



GIACCHE VERDI
BRONTE

HUMUS PER LA BIOSFERA – EUKI PROJECT GIACCHE VERDI BRONTE, MANFRED-HERMSEN-STIFTUNG

Brief description

In the small-scale farming river valleys of Mount Etna, Sicily, which represent an important eco-corridor between three nature parks for wildcats and other species, the project promotes humus growth in farms and gardens encouraging the return of organic matter to the soil, thus binding carbon and enriching soil biodiversity and fertility. Together with scientists and more than 100 farmers, the project implements good-practice examples for climate and biodiversity friendly organic farming on trial plots contributing to Sicily's strategic plan of the new agricultural policy of the EU. In cooperation with 27 municipalities, it provides guidance to local authorities and about 140,000 inhabitants for the establishment of a regional organic waste composting system. These activities are complemented by environmental education measures, which involve young volunteers from across Europe as multipliers and approximately 3,000 schoolchildren and their families in Sicily.

Problem analysis

Initial situation in the target countries/region

In Sicily, agriculture is the most important economic sector, but it faces a dramatic situation of humus loss due to centuries of exploitation of vast grain production. Today, 1/3 of Sicily is threatened by complete erosion to rooting depth, accelerating the global warmth. Humus is the essence of fertile soil, our life's basis, and an important carbon deposit. 1t organic waste = 60kg humus = 34kg C-sink.

Around the Etna, small traditional farming is predominant, but there is a lack of knowledge about sustainable soil management. Many farmers still burn tree cuttings, cultivate their soils in a climate-damaging way and use chemical (energy intensive) fertilizers. Regarding regulatory incentives, there are no measures introduced by the Sicily Region to promote humus growth. Moreover, calls for farm innovations are very complicated to apply for. In households, insufficient waste separation prevents organic material from returning to the soil cycle.

The organic waste gets transported far away into central Sicily. For potting soil, people buy peat from Northern Europe, which has a particularly negative CO₂ balance.

Therefore, Sicily needs a solid humus awareness campaign.

Stakeholder landscape in the sector

Decision-makers from politics, public authorities and schools will be encouraged by the easily reproducible mitigation measures we implement in this project, they become involved in environmental education, and will engage as a conscious collective to meet the climate goals of Paris. Especially mayors and technical divisions in the municipalities will be made aware and taught to make decisions according to sustainability and climate change mitigation and receive incentives and technical skills for construction and operation of compost sites of different scales in particular. The involvement of the BMU in their community is expected to spark their ambition. The Region of Sicily gets contribution for the reorientation of the CAP's regional strategy plan for agriculture, in particular contributing financial subsidies for humus growth /carbon sink agriculture methods and setting up regulations which avoid soil loss and desertification.

The project stimulates private households to select and compost organic household waste. This group is reached, for instance, through the environmental education of schoolchildren and by different awareness raising activities through media and visible/practical examples. Above all, we count on the municipalities, which, implementing local compost sites, will reach their inhabitants by special campaigns.

Farmers get trained towards sustainable soil management. They shall experience the practices learned and adopt the most suitable method/practise into their farming routine. Civil associations, who are co-promoter of the designed Biosphere Reserve, take part in the trainings for multiplying purposes and spread our message using for example



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humus for potting soil in flowering town decorations. Local companies promote manure compost, green roofs etc. The Sicilian public gets informed and influenced by workshops, TV and newspaper.

Embedding the project in the target country's climate policy framework

Italy, as one of the parties to the UN Framework Convention on Climate Change, has signed the Paris Agreement and its implementing plan from Katowice. The project contributes to the Italian action proposals for contrasting climate change, mainly in the fields defined as desertification (knowledge gain, capacity building, scientific research, international exchange), soil conservation (dissemination of information and development of educational practices for the public) and sustainable agriculture (promotion of incentives, information exchange systems on the existence of good practices and connections between farms and consultants).

Italy adopted the 2030 Agenda for Sustainable Development in 2015. The project contributes to a number of goals stated in the agenda, namely climate change, soil, desertification, environmental education, lifelong learning and responsible production. The Agenda also expresses the need for transnational cooperation to solve world problems, which will be considered in this project.

Italy is a member of the Food and Agriculture Organization of the United Nations (FAO); its proposals for climate-smart agriculture will be tested on the project's trial plots for their compatibility with organic farming methods. Specifically: plough-reduced field cultivation without being compensated by herbicide use. Results will be communicated to the FAO and to local farmers.

The project aids the implementation of the new EU's Farm to Fork Strategy on local level and serves as a model. Regarding the strategy's ambition to reduce nutrient losses to the environment by 50% in 2030, the project seeks to avoid soil degradation by addressing nitrogen deficiency and optimize nitrogen application for a healthy soil and optimal plant growth. The aimed sustainability of food systems will be promoted by the environmental education and awareness rising of the project.

The F2F strategy also proposes the rewarding of carbon sequestration in agriculture, which the project will advise to the rural development program (PSR Sicilia).

Environmental education has been a mandatory political goal of Italy since 2015 but is poorly implemented in Sicily for lack of professionals and financial means.

The project contributes to the establishment of the planned UNESCO Biosphere Reserve "Terre della Biosfera". The promoter group "Associazione Terre della Biosfera - le Valli fluviali dell'Etna", in which the implementing partner Giacche Verdi Bronte and the implementing organization, Manfred-Hermsen-Stiftung, are founding members, is about to finish the candidature dossier. This project fulfils the goals and actions formulated by UNESCO: sustainability, climate protection, environmental education and (international) cooperation / exchange.

Italy is known within the EU as one of the first nations, which cares about sustainability and ecological aspects within its agriculture, encouraging businesses and farmers to improve environmental standards, providing financial incentives for those who wish to apply for sustainable farming practice. In the project region, where traditional agriculture methods once allowed farmers to easily switch to eco-certified agriculture, we note since years the trend of turning to intensive agriculture. The reasons are that receiving the certification is expensive, prices on the local market for ecological products are nearly equal to uncertified products and the financial contributions for eco-certificated farming has been replaced by a similar subsidy, which, however, allows the use of pesticides and mineral fertilisers (PSR measure 10.1b published in 2018 and still open).

The Regional Prioritized Action Framework for the management of Natura 2000 sites in the period 2014-20 formulates the following objectives that are practically or theoretically affected in this project: Efficient management of natural resources, restoration of biodiversity and soil and sustainable promotion of ecosystem services, and green infrastructure measures.

The project supports the peacebuilding and Europe-friendly aspect of sending young people abroad, which is based on the European ERASMUS principle, and involves ERASMUS volunteers. Environmental education in particular is an ideal field



of activity for the volunteers and additionally educates the children participating in the project about tolerance and respect towards foreigners.

Project concept

Contribution to transformational processes

This project significantly contributes to the EU strategy “Farm to Fork”. Beyond the direct implications, the practical recommendations are widely spread, also across Europe through the EU Committee on Agriculture and other channels. Our field experiments will demonstrate realistic applicable methods of carbon storage within organic growth. Beside the climate effect, a description of side effects like improved soil fertility and water storage and the effort for implementing the best practice, will be communicated to the farmers of the project region as well as to agricultural schools and the agriculture department of the Universities Catania and Messina (for the integration into their schedule). These results, and also the importance of capacity building for farmers and consumers (beginning already with environmental education for children) will be communicated for the purpose of consideration in agricultural subsidies at regional, national, European and international level. The participating international (student) volunteers are trained in their awareness of nature and environmental protection and of political processes. We expect them to return to their countries as multipliers and also to become political advocates for climate protection and the related sustainable food chain.

Target group

Children between 6 and 10 years old (circa 3.000): Theoretical and practical environmental education activities should raise awareness, awake love for nature, provide knowledge and respect, and encourage environmentally responsible personal behaviour, hopefully forming future adults that act in a socially and environmentally responsible way. The parents of the children are educated and perhaps also influenced by their children to climate-friendly behaviour. Pupils (15-18) from Bronte’s Agricultural Institute (almost all children from farmers) participate in the project. Teachers and youth workers will be trained as future multipliers. The international volunteers and students aged 18-30 years participate as creative assistants in the project. The essential purpose of their commitment is their own further education, as a climate ambassador and multiplier after their return to their country of origin. Judging from our many years of experience, these young people are very much influenced by their work abroad; Many are taking their career path in this direction. They continue to benefit from the contacts they have been able to build and contribute to international networking.

The University of Catania is an active research partner and involves its students through thesis implementation or by research scholarships.

The farmers already working with us, and those who are reachable, get trained in carbon sequestration practices, like erosion-reducing ploughing, aerobic and anaerobic conversion of organic material into humus as well as the production of plant charcoal from tree cuttings and the incorporation into the soil, e.g. according to the specifications of Terra Preta production.

Visitors from bigger cities (Catania) or tourists, who are looking for good food offers in the countryside, will be informed through our project website (within the website terrebiosfera.org), where to find organic or traditional (low impact) produce.

27 Municipalities get encouraged to build composting sites with the argument of saving waste disposal expenses. In addition, they are to be convinced to produce good compost, which in turn can be sold to residents.

Towns also benefit by keeping their economic production and attractiveness alive.

Three Nature Parks will benefit from the project results, as environmentally friendly production and traditional farming contribute to their conservation strategies and attract tourists. Partner NGO’s and movements who participate actively or in networking (i.e. Slow Food, Biodistretto) will be strengthened and profit from new connections and the project’s experiences.

The Region of Sicily gets contribution for the reorientation of the CAP’s regional strategy plan for agriculture.



The Sicilian public, (in particular the 140,000 citizens of our project region, are informed about the project and its goals by means of information stands, press reports, the internet and local television and radio broadcasting, and is encouraged to give some thought to this. FAO receives scientific results for its databank. 3-5 European partner NGOs receive our results in their languages, while sending us volunteers.

Impacts (long-term results)

Through binding carbon in the ground, a significant reduction of greenhouse gases will be achieved, alongside the re-vitalization of fertile soil. Doing so, small farmers economic wellbeing will influence the smaller town's life and counteract the rural depopulation trend. We expect an overall improvement of the livelihoods of local communities by taking care of their soil and transforming organic waste into fertile humus. Through different channels the message of the soil's importance and sensitivity as well as humus growing methods will be disseminated to many decision makers and practitioners all over Europe, encouraging them to act carefully and realize good practices. The project contributes to a more sustainable lifestyle – also beyond the project's topic and region.

Results logic and capacity development

The project targets carbon sequestration in two areas: composting organic waste and humus accumulation in the soil. The first is achieved through awareness-raising and concrete recommendations for action for municipalities, as well as through environmental education for children and their families and smaller side activities such as distributing tree seedlings to festival guests or publicizing urban greening. Here, above all, public relations work plays a major role, calling for the valorization of organic household waste or at least the correct separation of waste in households. The other branch is the agricultural good practice, which is proven by scientifically accompanied field trials and gets widely disseminated as well, predominantly to other target groups. The issue of urgent climate protection is communicated in all activities and thus penetrates further into the awareness of the public and the participating partners (e.g. volunteers).

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Outcome

Improved awareness for the protection of climate and soil by demonstrating good practice examples and generating knowledge about composting organic waste and agriculture soil improvement through humus growth in the region of Sicily and at the EU level.

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