

PRACTICAL ECOLOGY IIII

TRAINING COURSE

FROM THE 3RD TO THE 15TH OF OCTOBER 2017

ARIÈGE FRANCE

TECHNICAL BOOKLET



After having done a training course in 2015 named “Ecological work-camp technical leading”, we would like to go deeper into three specific topics that participants and our team think the most relevant : ecological construction, bio-agriculture (way of living and gardening), and outdoor activities.



We lived 13 intensive days in Pyrenees training course about ecology.

There were 25 people involved from Hungary Pandora, Germany IBG, Slovenia Metta, Spain Biodiversa, Greece AlterEgo, Austria Neront England Moulsecomb and France Solafrika.



This training course allowed participants to discover natural ways of building, and leading outdoor activities.

AIMS :

To share techniques in each topic with youth workers to raise young people’s awareness of a healthy life style, to spread methods for organizing workcamps.



To promote active citizenship by individual involvement, to favour intercultural exchanges.

To sustain international partnership, reinforcing ties with associations which work with same the themes. These experiences gave us the opportunity to leave our comfort zone.



To share skills, methods and points of view for human connexion with nature, to become more aware of our way of buying, and find concrete tools to act to improve living together.



E C O - C O N S T R U C T I O N

With Joe Stubbs, Susana Pujol and Julien Nouri (professional at MVH) for the eco-construction

the clay oven was one of the bio-construction projects.
We learnt to use natural and recycled materials.

to use different tools and natural-building techniques ,
to create something new with our hands ,
to work in group,
to cooperate and help each other,
to reuse and recycle



TOOLS & MATERIALS

Clay, straw, sand = earth

Wood, wood palet, plastic tarpaulin = donations by friends/waste

Nails, buckets, showels, tools = shop/borrow from friends



CLAY OVEN

1- Nail planks of wood on to the pallet to fill all the holes, add nails everywhere leaving them sticking out 10 cm to prevent the oven from sliding. Draw a circle 75cm wide (keep in mind you will need a bit of extra space for the oven's door).

2- First coating : 1 bucket of clay soil (mixed with water and filtered) 6 buckets of straw. Mix on the plastic tarpaulin with hands and feet, make a 4 cm thick, layer the size of the circle

3-Second coating : 1 bucket of earth, 1 bucket of straw, leaving 3.5 cm on the edge of the first circle

4-Third coating : 1 bucket of soil, 3 buckets of sand , leaving 3.5 cm on the edge of the last coat. Add a little bit at the entrance for the oven's door (30 cm wide)

5- Cover with a thin coat of clay (or you can use fire bricks)

6- Cut the door in a metal sheet (semi circle 30 cm wide and 16 cm high) and lay a strip of metal above the door to hold up the entrance of the oven.

Leave this base to dry for a day

7-Build a dome of sand 21 cm high. Cover with wet news paper, this will support the other coats and will be taken out at the end

8-Mix 1 bucket of soil and 4 buckets of sand (coat is 3.5 cm thick)

9- Mix 1.5 bucket of straw for 40% of a bucket of soil (coat is 3.5 cm thick)

10- Mix 1 bucket of soil for 1 bucket of straw (coat is 3.5 cm thick)

11- Mix 1 bucket of soil for 1 bucket of straw and half a bucket of sand (smooth the surface)



WOODEN TERRACE

It is not that complicated, as we all think, to build a wooden terrace if you follow the instructions below like we did from Solafrika team.



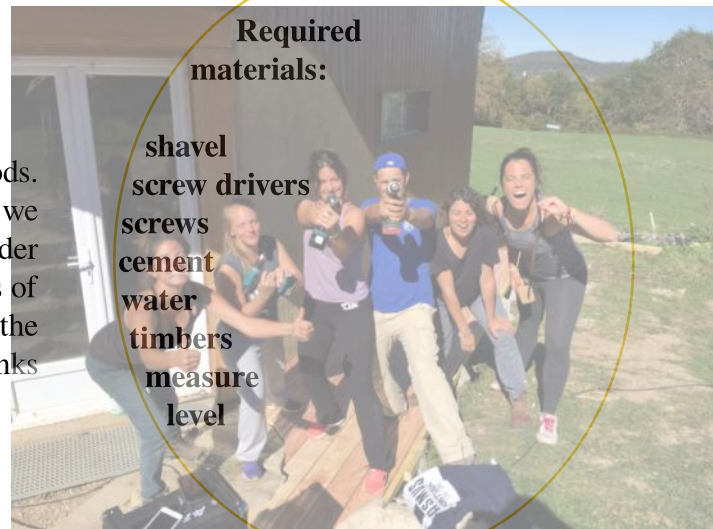
First of all we had to measure the perimeter of the space that we would use to build the terrace. We cut the woods according to our measurements in order to make the frame and then we set the distance between the timbers, to make that way the formwork. It's important to keep in mind that the distance between the timbers must be less or even equal to a footstep (35-50cm) for the sustainability of the structure, but not less than that because it's more expensive and waste of wood. In order to calculate the amount of the timbers that we needed for the formwork we divided the total length with the distance that we had set. It is important to strengthen the formwork, so we used prefabricated boxes of concrete which were connected by cement with the timbers. A useful tip for reinforcing the structure is to screw the timbers to the cement for the best adhesion. It is helpful to have the timbers' surface cleaned from the cement.



The formwork is ready to welcome the decking woods. Before we screw the planks to the timbers underneath we should have in mind the distance between the planks. In order to achieve this we used little pieces of wood with thickness of 2-3mm, avoiding the expansion of the wood because of the rain and humidity. For an aesthetic result we screw the planks in the same lines.

Required materials:

- shovel
- screw drivers
- screws
- cement
- water
- timbers
- measure
- level



COATING

The idea of the activity is to learn the basic principles of coating.

Coating is divided into four steps: Preparation of surfaces, creating the mix, application and finishing. The youngsters will be able to do all the steps and learn why they have to do them.

CLEANING SURFACES

Use a scraper to remove paint from interior walls.

Brush the surfaces to remove dust, for better physical adherence.

Protect the valuable items in surroundings with duck tape.

MIX PREPARATION

FOR CLAY COATING INTERIOR:

1 Part of water

1 Part of clay

3 Parts of sand

0.2 Parts maximum of colour powder (optional, if used always weigh to have the same proportion, mix before in another bucket with some water for homogeneous mix).

Mix with the plastic sheet and then with mixer.

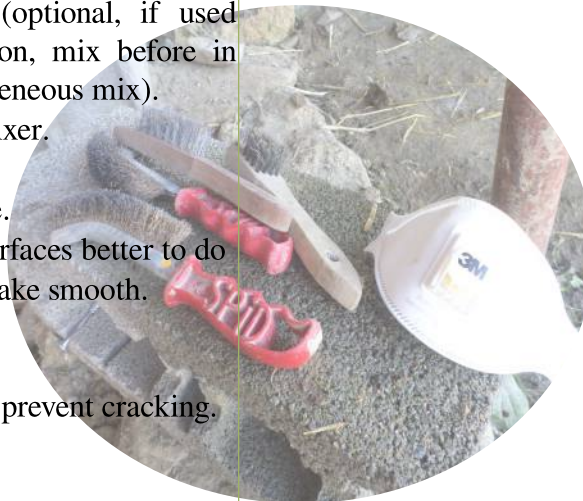
Put plastic to cover floor and put duck tape.

Use the trowel to apply the mixes on the surfaces better to do it from the top part of wall down. Try to make smooth.

Get sponge and a bit of water and polish.

Cover the exterior surfaces from the sun to prevent cracking.

Two hours later moist with sponge.



MIX PREPARATION

FOR LIME EXTERIOR COATING:

Protect, Apply oil to your hands, gloves mask and goggles.

1 Part of water

1 Part of Lime

3 Parts of sand

0.2 Parts maximum of colour powder (optional, if used always weigh to have the same proportion, mix before in another bucket with some water for homogeneous mix).

FOR CLAY COATING EXTERIOR:

1 Part of water

1 Part of clay

3 Parts of sand

1 Part of straw

Mix with the plastic sheet and then with mixer.



APPLICATION:

Brushes; Buckets; Electric mixer; Trowel; Float; Sponges; Scrapers; Plastic sheet; Duck tape

INGREDIENTS:

Soil with a lot of clay; Sand; Water; Lime; Straw

SECURITY:

Goggles; Vinegar; Oil; Gloves; Mask



PERMACULTURE

With Alban Réveill  and Guillaume Kedryna

AGRO-ECOLOGY & COLLECTIVE LIFE

The idea of this activity was to learn within the group how to be more self sufficient and grow your own vegetables in a more natural method.

The group will learn the basics about organic and eco -farming. Growing your own produce, how to feed the soil and when to plant and harvest.

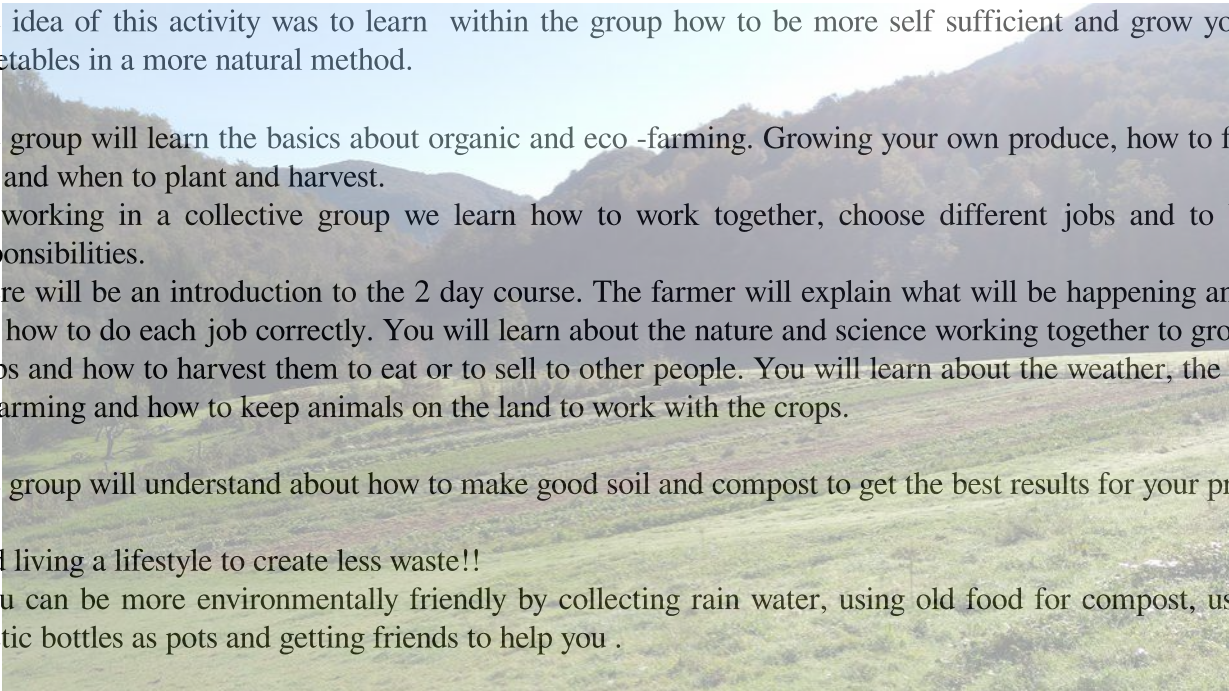
By working in a collective group we learn how to work together, choose different jobs and to balance responsibilities.

There will be an introduction to the 2 day course. The farmer will explain what will be happening and show you how to do each job correctly. You will learn about the nature and science working together to grow good crops and how to harvest them to eat or to sell to other people. You will learn about the weather, the seasons of farming and how to keep animals on the land to work with the crops.

The group will understand about how to make good soil and compost to get the best results for your project.

And living a lifestyle to create less waste!!

You can be more environmentally friendly by collecting rain water, using old food for compost, using old plastic bottles as pots and getting friends to help you .



HARVESTING SQUASHES

Discovering organic agriculture and small scale permaculture farming.

Objectives of the activity: Gaining knowledge about squash growing, both theoretical and practical aspects. Since squash is a relatively easy crop to grow it is an optimal vegetable to start gardening and gain a basic understanding of vegetable growing principles.

Theoretical introduction - Basic steps to grow squashes without digging:

-How to grow squashes?

- a) Place plastic tubes on the ground connected to the watering system.
- b) Cleaning of the field from weeds and potentially harmful plants. Put a plastic tarp so weeds don't have light to grow.
- c) Cut holes in the tarp one meter between each and plant small squash plants.
- d) After one month cut the upper part of the plant in order to make it grow faster and horizontally. Squashes don't need a lot of caring, only sufficient irrigation. Stop irrigation one month before harvesting.

Practical workshop

Detailed steps of the workshop:

10 person participated in the activity: 3 harvester, 3 transporter, 3 cleaner, 1 sorter.

1) Harvesting squashes

The harvesting period start in the end of summer and finishes before the first frost.

- a) Cut the squash with a knife, but leave the stalk in order to store for longer period, even up to 6 months. See image below:
- b) Sort the immature and damaged squashes from mature ones
(The damaged squashes must be sold in one month)

2) Transportation

- a) Take the wheelbarrow and transport squashes to a dry and warm storage place.
- b) Take care of squashes during the transportation, don't hold them at their stalk, but hold the whole vegetable

3) Cleaning the field

- a) Cut the plants at the trunk with scissors, but leave the roots in the soil, since roots will serve as nutrition to the soil during their decomposition.
- b) Remove green plant leftovers from the plastic tarp and use them in the neighbouring parcels to feed the soil
- c) Remove the plastic tarp and the water pipes

Material:
gardening tools: knife, scissor, gloves,
baskets, wheelbarrow and plastic tarp.



SOIL PREPARATION



VEGETAL AND PLASTIC COVER

ANIMAL TRACTION





OUTDOOR ACTIVITIES

With Nicolas Delrieu (nature activity leader) and Samuel Voiron (mountain guide)

BEFORE DEPARTURE :

1. choose route
2. check weather
3. check participants' needs
4. check permissions you might need
5. prepare equipment
6. prepare food for first meal
7. load van
8. depart

ON ARRIVAL :

Day1

1. energizer or team game to intro/bond group
2. set off for camp with all equipment
3. arrive at camp and prepare lunch
4. use maps and compasses to find our position and learn orienteering skills
5. first day hike 2- 3 hours
6. return to camp – divide into working groups to set up tents, collect water and wood
7. prepare and light the fire
8. prepare the dinner – e.g. make dough for chapatis, grill vegetables, make soup
9. enjoy the fire and being together as a team !

Day 2

1. start fire from embers or use stove to boil water and make breakfast for the team
2. relaxation/meditation exercises and games – e.g . blind-guiding game
3. pack up tents and put in cabin
4. prepare bags for hike and picnic
5. refill water bottles
6. hike to picnic spot
7. team games
8. setting up the picnic
9. Trust/team games
10. Continue the hike
11. Arriving to the lake and just 'chill' for 10
12. Team informal evaluation
13. Tidy everything up
14. Pack the van

Orientation
team building
survival skills
physical exercise
self-awareness
confidence
self-esteem
nature awareness
plant id

FIND YOUR TREES

For this game you need to divide group in pairs - one is going to be blindfolded and one the leader of the blind. If you have scarfs you can tie them to cover the blinds eyes or ask them to keep the eyes closed during the game.

The leader has 15min to guide the blind person around the forest and make them touch three different trees. When they finish, the blind one has to open or uncover their eyes and find the 3 trees that they touched.

The aim of the activity is to make the participants use their senses without using their eyes.



NATURAL MANDALA

This activity is individual. Each person has one hour to make a mandala (simmetrical circle) on the forest's ground. They can use natural material found in the forest, like flowers, leaves, pine cones, branches, rocks, etc.

After one hour you gather with everyone in a circle and ask them how they felt while making the mandala. After everyone has shared their experience, you give them another task, which is that they have to destroy the art they did.

The aim of this activity is that the participants become aware of their experience of the process that they went through while creating the mandala and to not get attached to the result.

"It's about the journey, not the destination."

ENERGIZER & ICEBREAKER

EVOLUTION



In the first steps everyone is bacteria and starting to walking in to a boarder area. Then bacteria must find another bacteria to play the stone, paper,scissors. The winner becomes chicken and the loser stays bacteria. Then chicken has to find another chicken to play the same game.The winner becomes monkey and the loser becomes bacteria.The monkey has to find another monkey and play the same game and the winner becomes human and goes out of the game. Always when you lose you go one step back for example monkey to chicken etc. At last only one bacteria, one chicken and one monkey are left.



DIRTY PILLOW

This game is a way to break the ice between people who dont know each other yet

One person holds a pillow and the others are standing in a cirle. The person who holds the pillow wants to get rid of it so he starts to chase other people and tries to touch them with it. Everybody has to hug someone in order to avoid the pillow. You only get the dirty pillow if you could not manage to find a pair and the person who was holding it touches you with it. Then a new round of the game begins.



BOOKLET

written by the participants of this TC, conception & page setting Emilie Chagnaud

The creation of this booklet was organized as the following: two or three supervisors are chosen for each activity, and are responsible for the writing and the pictures for the booklet. This booklet is then sent to every participant to be used as a tool to reproduce and improve the workshops and the knowledge acquired during this project.



Antonio,
Carola, Chloé, Daniel,
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Lucia, Lucie, Marc, Mary, Myrto, Nora,
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Zak

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ORGANISATION TEAM :

Maëva Giubilei & Emilie Chagnaud

