

GROWING COMMUNITIES

eduplus

Socio-Educational Association

ENGAGEMENT PROGRAM GUIDE FOR FACILITATORS OF MICRO-TRAINNGS

METHODOLOGY, ACTIVITIES AND EXAMPLES OF BEST PRACTICES

www.growingcommunities.es









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Guide for facilitators of micro-trainings

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1. About Growing Communities

The "GROWING COMMUNITIES: Empowerment through social permaculture" project responds to two important challenges in Europe: social inclusion and environmental & climate goals, by using an innovative approach to social permaculture, community gardening and sustainable lifestyles.

Around 22,4% of the population in Europe lives in households at risk of poverty or social exclusion – and the percentage is even higher in rural areas or suburbs. As an outermost region, Canary Islands report 36% of people at risk of social exclusion and poverty (in Romania 35.7 %) (EUROSTAT, 2017).

The most powerless people in our societies are likely to be worst affected by the consequences of a crisis (like the COVID 19 pandemia), not only economically, but also regarding the access to affordable and balanced food.

Increasing food autonomy and changing consumption patterns towards sustainable habits could be a way for adult educators to motivate and empower final beneficiaries to improve their socio-economic situation, health and educational opportunities.

The aim of this project is to enable adults – with focus on vulnerable adults – to acquire a wide set of skills, knowledge and competences needed for participating actively in modern society in a lifelong perspective, such as critical thinking, civic and environmental awareness, food autonomy and learning for healthy lifestyles.

The target groups and final beneficiaries are adults, especially from disadvantaged rural areas or problematic suburban neighbourhoods, seniors 55+ exposed to loneliness, adults who face economic instability and risk of social exclusion.

The project consolidates the efforts of 3 organizations from Spain (EDUPLUS), Germany (Kulturlabor – Try & Error) and Romania (DOMINOU Association). The partnership is going to work jointly on the development of 3 intellectual outputs:

- A European Educational model to empower adult educators to teach learners, including adults from disadvantaged backgrounds, to become true actors of change in their local communities.
- Bite-size learning tools a set of training and self-paced learning materials (OER) that support disadvantaged groups and adult educators in implementing transformative community processes.
- An Engagement program designed for 60 adults to increase their motivation for participation in the society, with a focus on those with fewer possibilities – they will exchange experience during microtrainings and social activities with peers.











2. What is the engagement program?

2.1 Our approach

The choice of our approach is determined by two main factors: the target groups and the objectives of learning.

2.2 Experiential learning

Experiential learning is a teaching method based on the theory of David A. Kolb in the 1970's. This learning model states that people learn best when they actively participate in a reflective process based on real-life experiences. It proposes that teaching should be adapted to the way different individuals process and understand information.

Kolb's and Fry's learning cycle for experiential learning is composed of four stages that describe how one person processes and applies information. The four stages are: concrete **experience**, observation of and **reflection** on that experience, **formulation of abstract concepts** based upon the reflection and **testing** the new concepts.

Learning can begin at any stage of the cycle. However, to maximise learning opportunities it is ideal to complete all four stages. It typically begins with the individual experiencing an activity and reflecting on what has happened. From that reflection, the mind extracts a meaning that is finally put into practice when the individual changes his or her behaviour or attitude. From this change, the individual can make new experiences that begin the cycle again.

Kolb's cycle is actually a natural cycle, experiential learning occurs spontaneously and continuously in the lives of individuals. However, if an educational experience is to result in effective learning, Kolb's theory shows that reflection and the formation of new concepts are the phases that make a learning experience complete.

Therefore, we can use the cycle as a guide to make our activities more effective by including sections that lead to each of the phases of experiential learning. Much experiential learning can occur naturally in daily life. It can also be configured or structured to guide students through an experience and maximise learning outcomes.

Concrete Experience (CE): Learning by experiencing. People learn by being involved in an activity or experience and remembering how they felt. This is the primary way in which we learn and can serve as the basis for all other stages in the learning cycle.

Reflective Observation (RO): Learning by Processing. Using a concrete experience as a basis, the student reflects on the experience to obtain more information or deepen his or her understanding of the experience. To help this stage to be effective, Kolb proposes some reflective questions:

- Did you notice?
- Why did that happen?
- Does that happen in life?
- Why does that happen?
- How can you use that?











Abstract Conceptualization (AC): Learning by generalising. Based on the reflection of an experience, the student consciously or unconsciously theorises, classifies or generalises his or her experience in an effort to generate new information. This "thinking" stage serves to organise knowledge, allowing students to see the "big picture" and identify patterns and norms. This stage is critical for students to be able to transfer their knowledge from one context to another.

Active experimentation (AE): Learning by doing. The student applies or tests his or her newly acquired knowledge in the real world. The application of learning itself is a new experience from which the cycle begins again.

At each stage of the cycle, a specific type of learning takes place: experiencing, reflecting, thinking or doing. The experiential learning cycle is commonly represented by two continuums that are useful for the production of information. In the 'y' axis, also known as the perception continuum, there are the two possible ways of facing an experience, Concrete Expression (CE) or Abstract Conceptualisation (AC). The concept of learning is basically our emotional response to learning, how we think and/or feel about it.

The processing continuum that includes two different ways of processing an experience through 'observing' or 'doing', Reflective Observation (RO) or Active Experimentation (AE) is situated on the 'x' axis. The processing continuum is basically how we approach a specific task. Kolb argues that students are not able to perform both actions on one axis at the same time (e.g. thinking and feeling) and for that reason we have a tendency to perceive and process learning in a particular way. This tendency to rely on certain ways of perceiving and processing information is what Kolb refers to as a learning preference or learning style, which can vary based on content and context.

There are four different learning styles based on the four-stage experiential learning cycle. Each has a unique learning style or preference, but to achieve a balanced learning experience it is important that learners use all four learning styles.

2.3 Micro-learning

Micro-learning is a teaching strategy defined by short-term, complete and independent content. Normally, this content is focused on advice, tips or interesting and didactic data. In other words, content that can be easily captured and assimilated by people. For this reason, Microlearning is positioned as an extremely efficient strategy for sharing relevant information.

Micro-learning is also an extremely efficient method for reinforcing previously taught content or for extending information on a subject that people already have knowledge of. It can be carried out in various ways: exercises, small videos or even feedback.

What benefits does it provide to students? The assimilation of the content is improved from the moment the student takes advantage of these small pieces of information on a specific subject and in a structured way. Likewise, micro-learning facilitates the review of concepts and ideas because it allows for complementary and reinforcing exercises and content with which to deal with diversity. It offers access to ubiquitous and instantaneous education thanks to new technologies.











2.4 Informal learning

Informal learning is a type of learner-centred learning primarily based on practice. In this methodology there is no set goal of learning outcomes, but it is oriented towards achieving a higher purpose that can be reached by various means, such as solving a problem. It is therefore a type of learning where time and content are not necessarily defined or planned in advance.

In informal learning, knowledge is constructed from the specific needs of the problem to be solved. And it is typically based on trial and error, learning by doing, modelling, feedback and reflection. The learner therefore creates his or her own knowledge in a shared way through heuristic language construction, seeking advice from peers, participating in communities of practice and play.^{1,2} Informal learning is common in communities where individuals have the opportunity to observe and participate in social activities.

Informal learning should not be confused with non-formal learning (outside educational institutions and self-regulated learning. The distinguishing characteristics of informal learning are:

- It is geared to the achievement of practical goals, not to a curriculum with specific learning objectives.
- It is experienced directly in its natural function of everyday life.
- It is creative.
- It is based on practice and reflection.
- It is learned collaboratively with peers.

The advantages of informal learning include:

- Flexibility and adaptability to learning needs
- Direct transfer of learning into practice
- Rapid problem solving

2.5 Social networking

In the 1980s, a multidimensional approach to understanding the processes of social inclusion and exclusion was introduced in sociology. Thus, social exclusion processes are described as structural, multidimensional, heterogeneous, diverse and influenced by subjective factors. (Laparra and Pérez Eransus, 2008). They are mainly influenced by three interrelated axes:

- Economical (purchasing power and access to means of production).
- Political (Participation and access to social benefits and services).
- Social-relational (Existence or non-existence of social networks of mutual support).

In terms of the social-relational axis, the need to create these social networks of mutual support is seen as necessary in order to create resilient communities where individuals are less vulnerable to the circumstances. Agreement has been found between the positive role that social capital can play for local development and the importance of promoting it under certain conditions.³

³ Dempsey, N., Bramely, G., Power, S., Brown, C. (2011) The social dimension of sustainable development: Defining urban sustainability, *Sustainable Development*, 19. Págs. 289 - 300









¹ Decius, J., Schaper, N., & Seifert, A. (2019). Informal workplace learning: Development and validation of a measure. *Human Resource Development Quarterly, 30*(4), 495-535. <u>https://doi.org/10.1002/hrdg.21368</u>

² Paradise, Ruth; Barbara Rogoff (2009). "Side by side: Learning by observing and pitching in". *Journal of the Society for Psychological Anthropology*: 102–138



Community activities are a tool for building and strengthening social networks and relationships in ways that buffer against situations of vulnerability and exclusion and foster participatory action for change in situations of inequality while meeting needs such as communication, relationships and friendship.

Mutual support within a community enables certain population groups with few sources of support to extend their social capital beyond the family environment and to find the support they need in their local environment. The importance of peer support is an effective tool in the fight against vulnerability and social exclusion if properly implemented.

This form of inclusion through social support networks should be understood as a dynamic resource, which can be built and fostered in a process of intersubjective recognition and mutual respect ⁴ and with a gender-sensitive approach.

3. The role of the facilitator

3.1 What is needed to be a facilitator?

A good facilitator of informal learning group processes is an active, dynamic and flexible person, able to adapt to the circumstances and learning needs of the participants in order to achieve the practical objectives of the project (in this case, the development of a permaculture garden).

He/she must have active listening skills and empathy to understand and give voice to those who have less communication skills, to mediate possible conflicts that arise between participants and to know if the group is ready for a new microlearning situation.

In order for the activity to be as participative and inclusive as possible, he/she must know how to cede the leading role and decision-making capacity to the participants, showing the microlearning workshops as open proposals for participation and cooperative learning, instead of impositions that must be completed as an aim in themselves.

On the other hand, given the situation of vulnerability and risk of social exclusion that some of the participants are going through, confidentiality and respect are basic attitudes.

Given the multidisciplinary approach of the project, studies in Education, Socio-cultural Animation and Agriculture are ideal, although they are not a prerequisite.

3.2 Adult learning principles

Education is a basic need for our lives at all ages. However, education of adult learners has its specific features. Adult learners enter education with a portfolio of knowledge and personal experience obtained during their Professional careers and personal lives. From the standpoint of ageing, an ability to learn is good during the whole career and after its end, when education is determined by expectations⁵. Therefore it is necessary that the expectations of learners to be in the centre of our interest and the whole process of education should meet these expectations.

⁴ Pizzorno, A. (2007) Perqué si paga el benzinaio. Nota per una teoria del capital sociale. En Il velo della diversità. Studi su razionalità e riconoscimento. Milano: Feltrinelli







⁵ Ilmarinen, J. (2005). Ako si predĺžiť aktívny život. Vydavateľstvo Príroda s.r.o. Bratislava



Participants of education have a lot of experience and they are relatively well-informed. They tend to pursue their hobbies, they want to communicate actively with their community.⁶ Naturally, they would like to stay healthy, as this is a basic premise of everyday living. They expect a competent approach by means of which a trainer provides them with clear and understandable information. Learning is not a passive receiving information, but i tis more about active processing. It is good when a trainer perceives ambitions of older learners and their will to learn as a chance on which trainers build a process of education.

Cognitive functions of adult learners differ from those of young people. Mechanical memory decreases by age. Education and experience do not play an important role in this process. While long-term memory decreases minimally, remembering new facts decreases sharply. However, connective memory compensates it. New and unknown things are connected with older and known ones. A new layer of information is built on a previous hard and strong layer. Therefore we need to encourage adult learners to connect new knowledge with their past experience. We also need to bear in minds that older information should not be a barrier for learning new one. We must not forget also negative attitudes and fear that can hinder a process of education. Mistakes are allowed. Also older students learn from their mistakes.

Tips for teaching adult learners:

- Take into account the expectations of learners
- They have a lot of knowledge, give them time to communicate it
- Give them clear and understandable information
- Connect new knowledge with their past experience
- Show them mistakes are allowed as a part of the process of learning

3.3 Working with disadvantaged adults

Disadvantaged adults are often people who have not had the opportunity to build their future because they have faced a situation of deprivation. This exclusion has deprived them of the right to education and participation, among others. With these workshops we should try to give them back these rights as far as possible.

However, although many of the people we are going to work with have a low level of education, this does not imply a lower level of intellectual capacity or knowledge. We can find curious and intelligent people who are eager for social recognition. This is why workshops should be open to the exchange of information and allow time for participation and dialogue.

The facilitator should listen to the participants' interventions with patience, even those who find it difficult to find the words or who bring knowledge that has already been exposed or is incorrect. It is a good idea to wait until the participant has finished before elaborating on what he or she says. However, there are times when these interventions break the dynamics of the activity or the group. In this case, the

⁶ Reidl, A.(2012). Senior zákazník budúcnosti. BizBook











participant's intervention is applauded and he/she is encouraged to share his/her reflections later in the planned time.

Other aspects to be taken into account in facilitating the process are:

- The process is voluntary. Participants should attend of their own free will and should not be forced to participate in activities in which they do not feel comfortable.
- Different levels. Sometimes we will encounter different levels of education and social exclusion. We should try to create diverse working groups where different people work together.
- Welcoming. There should be a space for participants to get to know each other, say their names and feel part of the group. It is helpful for the facilitator to call participants by name. This can be done with the help of name stickers that can be attached to clothing.
- Participatory activities. Whenever possible, activities should be carried out in small groups where each participant has the opportunity to participate and feel useful.
- Vocabulary and language. It is advisable to use simple and accessible language. Technical terms should be explained and clarified whenever they occur.

3.4 Feedback collection

Every micro- training session :

1. Will begin with an activation of prior knowledge acquired through self-directed learning based on the teasers (bite sized tools),

2. Then, there will be an activity and social networking (see Chapter 5),

3. Will end with a feedback session which promotes critical thinking and reflection on work, to facilitate deeper learning and evaluation of outcomes.

Based on the oral feedback collection, the facilitators will fill in a report with the summary of the shared impressions.

Moreover, by means of the pre-training questionnaires (see Annex 7.1) and post-training questionnaires (see Annex 7.2), the facilitators will evaluate the outcomes of the learning process and the impact generated among the participants to micro-trainings.

The expected learning outcomes among the participants to the micro-trainings are:

- Improved abilities regarding eco- or community gardening and regarding food autonomy;

- New knowledge about permaculture and other regenerative agroecology methods;

- Improved mindset and behaviour regarding consumption and production patterns and healthy sustainable lifestyles;

- Increased awareness about environmental and climate change goals, social inclusion and the challenges of today's society.

The expected impact on the participants in national micro-trainings is:

- Enhanced basic and transversal capabilities (critical thinking, problem solving, ability to cooperate, creativity, self-regulation etc.);

- Increased self-confidence, sense of purpose and personal achievement;











- Improved attitudes towards their participation to society;
- Increased sense of belonging and community spirit;
- Increased social and civic skills and critical thinking;
- Open minded to use the Bite-sized learning tools;

There will be quizzes administered after each micro-training, to assess the achievements of the participants to the micro-trainings, in terms of knowledge, skills and attitudes.

Through pre-training and post training self evaluation questionnaires will be measured the impact on the participants:

The pre-training questionnaire targets the improvements of the learning and training outcomes,

knowledge, skills and competences of the participants - compared to their needs and

expectations. The post training questionnaire will capture the changes and the impact of the course, too.

3.5 Methodology for facilitators' training

Methodologically, it is not restricted to the formal teaching-learning relationship.

Learning here is not one who teaches and one who learns, but both, educator and learner teach and learn from each other in the same act.

This is the way for education to contribute to the transformation of the world. World, which is understood as the permanent humanisation of the human being, according to Paulo Freire's ideas.

4. How to plan and organise micro-trainings

4.1 Finding the target participants

The micro-trainings are aimed at all kinds of adult audiences, the idea is that different people with similar concerns can share and learn together and in this way help to create support networks. That is why it is interesting to make an open call through social networks so that anyone with an interest in the subject can participate.

It is also advisable to contact organisations or associations that work with our target group (NGOs that help the homeless, associations for the elderly, etc.), as they can make it easier to reach the people we want to have in our workshop.

4.2 Communication with participants

In order to foster a relaxed learning environment, it is recommended to use simple language with vocabulary that participants can understand and feel able to understand. It may be useful to translate some technical terms, or if this is not possible, to explain them after naming them in order to make it clear that they are not expected to know them beforehand. When a participant makes an intervention or comment, try to avoid responses such as "no, that is not so" or "what you have said is incorrect", and











instead use constructive phrases such as "that is a very common doubt, but it has been discovered that it is not so" or "good reflection, although in this case the correct answer is another one". In the delivery of the workshop, during the activities, participants should be encouraged to talk to each other rather than directly to the facilitator.

4.3 Venue, set-up and materials needed

For the workshops, it is advisable to find a bright space where there is room for all participants so that they feel comfortable. If possible, each participant should have a place to sit.

The most suitable arrangement of the space is in a circle, either standing or sitting, so that all participants can see each other and sit on an equal footing.

4.4 Timing and agenda

The time for each workshop should be short, between one and two hours, including time for networking and free speaking. A good session would be one that includes a dynamic presentation, a short, relaxed activity and a longer, more in-depth knowledge activity.

Participants may have knowledge or reflections to share before or after each workshop. Since one of the aims of the micro-trainings is to create support networks, it is recommended to plan extra time for these exchanges and networking to allow freedom to talk, at least for a while.

4.5 Using the teasers

A series of teasers have been designed with the aim of motivating participants to attend each of the workshops and to encourage a joint reflection beforehand. The teasers can be accessed here.

To share them, you can create an online community, a Whatsapp group, or a Facebook or other social network. Teasers can be sent out in a way that encourages feedback from participants and encourages them to share other similar information or reflections.

The teasers can be sent out a few days before the activity, they will serve as a reminder of the event and at the same time as a motivation to attend.

At the beginning of the activity, participants can be asked if they have been able to take a look at the teasers, to show that there is a follow-up.

At the end of the activities, photos can be sent to encourage people who have not been able to attend to come to the following event.











4.6 Facilitating an online learning community

We can create a group on a social network where participants can exchange impressions and where we can post logistical information about the workshops. Participation in the group should be moderated to limit messages that may cause noise or be offensive. This group can be used to send out teasers before each working session.

When creating the online community, it is recommended to make a list of the rules of coexistence (no advertising, no unrelated messages, no offensive messages, etc.) It is also advisable to welcome all the people who enter the community and introduce them, so that they feel accepted.

However, it should be noted that some people may not have access to the email or social network we use and therefore may need us to contact them individually to provide them with the information.











5. Activities for micro-trainings

5.1 Micro-Training 1: Traditional Vs Permaculture Approaches

Description

The activity consists of looking at some of the most characteristic techniques and means of traditional agronomy and relating them to their impacts and consequences for the vegetable garden. Permaculture alternatives are then presented in order to compare the two approaches to agronomy.

Teaser

At first sight, a permaculture garden may seem a bit messy, but in reality there is a lot of planning involved. For example, when it comes to distributing the plants in the garden, we can make better use of the space if we know the sunlight needs of each plant and thus reserve the shaded areas for the less demanding ones. In case you don't find your plant in the list, you can be guided by this saying "If you grow ii for the fruit, it needs full sun. If you grow it for the leaves, partial sun is all you need."

Photos/Images



http//:www.thegardeningcook.com











Competences addressed

- Knowledge about benefits of permaculture.
- Knowledge about the most common techniques of permaculture.
- Communication
- Learning to learn

Learning objectives

- To reflect on the uses of external inputs in traditional agronomy.
- To learn about the environmental impact of some of the most commonly used inputs in traditional agronomy.
- To learn about some of the most common uses of plants in permaculture.
- To learn how to use one's own crops to get an added yield from them within the garden system.



Preparation for the activity

- Print and cut out the cards provided in annexes 1, 2 and 3. (We recommend to print them on a coloured paper, different for each document and double side)
- Prepare a table for each working group you are going to form.
- Place craft paper on each of the tables.
- Draw the columns to be filled in:
 - 1. conventional agronomy techniques,
 - 2. benefits and impacts and
 - 3. permaculture techniques.

The activity / the content

It is important to clarify that each type of production uses the means and resources of the other. When we speak of predominant traditional agronomy, we do not mean that traditional farmers do not also use some means of organic farming, such as crop rotation or organic fertilisers, traditional seeds, etc. It is important to emphasise this, especially for those participants who may











be offended by simplifying their way of working.

1. Introduce the topic:

To this day, conventional agronomy is based on the use of inputs to improve crop productivity (fertilisers, phytosanitary products, tillage machinery), which, in most cases, come from outside the plot. These supplements are highly effective during the first years of use. However, their long-term use results in a system that is increasingly dependent on external inputs, with the consequent economic cost and environmental impact (soil erosion, reduction of soil microbiota, contamination of aquifers).

It is therefore necessary to look for new forms of production that are more resilient and make use of the garden's own products, to achieve a system that, although it means waiting a few seasons until it is effective, in the long term is more efficient and, undoubtedly, more environmentally friendly.We are going to compare some aspects of traditional agronomy with permaculture starting with the most basic approaches: objectives, needs of the garden and means to achieve them.

2. Ice-breaker:

In a circle, ask every participant to think and express through mime, one activity that is used in conventional agronomy. The rest of the participants shall guess what the mime refers to.

3. Divide the participants in groups of 4-5 people. Assign a table for each group. And give them the cards.

4. On each table there should be a piece of paper (the bigger the better, depending on the possibilities of the class). The paper will have a table with three columns drawn on it, with the headings:

- Resources and techniques of conventional agronomy
- Benefit, impact and consequences
- Resources and techniques of permaculture

Predominant agron	Permaculture	
Resources and means	Impact and consequences	Resources and means

5. Give the groups the first and the second fist of cards, that corresponds to the first and the second header: *Resources and techniques of conventional agronomy* and *Benefit, impact and consequences.*

Ask them to read the cards and match each technique with its impact using the table. If they do not understand any of the techniques, they can read the definitions on the other side, or, if it is not possible to print the cards double-sided, on a separate sheet of paper.











6. When they finish task 5, give them the third group of cards, corresponding to *Resources and techniques of permaculture.* Ask them to put them in the table matching the conventional techniques they are an alternative for.

7. If a group is well motivated and they finish soon enough, you can ask them to write a fourth column with some of the benefits and impacts of permaculture techniques they can deduce.

8. Have a debriefing to check the results. The aim is not to correct mistakes of wrong matches, but to allow participants to share what they have learned. Ask each group to name one thing that stood out to them and to name one benefit of permaculture that they learned from the activity.

9. In Annex 2 you can find the table with solutions, in case you want to print them or if anybody asks for it.

Questions for reflection, self-assessment and conclusions

- How would you summarise the advantages of permaculture in one sentence?
- What are its disadvantages?
- Which practices would be easily exportable to other types of agronomy and would have a big impact?

Recommendations on how to adapt to different target groups

- Add pictures on the cards for disadvantaged groups that are not used to reading a lot.
- Make a big panel with the whole group, ask each participant to read one card and place it in order.











5.2 Micro-Training 2: Garden Web

Description

This game aims to deepen the understanding about how the diverse elements of a living ecosystem are interconnected. In this game each participant gets a card for a different organism or natural element and the group forms an ecosystem of a garden. During the activity the participants look for the other elements they depend on to be able to live and discover how all the participants in an ecosystem depend on each other. At least six people are needed to play this game, and it could be played with a large group as well.

The extension of this game is to introduce "disturbing" factors like pesticides, which with scissors cut the connection lines.

Teaser activity

Ask participants to sit on a bench in their closest park with papers and pen: they should list all the organisms they can observe. Once they have listed them, they should try to draw an organogram where the connection lines are different relations of the organisms.

Teaser-video:

https://www.ourplanet.com/en/video/what-is-biodiversity/

Photos/Images



Competences addressed

Ecological competences:

- Awareness about biodiversity and ecosystems
- Awareness about human impact on biodiversity
- Knowledges about needs and benefits of plants and animals

Social and individual competences:

- Group work and communication
- collaboration











Learning objectives

- The participants identify the different organism in a garden
- The participants identify the different relations of organisms in an ecosystem
- The participants are getting familiar with holistic approaches of gardening
- The participants learn to identify needs and benefits of different organism

Group characteristics

Activity can be done in groups of 6 till 30 participants.

Preparation for the activity

There is no need for special knowledge to do this activity.

Material needed:

- as many cards as participants
- As many pens as participants
- A ball of string
- optional: a flipchart, scissors

Place needed:

- 1)natural space / Garden
- Big enough that people can make a circle

The activity / the content

1) Go in a garden or in a specific natural place with your group

2) ask them to observe their surroundings and ask them to list the different organisms /elements they observe or they presume are present in the garden. At this phase moderator can write all the elements mentioned by participants on the cards and also gather the observations on a flipchart.

3) Gather the cards and put them in a box. Everybody picks a card.

4) The person leading the game should explain that the group now represents an ecosystem – a community of living things. Everyone should go around the circle and read out their plant or animal. The person leading the game should make sure that everyone knows what the plants and animals are.

5) The person leading the game should give someone the ball of string.

6) The person with the ball of string should look around the circle and find something they think they're connected to, for example, something they'd eat (or be eaten by!) or a place they'd live.

7) The player with the string should hold onto the end of the string, throw the rest of the ball of string to the player they're connected to and so on. Everyone should continue making connections and throwing the ball of string around until everyone is connected at least once.











8) When everybody is connected at least once everyone should talk about their different connections and what kind of connections it is (alimentation, fertilisation etc.).

9) The person leading the game can then introduce "disturbing factors" like a specific pesticide or cutting a tree.

10) The group should then decide what effects on these strings the disturbing factor is inducing. Eventually they should cut the connection with scissors.

11) Everyone should say how cutting one or two strings affects him/her or other parts of the web. Encourage everyone to think about the domino effect on other species. How will removing one plant or animal end up affecting the whole ecosystem?

12) The person leading the game should help everyone understand that this shows why all sorts of life is really important. This variety of life is called biodiversity

13) The person leading the game should explain that humans are part of this web of life – we need biodiversity to survive.

Questions for reflection, self-assessment and conclusions

- Which organisms are missing and could be beneficial for this garden ?
- Which organisms are in danger?
- Are there "useless" organisms?

Recommendations on how to adapt to different target groups

- If people have difficulties with language, they can also draw on the card
- If people are shy or demotivated you can also start with an ice-breaker game with the ball of string

References

https://library.uniteddiversity.coop/Permaculture/Permaculture_Facilitators_Resource_Book-Train ing_Assessment.pdf

https://www.amnh.org/explore/ology/biodiversity/web-of-life/activity-instructions











5.3 Micro-Training 3: The Jar Test

Description

This activity is a mix between a **role-playing game** and a **board game**, which will help participants to familiarise themselves with the internal dynamics of a permaculture garden. This activity consists in identifying the elements of a permaculture garden and understanding how they interconnect.

Participants are then asked to become one of these elements and natural factors and locate themselves where they think they'll have more chances to prosper. In this way, participants will be able to better empathise with the natural ecosystem and understand its challenges. The experience will also give them an idea about how natural ecosystems can be imitated for co-living in teams and, on a larger scale, in societies.

Teaser

Permaculture zones help us organise our spaces according to how (and how often) we use them. As a design strategy, zones are a super powerful way to make choices about where to place elements of the ecosystem, in order to enhance their ecological performance. Try to imagine: how could these zones be envisioned? In our micro training, you will get more practical experience about how this principle works and how human and natural interactions occur.

Competences addressed

Ecological:

- Knowledge about geographical structures and landscapes
- Knowledge about crop management
- Knowledge about botanical processes and natural cycles
- Knowledge about climate and climate change
- Knowledge about biodiversity and fauna
- Knowledge about energy and energy-saving
- Knowledge about permaculture

Personal:

- Attention and care
- Sense of control
- Ownership on actions
- Creativity
- Precision and structure
- Social:











- Project-management
- Ownership of public space
- Collective and democratic decision-making
- Sense of belonging
- Sense of usefulness
- Sense of support and solidarity
- Sense of responsibility and commitment

→ The experiment makes clear the interdependence between elements in the natural ecosystem and supports participants in the learning process through real experiences. Each participant is part of the ecosystem and part of the collective mission, with a function and a role. Each part of the system relies on others and the team is strengthened when everybody's action is aimed at the overall mission.

Learning objectives

- Learn about how to design a garden considering the impact of different actors and trying to maximise the capacity of these actors to interoperate and support each other.
- Make participants experience the relationships in the garden.

Group characteristics

There is no strict number of participants in this activity. Of course, the larger the group the more possibilities we will have to explore different elements and see them in action.

Preparation for the activity

The materials needed for this activity are cheap and simple (see below).

You would need a surface where you can draw the different zones as different concentric circles that expand from zone 0 (the centre) to zone 5 (the furthest from the centre). For that, you can use a cartoon or a big piece of paper. You can also figure out other ways (e.g. circles on the grass, circles with different materials, etc.)

You can prepare some cards with elements that are typical of a permaculture garden; we'd suggest preparing some empty cards as well because participants could think about an element that didn't come to your mind. It's always better to let it open for further ideas.











Don't forget to bring some pens and pencils for drawing lines, connections or new elements. Keep in mind that colourful cards and drawings make the activity always more attractive, increasing the opportunities to become active learners.

If you are in an open space, you could think about designing that specific space as a permaculture garden. Participants will then have the space to spread around and experience the space. Ideally, start the activity in the centre.

The activity / the content

- 1. Introduce the game and the concept of zoning in permaculture (see "Useful resources" for information)
- 2. You can choose between:
 - i. leaving the cards covered on the table and asking participants to uncover one and place it in the "right" zone
 - ii. presenting the cards uncovered and asking participants to pick one and place it in the "right" zone

 \rightarrow give participants the possibility to propose a new element if that's not on the cards!

 \rightarrow rounds: in order for everybody to be active and participate (even the shiest ones) go around in circles and let everybody speak when their turn comes

3. Discussion: Why did you put it there? How does this element relate to other elements? You can draw lines to highlight these interconnections.

4. Consent: the entire group should reach consent about where the element would be located. If someone does not agree, he/she should object and the group should find a better solution

5. If you find yourself in a place that allows that, you can pretend that the area around you is the garden you have to design.

- i. Locate Zone 0 all together, through consent
- ii. Ask participants to pick an element and locate themselves in the spot where those elements could live at best. <u>Remember participants to act as a team and consider the interconnection with other elements (the team is now an ecosystem and interconnections among elements are extremely important for a self-sustaining ecosystem).</u>

b. Ask participants to take a moment for themselves once they have found their location (meditate, sing, dance, do whatever they want!) and then come back to the center for follow-up and reflection.











Questions for reflection, self-assessment and conclusions

- How did you feel when you were in your zone?
- How did you perceive the other elements?
- What inspiration can we take for the organisation of human societies?
- How do interactions among social individuals reflect interactions among natural elements?

Recommendations on how to adapt to different target groups

Try to find a barrier-free space to run the activity.

If people have disabilities or are for any reason not able to follow the game, try to put them together with another participant, who can help. Together it could be easier.

References

https://www.freepermaculture.com/permaculture-zones/

This BSL tool was developed by the <u>Feld Food Forest</u> community for the design of the West Feld Garden (Tempelhofer Feld, Berlin), a permaculture community garden that sees the participation of more than 10 different organisations. The tool was therefore intended to be as participatory as possible, to ensure that everybody's voice is heard and the participants are empowered to participate in the co-creation process.

5.4 Micro-Training 4: Uses And Functions Of Plants

Description

The activity consists of looking at the uses and functions that we can give to the different plant species in our permaculture garden.

Each group works with a pack of cards with information about different plant species. The groups read the information and try to deduce what uses can be given to that plant in order to achieve a balanced ecosystem within the garden.

Teaser

Title: How much sunlight does each plant need?

Summary: Soil is the great neglected element of conventional agronomy. Look at the difference











in richness between conventional and organic soil.

Text: The soil of our vegetable garden is the central element. We can know its composition with analyses like this one (Pfeiffer chromatography) where it is separated into its different components. Here we see a soil of traditional agronomy (a) that only retains the compacted mineral part, while organic agriculture has an aerated soil, rich in active microorganisms and organic matter.

Photos/Images





Image by LSDSL - Own work, CC BY-SA 3.0, Wikimedia commons





Image credit: Kurt Stüber - caliban.mpiz-koeln.mpg.de/ mavica/index.html part of www.biolib.de, CC BY-SA 3.0











Competences addressed

- Knowledge about biodiversity and fauna
- Diversity and inclusion (biodiversity)
- Communication
- Learning to learn

Learning objectives

- Know some of the uses of different species within permaculture.
- Understand the importance and benefits of biodiversity
- To know some natural alternatives to the use of pesticides.

Preparation for the activity

Print and cut the cards in Annex 1

Prepare 4 pieces of paper for each group with the titles:

- Protection
- Health (of plants)
- Human use
- Fertilisation

Prepare 1 table for each group

The activity / the content

1. Introduce the subject:

One of the principles of permaculture is based on observing nature in order to try to emulate it and create a system that is self-regulating.

In a permaculture garden, many species of plants, animals and micro-organisms coexist to form a small ecosystem. Each of the species has a role to play in establishing a natural balance.

We have seen that combining different plant species in a garden allows us to reduce dependency on external inputs. In addition, we can combine our plants in an efficient way so that some species benefit others. In this sense, we can assign some functions or utilities to the plants according to the benefit they bring to the garden system as a whole. Let's take a look at some of them.

2. Describe the four main functions we can give plants in our garden:











Protection: Some plants serve to modify the climatic conditions of the orchard and make them more suitable for the rest: protection against the wind, absorption of excess humidity, providing shade, etc.

Health: We can grow plants that serve to minimise the impact of pests on our crops by repelling or confusing harmful insects.

Human use: Most plants are cultivated for the benefits they have for us. Mainly to provide us with food, but also to produce medicinal preparations, condiments, wood, dyes...

Fertilisation: Some plants have the ability to extract nutrients from the atmosphere or from deep soil layers. We can grow these species and then integrate them into the soil or make preparations that fertilise the soil.

- 3. Show the cards to the participants (Annex 1). Explain that each card contains a description of the species in the picture.
- 4. Divide the group into small subgroups of 3-5 people. Give each group a pack of cards and 4 pieces of paper with the names of the 4 functions of plants.
- 5. Give the instructions: Each group should read the information on the cards and assign a place to each one according to the function they think the plant might have in a vegetable garden by placing it next to the label with the name of that function. Make it clear that some cards may have more than one function and that they will therefore have to place them in a way that shows that they are in several groups at the same time.
- 6. While the groups are working, visit the tables to clarify doubts. Point out that for plants that have two or more uses, it is not necessary to choose only one, help them to find a way to represent several functions at the same time (for example, we can place the orange tree between the labels "protection" and "human use" to show that it has both functions at the same time). Let each group find their own way to represent this.
- 7. Invite the groups to share the information they found most interesting.
- 8. After the reflection, you can give the participants a summary table of uses of plants (Annex 2)

Questions for reflection, self-assessment and conclusions

- Which of these species are commonly found in a traditional kitchen garden? Which are not?
- What benefits can biodiversity conservation have?
- Why do permaculture gardens sometimes look like jungles full of mixed species?











5.5 Micro-Training 5: Urban-Nature-Tour

Description

The biodiversity is decreasing due to many human activities. About 40 percent of the 40,177 species assessed using the <u>IUCN Red List</u> criteria are now listed as threatened with <u>extinction</u> and scientists have estimated that millions more species are at risk which have not been formally recognized.

This activity aims at discovering biodiversity in our own neighbourhoods and also the threats to it. Due to the direct experience and contact with the diversity and endangered species, participants get a more tangible awareness about biodiversity and our impact on it.





Teaser activity

Ask participants to download the app "PlantNet" and scan the first plant they meet in their neighbourhood, so they can get familiar with the app.











Competences addressed

For the competences you can follow the ASK model:

- Attitudes
- Skills
- Knowledge

Traditional schooling has emphasis on knowledge and, especially in adult learning, it is very important to focus on hands-on activities, based on experiential learning.

Ecological:

For ecological competences, the ask model has a correspondence in the heart, head and hand model, where the competence and activities must include all these components to be considered acquired

Personal: select competences that also promote personal development, such as self-awareness on personal identity, values, strengths and weaknesses in connection with the environment.

Social:

Take into account a constructivist approach that valorizes the competences already existent in the group and teamwork competencies.

Ecological competences:

- Awareness about biodiversity
- Awareness about human impact on biodiversity
- increased responsibility in own actions and choices..
- Knowledges about plants

Social and individual competences:

- Group work
- Sense of observation
- Use of digital tools

Learning objectives

To define the learning objectives in accordance to the envisioned competences, you can take the operational objectives approach or the SMART objectives approach:

- Operational objectives are attainable, action-oriented, short-term goals organisations set and accomplish as a means of partially achieving larger, long-term objectives.

- SMART: S – Specific, M – Measurable, A – Attainable, R – Realistic, T – Time-bound











- The participants can recognize the plants in their city
- The participants learn basic infos of the plants of their city: where they come from, which environment they need, which fruits they have, if they have genetic input, if they are used by humans etc.,
- The participants can recognize plants which are threatened to disappear
- The participants learn to use a digital app for acquiring knowledges
- The participants learn to teach others about their discoveries and share knowledges
- Sense of belonging: as knowing some "special things" about the city they live in, participants should feel more connected to the place they live.

Group characteristics

Activity can be done in groups of 6 till 30 participants.

Preparation for the activity

Instructions for us:

The purpose of this part is for the participants to know what materials they need before doing the activity and, at the same time, give them confidence that they don't need much prior knowledge in order to do the activity and encourage them to just do it.

There is no need for special knowledge to do this activity.

- 1) Participants should install a Plant identification app on their mobile like "PlantNet". If participants have no mobile or no internet, organize that they have one in each couple. All the participants should install the same app.
- 2) Prepare printed maps of the city: divide the city in areas. Number of areas correspond to half of the number of your participants: If you have 20 participants divide in 10 areas. Print the map of the areas. Prepare a pen for each area.
- 3) Prepare a small game where the participants are divided into couples, and attribute an area of the city to them. (maybe it's good if in every area there is also a park)
- 4) Prepare a briefing in simple languages
- 5) Prepare a bag of seeds as rewards
- 6) Prepare a safe space for meeting, sharing and reflecting

The activity / the content

Instructions for us:

Try to divide and structure the activity in small steps so it is easy to follow by our target groups.

You can include links, videos, images etc. in this section in order to make the activity easier to understand and the resource more interactive.











Try to predict possible obstacles, doubts and questions that may arise. This part can also be finalised after the national pilot tests.

- 1) Divide the participants into couples and give them a printed map of an area of the city: best is to make this task together with an ice-breaker if people don't know each other
- 2) Explain to them the task: participants have 45 min (or more according to your participants). To discover as many different types of plants as possible in their defined area. Every plant they discover, they take a picture of it, scan it and then wirte it on their map with the name and basic infos. Every plant = 1 point.
- 3) Explain to them the use of the app: once they scan the plant, they can identify by crossovers and they can go on different pages with different infos about the plant. Make an example with one plant in front of the group.
- 4) They can gain special points with 1) Plant who comes from other land = 2 points, 2) Plants who come from other continents = 3 Points and finally Plant which is threatened of extinction (red list plants) = 5 points.
- 5) When coming back together, Install the maps of the participants so that participants can do a "gallery walk" of the
- 6) participants make a "puzzle" of their mobiles on the ground with an image of a plant which was not covered by others. Phones need here to be put in no sleeping modus.
- 7) You gather the points and as reward every point with 1 seed of a flower (for example), which they can plant.
- NOTA: If you don't want to play with points and competition, you can also give them instructions: find 5 plants like this, 3 plants which were imported, 1 plant which is threatened by extinction etc.

Questions for reflection, self-assessment and conclusions

Notes

For inspiration, you can use the questions from Kolb's experiential learning model.

Did you notice?

Why did that happen?

Does that happen in life?

Why does that happen?

How can you use that?

- Which plant surprised you?
- Which plant should have more space/presence in the city? And why?
- Are certain areas more diverse than others and why?
- Why is it important to have a diversity of plants in the city?

Recommendations on how to adapt to different target groups

- Check if there is some app in the language of your participants
- If people are afraid to walk through the city, you should organise a "mentor" for these groups, which can accompany the exploration











• Writing and reading: if there are some participants who have difficulties reading and writing, put them in couple with one person who can and give them the responsibility to take the picture and identify with the scan.

5.6 Micro-Training 6: Water Management

Description

Water management is very necessary but adults that are not actively involved or studied the subject have little knowledge about challenges and techniques to solve them. Water management requirements done through laws appear to regular people as absurd or unnecessary because they do not know the logic behind.

Polluted water is toxifying the planet and harming people. Caused by :

- Agriculture which pollutes groundwater
- Automobiles whose emissions pollute clouds
- Industry polluting air, soil and water
- Salinization caused by deforestation, rising water tables & agricultural watering
- Bottled water and cement are taking water out of the hydrologic cycle
- Erosion is a natural process that moves water, nutrients and resources.

Erosion can disturb existing systems and may replenish water sources, spread nutrients and feed life. Consider reducing erosion by storing or directing water, reinforcing soil with plants or physical materials.

In the following 'learning-by-doing' team game participants will have the chance to explore water management challenges and mitigation techniques.

Teaser activity

Ask the participants to read the text and react with 3 emojis: 70% of our Earth's surface is water 93.8% is ocean water, 2.5% is fresh water 0.375% is accessible to humans 0.3% of water is in lakes & ponds 0.06% is in soil & forests, 0.03% is in rivers, 0.035% is in the atmosphere.

- Sources of water in the environment: 13 percent of precipitation is rain 86 percent of precipitation is from condensation of sea air, mists & fog

Who uses all the water? 85% agriculture, 7.5% industry, 7.5% domestic & residential - 26% from toilet flushing, 17% from showering, 15% from taps, 22% from washing cloths, 14% by sub surface leaks and 5% from other uses

Industry uses

- 62.7 litres (16.5 gallons) of water to make 1/3 litre (12 ounce) can of soda
- 70 litres (18 gallons) of water to grow one apple











- 120 litres (31 gallons) of water to make one glass of wine
- 7900 litres (20,86 gallons) of water to make one pair of shoes
- 73,700 litres (19,469 gallons) to raise a cow to 18 months of age (Stats from www.grandforks.ca)
- In the west, 100 litres (26 gallons) of water for an average shower or average day of flushing the toilet
- 350 litres (92 gallons) of water is average use per person per day (*Stats from www.epa.gov*)
- 1.8 million tonnes (4 billion pounds) of trash per year comes into the ocean, killing one million sea birds and 100,000 marine animals annually

Competences addressed

Ecological competences:

- Development of documentation skills
- Demonstrating an understanding of the consequences of one's behavior in relation to the environment
- Demonstrating an ecological way of thinking in making decisions
- Understanding the importance of water management for environment preservation.
- Developing a proactive attitude towards applying water management techniques in their home community.

Social competences:

- Ability to collaborate with specialists in other fields.
- Developing interpersonal relationships and strengthening the skills needed for teamwork.
- Ability to appreciate diversity and multiculturalism
- Stimulating creativity and developing a competitive and innovative spirit, as well as teamwork.

Learning objectives

- Training and cultivating adults' interest and responsibility for water management.
- Promoting and stimulating healthy behaviors towards the elements of the environment.
- Empowering adults to decrease water pollution in their community and to engage in water cleaning and reuse.
- Stimulating the critical and self-critical spirit regarding the attitude towards water management.
- Increase knowledge about water management techniques

Group characteristics

Activity to be done preferably in groups of 4 to 6 trainees.

Preparation for the activity

Prepare 4 islands contours drawn on flipchart papers. You need to give paper and coloured pens/markers to the groups of trainees you train, plasticine and cardboard.











The trainees need access to the internet or pictures and articles about the water management techniques.

"Water friends" stickers for the end of the game, for each participant.

The activity / the content

The trainer reads the storytelling scenario:

"As a consequence of climate change, your city near the water is now submerged. You escape with members of your community on 4 ships, bringing as much materials and resources you can with you.

During your voyage, winds separate the ships, that end up on four different islands"

The participants are split between 4 groups, with the following scenarios for water challenges for each island:

- Island 1: Drought It's summer, it's extra hot and it has not rained in over 2 months. There are water restrictions, not allowing garden watering. What techniques can you use to ensure your plants can remain healthy and resilient?
- Island 2: Water contamination there has been oil activity in your area. You notice the water tastes funny and animals have been getting sick. You suspect water contamination. What techniques can you use to keep the water in your area clean and safe?
- Island 3: Flooding It's a warmer spring than usual and there is more run off from the mountains than expected, causing devastating flooding. What techniques can you implement to handle extra water flow during these historical weather events?
- Island 4: Soil erosion you live in a climate with heavy rain. In sloped areas, especially in the deforested area, there is mass soil erosion and your landscape is being depleted. What techniques can you use to restore the soil to avoid more soil erosion?

Participants water challenge and 2-3 techniques and are asked to consider their scenario and to create a design that solves their challenge using the techniques they are given:

• Island 1: Drought – Dew collection, Rain Tanks and Cisterns.

Dew collection: is primarily used in dried or arid environments and can provide much of a system's water in these conditions. High humidity and low cooling temperatures create the best yield for dew collection.

Rain tanks and Cisterns: used to catch water from different sources, mainly from roofs. Tanks should be level and if possible, raised for water pressure. A first flush system is recommended with roof water catchment.

• Island 2: Water contamination – Gray water treatment, Rain garden Gray water treatment: effective for cycling, cleaning water and flushing nutrients into your agricultural systems. There are a series of phases, including filtration, settling, aeration and UV exposure.

Rain garden: Low cost and low maintenance systems used for water capture and filtration. Typically built on a higher part of a property and connected to a downspout or a gray water system.

Island 3: Flooding – Flow through dam, Swales
 Flow-through dams are built solely for flood control and are used to protect against flooding in downstream areas. Because this type of dam is built solely for flood control, the opening (spillway) is at the same level as the riverbed. This means that when there isn't excess











water, the river will continue its natural flow. However, when water levels rise, the dam slows the water flow through the opening to prevent flooding.

Swales: a level ditch on contour with planted downhill berm intended for catching overland flow and infiltrating into the ground to recharge the surrounding soils, plant root systems and aquifer.

• Island 4: Soil erosion – Reforestation, keyline design Reforestation: Trees effectively condense water from the air at night and increase air humidity, cloud formation and rain. Tree roots also help reduce erosion during heavy rain and flooding events.

Keyline design is a landscaping technique of maximizing the beneficial use of the water resources of a tract of land and prevent erosion. The "keyline" denominates a specific topographic feature related to the natural flow of water on the tract. Keyline design is a system of principles and techniques of developing rural and urban landscapes to optimize use of their water resources.

- Participants are encouraged to use illustrations on their flipchart papers, make 3D sculptures with plasticine or use other creative means to share their designs.
- Players can also trade techniques with other groups and are welcomed to use their own elements in addition to the ones they were given.

In the end we do a "gallery walk" with everyone to visit each group's design. Participants can become teachers, sharing their essential learnings and the techniques they used to the whole group.

At the end of each presentation, the participants receive "Water friends" stickers.

Questions for reflection, self-assessment and conclusions

- What did today's activity consist of?
- Would you have liked to be on another island? Why?
- Do you have any other solutions for other islands?
- How can we apply what we have learned in our daily lives? Which scenario is relevant for your home region?

Recommendations on how to adapt to different target groups

If the group doesn't have a lot of time available, only one of the steps of the tool can be performed.

References

Permaculture Design.

https://www.permaculturedesign.ca/











5.7 Micro-Training 7: Permaculture Zoning

Description

This activity is a mix between a **role-playing game** and a **board game**, which will help participants to familiarise themselves with the internal dynamics of a permaculture garden. This activity consists in identifying the elements of a permaculture garden and understanding how they interconnect.

Participants are then asked to become one of these elements and natural factors and locate themselves where they think they'll have more chances to prosper. In this way, participants will be able to better empathise with the natural ecosystem and understand its challenges. The experience will also give them an idea about how natural ecosystems can be imitated for co-living in teams and, on a larger scale, in societies.

Teaser

Permaculture zones help us organise our spaces according to how (and how often) we use them. As a design strategy, zones are a super powerful way to make choices about where to place elements of the ecosystem, in order to enhance their ecological performance. Try to imagine: how could these zones be envisioned? In our micro training, you will get more practical experience about how this principle works and how human and natural interactions occur.

Competences addressed

Ecological:

- Knowledge about geographical structures and landscapes
- Knowledge about crop management
- Knowledge about botanical processes and natural cycles
- Knowledge about climate and climate change
- Knowledge about biodiversity and fauna
- Knowledge about energy and energy-saving
- Knowledge about permaculture

Personal:

- Attention and care
- Sense of control
- Ownership on actions











- Creativity
- Precision and structure
- Social:
- Project-management
- Ownership of public space
- Collective and democratic decision-making
- Sense of belonging
- Sense of usefulness
- Sense of support and solidarity
- Sense of responsibility and commitment

→ The experiment makes clear the interdependence between elements in the natural ecosystem and supports participants in the learning process through real experiences. Each participant is part of the ecosystem and part of the collective mission, with a function and a role. Each part of the system relies on others and the team is strengthened when everybody's action is aimed at the overall mission.

Learning objectives

- Learn about how to design a garden considering the impact of different actors and trying to maximise the capacity of these actors to interoperate and support each other.
- Make participants experience the relationships in the garden.

Group characteristics

There is no strict number of participants in this activity. Of course, the larger the group the more possibilities we will have to explore different elements and see them in action.

Preparation for the activity

The materials needed for this activity are cheap and simple (see below).

You would need a surface where you can draw the different zones as different concentric circles that expand from zone 0 (the centre) to zone 5 (the furthest from the centre). For that, you can use a cartoon or a big piece of paper. You can also figure out other ways (e.g. circles on the grass, circles with different materials, etc.)











You can prepare some cards with elements that are typical of a permaculture garden; we'd suggest preparing some empty cards as well because participants could think about an element that didn't come to your mind. It's always better to let it open for further ideas.

Don't forget to bring some pens and pencils for drawing lines, connections or new elements. Keep in mind that colourful cards and drawings make the activity always more attractive, increasing the opportunities to become active learners.

If you are in an open space, you could think about designing that specific space as a permaculture garden. Participants will then have the space to spread around and experience the space. Ideally, start the activity in the centre.

The activity / the content

1. Introduce the game and the concept of zoning in permaculture (see "Useful resources" for information)

- 2. You can choose between:
 - i. leaving the cards covered on the table and asking participants to uncover one and place it in the "right" zone
 - ii. presenting the cards uncovered and asking participants to pick one and place it in the "right" zone

 \rightarrow give participants the possibility to propose a new element if that's not on the cards!

 \rightarrow rounds: in order for everybody to be active and participate (even the shiest ones) go around in circles and let everybody speak when their turn comes

3. Discussion: Why did you put it there? How does this element relate to other elements? You can draw lines to highlight these interconnections.

4. Consent: the entire group should reach consent about where the element would be located. If someone does not agree, he/she should object and the group should find a better solution

5. If you find yourself in a place that allows that, you can pretend that the area around you is the garden you have to design.

- i. Locate Zone 0 all together, through consent
- ii. Ask participants to pick an element and locate themselves in the spot where those elements could live at best. <u>Remember participants to act as a team and consider the interconnection with other elements (the team is now an ecosystem and interconnections among elements are extremely important for a self-sustaining ecosystem).</u>
- b. Ask participants to take a moment for themselves once they have found their location











(meditate, sing, dance, do whatever they want!) and then come back to the center for follow-up and reflection.

Questions for reflection, self-assessment and conclusions

- How did you feel when you were in your zone?
- How did you perceive the other elements?
- What inspiration can we take for the organisation of human societies?
- How do interactions among social individuals reflect interactions among natural elements?

Recommendations on how to adapt to different target groups

Try to find a barrier-free space to run the activity.

If people have disabilities or are for any reason not able to follow the game, try to put them together with another participant, who can help. Together it could be easier.

References

https://www.freepermaculture.com/permaculture-zones/

This BSL tool was developed by the <u>Feld Food Forest</u> community for the design of the West Feld Garden (Tempelhofer Feld, Berlin), a permaculture community garden that sees the participation of more than 10 different organisations. The tool was therefore intended to be as participatory as possible, to ensure that everybody's voice is heard and the participants are empowered to participate in the co-creation process.

5.8 Micro-Training 8: Impact Of Food Production In Conventional Agriculture

Description

This is an activity designed to reflect on the environmental impact of the food we eat. Each group receives cards with food that they have to sort according to their impact. They are then given access to scientific data so that they can compare them with their own predictions and share them with the rest of the groups.

Photos/Images























Competences addressed

Ecological competences:

- Environmental liability. Awareness of the impact of everyday life decisions on our environment and on the lives of others.
- Belonging. Generating a sense of belonging to a group that can have a greater impact than the individual.
- Analysing information. Interpreting scientific data and relating it to everyday life.
- Applying information. Understand the environmental impact of different types and aspects of food production.

Social competences:

- Active listening. Listening to other people's opinions and ideas in order to build common knowledge.
- Cooperation. Awareness of the power of cooperation to face major problems of humanity.

Learning objectives

- The trainee understands the impact of the food industry on global warming compared to other types of production in the world.
- The trainee learns about different types of environmental impacts of intensive livestock farming and agriculture.
- The trainee compares the impact of animal products versus plant products on global warming.
- The trainee knows the impact of transport compared to the total impact of a food from production to consumption.
- The trainee understands the benefits of producing and consuming local products.

Group characteristics

Activity to be done in groups of 2 to 4 trainees.

Preparation for the activity

Print and cut the cards with the name of the products. Print a separate pack of cards for each group, as each group will do a different exercise. (Annex)

Print the solutions for each exercise. (Annex)











For the activity of representing the data, it will be necessary to have different materials such as beans, chickpeas, stones, wool, fabric scraps, coloured paper, wooden blocks, bottle caps...

The activity / the content

1) Lead in: The price is right

The participants get together in groups of two or three and have to estimate on a piece of paper or a blackboard some of the questions that the trainer will ask. Whoever comes closest to the exact amount will win 10 points.

The questions the trainer will ask are:

- What percentage of total greenhouse gas emissions are due to food production?
- What percentage of a product's emissions derives from transport, i.e. the fact that it was produced thousands of kilometres away?
- How many tonnes of CO2 equivalent are emitted to produce 1 kg of cheese?
- What about cabbage?
- And almonds?
- And beef?

At the end, all the results are displayed on a panel or blackboard for further reflection.

2) Collaborative learning: Sort the line

Each team receives cards with the names of several foods. They should place them in a line according to the environmental impact they estimate they have on global warming, from the food with the most impact to the food with the least impact.

It is not necessary to have previous knowledge, the aim is to share the reflections, doubts, ideas and intuitions of all the members of the group in order to build common knowledge.

3) Compare and reflect: What the science says

Each group is given a table with emission values for each food, taken from a scientific study. They are asked to use this information to rearrange the cards.

4) Sharing the results

Each group briefly presents its results and reflections. A general analysis of all types of impact is made and the most important foods to avoid are concluded.

5) Optional: Represent data with recycled materials

If there is enough time, this phase of the activity is the most creative and challenging.











The groups are asked to represent in a visual way the numerical data they have been given. They can do this using all kinds of recyclable materials, e.g. they can use a pile of beans where each bean represents a tonne of CO2, or cut out a strip of paper where the length represents the amount of emissions... The more diverse materials they come up with, the more creative the participants will be.

Each group then presents their creations and reflections to the rest of the class.

Some questions for reflection:

- Do your estimates resemble the results found by the scientific community?
- What are the most surprising facts?
- Which foods have the greatest environmental impact?

6) Reflection. Local production

The trainee then asks whether, with the information analysed, it can be concluded that local production is more beneficial for the environment. After a short input, the participants are asked to give arguments for and against the consumption of local products taking into account the following aspects:

- Agro-diversity
- Production model
- Conditions for farm workers
- Nutritional quality of food
- Food processing

Questions for reflection, self-assessment and conclusions

- What did today's activity consist of?
- How did you feel when you were confronted with scientific information?
- What information was the most surprising?
- How can we apply what we have learned in our daily lives?

References

J. Poore and T. Nemecek, Reducing food's environmental impacts through producers and consumers. Science 01 Jun 2018: Vol. 360, Issue 6392, pp. 987-992 DOI: 10.1126/science.aaq0216

Available on: doi.org/10.1126/science.aaq0216

Our world in data: https://ourworldindata.org/environmental-impacts-of-food

Exercise 1:











Rank the following foods according to kgCO2 equivalent emissions from highest to lowest

- Beef
- Cheese
- Chocolate
- Coffee
- Lamb
- Nuts
- Peas
- Pig and poultry
- Roots
- Sugar

Solution for exercise 1	
 Nuts Roots Peas Sugar Pig and poultry Coffee Chocolate Cheese Lamb Beef 	0.3 0.4 0.9 3 7 17 19 21 24 60

Exercise 2:

Rank the following actions according to the (positive) impact they have on reducing greenhouse gas emissions

- Avoid one continental flight
- Avoid one transoceanic flight
- Conserve energy
- Eat a plant-based diet
- Eat local
- Have one fewer child
- Join organisation
- Live car free
- No food waste
- Plant a tree
- Purchase green energy
- Recycle
- Reusable shopping bag
- Switch to electric car











Solut	ion for exercise 2 ⁷	
	Reusable shopping bag Plant a tree Eat local Conserve energy Recycle No food waste Avoid one continental flight Purchase green energy Switch to electric car Eat a plant-based diet Live car free Avoid one transoceanic flight Have one fewer child Join organisation	5 40 180 210 210 370 700 900 1100 1600 2400 2800 58600 ???

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5.9 Micro-Training 9: Healthy Food Preservation

Description

Food preservation allows us to take advantage of nature's abundance long after its growing season has ended, and enjoy it year round! By preserving food grown on you own site and supporting local farmers by buying seasonal products to preserve, we help to re-localize our diet and reduce our dependencies on factory food. When we grow our own food or support local farmers, we vote on what we want more of in our lives with our money or with our time; supporting People Care, Earth Care and Fair Share in our local communities.

No matter if you start with a few jars of jam to enjoy or gift, or envision a stocked root cellar brimming with canned, dried, smoked and salted goods as well as hardy vegetables, I wish you the best in your food preservation adventures and hope that these short overviews can serve as a starting point for a new or expanded journey into your permaculture diet!

Teaser activity

It's "common" for food to contain artificial preservatives. That's because they can "prevent spoilage, improve appearance and texture, and maintain the food's nutritional quality". It's not just fast food restaurants using artificial preservatives, either. There are also natural preservatives — like salt, sugar, vinegar and citrus juice — but using them usually comes at a higher cost to the food manufacturer.

⁷ Source: Seth Wynes and Kimberly A Nicholas 2017 Environ. Res. Lett. 12 074024 The climate mitigation gap: education and government recommendations miss the most effective individual actions

Note: The data is based on the analysis of 148 scenarios from 39 scientific sources.











Artificial preservatives help decrease the price of that food product for the consumer. But alongside these benefits, there may be some health concerns that come along with artificial preservatives. Artificial preservatives are chemical substances that get added to food during the manufacturing process.

Some of the most popular are sodium benzoate, sorbic acid, butylated hydroxyanisole (BHA) and butylated hydroxytoluene (BHT).

- Sodium benzoate is a preservative and microbial agent used in tomato products, pickles, sauces, fruits, fruit salads, jams, cider, salad dressing, and some meat and poultry products.
- On labels, sorbic acid is sometimes called calcium sorbate or potassium sorbate. "[It's] a
 preservative used in jams, cold-processed smoked and salted fish paste, concentrate juice
 (except frozen concentrate juice), minced meat, marmalade with pectin, jam, syrup,
 pickles, relishes, smoked or salted dried fish, ketchup, tomato paste, tomato puree,
 margarine and salad dressing."
- BHA and BHT are preservatives with "antioxidant properties". They help fats stay fresh longer by preventing the oils from becoming rancid. They're used in fats and oils, potato chips, dried breakfast cereals, parboiled rice and chewing gum.

Some artificial preservatives, such as nitrites or nitrates used in processed meats, have been shown to be bad for our health. Consuming these preservatives has been shown to increase our risk of colon cancer and should be limited in our diets" In an effort to avoid artificial preservatives, some people try to use natural preservatives. However, natural doesn't always mean healthier.

For example, alternative preservatives that are 'all natural' can include things like sugar and salt. We know that excess amounts of these in our diets aren't healthy for us, even if they do come from natural sources. Choosing to use natural preservatives can also be more expensive.

If you do want to avoid artificial preservatives, you can do so by closely examining package labels. These ingredients are usually listed at the very end of the list as they are only used in small quantities. Find food labels at home or in a shop and take a picture of the label. Find the unhealthy ingredients.

Competences addressed

Ecological competences:

- Development of documentation skills
- Demonstrating an understanding of the consequences of one's behavior in relation to the environment and their health
- Demonstrating an ecological way of thinking in making decisions
- Understanding the importance of natural food preservation.
- knowledge about food preservation techniques and their advantages.

Social competences:

- Ability to collaborate with other adults
- Developing interpersonal relationships and strengthening the skills needed for teamwork.
- Ability to appreciate diversity and multiculturalism











• Stimulating creativity and developing a competitive and innovative spirit, as well as teamwork.

Learning objectives

- Training and cultivating adults' interest and responsibility for healthy food preservation
- Empowering adults to engage in healthy food preservation.
- Provide adults with knowledge about healthy preservation techniques.
- Stimulating the critical and self-critical spirit regarding interpretation of food labels

Group characteristics

Can be used with any group of adults. In the game you choose the preservation method, you will split participants in groups of maximum 5.

Preparation for the activity

Prepare cards with food examples (20) and cards with methods of preservation (photo and description of method on the back) – 1 set for every group.

The activity / the content

Participants share labels of food and present the unhealthy ingredients. If we have different opinions, we debate to find the scientific truth.

We split the group in 4-5 smaller groups of maximum 5 participants.

Every group will draw 5 food cards and will receive a set of preservation techniques.

They have to read about the preservation techniques and match the food with the appropriate techniques.

After the participants share their results and debate if there are differences.

Every group will choose a preservation technique and will design a short video add to present the technique and its advantages compared to mass production preservation techniques. The trainers help them define the message.

They film and share the ads.

Questions for reflection, self-assessment and conclusions

- What did today's activity consist of?
- What natural preservation method have you used before?
- What natural spices/ herbs do you use to improve the taste, nutritional value and preservation time?

How can we apply what we have learned in our daily lives?











Recommendations on how to adapt to different target groups

If there is no access to a kitchen, the tool can be used without the second part.

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References

https://www.permaculturedesign.ca/

5.10 Micro-Training 10: Waste Management

Description

Europe still generates large amounts of waste: construction and demolition waste, food and gardening waste, mining waste, sludge, industrial waste, old cars, batteries, old TVs, plastic bags, paper, sanitary waste, old furniture, old clothes ... and the list goes on. There is still the unpleasant and harmful habit of people to throw waste on the ground or in the water. It is important to talk to adults in non-formal activities so that they know: to classify waste; to identify ways to stop this phenomenon based on their own knowledge; be aware that waste is harmful to the environment; to selectively collect waste; to notice the need for waste recycling.











Teaser activity

Ask the participants to read the text:

Selective collection and recycling often reduce the negative impact of waste affecting the environment and society.

Selective waste collection involves the management of waste, by their temporary storage, by categories, in specially arranged places, for recycling.

Recycling is the collection, separation and processing of products / materials already used or some of their components to be transformed into new useful goods.

- Paper recycling saves about 25% of the amount of electricity and 90% of the amount of water used to produce one kilogram of paper;
- Cardboard boxes used for packaging beverages (milk, juices, for example) are made of
 paper protected by thin layers of plastic (polyethylene). Aseptic boxes have a thin layer of
 aluminium that makes it easier to keep the contents fresh for longer, without the need for
 preservatives, as this prevents oxygen and light from entering the package. Boxes of this
 kind can be recycled.
- A wide range of products can be manufactured from recycled PETs: roof insulation films, components for the automotive industry or for lighting fixtures, kerosene for aircraft, textiles, etc. At the same time, very large spaces are required for PET storage. So, it is best to contribute to their recycling.
- Waste spends different periods of time in the process of natural grading biodes, aided by moisture, bacteria, lack of light, etc .:
 - o fruit and vegetable peels 2-5 months;
 - a paper bag 3-5 months;
 - newspapers 3-12 months;
 - a matchstick 6 months;
 - chewing gum 5 years;
 - a leather shoe 25-50 years;
 - a dose of aluminum up to 100 years;
 - a PET over 500 years;
 - a credit card about 1000 years;
 - a glass container 1,000,000 years old

Competences addressed

Ecological competences:

- Development of documentation and communication skills
- Demonstrating an understanding of the consequences of one's behaviour in relation to the environment
- Demonstrating an ecological way of thinking in making decisions
- Understanding the importance of using waste as a raw material to obtain other goods.
- Developing a proactive attitude towards identifying simple solutions for waste recycling at home.

Social competences:

- Ability to collaborate with specialists in other fields.
- Developing interpersonal relationships and strengthening the skills needed for teamwork.











- Ability to appreciate diversity and multiculturalism
- Stimulating creativity and developing a competitive and innovative spirit, as well as teamwork.

Learning objectives

- Training and cultivating adults' interest and responsibility for waste.
- Promoting and stimulating healthy behaviours towards the elements of the environment.
- Training and consolidation of selective waste collection and recycling skills.
- Training and cultivating adults' interest and responsibility for waste.
- Development of the skill of selective waste collection in the community.
- Empowering adults to keep their community spaces clean, selectively collecting waste.
- Stimulating the critical and self-critical spirit regarding the attitude towards waste collection and recycling.
- Creating the necessary premises for adults to be able to consider waste a resource.

Group characteristics

Activity to be done in groups of 4 to 6 trainees.

Preparation for the activity

Prepare a box in which you put different cardboard and plastic packaging, papers, food scraps, plastic bags and bottles, metal objects, textiles, bottles. Prepare gloves for trainees, scarves to blindfold them. You need to give paper and pen to the groups of trainees you train.

The activity / the content

Ice-breaker: The price is right

- Divide the trainees into four groups.
- Ask each group to choose a representative.
- Cover the eyes of the four representatives with scarves. Each one, in turn, will take out of the box, touching the objects, which they will recognize. They will name the package, describe it, then take it out of the bag and show it to colleagues. The others from the group must write down the duration of their decomposition and the effects on the environment, as well as the methods of reduction and the ways of recycling them. Is this package nature friendly?
- Compare the results they found with those provided on the internet.

Group reflection: Highlighting the most common types of waste in the environment











- The most common wastes will be written on the board and on white sheets, in random order: papers, food scraps, plastic bags and bottles, metal objects, textiles, glass etc.
- The trainer lists the waste that can be collected selectively: glass, paper, plastic and specifies the color of the container for selective storage.
- The trainees are divided into groups and are asked to sort the waste in 3 baskets (paper/glass/plastic-metal depending on the country, there might be more baskets necessary).
- They are also invited to write in teams messages to encourage recycling (messages for each type of waste: paper/ glass/ metal). They will do advertising about recycling.

Group research: What the science says

- The group discusses the negative effects of hard degradable waste on the health of the environment during the period until it is completely degraded.
- Trainees list some of their ideas on stopping this phenomenon: selective waste collection for recycling, fines, more garbage cans, reducing the amount of waste through lower consumption, more posters with environmental urges, the power of personal example.
- The purpose of waste recycling is established together with the trainees:
 - protecting the environment.
 - protecting people's health.
 - reducing the costs of obtaining new products.
 - maintaining public cleanliness.
 - conservation of the natural resources from which the products are obtained.

Conclusion

To reduce means to diminish, to decrease. When we talk about reducing our waste, it means producing less garbage. Purchasing products with less packaging helps us reduce the amount of waste we generate. We could turn organic materials into compost instead of throwing them in the trash. We should also rethink more carefully if we need everything we intend to buy.

We often use certain objects only once and then get rid of them. But if we intend to reuse them, it means that we have identified certain ideas and ways to reuse them. Older clothes, books, toys could be given to friends or second-hand shops. Some people can get work done this way, and others can benefit from goods they cannot afford to buy. Instead of throwing things away, we can find ways to have fun, be creative, generous, or use them again.

Recycling is only a small part of rethinking the way we use our natural resources. Almost half of the things we throw away could be recycled. Recycling involves transforming old objects into new ones. Materials such as paper, aluminium, glass, plastic, etc. can be transformed into new products. Some of them can be recycled in the same material (glass can only be turned into glass), while others can result in new products (PET plastic can be turned into mats or synthetic yarns!). Recycling consumes less energy or less natural resources to obtain the new product, pollutes less air or water than if we manufacture goods from scratch.

Questions for reflection, self-assessment and conclusions

- What did today's activity consist of?
- How did you feel when you were confronted with scientific information?
- What information was the most surprising?
- How can we apply what we have learned in our daily lives?











Recommendations on how to adapt to different target groups

If the group doesn't have a lot of time available, only one of the steps of the tool can be performed.

References

https://www.tetrapak.com/content/dam/tetrapak/publicweb/ro/en/sustainability/Brochure-Environment-Project.pdf

6. Guide of best practices

The partners created a common template in order to collect the best practices from all the activities tested during the micro-trainings. The purpose is to visualise the activities with pictures and complement them with the objective evaluation and shared personal experiences from the facilitators as well as with quotes from participants, in order to make it easier for any facilitator to try out an activity just by reading the materials of our project and the Guide of Best practices.

6.1 Best practices from Germany

Permaculture Zoning

This activity is a mix between a **role-playing game** and a **board game**, which will help participants to familiarise themselves with the internal dynamics of a permaculture garden. This activity consists in identifying the elements of a permaculture garden and understanding how they interconnect.

Link to the activity.

Best Practices Guide

Quantitative evaluation of the activity (visualised - from 1 to 10):

- Satisfaction of learners with the activity: 8
- Participative: 10
- Time consuming: 5
- Difficulty: 4
- Acquiring new knowledge: 8
- Acquiring new skills: 4
- Versatility: 5















Step-by-Step visual guide

1. Introduce the game and the concept of zoning in permaculture (see "Useful resources" for information)

2. You can choose between:

a. leaving the cards covered on the table and asking participants to uncover one and place it in the "right" zone

b. presenting the cards uncovered and asking participants to pick one and place it in the "right" zone

 \rightarrow give participants the possibility to propose a new element if that's not on the cards!

 \rightarrow rounds: in order for everybody to be active and participate (even the shiest ones) go around in circles and let everybody speak when their turn comes



3. Discussion: Why did you put it there? How does this element relate to other elements? You can draw lines to highlight these interconnections.

4. Consent: the entire group should reach consent about where the element would be located. If someone does not agree, he/she should object and the group should find a better solution











Reflections and tips from the facilitators (written 1-2 paragraphs).

The activity allows participants to work together to find solutions, therefore the activity can also be useful for team-building and a problem-solving exercice.

It's helpful to lead the activity in a garden or in a space, where people can imagine and project themselves as a "designer". After the activity, people can have a walk through the space together and imagine what could happen there, which functions the different elements can have. The exercise helps to have a real experience with the zoning idea. In our case, we find ourselves in a community garden that was designed using exactly the same process. Participants had the possibility to share ideas with the garden team, ask questions and make suggestions. Being a community-based design process, it makes people feel heard and valued, and empowered to contribute to shaping a collective space.

It is also very useful to have a map of the garden or the space where you will conduct the micro-training.

6.2 Best practices from Romania

Water management

We use a game with some scenarios about water management and the participants need to find water management solutions.

Link to the activity.

Quantitative evaluation of the activity (visualised - from 1 to 10):

- Satisfaction of learners with the activity: 9
- Participative: 9
- Time consuming: 10
- Difficult: 2
- Acquiring new knowledge: 8
- Acquiring new skills: 8
- Versatility: 8







Step-by-Step visual guide

You can also give to each of the team 2 solutions to their needs.

Allow the participants to decide how to solve the situation regarding water management, give them time to discuss.

Give to the participants materials like: colours, papers, plasticine, scissors for creating the solution for their island.

Visit the working groups to help them solve the problem

Reflections and tips from the facilitators

This activity is a team work activity based on gamification. It is very rich in the sense that it invites participation, collaboration and through this the participants will find and discover ways for water management in four different scenarios. The participants enjoyed the game a lot and they were enthusiastic to find and design the solution for their island, the groups work on their own, with little or no intervention from the educator. The scenarios cards are written in easy-to-understand language and the activity is so simple and fun. At the beginning the educator needs to visit the working groups and to solve any doubts and after we have chosen to leave the groups free to find a solution for their island. At the end every team will present the scenario for their islands and they will present what solution they find and design. In this way we also have the chance to see other situations regarding water problems and to see what kind of solutions our colleagues found. This activity can be organised with adults or youth.

Quotes from the participants to the micro-trainings:

I really enjoy it and I am happy because I do not face any of these problems in my area, I hope that in the future we will not have problems with the water.

It is not easy to live when you have problems with water in your area but for each problem you can find solution

I liked to work in my team, I really enjoy it!

6.3 Best practices from Spain

Traditional vs Permaculture approaches

We introduce some concepts and techniques of agronomy through cards with definitions. The groups work independently to relate each type of practice with its consequences for the environment and the ecosystem of the garden. The activity is then repeated, analysing the alternatives offered by permaculture.

Link to the activity:

https://docs.google.com/document/d/1R3aoTpfxrlsv3j2ImDiZU2qenoJY3mzsuSyy-QBWopw/edit#bookm ark=id.fv8pka9qhxzh

Quantitative evaluation of the activity (visualised - from 1 to 10):

- Satisfaction of learners with the activity: 8,3
- Participative: 8
- Time consuming: 10
- Difficult: 4
- Acquiring new knowledge: 7,8
- Acquiring new skills: 7
- Versatility: 5

Satisfaction of learners					
Participative					
Time consuming					
Difficulty					
Acquiring new knowledge					
Acquiring new skills					
Versatility					

Step-by-Step visual guide

Give each group the cards corresponding to the conventional agronomic practices and those of the consequences (positive and negative).

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Read the definitions of each of the practices aloud.

Match each practice with its consequences (deck printed in a different colour)

Allow participants to share their knowledge and comment on the content of the cards.

Give the groups the permaculture cards (purple in the example). Ask them to match the alternative permaculture practices with the conventional practice they replace. Notice that the same practice can be replaced by several alternatives.

Reflections and tips from the facilitators

This activity contains many theoretical concepts that are necessary to acquire an overview of conventional agronomy and the need for permaculture to respond to the problems and consequences for the environment and also for the garden itself. This amount of information can be heavy and difficult to assimilate. The activity tries to present it in a participatory and enjoyable way, which allows the exchange of knowledge between the members of the group and gives an overview of the situation.

If there is someone who is more knowledgeable than the rest, it is recommended to ask them not to give the answers, but just to explain the definitions and consequences, but to allow the rest of the group to match one with the other.

Quotes from the participants to the micro-trainings:

An introduction to the topic before practice An enjoyable activity in the company of like-minded new people Nourishing and practical

Una toma de contacto con el tema antes de la práctica Una actividad amena en compañía de nuevas personas con ideas similares Nutritiva y práctica

Uses and functions of plants

We use a pack of cards with plant species to find out in groups the different functions a plant can have in a permaculture garden as part of the ecosystem.

Link to the activity.

Quantitative evaluation of the activity (visualized - from 1 to 10):

- Satisfaction of learners with the activity: 8,8
- Participative: 9
- Time consuming: 10
- Difficult: 2
- Acquiring new knowledge: 8,8
- Acquiring new skills: 8,6
- Versatility: 8

Step-by-Step visual guide

Read the text of the cards in groups

- Decide whether the function of the plant is:
- Health (of the garden)
- Protection

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- Human use
- Fertilization

Allow the participants to decide how to solve the situation in which one species can have more than one function at the same time.

Visit the working tables to help the groups solve the problem

Reflections and tips from the facilitators

This activity is very rich in the sense that it invites participation and collaboration while at the same time conveying useful and inspiring knowledge. The cards are written in easy-to-understand language and the activity is so simple that the groups work on their own, with little or no intervention from the educator. Even so, it is recommended to occasionally visit the working tables, especially at the beginning, in order to resolve doubts.

In the design of the activity, we have chosen to leave the groups free to solve the problem of the same plant being able to fulfill several functions at the same time. This has been done because it seems to us that this situation, in which nature escapes human classifications, is more realistic. But this decision also places a little more demand on the educator to make it easier for the groups to find a solution that makes it possible to show several functions at the same time.

At the end of the workshop, some participants may ask to have the information for future reference. It may therefore be useful to have an accessible document or print out the texts of the cards.

Quotes from the participants to the micro-trainings:

We interact with nature because we are part of it. Fun, entertaining and I liked it because we shared knowledge with each other. Practical, didactic, pleasant and interesting

7. Annexes

7.1 Pre-training feedback collection

Please indicate below your level of satisfaction by marking "I disagree" (1) to "I agree" (10)

1 . V	Vhat is y	your kn	owledge	e about	commu	inity ga	rdens?	
	1	2	3	4	5	6	7	8

	1	2	3	4	5 □	6 □	7	8	9	10 □
2.	What is y	our kno	owledge	e about	permac	culture?				
	1	2	3 □	4	5 □	6 □	7	8	9	10 □
3.	What is y	our kno	owledge	e about	climate	change	e and e	nvironm	nental to	pics?
	1	2	3	4	5 □	6 □	7	8	9	10 □
4.	What are	your s	kills for	ecologi	cal gar	dening?)			
	1	2 □	3 □	4	5 □	6 □	7	8	9 □	10 □
5.	What is y	our inte	erest in	taking	part in a	a comm	unity ga	arden?		
	1	2	3 □	4	5 □	6 □	7	8	9 □	10 □

Let us know about your expectations and needs.

6. What are your expectations for these micro-trainings?

7. Do you have any special needs we should take into account? Any other comments?

7.2 Post-training feedback collection

MICROTRAINING EVALUATION QUESTIONNAIRE

Please respond to the statements below. Your immediate feedback means a lot for the development and improvement of our work.

Please indicate below your level of satisfaction by marking "I disagree" (1) to "I agree" (10)

1. Did t	 Did this activity meet your expectations? 									
	1	2	3	4	5 □	6 □	7	8	9	10 □
2. Did <u>y</u>	you acqı	uire new	/ knowle	edge?						
	1	2	3	4	5 □	6 □	7	8	9	10 □
3. Did <u>y</u>	you acqı	uire new	/ skills?							
	1	2	3	4	5 □	6 □	7	8	9	10 □
4. Did y	you find	it releva	ant to eq	co-garde	ening o	r comm	unity ga	ardening	g?	
	1	2 □	3	4	5 □	6 □	7	8	9	10 □
5. Did <u>y</u>	you find	it releva	ant to le	arn abo	ut envii	ronmen	tal issue	es?		
	1	2	3	4	5 □	6 □	7	8	9 □	10 □
6. Did <u>y</u>	you feel	comfort	able?							
	1	2	3	4	5 □	6 □	7	8	9	10 □
7. Do you want to participate again?										
	1	2	3	4	5 □	6 □	7	8	9	10 □

8. The level	Too high over	Suitable for my	Too below under
was:	my level of	level of	my level of
	knowledge	knowledge	knowledge

9. What aspects of the activities do you think that could be improved?

10. What would you like to implement in your garden / your life?

11. How would you describe the activity in a sentence?

(We'd like to collect some quotes for our Best practice guide)

12. Any comments or suggestions?

