TERMS OF REFERENCE 2022 CALL

"Innovations to improve the sustainability and resilience of farms to the impact of climate change in Latin America and the Caribbean"

BID Banco Interamericano de Desarrollo

IICA

Ministry for Primary Industries Manatū Ahu Matua

GLOBAL RESEARCH ALLIANCE ON AGRICULTURAL GREENHOUSE GASES

FONTAGRO

SECTION I. BACKGROUND

1.1 Global challenges in agri-food systems and the sustainable management of natural resources in the context of climate change by 2050. In the coming decades, one of the greatest challenges facing humanity will be how to meet the growing food needs of the population and, at the same time, guarantee the sustainability of natural resources and resilience to climate change. It is estimated that by 2050 the world population will have exceeded 9,000 million people and the middle class will constitute more than half of the total[1], so production will have to increase by 70% to respond to new demands. At the same time, in many regions competition for the use of water, energy and arable land will intensify as a result of climate change. Agri-food systems will face extreme events such as heat waves, droughts and floods, which will impact on production potential and food distribution and even on the generation of food waste, which today ranges alarmingly from 30% to 50% of what is produced. FAO[2] estimates that climate change will be one of the constant challenges for the agricultural sector, which will require a transformation towards more resilient systems and sustainable territories, including early interventions in supply chains to reduce losses. While the Green Revolution focused on increasing agricultural productivity to strengthen food security, in the future the challenge lies not only in maintaining and enhancing those levels, but also in focusing on the nutritional improvement of the population's diet and their well-being. The strain on the agri-food system will be increasingly significant, establishing new, more complex and more tightly interconnected challenges that will make a paradigm shift necessary to successfully address them.

1.2. Challenges 2020-2025, productivity, sustainability, and resilience of farms in the face of climate change. Globally and especially in LAC, there are still large productivity gaps in agricultural and agrifood systems. These differences arise from asymmetries in the generation and adoption of technologies appropriate to their scale, enabling them to adapt to and mitigate the effects of climate change[3,4], take advantage of available financing, and gear their activities to market demands. In this context, the coming years will require knowledge and innovations that facilitate technological change on farms at all scales, with emphasis on specialization, diversification, and sustainable intensification. This requires a systemic approach and the cooperation of local institutions (universities, private sector, non-governmental organizations) to facilitate these changes[5,6]. In this sense, it is essential to promote alliances between producers and public and private research and extension agencies, especially when they do not have access to information on the benefits of technologies or the organizational capacity to take advantage of them[7,8] . FONTAGRO will support the co-financing of initiatives that increase farm productivity and efficiency in a sustainable manner, improving producer income and profitability, with lower input use, low environmental impact, and positive effects at the territorial level. The focus will be on proposals tailored to the scale as well as the social and economic characteristics of the producer[9], including effective extension and transfer processes to improve the implementation rate[10]. Likewise, the diversification of production will be encouraged, focusing on the consumption of balanced diets[11,12].

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1.3 Urbanization, agri-food systems and territorial development. Urbanization is a growing phenomenon worldwide, and Latin America and the Caribbean (LAC) is expected to reach 83% of the total world population in 2030[13]. Beyond the challenges that megacities entail, this phenomenon is an opportunity to reflect on the ways small rural towns could be transformed into cities of various sizes, where a diversity of agricultural and other extra-sectoral activities might be combined, as well as improvements in income and quality of life could be promoted. All these advances generate variations in the population's diet and impel changes in value chains and in the management of agribusiness associations, which may identify new market segments and niches and increase added value. This process has already manifested itself throughout the region since the 1990s with the creation of small- and medium-sized companies that provide harvesting, processing and packaging services, among many others, and that have become drivers for family farming, which in LAC includes some 15 million units with access to 400 million hectares. These prospects make it essential to find new alternatives for adding value to this sector, while promoting comprehensive territorial development that takes into account environmental, human, economic, institutional and cultural resources. This vision requires large-scale processes often accompanied by specific policies, the participation of diverse actors and a multidisciplinary approach informed by science and technology; nevertheless, innovations that may prove scalable in time can be achieved at the community level[14].

1.4 Importance of added value and agribusiness management in Latin America and the Caribbean. The demographic transformations taking place in urbanization, income levels and diets types, among many others, and more recently the emergence of pandemics (such as COVID-19), have had an impact on regional and global agri-food systems. Changes in the technological, commercial, organizational, institutional, environmental and social contexts affect the performance of the various public and private actors that participate and interact in the value chains. Many of these chains, once mapped, register bottlenecks that must be resolved, to achieve greater efficiency, with fewer losses and less waste. Many of these challenges require new technologies and innovations that will help to connect producers and consumers, reduce transaction costs, facilitate access to market segments, create new products and services, and implement certifications, to name a few. The challenge is to develop agribusiness models that provide solutions while generating greater sustainability in the territory.

1.5 FONTAGRO supports the creation of Regional Public Goods[15] through the co-financing of innovation platforms. With this goal in mind, the organization is launching this call in order to identify the best project proposals whose results will generate concrete evidence of **"how to foster connected, efficient, sustainable and resilient farms through know-how, science, technology and innovation"**. Our aim is to co-finance initiatives whose potential impact will demonstrably improve the life quality of families, while promoting the development of sustainable and resilient agri-food and territorial models. The proposed innovations must be aligned with FONTAGRO's 2020-2025 Medium-Term Plan (MTP) and the Sustainable Development Goals (SDG).

SECTION II. ABOUT FONTAGRO

2.1 FONTAGRO was created in 1998 with the objective of establishing a sustainable financing mechanism for the development of agricultural technology in LAC, and a forum for the discussion of priority topics in technological innovation. Its purpose is to promote an increase in the competitiveness of the agri-food sector, ensuring sustainable natural resource management and poverty reduction in the region. It currently has 15 country members and two sponsors, the Inter-American Development Bank (IDB) and the Inter-American Institute for Cooperation on Agriculture (IICA), the former being its legal representative.

2.2 The 2020-2025 Medium Term Plan (MTP) has renewed FONTAGRO'S philosophy, defining its vision as "transforming agri-food systems through the use of knowledge so that they will be more inclusive and sustainable for the environment and society" and its mission as "leading regional articulation, cooperation and dialogue through the sustainable co-financing of public goods initiatives that will contribute to the knowledge and innovation of agri-food systems and to the improvement of the population's quality of life". Moreover, FONTAGRO fosters the values of integrity, solidarity, efficiency, transparency, and respect. The present call for projects is aligned with the three strategies proposed in the 2020-2025 MTP: (I) "Resilient and sustainable farm networks"; (II) "Sustainable production systems, agroecosystems and territories"; and (III) "Food, nutrition and health", as well as with the MTP's cross-cutting themes, which must be included in all initiatives to be co-financed.

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14. FAO. Landscape for life. Approaches to landscape management for sustainable agriculture. 2017. Enlace.
15. Operation Manual

2.3 FONTAGRO's co-financing is intended to establish and / or support cooperation platforms, leveraging resources from other agencies and participating institutions. To date, FONTAGRO has supported 167 projects and initiatives for a total investment of US$124.5 million, of which FONTAGRO has contributed US$25,6 million; other strategic partners, US$16.5; and project executing institutions, US$82 million as counterpart contributions.

2.4 FONTAGRO co-finances initiatives that generate agricultural Regional Public Goods (RPGs) for LAC, in which countries share challenges and opportunities for growth and development that are more efficiently addressed when institutions work in a collective, participative and cooperative manner. In this sense, the regional platforms promoted by FONTAGRO as well as the knowledge and lessons they generate are, in themselves, RPGs.

SECTION III. OBJECTIVE OF THE CALL

3.1 Objective. The objective of the call is to identify project proposals that provide concrete evidence of **"how to foster connected, efficient, sustainable and resilient farms through know-how, science, technology and innovation".**

3.2 Description. This call addresses strategy I of the 2020-2025 MTP, which seeks to increase the number of technologies and innovations with high potential for adoption and impact on the sustainability of farming systems, agroecosystems and the territory. To fulfil the objective of the call, initiatives must be based on prior and validated scientific knowledge, and must either promote new innovations or validate promising or successful existing ones.

3.3 Based on what is stated in the previous paragraphs and on the interests of FONTAGRO country members, of LAC and of potential co-financing agencies, the following are some examples of initiatives consistent with this call, which complement or combine technological, organizational and institutional innovations:

i. Climate change mitigation: innovations, technologies and/or agronomic management strategies that reduce net greenhouse gas (GHG) emissions and/or increase the sequestration of organic carbon in soils.

ii. Sustainable intensification of production systems, agroecosystems and management of local natural resources: innovations that increase productivity in a sustainable and environmentally friendly manner, promoting improved income and quality of life for producers, integrated management of farms in a network, strategic diversification of production, new mixed and complementary production models, implementation of agroecological practices, intelligent management of fertility, water and soil use, sustainable ecosystem and biodiversity management, and that demonstrate greater and better resilience of production systems.

iii. Sustainable territories: Innovations that demonstrate improved sustainability and resilience of agroecosystems, restoration of forests, landscapes and maintenance of natural capital, that increase the efficiency of water resource use and conservation, improve biodiversity conservation while exploring opportunities to develop new markets, increase value addition, generate inclusive agribusiness and business management models, traceability, blockchain, bioeconomy and circular economy strategies, disaster risk management, and that comprehensively promote territorial development and management.

SECTION IV. FINANCING

4.1 Amount of the Call. This call will be carried out with FONTAGRO's own resources and those of the Ministry for Primary Industries (MPI) of the Government of New Zealand. The total amount of the call for proposals is $1,600,000. FONTAGRO will co-finance up to four proposals for a maximum amount of $200,000 each and MPI will co-finance up to four proposals for a maximum amount of $200,000 each. MPI prioritizes funding of proposals corresponding to the thematic area in paragraph 3.3.i. and that demonstrate connections with the work of the Groups and/or Networks of the Global Research Alliance on Agricultural Greenhouse Gases. MPI prioritizes funding for proposals that include participation of public and/or private New Zealand institutions or stakeholders.

4.2 Counterpart. Institutions participating in the platforms must, individually or in partnership, co-finance the proposal by providing matching funds in cash or in-kind, or a combination of both. The minimum counterpart amount must be twice the amount requested from FONTAGRO or MPI.

4.3 Policies and Conditions. This solicitation is subject to the provisions detailed in the current FONTAGRO Operations Manual (MOP), IDB policies, and these Terms of Reference.

4.4 Additional financing sources. This call may obtain additional financing sources if, at the time of selecting final proposals, other agencies become interested in co-financing them, according to their regional priorities and / or other special conditions.

SECTION V. CONSTITUTION OF A REGIONAL INNOVATION PLATFORM (RIP)

5.1 Regional Innovation Platform (RIP). Existing or new Regional Innovation Platforms (RIPs) will be co-financed; such RIPs should be made up of public agents or public-private alliances that come together to design and implement a regional technical cooperation project in compliance with the terms of reference of this call.

5.2 RIP participants. RIPs should promote practices and / or institutional arrangements that promote the public and / or public-private entrepreneurial ecosystem and that create links between producers and science and academia actors. The latter must be identified and included in the initial presentation of the project's concept note. RIPs should connect the different actors with the final users or beneficiaries. For this, they must be consist in: (a) at least one public or private scientific research center; (b) direct beneficiaries who must be included in the testing or validation process; (c) an entrepreneur or entrepreneurial team (optional); and / or (d) other partner organizations (optional).

5.3 Administrative role of participants. As for the administrative implementation of the project, only one of the institutions should act as executing agency and, therefore, legally empowered to act as such and manage funds in United States dollars on behalf of the rest of the platform participants, who will act as co-executing agencies (if they receive funds from FONTAGRO) and optionally as associated organizations (if they participate with their own funds).

5.4 Technical role of participants. RIP participants must be multi- and interdisciplinary and demonstrate a multidimensional approach (productive-agronomic, social, economic, technological, environmental, and / or value-added, among others) consistent with the technology or innovation that is proposed for validation. As for the complementarity of technical functions, participants may be public, private, national, regional and / or international institutions.

5.5 General conditions regarding regionality. This call prioritizes the creation of platforms made up of partners from different regions and with different capacities and strengths in technical disciplines so that they will complement one another. The following are the defined regions: (1) Southern Cone, (2) Andean Region, (3) Central America, (4) Caribbean Region, and (5) extra-LAC region.

5.6 Particular conditions regarding regionality. FONTAGRO will co-finance proposals executed by public institutions or public-private alliances of at least two FONTAGRO member countries. This means that the activities to be carried out by the proposal must be implemented in at least those two member countries. Once this requirement has been fulfilled, other institutions from FONTAGRO non-member countries, though mandatorily from IDB member countries, and regional and international organizations will be allowed to participate as partner organizations with a facilitating or complementary role, and with their own resources.

5.7 Conditions regarding global regionality. Institutions from IDB non-member countries may participate by contributing their own funds to the RIPs; they may do so by signing an agreement either with the IDB — the legal representative of FONTAGRO — or directly with the platform institutions, in agreement with IDB / FONTAGRO.

SECTION VI. APPLICATION AND EVALUATION OF CONCEPT NOTES AND PROPOSALS

The submission and evaluation of projects is organized in two phases: PHASE I (submission and evaluation of project concept notes) and PHASE II (submission and evaluation of final project proposals).

PHASE I: SUBMISSION AND EVALUATION OF PROJECT CONCEPT NOTES

6.1 Call Launch. The call will be open from December 13, 2021 to April 8, 2022 at 3:00 PM (US Eastern Standard Time, Washington, D.C.). The relevant dates are listed in section VII.

6.2 Preparation of the concept note. A concept note is the summary presentation of the project proposal. Concept notes must be prepared in a participatory manner among the members of the RIP, in Spanish and according to the Instructions for the Concept Note Electronic Application Form, which can be accessed on FONTAGRO's website.

6.3 Submission of concept notes by means of the electronic form on FONTAGRO's website. Participants will apply for submission of their concept notes through an electronic form on FONTAGRO's website. The participant who will act as executing agency will be the one who registers the concept note, previously generating a username and a password. Each concept note will have a unique code assigned automatically. **Concept notes received at FONTAGRO by any other means or in any other format will not be accepted**.

6.4 Deadline. The deadline for submitting concept notes is **April 8, 2022 at 3:00 PM (US Eastern Standard Time, Washington D.C.)**. Submitting concept notes a few days before the deadline is recommended to avoid website congestion. **Concept notes received at FONTAGRO after the established closing date and time will not be accepted.**

6.5 Concept note external evaluation panel. FONTAGRO, with the support of its sponsors, will select a group of experts to form an external evaluation panel to review the concept notes submitted for this call. This panel will carry out the evaluation (Phase I) and will prepare a report recommending which concept notes may move on to Phase II.

6.6 Criteria for evaluating concept notes. The evaluation criteria for concept notes are described in FONTAGRO's current Operations Manual (OM) and in these terms of reference. In PHASE I, two evaluations will be carried out: i) an evaluation of compliance with the formal eligibility criteria, and ii) a technical evaluation of the concept notes.

I. Evaluation of formal eligibility criteria. The formal eligibility criteria are cited in FONTAGRO's OM (Table 3). Any concept note that does not meet at least one of these requirements will be disqualified. The concept notes that meet the above requirements will be evaluated on the remaining formal eligibility criteria of congruence, regionality, technical capacity and RIP articulation. The maximum execution period provided for the project will be 36 months.

II. Concept note evaluation based on technical criteria. Once the previous verification has been completed, concept notes meeting the formal eligibility criteria previously listed will be evaluated on the formal technical criteria detailed in the OM (Table 4). Once this evaluation is completed, the authors of concept notes that receive ratings equal to or greater than 75 points (on a 100-point scale) will be invited to submit full project proposals.

6.7 Notification of pre-selected concept notes. FONTAGRO will notify only submitters of pre-selected concept notes of the invitation to submit full project proposals. These pre-selected concept notes will be available on FONTAGRO's website as of May 16, 2022. In this way, if there are other institutions interested in participating in or contributing to the preparation of the final proposal, they could contact the platform leader, who on its behalf may accept or reject the offer of participation from other interested parties.

PHASE II: SUBMISSION AND EVALUATION OF FINAL PROJECT PROPOSALS

6.8 Preparation of final proposals. Final proposals must be prepared in a participatory manner with the members of the RIP, in Spanish and in accordance with "FONTAGRO Project Proposal Presentation Instructions", available on FONTAGRO's website. Final proposals must be prepared using the proposal form and submitted as Word files; tables should be included as Excel files.

6.9 Submission of the final proposal on FONTAGRO's website. Final proposals must be submitted through the same online system and in accordance with the Instructions. Final proposals will consist of two files: (a) the proposal form in a Word file, and (b) the supplementary information form in an Excel file. Final proposals received at FONTAGRO by other means or in other formats will not be accepted.

6.10 Deadline. Final proposals will be received until **August 8, 2022 at 3:00 PM (US Eastern Standard Time, Washington D.C.)**. Once received, proposals cannot be modified. **Proposals received after the established closing date and time or submitted by other means will not be accepted**.

6.11 Evaluation of final proposals. The external panel will evaluate final proposals according to the criteria mentioned in the OM (Table 5). The panel will recommend for funding proposals that have received a score equal to or greater than 75 points (on a 100-point scale).

6.12 Recommendation report. The panel will prepare a report recommending the co-financing of selected proposals and send it to FONTAGRO's BD. The BD will decide whether to approve the co-financing allocation. The BD's decision will be final and unappealable.

6.13 Interview with finalists. While considering a co-financing decision, FONTAGRO may request the finalists to attend a virtual or face-to-face interview to provide further information.

6.14 Notification of selected proposals. FONTAGRO's Technical Administrative Secretariat (TAS) will notify only the winners of co-financing decisions, both by email and on FONTAGRO's website.

6.15 Co-financing authorization. Finalists must incorporate all recommendations received from the external panel and make all necessary adjustments to their proposals within 30 days of the official selection notification.

SECTION VII. SCHEDULE

Phase I	**Dates**
Call Launch	December 2021
Call Opening (17 weeks)	December 13, 2021 to 8 April, 2022
Deadline for submitting concept notes	April 8, 2022
Evaluation of concept notes (5 weeks)	April 8 to May 13, 2022
Invitation to applicants to prepare final proposals	May 16, 2022
Phase II	
Development of final proposals (12 weeks)	May 16 to August 8, 2022
Submission of final proposals	August 8, 2022
Evaluation of final proposals (5 weeks)	August 8 to September 6, 2022
Board of Directors' decision and notification to applicants	October/November 2022

INFORMATION AND INQUIRIES

Administrative Technical Secretariat (ATS)

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GLOSSARY

Agtech: Innovations arising from the convergence of different disciplines and based on digital agriculture, life sciences and processes of physical transformation.

Entrepreneur: Agents capable of identifying scientific knowledge and transforming it into an innovation that provides a solution to a user or beneficiary; in addition, entrepreneurs are able to assess the potential for scaling a solution using its own complementary financing and services.

Innovation: Innovation is a participatory process by which individuals or organizations generate and/or use technological, organizational and institutional knowledge that is translated into new goods and services, and that, once appropriated by society, generates a social, economic, environmental and/or cultural benefit.

Institutional innovation: Changes in the rules that govern the relationships and interactions of agents in the chain and other public actors. Example: new norms, regulations, policies and public-private relations that facilitate the adoption of knowledge and technologies in a given context.

Multidimensional approach: Multiple-criterion methodology for analysing a topic. These criteria may be social, economic, technological, or environmental or any other factors related to the issue under study.

Organizational innovation: In organizations, transformational changes that entail the use of knowledge and jointly develop or improve economic or social products or processes. Example: inclusive, competitive and sustainable associations; small-scale producers' commercial organizations.

Participatory research: Research and/or extension method in which users participate in the definition of priorities, actively contribute throughout the process, and ultimately gain empowerment and ownership of the knowledge generated. Examples: farmer field schools; local innovation committees; farmers' research groups.

Technological innovation: Changes in practices and processes required to increase efficiency or quality in production and transformation in response to market demand. Example: introducing previously unknown water and soil management practices; obtaining new varieties or more productive breeds; using seed production techniques; employing machinery adapted to specific conditions.

FONTAGRO Member Countries: https://www.fontagro.org/en/who-we-are/organization/member-countries/