

COP27 Fact Sheet: AIM for Climate Innovation Sprints

23 AIM for Climate Government Partners Increase Investments in Climate-Smart Agriculture and Food Systems Innovation

- **23 AIM for Climate Government Partners** intend to increase investment in climate-smart agriculture and food systems innovation totaling **over \$7 billion** from 2021-2025 (2020 baseline).
- These partners are: **Australia, Bangladesh, Canada, Denmark, the European Commission, Finland, Hungary, Ireland, Israel, Japan, Lithuania, New Zealand, Republic of Korea, Romania, Singapore, Spain, Sweden, Ukraine, United States, United Arab Emirates, United Kingdom, Uruguay, and Vietnam.**
- The following AIM for Climate Government Partners are pleased to share more information about their support for climate-smart agriculture and food systems innovation.
- To join the conversation with AIM for Climate partners, please visit the [AIM for Climate Innovation Hub](#).

Australia

Drought is an enduring feature of the Australian landscape. It has significant economic, social and environmental impacts. Under the [Australian Future Drought Fund](#), programs are focused on providing better climate information, support better planning, encouraging practice change through innovation and better supporting communities to prepare for drought. The Drought Resilience Innovation Grants Program within the Future Drought Fund is supporting projects that will drive the development and adoption of new and innovative technologies and practices to improve the drought resilience of Australian farmers and agriculture-dependent communities.

The projects being funded in this program are diverse and encompass activities such as: harvesting atmospheric moisture; utilizing irrigation management technology and livestock ranking strategies; trialing diversified vegetation cover; demonstrating different crop rotation cycles; developing digital tools to support decision making ahead of droughts; and using behavioral science approaches to building drought resilience. One of these, the WaterSmart Dams Project, has been developed to help farmers better understand how their dams can function in dry years. The project is a partnership with regional grower groups and researchers in the south-west of Western Australia and is co-designing new farm water planning tools to help farm businesses and regional communities become more water-efficient, resilient, and profitable, in even the driest years.

Bangladesh

Climate change in the world is taking place due to global warming caused by excess emissions of greenhouse gases. Bangladesh is highly vulnerable to climate change impacts due to its low-lying terrain, high population density, and location in the confluence of the Ganges, the Brahmaputra, and Meghna river basins. The most critical climate change induced hazards affecting agriculture in Bangladesh are rainfall variability, river flood, flash flood, sea level rise, salinity, cyclonic storm surge, drought, extreme heat wave and extreme cold, the intensities of which are increasing day by day.

Bangladesh Rice Research Institute (BRRI) has so far developed 108 modern varieties. Of them, 33 rice varieties have been released with stress tolerances. Twelve salinity tolerant, three submergence tolerant, one for both salinity and submergence, three drought tolerant, five cold tolerant, three tidal submergence tolerant, one semi-deep-water tolerant, four stagnant flooding tolerant and one bacterial blight resistant varieties have been developed. Stress tolerant varieties cover 15% of the stress-prone areas, contributing 4.0 million tons of rice to the national food basket. In addition to rice varieties, soil, nutrient and water management technologies like alternate wetting and drying (AWD), deep placement of USG and NPK briquette fertilizers, soil bioorganic fertilizer etc. have also been developed. The adaptation technologies developed for rice and other crops are playing a key role in contending climate change in Bangladesh which required to be strengthened in coming future for sustaining food security of the country.

Denmark

In the Danish agricultural and food sector, there is an urgent need for new cost-effective technologies and tools to reduce the emission of greenhouse gases and increase the absorption of CO₂, a greater focus on circular and sustainable solutions and more precise knowledge of the connection between existing agricultural activities and the level of emissions.

Permanent funds for investment in research and development in the agri-food sector in Denmark: 3.4 billion DKK for the period 2021-25 (approx. 470 mio. USD). The permanent investment for research and development in the agricultural and food sector in Denmark is used broadly in relation to the sector and with the aim of advising the authorities on an ongoing basis in relation to policy development and administration within agriculture (plants and livestock), fisheries, food and diet, veterinary diseases and animal welfare. Also, support is provided for project under the Green Development and Demonstration Program promoting green transition and economic development of the sector – from primary production in agriculture, fishing and aquaculture to technology development, refinement and processing to sale. The realization of the permanent investment has a crosscutting focus on possible reduction of greenhouse gases in the sector.

Additional temporary funding for research: 1.7 billion DKK for the period 2021-25 (approx. 230 mio. USD). The increased funding for research further focuses on greenhouse gas reductions in the agricultural sector in order to meet the binding Danish reduction target of 55-65% by 2030 compared to 1990. Investments have a wide span. From the development of accurate calculations of emissions at farm level

as a basis for cost-effective regulation of the area to increased use of brown bio-refining (especially pyrolysis) for carbon sequestration. Also, better handling of manure and fertilizers to reduce the emission of methane and nitrous oxide, development of methane-reducing feed, development of a plant-based and sustainable food production and alternative protein sources, better soil management and research in organic agriculture are included in the programs.

European Union

When the European Commission joined AIM for Climate as a Government Partner in December 2021, it announced investments in climate-smart agriculture and food system innovation totalling ca. 750 million € over the course of 2021 and 2022. This represents roughly a doubling of such investments compared to previous years. These investments are made in the context of the EU's framework programme for research and innovation, [Horizon Europe](#), which has a priority area ("cluster") dedicated to food, bioeconomy, natural resources, agriculture and environment. In addition, as a new R&I tool, Horizon Europe includes "EU missions", one of which is aimed at [conserving and improving soil health](#).

Across the agri-food-environment cluster and the soil mission, funds are available on a range of different topics through calls for applications. For example, 43 million € are dedicated to the creation of a demonstration network on climate-smart farming in 2021 and 2022. As part of the soil mission, and in line with an EU policy initiative on [carbon farming](#), 14 million € are reserved for tackling challenges related to monitoring, reporting and verification of soil carbon and greenhouse gas balances. The programming of R&I investment in additional climate-related agricultural research and innovation for 2023 in 2024 is currently ongoing and subject to approval by the EU Member States. The European Commission is proposing to maintain the high current levels of investment. Calls for applications are published on a central [portal](#). While the conditions for access to EU funds vary between different groups of countries inside and outside of the Union, Horizon Europe calls are generally open for applicants from across the world, and [international cooperation](#) is a priority.

Finland

Finland is proud to participate in and support the Agriculture Innovation Mission for Climate. Finland aims to be climate neutral already by 2035 and to be the world's first fossil-free welfare society. To achieve these ambitious goals, Finland has launched a package of land-use sector climate measures. Over 100 research, development and innovation projects have been funded as a part of "Catch the Carbon" package. The package includes a specific research and innovation program with total volume of 35 million euros and 15 projects. More information online:

<https://mmm.fi/en/climate-plan-for-the-land-use-sector/>

Ireland

Ireland is proud to participate in and support the Agriculture Innovation Mission for Climate as launched at COP26. The Irish Department of Agriculture Food and the Marine has committed to an increase in aggregate public investment in agricultural innovation for climate-smart agriculture and food systems which will see Ireland increase spending on climate related research by 40% over the five year period from 2021-2025, compared to a 2020 base.

Further to the commitment at COP26 to increase climate-related research over the period 2021-2025, a focus on increasing climate research in agriculture has seen the funding since 2021 of a total of 21 climate-related research projects, including 9 in 2021 and 12 in 2022, by the Irish Department of Agriculture Food and the Marine. The investment in these projects, which focus on mitigation of emissions and carbon sequestration, will facilitate the development of science based innovative solutions to the climate challenge in the agricultural sector in Ireland and Internationally.

Israel

[Israel](#) is a proud governmental partner in the Agricultural Innovation Mission for Climate. Israel has increased its investment in climate-change research by six hundred percent since 2020, and is investing over 23 million USD from 2021-2022 alone, with further increases in years to follow. The 2022 call for research proposals will focus on short-term, actionable responses to climate change, regenerative agriculture, alternative protein sources, agrivoltaics, aquaculture, orchard-breeding with a focus on climate resilience, soil conservation and surface runoff, the use of brackish water in agriculture, and more.

Japan

Japan is proud to participate in and support the Agriculture Innovation Mission for Climate. Japan's new strategy "[MeaDRI](#)" was launched in 2021, that is, Measures for Achievement of Decarbonization and Resilience with Innovation. The objective is achievement of increased production potentials compatible with improved sustainability by means of innovation in the sectors of food, agriculture, forestry, and fisheries. Based on the Strategy, we are accelerating innovation, including on climate-smart agriculture, through budget allocations.

The Strategy's goals include zero CO2 emissions from the agriculture, forestry and fisheries sectors and a reduction of chemical fertilizer and pesticide use by 2050. The focus is not limited to R&D and field experiments. Innovation and its introduction will be facilitated with engagement of and collaboration with diverse stakeholders along food supply chain such as processors, wholesalers, retailers, and consumers. Following the release of the Strategy in 2021, its enforcement law was enacted in 2022. It underpins governmental support in legislative, tax-incentive, and budgetary measures. Japan and Asia-Monsoon countries share certain affinities in climatic conditions and agricultural practices. New technologies developed in Japan could find its application and benefit in those countries, too. In this regard, "MeaDRI" can provide an opportunity for the creation of more sustainable food system in the region. Japan undertakes cooperation with Asia-Monsoon countries to facilitate research and its application for climate change mitigation and the achievement of sustainable agriculture (<https://www.jircas.go.jp/en/greenasia>).

Lithuania

Lithuania has joined the Agriculture Innovation Mission for Climate initiative in 2021 pledging to increase investment in climate-smart agriculture research and food systems innovation. Lithuania, via the Ministry of Agriculture, is actively participating in the EU and global scientific research initiatives and projects, such as SCAR, FACCE-JPI, Horizon Europe partnerships, Global Research Alliance. Ministry of Agriculture maintains partnerships with agricultural research institutions in the country and makes funding available through different calls throughout the year. The (co-)financed research projects enable greater involvement of Lithuanian scientists in international research, enhancing their skills and cooperation with scientists from other countries to exchange best practices and address global challenges in agriculture and food sector, such as green transformation, digitalization, climate change mitigation and adaptation, and others.

The main priorities of the increased investment are the promotion of scientific and applied research, including rapid dissemination of its results, production of science-based recommendations for the agricultural, food, fisheries, and rural policy, as well as development and piloting of new techniques and technologies in order to foster sustainable, competitive, fair and inclusive agriculture and food sector. Overall, the aim is to improve the quality of production, preserve the environment, ensure sustainable use of natural resources, and promote rural development. Projects focusing on improving soil health, developing carbon farming practices to increase carbon removal, and improvement of animal welfare are some of the key thematic areas of the increased funding.

New Zealand

In 2022 Aotearoa New Zealand increased its investment in climate-smart agriculture and food systems innovation by NZD\$287.6 million, raising our total investment to NZD\$561 million across the next 5 years. Aotearoa New Zealand is proud to participate in and support the Agriculture Innovation Mission for Climate. We're investing to drive transformational global action to lower global emissions from agriculture and supporting more sustainable, climate resilient agriculture systems for global food security. This includes:

- Scaling up our work within the [Global Research Alliance on Agricultural Greenhouse Gases](#) to deliver more food and less emissions. We recently announced an additional NZD\$10 million investment into the Latin America and Caribbean region to build resilience, enhance food security and address the challenges of climate change.
- Establishing a new Centre for Climate Action on Agricultural Emissions which will coordinate our NZD\$339 million investment into the research and development of low-emissions tools and technology and specialized extension services with a climate and environmental focus.

In addition to specific investment in climate smart agriculture and food systems innovation, Aotearoa New Zealand is driving agricultural climate action through our NZD\$1.3 billion climate finance commitment to support developing countries. Supporting climate smart agriculture to ensure food security for all is a major pillar of our recently announced Climate Finance Strategy. We recognise the significant climate change challenges facing Pacific nations, and want to support the accelerated adoption of emissions reducing technologies and practices across

agriculture and its associated land-use. For more information on what Aotearoa New Zealand is doing to support the global transition to climate-smart agriculture, please visit www.mpi.govt.nz

Republic of Korea

Republic of Korea is proud to participate in and support the Agriculture Innovation Mission for Climate. Republic of Korea pledges to increase investment in climate-smart agriculture and food systems innovation by contributing 154 million dollars, prioritizing investment in the establishing climate change response system in agriculture in partnership with the Rural Development Administration (RDA).

Romania

Romania through the Ministry of Agriculture and Rural Development is the governmental partner of the Initiative, stimulating innovation, research and development in agriculture being in line with the policies and measures adopted by us in the field of climate change. We consider that agriculture is very vulnerable to the impact of climate changes having in view that the associated risks are not evenly distributed. In our opinion the high priority for the agricultural sector is adaptation having in view that the climate changes become progressive and the impact on the agricultural sector is significant.

The agricultural sector needs to react faster and get strengthen and resilient, especially for big farms and subsistence farms. The droughts and floods have the strongest impact on the agricultural sector and the cause of the significant volatility of crop yields from one year to the next. Climate risks such as droughts can last for weeks or months, affecting the results of all annual agricultural production.

The Sectorial Plan for research and development funded/financed by the Ministry of Agriculture and Rural Development "Agriculture and Rural Development" will be launched in early 2023 and it will run for a period of 4 years. This is the main tool through which we will participate to the Initiative.

The Plan includes research projects aimed to identify and provide solutions for environmental protection and combating climate change for a better market orientation and ensuring a close link between academia and farmers, processors.

The research projects included in the Sectorial Plan are assigned in a competitive system, the research-development units, as well as consortia and is referring to the financing of investments of modern and performant equipment.

Spain

The Spanish contribution to the AIM for Climate initiative includes 972 million euros of aggregate public investment in agricultural innovation for climate-smart agriculture and food systems over the next five years (2021-2025). First, part of these investments (121 million euros) are included in the Strategic Economic Recovery and Transformation Project (PERTE) in the agri-food sector, specifically, the support package for the agri-food industry to improve its production processes, linked to its competitiveness, sustainability and traceability of food production and the measures to support innovation and research for a competitive agri-food sector.

Second, the cooperation-innovation intervention of the European Innovation Partnership for Agricultural productivity and Sustainability (EIP-AGRI) programmed in Spain in the CAP Strategic Plan (168 million euros) that works to foster competitive and sustainable farming through innovative projects. Third, other investments (316 million euros) are included in the Spanish recovery and resilience plan, which includes investments in precision agriculture, energy efficiency and circular economy in agriculture and livestock; innovation and technological development in renewable energies related to the agri-food sector; a digital innovation hub for companies in the agri-food sector and actions included in the plan to improve efficiency and sustainability in irrigation.

Sweden

Sweden is proud to participate in and support the Agriculture Innovation Mission for Climate as launched at COP26. [Formas](#) is the government research council for sustainable development. It funds research and innovation and areas of activity include the environment, agricultural sciences and spatial planning. Among programmes are *The National research programme for food (2017-2026)* which is carried out within the framework of the Swedish Government's food strategy with one of its missions being to achieve a climate-neutral food production by 2045, when Swedish food production should have a net zero carbon footprint. This long-term, interdisciplinary research programme will strengthen needs-driven research, increase the focus on product development, innovation, dissemination and commercialisation of research results. *The National research programme on climate (2017-2026)* will contribute to achieving Sweden's objective to become a fossil fuel-free society and the ambition to be a leading participant in global efforts to achieve the goals of the Paris Agreement. Tackling climate challenges therefore requires research within several different subject areas, as well as interdisciplinary and intersectoral research and innovation. Among Formas' most recent research calls in this area we would like to highlight "[Carbon sequestration as a climate measure in agricultural lands](#)", with the main purpose of providing climate, environmental and social benefits while increasing food production. Another recent call is [Sustainable and resilient food systems in uncertain times](#), a call which is expected to contribute to increased knowledge and innovative solutions for how we secure both Swedish and global food supply in the event of societal and environmental crises.

United Arab Emirates

The UAE is situated in a desert region with some of the highest temperatures in the world, characterized by water scarcity and limited arable land. To address the challenges climate poses to its agricultural sector, the country has made food systems innovation a key focus. Innovative cultivation methods and AgTech have enabled the nation to turn deserts into farms. Investing in AgTech to boost local agricultural production is an integral part of the UAE's National Food Security Strategy. A prime example of such an investment is Bustanica, the world's largest vertical farm, launched in July 2022 as a joint venture between Emirates Flight Catering and US-based Crop One at the cost of US\$40 million. The facility spans 330,000 sq ft but has a production output equivalent to 1,000 acres of farmland at 3,000 kg per day, using 95% less water than outdoor fields due to a circular water system.

The UAE is a founding member of AIM for Climate and has pledged US\$1.7 billion of increased investments to the initiative. This figure represents commitments by several government or government-affiliated entities in the country. Initiatives carried out as part of the announced investments include R&D of salinity-tolerant crops and controlled-environment agriculture (CEA), such as vertical farms.

The country's latest project in this space is the Food Tech Valley, a first-of-its kind AgTech city which aims to serve as a testbed for pioneering innovations that drive the transition to sustainable food systems. The venture aspires to position the UAE as a leading global exporter of climate-smart agricultural solutions.

United Kingdom

The United Kingdom is proud to participate in and support the Agriculture Innovation Mission for Climate, and it is an important part of achieving our commitment to address climate change and global hunger, through increased investment in research and innovation for climate-smart agriculture. The UK also values AIM for Climate because we recognise the strong complementarities between AIM for Climate, the Agriculture Breakthrough, and the initiatives that are supporting the Agriculture Breakthrough including the Global Action Agenda on Innovation and the Policy Action Agenda on Sustainable Agriculture. The convening power of AIM for Climate provides a platform through which we can collaborate and partner with other like-minded governments and stakeholders to facilitate scientific breakthroughs by driving collaboration and momentum around specific challenges in agricultural innovation. Funding from the United Kingdom will include supporting early-stage interventions to reach scale and achieve the type of impact required to radically overhaul our food systems. Through this funding we will harness emerging technologies and mobilise climate finance to scale the solutions required to strengthen the food system's climate resilience, in areas including solar irrigation, climate resilient crop varieties, cold storage solutions and precision agriculture informed by big data.

United States

America's vast lands provide opportunities to both reduce emissions and sequester carbon while sustainably increasing agricultural productivity and incomes. Capitalizing on these opportunities includes scaling up climate-smart agricultural practices. Accomplishing climate goals this decade and setting up the economy for further emissions reductions after 2030 requires investment in innovation and U.S. manufacturing to lower the cost of new technologies, grow the domestic manufacturing base and supply chains for those technologies, and train the workforce needed ([The Long-Term Strategy of the United States, Pathways to Net-Zero Greenhouse Gas Emissions by 2050](#)).

The [U.S. Global Change Research Program \(USGCRP\)](#) coordinates federal research and investments to advance understanding of the changing Earth system. The U.S. Department of Agriculture's (USDA's) [global change research](#) is focused on the development and evaluation of innovative practices and technologies, monitoring networks, and a range of analyses and modeling efforts to investigate outcomes of climate scenarios and adoption of climate-smart practices. USDA is leading with investments in science, research, and climate-smart solutions. These investments will

mitigate the causes of climate change, increase adaptation to climate change, generate new income opportunities, and build generational wealth in disadvantaged communities ([USDA's 2022-2026 Strategic Plan](#)). The United States Agency for International Development (USAID) is collaborating with partner countries to support climate-resilient food systems, reduce emissions from food and agriculture systems, and mobilize inclusive finance for climate smart agriculture, partnering with Indigenous Peoples and local communities and enabling and empowering women and youth and other marginalized and/or under-represented groups to lead climate action ([USAID Climate Strategy 2022-2030](#)).

For further information, please contact:

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