Come take part in sharing agricultural knowledge through the creation of Academies of Sahelian expertise and experience.

SOS SAHEL is actively involved in the design of innovative solutions and the construction of a dynamic technological ecosystem which will modernize agricultural production and strengthen food value chains for the economic inclusion of family farmers in the Sahel.

Collaborative problem solving, and the development, application and sharing of technological solutions will be concentrated and brought to life within the framework of an annual AGRI-HACKATHON.

SPARK2050, the broader platform, will serve as the base for these processes until 10 innovative agricultural technologies are identified to be deployed over 30 years, thus transforming the lives of 300 million Sahelians.

The Africa Camp aims to bring together all players - producers, leaders of cooperatives, economic operators, social enterprises, NGOs, local elected officials, leaders of civil society, communications advisors, development agents, researchers, instructors – to identify their needs and conceptualize innovative solutions that will modernize, adapt and scale up African agriculture processes.

Among other things, these solutions will help stakeholders across the region, support local initiatives, structure an inclusive economy for young people and women, link actors to one another, disseminate knowledge, support development policies, and strengthen and enhance skills to ensure local action is more effective.

THREE CORE THEMES OF LOCAL DEVELOPMENT

The objective of the Africa Camp is to share thoughts and ideas about innovative solutions that could aid in the dissemination of knowledge as it pertains to development issues in the Sahel. This work will be entrusted to six small groups of people from different backgrounds. Each group will work on one of the three themes below. These ideas and concepts will then be assigned to the participants of SOS SAHEL’s Agri-Hackathon who will be tasked with developing the technological solution. The Agri-Hackathon will take place in May 2020.
Theme 1: How to encourage access and use of agricultural and environmental knowledge at the intersection of traditional and academic sciences?

How do you start an orchard? Protect young plants from termite attacks? Grow and maintain sturdy hedges? Improve your compost process and restore the fertility of a particular type of soil? How do you tap gum trees without making them die? Ensure that natural gum forests remain dense? There are so many questions - but there are also many producers with personal experience who have the answers. Unfortunately, due to a lack of communication methods, these solutions are not easily shared.

In the Niayes, in Senegal, Modou Beye began to plant lemon trees on his 0.6 ha. After 8 years, thanks to effective agricultural solutions, he now has 7 ha of orchard, protected by robust hedges. Modou Beye is a guide and reference for the planters of his commune. He provides training on pruning for planters within a 50 km radius.

Working alongside another Senegalese planter, Professor Ibrahima Diedhiou of the University of Thiès discovered that Guiera, a shrub spread throughout the Sahel, can supply water to fruit trees planted nearby. After studying this phenomenon, Professor Diedhiou and his colleagues published this discovery in the *Frontiers in Environmental Science* journal. It has the possibility to revolutionize arboriculture in Africa.

In Chad, local villages have adapted and improved their methods of tapping gum trees as well as harvesting and storing the arabic gum. This has allowed for increased production as well as an improvement in the quality of the gum. Inspired by this success, neighboring villages often visit to learn from their techniques and bring this knowledge back home.

**How can we help dozens of experts like Modou Beye and gum collectors spread this important knowledge more quickly and widely? How can we disseminate science-based agricultural practices to local producers?**

There are many ways to share this knowledge: audio messages, photographs, images, videos, an exchange of names and reference addresses, sharing plans and geographical maps, through an exchange of technical services, research centers, cooperatives, etc.

**Which applications are accessible to everyone, so that they may share this local knowledge on everyday agricultural problems?**
Solution 2 Brief: “Gongo”

Theme 1: How to encourage access and use of agricultural and environmental knowledge at the intersection of traditional and academic sciences?

Why do we need an innovative solution?
We are witnessing a silent conflict between the traditional knowledge (supposedly non-scientific, unproven, transmitted from generation to generation) and scientific knowledge (knowledge tested by demonstrated methods and techniques, knowledge published via articles and journals) in the use of agricultural and environmental learnings.

The challenges to overcome here are:
- Lack of sharing traditional knowledge due to the lack of access and interest of scientists for these types of knowledge;
- Lack of funding to promote traditional knowledge;
- Linguistic and regional barriers.

What is the “Gongo” solution for?
The solution must resolve the problems of communications and transmission of traditional and scientific knowledge.

The objectives of the solution are to:
- Facilitate the diffusion of traditional and scientific knowledge in the agricultural and ecological field;
- Create a natural interaction between actors in these fields;
- Boost agricultural ecology and ecosystems;
- Protect the environment;
- Democratize scientific knowledge;
- Connect actors in the same field all over the world thanks to building a universal database of knowledge;

Who will use the solution and on what scale?
The device, the “Gongo” bracelet, is a revolutionary, multilingual interactive hologram broadcaster, linked to the most powerful database ever designed on earth.
Gongo has no geographic limitation, which locally serves all the countries of the Sahel.

How does the intended end user imagine the proposed solution will work?
Beneficiaries are provided with the bracelet free of charge and without restriction; they are referenced and registered on the database.
The bracelet is rechargeable via body heat and solar energy, and there must be constant knowledge updates in a cooperative and multilingual synergy:

- The solution to the shape of a bracelet as a user interface;
- The materialization of knowledge through the projection of a 5-dimensional hologram by the bracelet;
- Interactivity in the spreading of simplified knowledge in addition to scientific rigor.
- Users will have to pay a flat rate for access to the database.