

## Innovation Sprint Framework

Private sector and non-profit organizations are critical to the success of the Agriculture Innovation Mission for Climate (AIM for Climate). We welcome this community to join as Innovation Sprint Partners<sup>1</sup> (ISP). Per the AIM for Climate Terms of Reference, to join AIM for Climate as an ISP a non-government entity should, “announce an increase in aggregate self-financed investment<sup>2</sup> in agricultural innovation for climate-smart agriculture and food systems over five years (2021-2025).” This paper outlines guidelines for AIM for Climate ISP announcements. Broad definitions are used to allow flexibility, while also ensuring an increase in investment is achieved.

To join AIM for Climate as an ISP, the ISP should announce an innovation sprint. An innovation sprint is:

- ✓ An increase in aggregate self-financed investment to achieve an outcome/output
  - ✓ in agriculture innovation
- AND
- ✓ for climate-smart agriculture (CSA) and food systems
- ✓ to be completed in an expedited timeframe

An innovation sprint proposals should clearly state the following components:

- 1) Who are the innovation sprint participants?<sup>3</sup>
- 2) What is the CSA output/outcome?
  - a. How does it sustainably increase in agricultural productivity and incomes?
- AND
- b. How does it support adaptation and/or mitigation?
- 3) When will the activity be completed?
- 4) How much is the increase in aggregate self-financed investment?<sup>4</sup>

The following organizing principles should be considered when developing an innovation sprint:

- **Bold idea:** Quantifiable, concise and ambitious, but achievable, outcome and/or output in support of the AIM for Climate objectives.
- **Foster innovation and cooperation:** Leveraging sector leadership, consortiums, and/or public-private partnerships to develop, demonstrate, and deploy innovative CSA tools and approaches.
- **Expedited timeframe:** Activity should establish an ambitious timeline to achieve outputs and outcomes, bounded no later than the end of the AIM for Climate initiative (end 2025).

Innovation Sprints should support CSA innovation by increasing agriculture productivity while adapting and building resilience to climate change and/or reducing/removing greenhouse gas emissions. Components of innovation sprints may include, *inter alia*:

- **Increasing agricultural productivity:** improving water and other resource use efficiency; developing optimized hybrids and varieties; advancements in digital and precision agriculture.
- **Adapting and building resilience:** enhancing soil health; improving hybrids and varieties; improving water and other resource use efficiency; advancements in monitoring tools, biotechnology tools, and/or sustainable management practices to control pests, contamination, and diseases.
- **Reducing/removing greenhouse gas emissions:** Advancements in cold storage; improving traditional fertilizer management practices; advancing alternatives to traditional fertilizers; improving livestock genetics, feeding and management; improving soil carbon sequestration; advancements to reduce deforestation; scaling precision agriculture technology; advancements in sustainable land use practices; improving use of solar and other renewable agricultural technologies; and, advancements in green energy equipment.

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<sup>1</sup> Joining AIM for Climate as a Government Partner, Innovation Sprint Partner or Knowledge Partner does not imply endorsement of or partnership between the participants, rather it entails an intention to support the goal and objectives of the AIM for Climate initiative.

<sup>2</sup> The investment is specifically for bold ideas to foster innovation in an expedited timeframe. Responsibility, control, and oversight of investments will remain with the participant unless the participant determines otherwise. Announced new investments should avoid double counting (e.g., double counting of the same investments by government and innovation sprint partners).

<sup>3</sup> While in most cases innovation sprint partners may lead the formation of an innovation sprint, this does not preclude participation in the sprint by government and/or knowledge partners.

<sup>4</sup> Should reflect the increased new investment by the innovation sprint partner(s) and take steps necessary to avoid double-counting of investments reported by other AIM for Climate participants.

In 2022 AIM for Climate launched four innovation sprint focal areas:

- **Smallholder farmers in low- and middle-income countries (LMICs):** Innovation sprint proposals in this focal area must identify how it will result in climate-smart agricultural solutions that will benefit smallholder farmers in LMICs. Climate change is rapidly upending the landscape for smallholder agriculture - including both the crops and livestock they depend upon. Through heat, drought, floods, and emerging pests, climate change is projected to reduce agricultural productivity by as much as 30%, but with targeted investments in research, the tools smallholder farmers need to adapt to these challenges and build resilient livelihoods in the face of worsening negative impacts of climate change can be developed in time to avert catastrophe.
- **Methane Reduction:** Innovation sprint proposals in this focal area must identify how it will work to create climate-smart agricultural solutions that reduce methane emissions from agriculture and food systems. Methane (CH<sub>4</sub>) is a greenhouse gas (GHG), so its presence in the atmosphere affects the earth's temperature and climate system. Methane is the second most abundant greenhouse gas after carbon dioxide and accounts for nearly half of current net global warming. Methane is many times more potent than carbon dioxide [24-84 times depending on the timeframe] and its effects are most strongly felt in the short term. Rapidly reducing methane emissions is widely seen as the most effective strategy to limit near term warming and is essential to keep a global temperature increase of only 1.5 degrees Celsius within reach.
- **Emerging Technologies:** Innovation sprints proposals that focus on an emerging technology must identify how it utilizes and/or advances the application of an emerging technology for climate-smart agricultural solutions. Emerging technology is a term generally used to describe a new technology or continuing development of an existing technology. Emerging technologies are typically those where development, practical applications, or both are still largely unrealized such that they are emerging into prominence. Examples include nanotechnology, biotechnology, robotics, and artificial intelligence.
- **Agroecological Research:** Innovation sprint proposals in this focal area must identify research at the intersection of agronomy and ecology to facilitate climate-smart agricultural solutions. The term 'agroecology' can be interpreted in a variety of ways. In this context agroecological research is intended to incorporate the disciplines of agronomy and ecology to produce climate-smart agricultural solutions supported by science and data, enabling the economic prosperity of farmers and ranchers.

Innovation Sprint Partners should quantify innovation sprint outputs/outcomes, examples include:

- Increasing productivity of crop X while reducing water utilization by Y.
- Achieve electrified tractors at cost \$X or lower that reduce farm equipment GHG emissions per unit of agricultural output by Y%.
- Improving soil management practices and advancing utilization of new seed varieties, increasing yields and reducing water by X and fertilizer inputs by Y.
- Alter management practices to reduce GHG emissions by X and increasing soil carbon sequestration by Y in crop Z while maintaining productivity on the same or less land.
- Achieve a new fertilizer at cost \$X that reduces GHG emissions per unit of agricultural output by Y%, while maintaining and/or increasing productivity on the same or less land.

Innovation sprint proposals should be no longer than one page and include the components noted on page 1. Proposals are encouraged to align with one or more of the four focal areas. Proposals should be submitted to [info@aimforclimate.org](mailto:info@aimforclimate.org) by the deadline noted on the website: <https://www.aimforclimate.org/innovation-sprints/>

## **Definitions**

**Increased investment:** allocation of additional money during 2021-2025, using 2020 as baseline.

**Example:** 2020 = \$1,000,000 (baseline)  
2021 = \$1,500,000---- (+\$500,000)  
2022 = \$1,500,000---- (+\$500,000)  
2023 = \$1,000,000  
2024 = \$1,500,000---- (+\$500,000)  
2025 = \$1,500,000---- (+\$500,000)  
Increased investment = \$2,000,000

**Agriculture:** science or practice of farming, including growing crops and raising animals to produce food, fiber, fuel, and other products.<sup>5</sup>

**Climate-smart agriculture (CSA):** an approach that helps to guide actions needed to transform and reorient agricultural systems to effectively support development and ensure food security in a changing climate. CSA aims to tackle three main objectives: sustainably increasing agricultural productivity and incomes, while adapting and building resilience to climate change and/or reducing/removing greenhouse gas emissions.<sup>6</sup>

**Innovation:** research, development, demonstration and deployment including creation, development and implementation of a new product, process, or service, with the aim of improving efficiency, effectiveness, or competitive advantage.

**Research and development (R&D):** creative and systematic work undertaken to increase the stock of knowledge—including knowledge of humankind, culture, and society—and to devise new applications of available knowledge. R&D covers three types of activity: basic research, applied research, and experimental development. Includes basic research; applied research on sources, processes, and/or related infrastructure; research addressing specific technical barriers to progress; technology development activities such as systems integration work, pilots, prototypes, and intermediate scale-ups that prepare the technology for demonstration at or near full-scale. The primary purpose of these projects is proving the benefits and costs for end-users as opposed to the verification of engineering concepts and technologies as part of the development process.

**Demonstration:** Projects that are designed to prove a technology or set of technologies can operate at or near full-scale as predicted from intermediate scale results.

**Deployment:** Activities undertaken to support the diffusion of climate-smart agriculture and food systems innovations, including: clean energy and emissions mitigation technology and practices; voluntary partnerships; capacity building; technical assistance; permitting; development and enforcement of rules and regulations; development and enforcement of codes and standards; etc.

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<sup>5</sup> For purposes of AIM for Climate, inclusive of forestry and fisheries.

<sup>6</sup> Adapted from UN Food and Agriculture Organization, source: <http://www.fao.org/climate-smart-agriculture/en/>