

CALL 2023

**SCIENCE, TECHNOLOGY AND
INNOVATION TO MAKE
AGRICULTURE AND FOOD
SECURITY MORE SUSTAINABLE
AND RESILIENT TO CLIMATE
CHANGE IN LATIN AMERICA
AND THE CARIBBEAN**

TERMS OF
REFERENCE



SECTION I. BACKGROUND

1. A challenging future. Over the coming decades, different challenges will test the response capacity and resilience of the world's agrifood system. Forecasts indicate that the world population will reach 8.6 billion by 2030 and that by 2050 it will exceed 9.5 billion¹. This growth in population and an increase in per capita income - meaning that more than half of the population will belong to the middle class - will bring changes in consumption patterns and the composition of people's diets. As a result, the agrifood system will once again face the challenge of increasing food production by 70%² to meet this new demand. However, this increase in production and demand will also have other priorities regarding nutrition and food security. Currently, agrifood systems produce approximately 11 billion tons of food each year³, in addition to many other products (non-food, but on the same productive base), such as natural fibers (32 million tons per year) and 4 billion cubic meters of wood. Primary production alone generates a quarter of the world's employment and more than half of that is in low-income countries.

2. Adaptation and mitigation to climate change, the search for sustainability and resilience of agrifood systems. While it is true that agricultural production increased in the second half of the 20th century, the current situation presents more significant challenges. One of the most significant is climate change's impact and variability, as well as energy cost, among others. Developing new knowledge, technologies, and innovations such as genetically improved seeds, new inputs, especially fertilizers, the increased adoption of irrigation systems and specialized machinery, and, more

recently, the internet and digitalization, have allowed for increased productivity and agricultural production. In some cases, however, this tremendous growth has brought about environmental effects on soil, water availability, and biodiversity⁴, making these the focus of developing new technologies that provide greater sustainability, resilience, and decarbonization potential to agri-food systems. Hence, a new environment for science, technology, and innovation is emerging⁵.

3. Agricultural production, food security and nutrition. Food security means ensuring society's access to safe and nutritious food, enabling it to meet its nutritional requirements and enjoy health and well-being. However, strengthening food security and nutrition has not always accompanied the remarkable growth of world agricultural production brought about in recent decades. Food security refers to concepts such as access to and availability of food that is safe, nutritious and contributes to health. In 2020, an estimated 9.3% of the world's population was undernourished (a condition in which a person's usual food consumption does not provide the amount of energy needed to lead a normal, active, and healthy life). This figure increased to 9.8% in 2021, resulting in approximately 702 to 828 million people who suffered from hunger⁶. Similarly, moderate or severe food insecurity (an indicator that reflects restricted access to food due to limited money or other resources) was estimated at almost 30%; in other words, one in three people was unable to eat a healthy diet. One of the reasons observed is the rising cost of healthy diets^{7,8}, coupled with persistently high levels of income inequality. In terms of nutrition and health connected to agrifood systems, about 150 million children under five years of age were stunted in the year 2020 (almost 80% of them in Central Asia and Sub-Saharan Africa), while 45.4 million suffered from acute malnutrition and 45.4 million were undernourished. In contrast,

¹ World population prospects: The 2017 revision: Key findings and advance tables. Working Paper No. ESA/P/WP/248. New York: United Nations, Department of Economic and Social Affairs, Population Division. https://esa.un.org/unpd/wpp/Publications/Files/WPP2017_KeyFindings.pdf.

² FAO, IFAD, UNICEF, WFP, and WHO (Food and Agriculture Organization of the United Nations, International Fund for Agricultural Development, United Nations Children's Fund, World Food Programme, and World Health Organization). (2017). The state of food security and nutrition in the world 2017: Building resilience for peace and food security. Rome: FAO.

³ FAO. 2021. FAOSTAT. New food balances. At: FAO. [online]. Rome. <http://www.fao.org/faostat/es/#data/FBS1>

⁴ World Economic Forum (2020), Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy.

⁵ UN (2018), The 2030 Agenda and the Sustainable Development Goals: an opportunity for Latin America and the Caribbean (LC/G.2681-P/Rev.3), Santiago.

⁶ FAO, IFAD, UNICEF, WFP and WHO. 2022. The State of Food Security and Nutrition in the World 2022. Repurposing food and agricultural policies to make healthy diets more affordable. Rome, FAO.

⁷ FAO, FIDA, OMS, PMA y UNICEF. 2021. The state of food security and nutrition in the world 2021. Transforming food systems for food security, improved nutrition and affordable healthy diets for all. Rome, FAO.

⁸ According to the World Health Organization, healthy diets protect against malnutrition in all its forms, including non-communicable diseases such as diabetes, heart disease and cancer, while ensuring each person's essential macro- and micronutrient requirements.

obesity affected 6% of children under five years of age (estimated to be around 39 million children). Meanwhile, adult obesity has continued to rise sharply since 2012.

4. Food situation in the region. Since 2015 the levels of hunger and food insecurity have increased in Latin America and the Caribbean. By 2020, it affected 9.1% of the population, which means that nearly 60 million people in the region are undernourished. When analyzed by sub-region, 16% of the Caribbean population, 10.6% of the Mesoamerican population, and 7.8% of the South American population did not meet their minimum energy requirements. Moderate or severe food insecurity stood at 40%, almost 10% more than in 2019, which translates into 257 million people in the region being unable to access a healthy diet⁹. On the other hand, the prevalence of stunting in children under 5 was 11%, well below the global average, while the wasting rate is only 1.3%. As for obesity, 7.5% of children in LAC were overweight in 2020. This rate has been increasing for the past 20 years and is higher than the world average. Finally, the most recent data (dating from 2016) indicates that almost a quarter of the adult population in LAC was obese, with Mesoamerica being the subregion with the highest prevalence and South America the lowest.

5. Sustainable Development Goals. In light of the above considerations, FONTAGRO's call for proposals aims to co-finance the generation of new knowledge, technologies, and innovations to meet the targets of the following [Sustainable Development Goals \(SDGs\)](#): [SDG #2 "Zero Hunger"](#), [SDG #12 "Responsible Production and Consumption"](#), [SDG #13 "Climate Action"](#), [SDG #15 "Life of Terrestrial Ecosystems"](#), and [SDG #17 "Partnerships to Achieve the Goals"](#). Therefore Strategy III: Food, Nutrition, and Health of FONTAGRO's Medium Term Plan 2020-2025 aims to increase the application of technologies and innovations with the potential for positive results and impact on food security, nutrition, and health. Increases in agricultural productivity and, therefore, in the supply of raw materials have been achieved through research, development, and innovation. However, there is still a need to improve their nutrient content and develop strategies to diversify the population's diet and ensure their adequate and equitable distribution. It is also essential to connect consumers with producers, educators, and health agents to raise awareness of the nutritional content of the foods available and the benefits of a balanced diet.

6. One Health. The pandemic caused by the Covid-19 virus and its link to zoonosis shows the importance of food safety. The concept of ["One Health"](#) should be applied, i.e., multi-sectoral and interdisciplinary collaborations at national, regional, and international levels, to achieve one health, recognizing the interrelationship between people, animals, plants, and the environment. FONTAGRO seeks new critical strategic alliances with other key public and private stakeholders to achieve these goals.

7. FONTAGRO supports the creation of Regional Public Goods through the co-financing of innovation platforms. To this end, it is launching this call aimed at identifying the best project proposals whose results generate concrete evidence of "how science, technology and innovation can contribute to a more sustainable agriculture and food security that is resilient to the effects of climate change in the countries of the region. The aim is to co-finance initiatives that, through their potential impacts, demonstrate improved productivity in food production, improved quality of the food produced and nutritional content, while promoting the development of sustainable territorial models in the region, with waste reduction and the promotion of circular economy and bioeconomy. The proposed innovations must be aligned with FONTAGRO's Medium Term Plan (MTP) 2020-2025 and the Sustainable Development Goals (SDGs).

SECTION II. ABOUT FONTAGRO

8. [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. To date, FONTAGRO has supported more than 178 projects and initiatives, representing a total investment of US\$130 million, of which US\$39 million (37%) has been contributed by FONTAGRO and other strategic

⁹ FAO, FIDA, OPS, WFP y UNICEF. 2021. Latin America and the Caribbean - Regional overview of food security and nutrition 2021: statistics and trends. Santiago de Chile, FAO.

partners (IDB, CGIAR-World Bank, AECI, Governments of Korea, Japan and New Zealand, among others); and the rest has been contributed as counterpart funds by the project executing institutions.

9. **FONTAGRO** co-finances initiatives that generate Regional Public Goods (RPG) for LAC. FONTAGRO and its sponsors promote opportunities for countries that share growth and development challenges to be efficiently addressed by institutions working in a collective, participatory and cooperative manner. In this sense, the regional platforms promoted by FONTAGRO are, in themselves, a RPG, as are the knowledge and lessons learned that they generate.

10. **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.

11. Since 1998, FONTAGRO has carried out 22 Calls for Proposals - almost one per year - to identify and document successful experiences that other financing actors in the global innovation system can scale up. For more information on previous competitions, please click [here](#).

SECTION III. OBJECTIVE OF THE CALL

12. **Objective.** The objective of the call is to identify project proposals that provide concrete evidence of “how science, technology and innovation can contribute to a more sustainable and resilient agriculture and food security in the face of the effects of climate change in the countries of the region”.

13. **Description.** This call focuses on Strategy III of the MTP 2020-2025, which aims to increase the application of technologies and innovations with high potential

for adoption and positive impact on food security, nutrition, and health. The initiatives should be based on previous scientific knowledge and should promote new innovations or validate other existing, promising, or successful ones to meet the objective of the call.

14. The review of various factors that have contributed to food security in LAC has led to the identification of areas in which science, technology and innovation can contribute to food security in LAC:

i. **On increased availability and better access to raw materials and food:** proposals on how to increase productivity and diversity of supply, while promoting the sustainability and resilience of agrifood systems to the effects of climate change, climate variability, and other global or regional challenges. These proposals should include measures for adaptation and/or mitigation to climate change or natural disasters (or others of a social (social crises) and public health (pandemics). Other initiatives could be aimed at improving the distribution chain, reducing transaction costs, increasing added value, and reducing food losses (incorporating concepts such as circular economy, waste recovery, shelf life of food, packaging, etc.).

ii. **On foods that contribute to the health of the population:** proposals on how to develop technologies and innovations to rescue and/or develop foods for their nutritional quality and health effects on the population, capable of contributing to a healthy, balanced, and diverse diet, lowering the incidence of avitaminosis, immunosuppressive diseases and chronic non-communicable diseases (NCDs) such as diabetes, hypertension, among others (fortified, enriched or “high in...”, “or free of,” “or low in...”), and revaluing waste.

iii. **On safe and innocuous food:** proposals on how to develop technologies and innovations to increase food quality and safety for the protection of public health (zero or low pesticide residues, nitrate contamination in vegetables, microbiological risks, food fraud (authenticity), identification and traceability, natural antimicrobials, etc.).

15. As seen above, the application field to achieving a positive impact on food security through innovations is vast, and much work needs to be done in an increasingly adverse global context, where the number of people unable to access a diet meeting minimum energy requirement is increasing annually.

SECTION IV. FINANCING

16. **Amount of the Call.** This call will be carried out with FONTAGRO's own resources. The total amount of the call for proposals is US\$800.000. FONTAGRO will co-finance up to four proposals for a maximum amount of \$200,000 each.

17. **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.

18. **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.

19. **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)

20. **Regional Innovation Platform (RIP).** Existing or new Regional Innovation Platforms (RIPs) will be co-financed; such RIPs should be constituted 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.

21. **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 consist of: (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).

22. **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).

23. **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.

24. **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.

25. **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.

26. **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

27. **Call Launch.** The call will be open from January 02, 2023 to April 3, 2023 at 3:00 PM (US Eastern Standard Time, Washington, D.C.). The relevant dates are listed in section VII.

28. **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.

29. **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.

30. **Deadline.** The deadline for submitting concept notes is **April 3, 2023 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.

31. **Concept notes 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.

32. **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.

33. **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 8, 2023**. 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

34. **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.

35. **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.
- 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.

36. **Deadline.** Final proposals will be received until **August 7, 2023 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.

37. **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).

38. **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.

39. **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.

40. **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.

41. **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 sent by FONTAGRO.

INFORMATION AND INQUIRIES

FONTAGRO. Administrative Technical Secretariat (ATS)

fontagro@fontagro.org

<http://www.fontagro.org>

CALENDAR

PHASE I	DATES
Call Launch	December 2022
Call Opening (17 weeks)	January 2, 2023 to April 3, 2023
Deadline for submitting concept notes	April 3, 2023
Evaluation of concept notes (5 weeks)	April 3, 2023 to May 5, 2023
Invitation to applicants to prepare final proposals	May 8, 2023
PHASE II	
Development of final proposals (12 weeks)	May 8, 2023 to August 7, 2023
Submission of final proposals	August 7, 2023
Evaluation of final proposals (5 weeks)	August 7, 2023 to September 4, 2023
Board of Directors' decision and notification to applicants	October 2023

