

Climate Action Summit. Agriculture Transition coalition. Deliverable overview.

Name of initiative: Sustainable technologies to promote transformational agriculture with positive and long-term results

Please describe the initiative/commitment (deliverable), how it aims at advancing the global agriculture transition and how it relates to addressing different elements in the agriculture system:

The agricultural sector is a major contributor of Brazilian's economy and development. However, agriculture is also one of the economic sectors most vulnerable to climate risk, as also pointed out by the IPCC AR5. With a large diversity of production systems, Brazil has been able to strategically invest in the development of national science and technology that has fostered over the last five decades a strong understanding about agriculture sustainability, coupled with resilience and adaptive capacity. This development has led to a consistent increase in yield and thus performed a substantive transformation in the agriculture sector. Leaving behind the condition of food-importer, planning and investment in national science has allowed Brazil to become one of the largest suppliers of food and energy resources in the world.

Supported by a legacy of investments in research and technology and established public and financial institutions Brazil was able to foster the implementation of a sector specific policy on agriculture and climate change, that has increased the adoption of sustainable agriculture practices and promoted a strong transformation.

The Brazilian National Plan for Low Carbon Emission in Agriculture (ABC Plan) aims to foster shift the perception of farmers and other stakeholders fostering the opportunity to promote key technologies, practices and processes that increase the resilience of agricultural systems, strengthening their capacity to adapt to the adverse impacts of climate change, increase the yield of crops, while also supporting sophisticated abilities to control emissions of greenhouse gasses in agriculture. The central assumption of the ABC Plan is that the adoption of conservationist agriculture strategies, combined with the integration of production systems, increases the resilience of production systems, their ability to adapt to external impacts and are more efficient in controlling GHG emissions. These strategies encompass the adequate management and conservation of soil, water and biodiversity, duly compatible with the use of external inputs, thus intensifying production.

The ABC Plan was designed in a thorough and open-ended consultation process, involving representatives of many areas of interest related to the challenges of agriculture sustainability. This process fostered the empowerment of people and allowed the effective identification of the major challenges and blockers that would otherwise have harmed its success.

Though national in nature, the ABC Plan, incorporated a strategy to include considerations regional circumstances, and the development of subnational ABC Plans, in line with the national targets and strategies with a close interaction with local stakeholders and focal points, from a bottom-up perspective. Local priorities could then be identified and selected according to specific needs and circumstances. Everything is done in accordance to scientific established technologies, practices and process aligned at the national level. The interaction with financial institutions, responsible for the crediting policy and thus the dissemination in very remote regions, has also been strategic. Finally, the ABC Plan interacts directly with other national policies, such as the Forest Code, Agricultural environmental zoning, among others.

The implementation of the ABC Plan has resulted in a shift in farmers perception regarding climate change, now identified by many as an opportunity that resulted in increase in productivity, adaptive capacity and profitability, while reducing risk due to climate variability

and the other adverse impacts of climate change. The ABC Plan has been achieving positive results, with an increase of 28 million hectares under the proposed practices. Increase of production, resilience, and an estimate control of GHG emissions of around 100 to 154,38 million Mg CO₂ eq. The positive results of the ABC Plan are evident, and currently, when its first cycle is reaching to an end, the Mapa is receiving strong support of the private sector, farmer's representation, civil society, and government representatives, all requiring for the continuation and strengthening of the ABC Plan

How does the initiative answer to the selection criteria?

Transformational impact: The adoption of sustainable technologies promotes transformational agriculture with positive and long-term results. The implementation of the ABC Plan has led to a shift in perception by farmers and other stakeholders. Environmental sustainability and the conservation of natural resources is seen as key to guarantee profit and a broader sustainability by farmers, and the establishment of effectively sustainable production systems can concretely contribute to the conservation of the environment, and to the provision of environmental services as well as other social and economic benefits. The adoption of the ABC Plan resulted in increase in productivity and profitability, as well as resiliency and adaptive capacity of national agricultural systems, with the integration of soil, water and biodiversity conservation strategies. The ABC technologies contribute also to increase food production and, therefore, food security, while maintaining almost unchanged the area under farming activity and making production systems more resilient to climate change.

Sustainable development co-benefits: The sustainable technologies have resulted in effective conservation of natural resources, have reduce pressure from the agriculture sector to convert natural areas, including forest, savannas (Cerrado) and grassland to agriculture. Increase in efficiency, productivity and resilience means that farmers can now concentrate in the best fraction of their land, using less land to produce much more. Conservation of natural resources means that biodiversity is more protected, watersheds are less exposed, social habits and traditions of local communities and indigenous people that relay heavily in agriculture now are more protected, since information is available to support better decision-making on how to produce in a sustainable manner, and likely to be tailored to their local conditions. Monitoring the overall and systemic co-benefits is also a further benefit. The availability of quality information has allowed society to become more aware of the relevance of agriculture as a tool to promote sustainability. In addition to all this, the ABC Plan has directly contributed to better control emissions of greenhouse gases from the agriculture sector and therefore to the implementation of the Brazilian NDC.

Replicable and scalable: ABC Plan model is replicable and scalable in other countries. Moreover, its concept considers regional and local policies (top down and bottom up approach), with a strategy that recognize local experiences and consider the importance of the involvement of sector stakeholders. Further, the scientific and technical knowledge on tropical agriculture technologies and processes developed by Brazilian research and extension institutions, can be effectively applied and adapted to many other realities that have, or will have similar production conditions.

Measurable and implementable:

The MRV of the ABC Plan is being implemented with a combination of the ABC Plan Governance System (SIGABC) and the Multi-Institutional Platform for Monitoring Greenhouse Gas Emission

Reduction in Agriculture (ABC Platform). The SIGABC is the management system for tracking actions during the implementation of the ABC Plan. Coordinated by the Ministry of Agriculture, it registers the results of the actions of dissemination, training, implementation of Technological Reference Units (URTs) and/or Test and Demonstration Units (UTDs), and data related to financial credit agreements granted by the banking system that implements the line of credit designed for the ABC Plan, among others. The ABC Platform is the MRV instrument instituted in the context of the ABC Plan and aims at developing and validating a broad and integrated identification, qualification and monitoring system towards the adoption of technologies by the ABC Plan and their contribution in GHG emission reductions by sources and removals by sinks. The assessment methodologies follow international GHG emissions monitoring protocols and the IPCC guidelines, together with national scientific data at the state, municipal or biome levels. The executive management of the Platform is under the responsibility of Embrapa, with the support of a Steering Committee coordinated by MAPA, Embrapa and composed by representatives of the Ministry of the Environment, Ministry of Science, Technology, Innovations and Communications, Ministry of Foreign Affairs, Rede Clima, besides experts and representatives of private enterprise and civil society. Both systems rely on other national research and monitoring institutions, such as INPE (National Institute for Space Research), and universities.

Innovative and visible: Nationally recognized, the ABC Plan is part of the National Policy for Climate Change and has a strong emphasis on the promotion of resilient agriculture production systems, increase the productivity and controlling GHG emission. While resting in effective scientific and technological knowledge, the ABC Plan established strategical practices that were essential to its success. First, it is part of a wider national policy to climate change, and was implemented in close collaboration to other sectors, such as environment, industry and energy. Within the plan, the inclusive and participatory process to the development of the plan, the definition of its priorities, actions and targets, sharing responsibilities, was a first key perspective to ensure participation in the implementation stage. Further, the establishment of subnational ABC plans, aligned with the national plan, involving local stakeholders, was essential to an effective participation, creating ownership and commitment... These two planning processes were central to produce a Plan that fosters the adoption of recognized practices and technologies through technical extension and empowerment. Integrating the diffusion of information and technical training with assistance and financial instruments, was another key strategy to achieve success. The systemic vision, the solid scientific and technological basis, and participation, in an integrated strategy were essential to promote the vision of sustainability.

Please describe stakeholders/partners, their respective roles in achieving the deliverable, and whether they are confirmed to take on this role

The stakeholders and partners of ABC Plan are:

- farmers (agricultural producers), which adopt ABC technologies and will seek to improve their efficiency and sustainability;
- national, regional and local policies
- researchers that provide new scientific data and technologies;
- extensionists and technical assistant
- consumers, as they will have access to sustainable food products;
- society in general, which will benefit from the carbon emissions reduction, as well as from the improvement in the quality of food, soil, water and air;
- regulatory agencies;
- the government, which manage the ABC Plan that ultimately drives the demands of the other stakeholders.

Please describe whether and if so, how, the initiative relates to other tracks

The initiative is related to the tracks on carbon pricing (since it is based on a so-called positive carbon-pricing model); nature-based solutions; mitigation strategy; youth and citizen mobilization; adaptation and resilience and social and political drivers.

Please present initial ideas for presentation at Summit

A dynamic audio-visual presentation could be made at the summit to highlight the main features of the policy design of ABC Plan and its innovative characteristics, focusing on how it could be replicated in other contexts.