

Setting up an ESD centre for a protected area, specialized on organic farming

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The importance of organic farming for a protected area

The scope of this work is the presentation of several ideas about setting up an ESD centre near a protected area (P.A.), which focus on Organic Agriculture. The idea of this specialization was conceived by taking into account the multiple benefits of promoting organic farming around a P.A. The positive effects of expected reduction of air-, water- and soil pollutants are related with a more substantial conservation of a P.A. In addition, through educational and training programmes on organic farming around a P.A, people may be familiarised with the importance of P.A.s and in what ways its conservation can be achieved. Finally, the promotion of organic farming, apart from being environmentally beneficial, may have advantageous socio-economic aspects (Cobb *et al.*, 1999).

Objectives of the ESD centre

The suggested ESD centre aims at:

- **Education:** increase of public awareness on environmental matters, i.e. related to P.A., through a perspective of Sustainability
- **Social inclusion:** training unemployed people on organic farming for future occupation
- **Innovation:** the development of new agronomic technics via researches
- **Sustainable Tourism :** enhancing sustainable tourism of the area with specialised programmes

- **Economy:** increase of the local economy by achieving the goals referred above

For the realization of these objectives, it is crucial to find land, buildings and financial support. Moreover, employing experts and inviting volunteers who want to be part of the setting up and could be work on land management, educational program planning, and promoting of the ESD centre (organizing a website, newsletter and promo-material) is needed.

Fundraising

According to the previous experience, effective education centres for sustainable development required ongoing financing that may come from international funds, national funds or even funds coming from the municipality (UNESCO, 2013). Self-financing options is an important part of ESD centres' livelihood and could guarantee the development of long-term projects in the territory.

• **Purchase or Donation of Land**

The first option considered for the “acquisition” of the land is donation or rent from public or private authorities. This procedure could be relatively cost-effective, in particular in areas where the price of the land is very low (UNESCO, 2013). The donation from public authorities reflects a direct collaboration focused on the valorisation of public land, an example of a sustainable development action

• **Rural development 2014-2020**

Before the creation of ESD centre, the development of organic farming lands of the ESD centre is needed and it requires several financing that may come from the European commission and the Rural development plan 2014-2020. In line with Europe 2020 strategy and the overall CAP objectives, three long-term strategic objectives for EU rural development policy in the 2014-2020 period can be identified:

- ✓ fostering the competitiveness of agriculture
- ✓ ensuring the sustainable management of natural resources and climate action
- ✓ achieving a balanced territorial development of rural economies and communities including the creation and maintenance of employment

Funding may be obtained partly from the European Agricultural Fund for Rural Development (EAFRD) and partly from national / regional and sometimes private sources (EC, 2014).

- **Local Authorities and Municipality**

In order to enhance the link between the ESD centre and the local authorities, the maintenance of the structure could be carried out from the municipalities. The development of these connections is a fundamental step for the acceptance and involvement of local community in the ESD.

- **Ministry of Education**

Education, being the core of such an initiative, should be supported by a qualitative service that include technological instruments and specialised crew with field and laboratory experience. For the achievement of this, the contribution from the Ministry of Education may be needed.

Some of the funds may be obtained from European Commission for Education and training and from several agencies such as School Building Organizations (OSK) or School Book Publishing Organization (OEBD)

- **Associations and NGO's**

This type of donors could contribute through voluntary donations or small annual fees in order to spread the awareness and contribute to our annual budget.

Self-financing options:

- **Brand Name product**

The ESD centre may sell part of the products deriving from the cultivation of vegetables and herbs to the visitors/ tourists or through the internet support (UNESCO, 2013).

The product itself and the label should underline that part of its production is done with the contribution of visitors, as a memento of the experience they have lived.

- **Fees from farmers and tourists**

The special daily program for tourists and the training programmes that refer to existing farmers that aim at cultivation conversion could be accompanied with special fees

Education & Training

Target groups

The education or/ and training target groups offered by ESD-centre will refer to the categories of people below:

- students of primary and secondary school of all over the country
- adults that are interested in learning about organic farming (local people and tourists)
- farmers at local and national level
- unemployed people
- under- and post-graduate students of highest level education that are interested in having the internship on organic farming fields

The indoor and outdoor activities should be adjusted to the characteristics of the group that refers to, such as age, interests and level of knowledge.

Aiming at the constant improvement of the ESD centre programmes, visitors and trainees will take part in evaluation procedures, via questionnaires and discussion, before and after the educational interventions and training.

Inside the ESD centre

In the building of the ESD centre, a main hall is needed to be used for attending lectures and discussions. In addition, a hall equipped with desktops could accommodate a variety of workshops.

Apart from a lecture and a workshop hall, the building may be consisted of several rooms dedicated to different topics. In these rooms, all the categories of visitors may have the opportunity to get familiar with the meaning and importance of organic agriculture and sustainability as well as the multifaceted relation of a P.A. with the wider area before the outdoor sessions, where things are to be seen in a real-word context.

The rooms should be adequately equipped with educative means such as computers, projectors, sound systems and interactive whiteboards and properly decorated with photographs, maps, posters and paintings, aiming to be used as educative tools.

Each educator of the ESD centre may initially present the topic of each room and then serve the role of the instructor and facilitator in a series of discussions and student-centred learning methods such as inquiry- and problem-based learning. Researches show that these

constructivist approaches may enhance students' argumentation skills (Sampson, 2010). In addition, role playing is a method that promotes active learning and enthusiasm (Bonwell & Eison, 1991). These type of methods promote critical thinking, which is a key ingredient for the holistic approach of Sustainable Development issues. Moreover, taking into account students' prior ideas and focusing on their interests and on applying knowledge on real –life issues is of high importance (Dewey, 1952). All the above can be applied outdoors, too.

More specifically, the room topics may be:

- **the sustainability and its applications on our everyday life:** recycling and upcycling of materials, alternative energy sources such as photovoltaic panels, mindful use of electric energy

- **general ecological concepts** related, for example, with the energy cycle and food chains and with the biodiversity, giving examples of local species interactions, highlighting those of the protected area.

- **the relation between organic agriculture and sustainable development** referring to environmental, social and economic aspects (i.e decrease of unemployment, increase of income in an environmental friendly way), giving examples of the local area and concluding to the importance of organic agriculture in global scale.

- **the benefits of organic agriculture specifically on the conservation of a P.A. the connection of a P.A. and the economy of the local area.**

Outdoors

- **Protected Area:**

Visitors and trainees may engage in various field work activities in the P.A. so as to become acquainted with its special characteristics, be it flora and fauna species and their interrelationships, the abiotic factors etc. This aims to raise awareness, the interest, and the willing to be a member of this protection effort. The learning methods referred above are suggested for outdoors, too.

- **Organic farms**

For all the target groups, the visit at ESD centre's and local organic farms would be a hands-on experience, adjusted at the level and interest of each category of visitors. People will have the opportunity to get involved in the everyday procedures of the farms and get familiarised with the methods, tools and materials that are being used. Via discussions with organic farmers, visitors could discover the contribution of tradition in local farming, ways to overcome difficulties and be informed about the distribution of the products. Emphasis should

be given to the procedure as a whole, through which a product gets to our hand, ready to be eaten. At the end, the conclusion of these visits should be the realization of the exact ways that organic farming supports the conservation of a P.A.

Moreover, local organic farms is an ideal training place for unemployed people who want to get involved in agriculture and farmers from all over the country that aim at switching their conventional crops to organic. Seminars on organic farming may be scheduled systematically during the year. Research may grow at organic farms of the area where under- and post-graduate students of highest level education interested in organic farming, may have their internships.

- **ESD centre gardens**

At the ESD centre outer area, visitors may take gardening classes at different type of gardens, i.e. with herbs, edible flowers, cut flowers or vegetables and be able to know how to create and maintain their own one.

The gardening classes may be combined with cooking classes aiming to provide ideas about ways to preserve the products during the whole year (i.e. jarred preserves, pickles, and pestos) following local traditional recipes. In addition, workshops on how and when to harvest herbs, how to dry and store them properly and how to prepare simple herbal remedies for everyday use may be combined, too.

It is recommended that each person, by the end of the visit, to take a little plant in a pot with them, to replant at their home. This memento at urban windows, balconies and gardens may help the ideas of the ESD centre to grow and spread.

Pre- and post-visit: distant e-learning sessions

A distant e-learning session is recommended for future visitors, especially students (young or adult) and teachers to be attend before and after the visit to the ESD centre. The objective of the pre-visit session is to act as an “advance organizer” -a tool introduced by Ausubel in the 60s- that is helpful for the students to organize the incoming information. This include the directing of attention to the important concepts and some relations of the coming material and a way to connect these elements with relevant prior knowledge (Woolfolk *et al.* 2010), which makes the learning meaningful. The teacher-specific pre-visit session will be a kind of training for them in order to be able to support the educational process during the visit. The after-the-visit session will act as a means for students to keep in touch with the progress of the agricultural procedures, so as to observe its sustainable facet through time.

Future perspectives

After several years of function of the ESD centre, the achievement of the initial goals and its economic adjustment, the effort may get more extended, aiming at:

- **Collaborations:** with other type of farms, such as pet therapy farms
- **Social inclusion:** creation of programs focused on children with special needs
- **Funding:** as result of increasing programs and involvement of heterogeneous partners, new sources of funds may requested
- **Connectivity:** creation of a network among the organic farmers of the area that may enhance the productivity by synchronising the use of up to date methods and the promotion of the products to the market.
- **Economy:** the expected results of the creation of the farmers' network mentioned above may have a significant effect on local economy. Economy improvement is a fundamental component for the development of durable projects and it could act with a positive feedback.
- **Creation of a buffer zone around the P.A.:** taking into account that organic farming has been under rapid development all over Europe (Agency, 2006), it the creation of a wide area of organic farms is possible, with new and converted cultivations, around the protected area that may play a significant protective role for it.

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