and economic factors;
- Socio and agro-ecosystem co-viability and co-benefits, synergies, tensions, trade-offs;
- Vulnerability and resilience of territories: tools, practices, strategies, policies;
- Enhanced crop-livestock integration.

Axis 2: Conservation and sustainable use of biodiversity

Under this axis, the aim is to document and analyse the measures and policies that support the conservation, and promote sustainable use of biodiversity in various agroecosystems. Among the key issues, the following themes may be the subject of research and training proposals:

- The links between biophysical functions and biodiversity: study of the microbiota, crop associations, wild, domestic, improved and hybrid biodiversity, etc.;
- Agrobiodiversity through its ecological, economic and sociocultural functions;
- Studies including controlled conditions, field experiments and real agrosystems;
- Interactions between biodiversity, food security and plant health;
- Policies (from conservation to exploitation, from local to international scales) on practices and territories: land tenure, use and access rights, protected areas, sustainable use/management, biodiversity offset, Payment for Ecosystem Services, etc.

Axis 3: Responsible production and consumption

Under this axis, the aim is to contribute in ensuring sustainable food systems by moving towards more responsible production and consumption. Among the key issues, the following themes may be the subject of research and training proposals:

- Food environments: food landscapes, food deserts, food swamps;
- Co-designing agro-ecosystems with stakeholders (e.g., farmers, policy-makers, experts, etc.);
- Governance of sustainable food systems (certification and quality of production, public regulations, role of companies, coordination of sectors);
- Bio-economy in circular economy in food and non-food system, to include, among others efficient waste and resource management;
- Animal and/vs plant-based proteins (food transformation);
- Innovation and socio-ecological transformation.

IV- Eligibility

1. A submitted proposal should tackle at least one of the crosscutting axes presented in Section III.

2. The lead proponent should be from one of the research units belonging to the Fondation's scientific network (Labex Agro)[12].

3. **In the case of a proposal that is only partially funded through this CfP, the proponents must have obtained the funding of the other part of their project and provide all the required documents.**

4. Scientists from research units or institutions outside of the Fondation's scientific network can participate as partners.

5. A scientist can coordinate only one project funded under this specific CfP.

V- Project types, cost and duration

6. Up to **€900k** are available for this CfP complemented by **€120k from the SEARCA** which will fund two types of projects presented below:

[12] For the list of the Fondation's research units, please visit http://www.agropolis-fondation.fr/Unites-de-recherche. Interested parties are highly encouraged to contact directly the concerned research unit(s) in writing.

a. **Half Doctoral Fellowship Grant** (up to €62.5k)
b. **Full Doctoral Fellowship Grant** (up to €125k)

7. **The PhD student must spend at least 12 months in France during the three-year thesis.**

8. All the **selected projects must start before the 1 October 2022 and end before 30 September 2025 at the latest.** Therefore, the identification of the potential PhD student before the deposal of the project would be appreciated.

9. **The Fondation is partnering with SEARCA in co-supporting two PhD fellowships grants** (based on a 50:50 co-funding between AF and SEARCA). For this category, applications must meet the following conditions and eligibility:

    a. Research proposal (i.e., PhD research topic) must be developed and submitted jointly by a French scientist/professor belonging to Agropolis Fondation's network and a Southeast Asian scientist/professor[13] from any of the five Southeast Asian universities covered by this CfP[14].
    b. A French or Southeast Asian scientist/professor can co-coordinate/co-supervise only one project funded through this Call.
    c. The two co-supervisors must both agree (or have agreed) to co-supervise PhD research and must possess the required qualifications (e.g., HDR or an agreement by the relevant Ecole Doctorale in the case of French scientists/professors) to supervise a doctoral student.
    d. The two co-supervisors must have already identified a PhD student who will have completed the first part of his/her doctoral training (including the required level of English).
    e. The research topic clearly contributes to reinforcing French-Southeast Asian scientific cooperation.

If of equivalent scientific quality, preference will be given to a proposal that enables first-time partnership between research teams.

VI- Eligible expenditure

10. Eligible costs for each funding category are restricted to expenditures directly related to the project, such as:
    - PhD student recruitment costs
    - Consultancies and services subcontracted specifically for the project
    - Limited consumable items[15]
    - Publication and dissemination costs, including cost related to organization of events
    - Travel expenses
    - Overheads (max 8% of the grant amount for each partner) …

11. No more than 30% of the total grant should be transferred to partners outside of the Fondation's scientific network (Labex Agro), to external service providers or to consultants.

12. Non-eligible costs include items such as:
    - Expenditures linked to internal services
    - Salaries of staff that are not specifically recruited for the project
    - Expenditures linked to existing infrastructure

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[13] Click here to access a non-exhaustive list of potential Southeast Asian partner researchers/scientists/faculty members.

[14] Which are: Institut Pertanian Bogor (IPB) in Bogor, Indonesia; Universitas Gadjah Mada (UGM) in Yogyakarta, Indonesia; Kasetsart University (KU) in Bangkok, Thailand; Universiti Putra Malaysia (UPM) in Serdang, Selangor, Malaysia; University of the Philippines Los Baños (UPLB) in Los Baños, Laguna, Philippines.

[15] Only consumables related to the project are eligible. As stipulated in the ANR rules, « *only depreciation rates corresponding to the duration or the project are eligible » for the purchase of materials and equipment*.

- Expenditures already funded through other sources

All the expenses must comply with ANR's Financial Regulations (IDEX).
(https://anr.fr/fileadmin/documents/ia-rf-idex.pdf).

13. The project's full cost must be presented including counterparts from the applicants and their partners in the Financial Annex.

14. In the case of a proposal that is a standalone project contributing to a larger project or programme, the proponents should provide all elements concerning the objectives, organization and overall funding of the larger project (i.e., acquired, submitted, and/or planned funding request).

VII- Evaluation process and criteria

15. Eligible proposals shall be evaluated by external experts and shall be reviewed by the Fondation's Science Council (SC) on the basis of the criteria below:
    - Adequacy with the call and notably the link with ongoing research projects funded by Agropolis Fondation
    - Scientific quality, overall coherence and feasibility (i.e., clarity of objectives and expected outputs, robust methodology, proposed timetable, project leadership, etc.)
    - Budget adequacy
    - Originality and innovativeness
    - Quality of partnership and collaboration (i.e., role of partners in the project conception, implementation and management; potential involvement of actors from the South; potential collaborations with other Labexes in Montpellier or elsewhere; clarity and fairness of data and knowledge sharing, exchange and management mechanism across partners)
    - Structuring effect of the project within the Labex Agro community and complementarities with existing initiatives
    - Visibility and international dimension and potential benefits for developing countries (e.g., accessibility, relevance of the topic, etc.)
    - Project trajectory (i.e., strategic positioning and ambition) and sustainability (how will
    - Project's potential leverage effect
    - Clarity of project management and coordination

VIII. Submitting proposals, timetable and requirements

16. All submitted proposals must be written in English.

17. Proponents should submit a duly completed Application Form, including applicable annexes.

18. All proposals must be submitted electronically, by the specified deadline, via the link: https://agropolis.jotform.com/assign/221184513704348/210936356109052

19. Agropolis Fondation shall not be held responsible for submissions not received due to technical problems preventing the transfer of proposals electronically.

20. By submitting a proposal, the proponents assure that they have obtained the due approval of all the participants involved in the project. The application form should bear the signature of the head of the research unit/institution of the (co-) leaders (use the template provided in the annex).

21. Please note that all proposals received under this CfP shall be archived and could be used by Agropolis Fondation for analysis in the context of its activities. Except for the Abstract, a proposal shall not be shared with a Third Party without prior consent of its proponent.

22. If the project is selected, the project leader commits to the following, in addition to other contractual obligations to be reflected in the Grant Agreement: (a) Cite the support of Agropolis Fondation through Labex Agro in any communication coming from the project (scientific publications, oral communications, book chapters, etc.)[16]; (b) provide the Fondation with all communication materials it may need; and (c) ensure a regular and quality interaction with the Fondation team.

23. Below is the timetable for this Call:

06 Mai 2022	Opening of the Call for Proposals
21 June 2022, 11.59 PM	Deadline for the submission of proposal *Late and/or incomplete submissions will not be accepted.*
July 2022	Publication of results (selected proposals)

[16] *« Ce travail a bénéficié d'une aide de l'état générée par l'agence nationale de la recherche au titre du programme "Investissements d'avenir" portant la référence ANR-10-LABX-001-01 Labex Agro et coordonnée par Agropolis Fondation / This work/project was publicly funded through ANR (the French National Research Agency) under the "Investissements d'avenir" programme with the reference ANR-10-LABX-001-01 Labex Agro and coordinated by Agropolis Fondation »)*