LAYMAN'S report

GREAT LIFE agricolo creativo

The GREAT LIFE project has received funding from the LIFE programme of the European Union

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THE PROJECT

THE PROBLEM

In the last decade, climate change caused both a temperature rise and a reduction in rainfalls. This had a **negative impact** on some traditional crops (like corn) which need a lot of water to grow, encouraging non-sustainable agricultural practices.

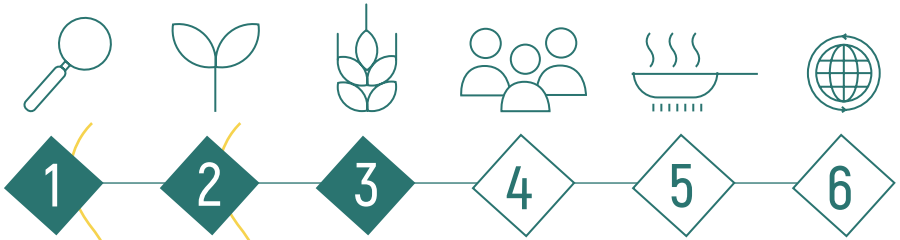
THE ANSWER

GREAT LIFE intends to replace those crops which do not adapt well to climate change with more **resilients crops**. These kinds of crops present a higher adaptability and a low water requirement, like **millet and sorghum**- the cereals identified for the experimentation. Moreover, to encourage the reduction of greenhouse-gas' emissions, GREAT LIFE proposes to adopt **more sustainable agricultural practices**, able to reduce the impact of agriculture on the environment and increase biodiversity.

IMPACT VISION

GREAT LIFE project questioned itself on **how to reduce the economic and environmental damages of climate change in the agricultural field** through a production chain approach able to put in communication all the actors involved. From agricultural production to product transformation until the final consumers, GREAT LIFE considers the **production chain as a whole community** which believes in the value of food for the protection of natural resources, environment, farmer's income and health.

THE STEPS OF THE PROJECT



1 RESEARCH (Unibo)

The Department of Agricultural and Food Sciences of the Alma Mater Studiorum - University of Bologna was responsible for the **identification of resilient cereals** for the GREAT LIFE experimentation: common millet (Panicum miliaceum, L.) and sorghum (Sorghum bicolor, L. Moench). It has also managed, together with three farmers from the Emilia Romagna Region, experimental field trials, to **develop the best agronomic practices** for the cultivation of these cereals and **increase the resilience of the agroecosystem**.

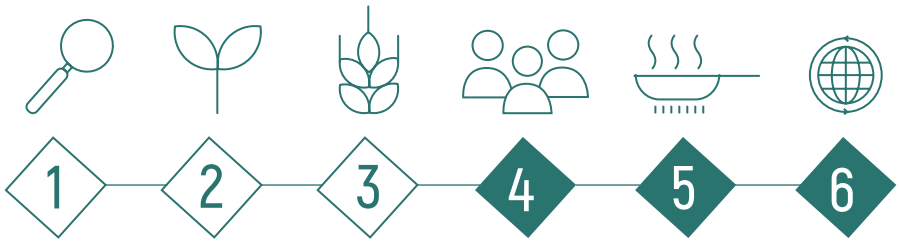
2 EXPERIMENTATION ON FIELD (Farmers)

Researchers from the University of Bologna developed, together with the farmers who took part in the experimentation, **resilient agronomic techniques** and **optimized the cultivation of the two cereals in organic farming**. GREAT LIFE has proposed a rotation scheme capable of ensuring continuous land cover, thus improving the fertility and water capacity of the soil, other than introducing summer crops that are more resilient to the environmental conditions imposed by climate change.

3 CEREALS TRANSFORMATION (Alce Nero)

Alce Nero **created the first organic products prepared with organic millet and sorghum** cultivated in Italy in the context of GREAT LIFE project: **sorghum's grain, millet's grain** and the **millet and sorghum cookies** with chocolate drops. The experimentation has revealed the important nutritional qualities of these two cereals: sorghum is naturally high in fibers and phosphorus, other than being a natural source of iron, potassium, copper and zinc; millet is a natural source of fibers and iron, other than being naturally high in phosphorus, magnesium, copper and zinc.

THE STEPS OF THE PROJECT



4

COMMUNITY BUILDING

Around the GREAT LIFE project the **GREAT Community** was created: a community which believes in sustainability as a creative act, capable of sustaining a system which **puts the common good above the individual one**. A **physical and digital community** who was engaged and involved through different activities: digital contents, events, workshops, webinars and experimentation with millet and sorghum. A network of food's professionals (chefs, breadmakers, restaurateurs) were also part of this community and they experimented in first person with the cereals.

5

EXPERIMENTATION IN SCHOOLS' CANTEENS (Municipality of Cento)

The first phase of experimentation saw an initial **evaluation test of recipes and products** with millet and sorghum by students from Reno Centese school. Following the results of this phase and the satisfaction on the different dishes expressed by the students, the experimentation extended to other five schools of the territory. From october 2020 until june 2021, 233 students and 17 teachers have benefited from **eco-compatible and highly nutritious dishes and products** containing millet and sorghum.

6

ENVIRONMENTAL IMPACT MEASUREMENT (LCE)

Inside the context of the project the **Great LIFE LCA Tool** was developed: a platform that permits a **easy and centralized collection of datas** by the farmers. Aim of the tool is to create an automated report with values associated with environmental indicators.
The tool uses the **Life Cycle Assessment (LCA) methodology**- standardized at an international level- which permits quantifying the impacts on the environment by measuring the consumption of resources and the emissions associated with a system.

THE METHODOLOGY

PRODUCT CHAIN APPROACH

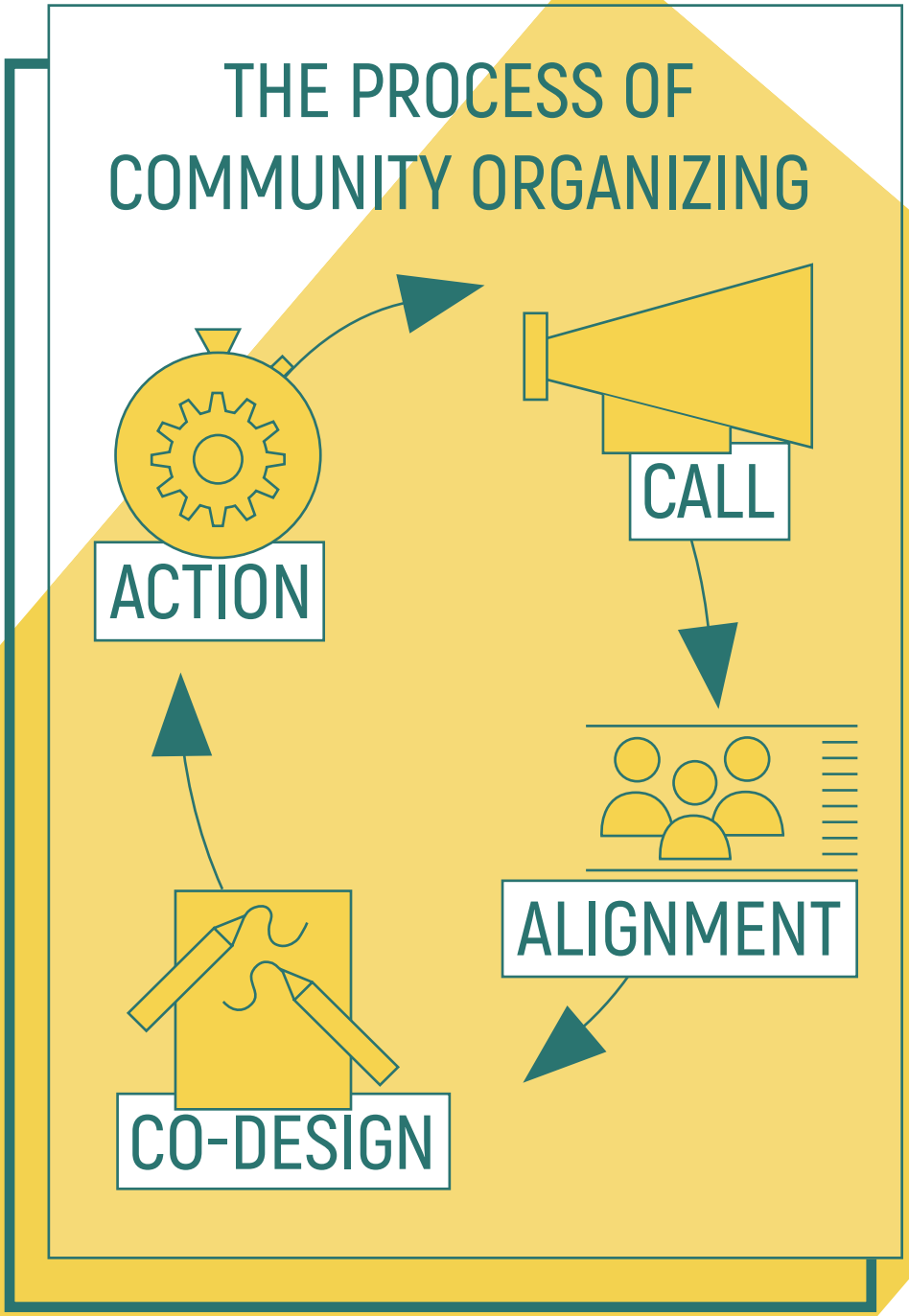
From agricultural production to transformation, up to final consumers.
The GREAT LIFE project put in action an approach which looks at the **product chain as a whole community** which believes in the values of food for the preservation of natural resources, environment and health.
Product chain approach puts at the center the **relationship between all the actors of the chain**, to create awareness on the **contribution that our alimentary choices have on environment, health and economy.**

FROM STAKEHOLDER ENGAGEMENT TO COMMUNITY ORGANIZING

Going from the stakeholder engagement to community organizing means:

- to accept the final result to not be predefined (like in stakeholder engagement) but to be the **result of a maieutic process** with the user or the community we are designing for
- to understand the **needs and interests** which move and aggregate the members of the community, and to build values on that
- to **identify and take care of the community leaders**, not just of the stakeholders
- to accept to start from small changes and to accept that **change requires time**

The logic of community organizing is to **experiment with different forms of engagement** of the community, by putting in communication the members of the community with systems of rules and logic of actions around a shared theme.



OUTPUT

SORGHUM GRAIN

GREAT LIFE's sorghum grain produced by Alce Nero is naturally rich in fibers and phosphorus, rather than being a natural source of iron, magnesium, potassium, copper and zinc.

MILLET GRAIN

GREAT LIFE's millet grain produced by Alce Nero is naturally rich in fibers and iron, other than being a natural source of phosphorus, magnesium, copper and zinc.

MILLET AND SORGHUM COOKIES WITH CHOCOLATE DROPS

The organic millet and sorghum cookies with chocolate drops created and produced by Alce Nero inside GREAT LIFE's project are a source of fibers, phosphorus and magnesium- other than being rich in copper.
A food which **valorizes the work of the farmer and respects the health of the consumer.**

GREAT COMMUNITY

A Facebook group with 600 subscribers, dedicated events inside Resilienze Festival, in-depth webinars, two GREAT pic-nics and a series of recipes created by chefs and bread makers with GREAT's millet and sorghum. **A platform for experimentation and sharing**, online and offline meeting, for the creation of a territorial network composed by consumers and professionals.

RECIPES FOR A GREAT LIFE RECIPE BOOK

We created a **recipe book** in order to tell the story of millet and sorghum starting from the table. A tool to discover new innovative recipes able **to promote a more resilient agriculture** and to deepen the themes of energy-intensive agriculture, climate change, biodiversity and health.

GUIDELINES FOR ORGANIC MILLET AND SORGHUM CULTIVATION

The **guidelines for cultivation of resilient crops** were produced in order to promote good agricultural practices and knowledge about millet and sorghum between farmers.
The agricultural practices adopted and described in the guidelines are the basis of an agricultural conservative model, which contributes to **developing the agroecosystem's resilience and adaptability to climate change.**

TOOL GREAT LIFE

A **platform** allows the farmer to collect datas in an easy and centralized way, with the aim of automatically generating a report with values related to chosen environmental indicators.

NUMBERS AND RESULTS

- **3** publications in scientifics magazines
- **5950** millet and sorghum cookies distributed (Resilienze Festival, Val di Zena Biking, CondiMenti Festival, Internazionale Festival, Antoniano Onlus, Eroica Gaiole)
- **250** kids and teachers involved in the experimentation in Cento's schools canteens
- **40** food sector's professionals involved in the experimentation with millet and sorghum grains
- **2000** people engaged by the GREAT Community activities
- **6** LIFE project we created a connection with
- **6** hectares of resilient crops and 3 different farms involved in the experimentation
- **3000** m3/ha of water saved during the project
- **0** synthetic chemical inputs involved

GREAT LIFE is the European project led by the Department of Agri-food Agro-Food Sciences and Technologies of the **University of Bologna** and as partners **Kilowatt, Alce Nero, Comune di Cento and LCE**. From agricultural production to processing and final consumers, our aim is to test new resilient crops to reduce the impact of **climate change** on agricultural activities in the Po Valley and Italy as a whole, helping to sustain farmers' income, reduce water consumption and produce quality food for the final market.

great-life.eu