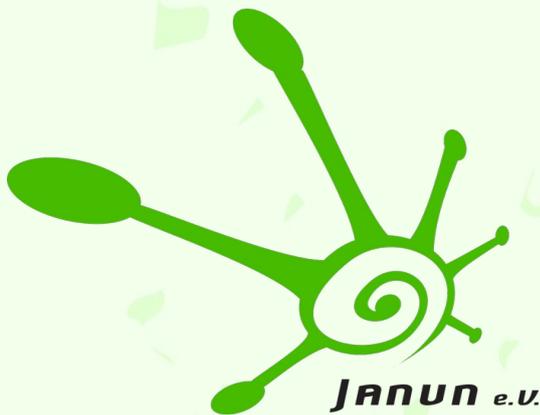




EcoNa Educational Handbook

Methods for the educational work on the topics of food sovereignty, sustainable nourishment and urban garden installations.



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More information on the project partners can be found in the editorial at the end of this tool-kit.

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Introduction

Sustainable development and food sovereignty

Sustainable Development is the main challenge of our times. To provide a good living for all people, now and in the future, our planet's environmental boundaries have to be taken much more seriously. To move forward in the direction of a truly sustainable development of our economy and society, we need to drastically reduce emissions as well as the throughput of resources generally. In this regard, the pathway towards sustainable development is not just about greening the economy, but also about sufficiency and rethinking our lifestyle.

Food is a key issue here involving agriculture, processing, transport and consumption. Food (or nourishment) is an important factor in the concept of the planetary boundaries: it contributes to the overload in four of the nine areas, meaning that we overstretch the planetary boundaries. On the other hand, aiming for a better development, we can find the aspect of food being prominent in various of the Sustainable Development Goals (SDGs).

When it comes to combining food and sustainable development we often speak about sustainable agriculture, organic food, fair trade, and many other things. The concept of 'food sovereignty' is used as umbrella term for these ideas. 'Food sovereignty' is no scientific term, but a political concept. It demands more self-determination for producers, distributors, and consumers. This includes easier access to land, to markets, and more knowledge for consumers about the food they buy and eat. To increase sovereignty would mean to downsize some of the now existing structures: e.g. to have more local and regional markets that allow for more personal contacts between the people (consumers and producers) involved. The core idea of 'food sovereignty' is to organize the production and distribution of food in a more democratic and participatory way. Right now, the big corporations dominate the market. They use their power for their own advantage, aiming at ever growing market shares and revenues.

Food is not only relevant from a sustainability perspective. Food is also a prime topic in education, simply because it is so central to our daily lives. We need to eat to survive, and eating is also a main part of human culture that is often defined by what we eat, how we eat, and with whom we eat. Finally, eating good food is a joyful activity, so we connect to a very positive part of our lives.

About the origins of the term food sovereignty among the small farmers movement in the Global South see the website of Via Campesina:

<https://viacampesina.org/en/food-sovereignty>

A paper with detailed background information can be found here:

<http://www.ukabc.org/foodsovpaper.htm>

Education for sustainable development

Education for sustainable development has been a leading concept for the last 15 years, describing how education can contribute to a sustainable development and how education is embedded in the concept of sustainable development.

Education for sustainable development (ESD) is not just about teaching facts on sustainability. It puts a spotlight on how our individual lives are interrelated with the economic, social and political circumstances that prevail in our society. It is about asking the question: how do we want to live in the future? How do we want to organize economy and society and our daily life? It

investigates how people can make a change and what people need to become change-agents for a more sustainable society. ESD is about opening a space for experiences and experiments, for explorations and discussions. It aims at combining knowledge and skills, so that people learn what they can do and how and how to make informed choices about their actions. Central to ESD is the concept of a 'shaping competence' that empowers people to influence and co-create their environment on all levels: socially, politically, economically, culturally. ESD by this bridges the approaches of environmental education, citizenship education, global learning and others. ESD invites participants to be active learners and not just receivers of lectures and lessons. *Learning by doing* is a crucial part of this approach, so for example developing and implementing own projects. Such an interactive approach asks for respective learning settings and environments. Therefore, in ESD (and in this toolkit) you will find lots of methods that are based on the idea of non-formal education. Compared to a formal learning setting (like traditionally in school or university), the approach is more interactive and participatory. In most setting there will still be somebody guiding the process and facilitating the learning methods, but the person leading the group is not teaching in a traditional sense. This is important to keep in mind when working with this tool-kit and the methods described.

The EcoNa project and this toolkit

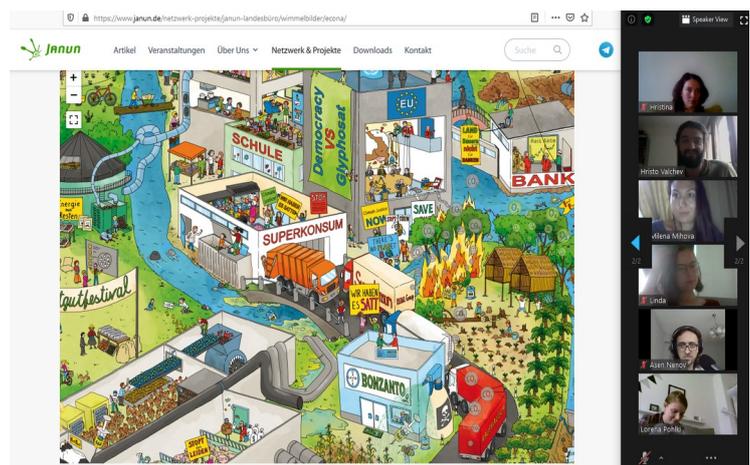
In the project *EcoNa*, we explored approaches to sustainable food and looked at traditions of sustainable nutrition in Germany and Bulgaria. As a starting point we looked at the present-day system of food production, distribution, and consumption. The concept of food sovereignty helped us to understand the structures of the entire food system in a holistic approach and opened the perspective on alternatives.

The aim of our project was not only to inform people i, but also to get them involved in practical activities, following the approach of Education for Sustainable Development. Therefore, many of our educational activities were embedded in practical activities, like building educational garden installation.

In this toolkit, you can find information about the educational methods we developed and used. The methods are listed in a kind of intuitive order for educational work: first some starting exercises that introduce the topic and might be good to begin the work with the group. Following this we have some methods that dive deeper into the subject by focusing on specific topics or practical examples. One big chapter is about how to design, build and run a garden installation. Finally, a chapter on sustainable gardening and the concept of Permaculture goes 'back to the roots' and complements this toolkit.

On the use of educational methods in online sessions

As part of our German-Bulgarian educational project on sustainable nutrition and food sovereignty, we had planned two youth exchanges in Sofia and Lüneburg in 2020 and 2021 that had to be canceled due to the Covid-19-pandemic. Instead we facilitated a digital exchange, in which we tried to connect people from Bulgaria and Germany by relying on a common interest and passion: sustainable food and gardening.





While working online was first of all an emergency adaptation to the pandemic situation, we realized that in future of international projects and youth exchange settings it could also be used to supplement and prepare classic live exchanges or to keep the connection after an exchange or between two exchanges. It might also be helpful for some national/regional meetings if your participants live in different places and cannot easily come around for an evening group meeting. Most methods of this toolkit can be easily adapted for an online setting. We found that taking enough time for getting-to-know-each-other exercises is good, as well as often using breakout-rooms for more intense discussion between participants.

Our experiences and recommendations: The digital formats seem to be easily arranged, but it still need a profound preparation. You need to make sure that everyone from organizers to facilitators is involved, the ideas are synchronized in the team and the roles are clearly defined. This way everyone knows what to expect and how to proceed. It is also crucial to provide information on the technical equipment that is necessary (e.g., microphone, camera) and to check as a first thing whether all participants have it so that they can participate in the meeting. We also found it very helpful to combine the online sessions with offline activities. Giving tasks that participants can fulfill on their own or in their local group makes it more attractive to stay tuned. Respective tasks could be observing some natural environments, collecting and showing seeds, starting some micro-gardening activity on the own balcony or garden, or examining daily life routines like eating, shopping, cooking with regard to sustainability.

Creating awareness when working on global topics

Topics like sustainable development, agriculture, nutrition, and food touch on global issues and therefore also relate to people around the world. In our project we mainly focused on the Bulgarian and German examples of food production, but we quickly realized that they are embedded in the global political and economic system. When talking about sustainable issues on a global level we therefore should keep in mind, that we might project ideas, problems and solutions upon other people that might have a different perspective, but they are not part of our meeting cannot raise their voice. When developing ideas we should be careful not to give them the form of a master-plan that offers solutions for the planet and all people. We develop our ideas by discussing with the whole group, it should be the same on the global level. That seems complicated, but it is the only fair and sustainable way to go.

In this spirit we also aim to avoid stereotypes when speaking about global issues and describing living situations in the Global South. For example, Africa is a continent with 55 countries and 1.300.000.000 people, so there is no such thing as *the* African farmer. Here the concept of 'global learning' offers helpful approaches to work in a sensitive way. Hopefully it will be possible to include more voices from all over the world in future educational activities.

And now: enjoy reading this toolkit and have fun using the methods and ideas!



Educational methods

Speed-dating with references to the topic of food sovereignty

We recommend introducing the topic already with the start of our group activities. The first methods combine getting-to-know each other with sustainability and food issues. Even if you are working with a group that already know each other, this will be useful to get to know people from this new perspective and to already introduce the topic in a informal and playful way.

Speed dating can be used for getting to know each other in the first meeting or in further meetings as an opening activity/icebreaker. Participants are asked to talk about thematic questions in couples sitting together. Partners and questions will change every 2 minutes. We recommend 3-5 rounds. In a classical speed-dating you would mainly ask personal questions to make people connect and get more relaxed in the group setting, here we relate the personal with the topic. Some of the following questions can be used:

- What is your favorite food?
- What did you eat today and what do you know about the food you ate today?
- How many producers (production or processing) of food do you know in person?
- Did you ever work on a farm?
- Are you involved in food production, processing, distribution yourself?
- What was the first thing in environmental protection you did?
- What's one important environmental lesson you've learned in the past year?
- In what ways do you consider yourself eco-friendly/environmentalist?
- What does 'sustainable food' mean for you?

...You can also include an 'open round' where participants can suggest a question.

Cultural aspects of food

Food is very important for all humans in terms of nutrition, but it is also central to us as social beings. Food is very much connected to culture: what we eat and how we eat, when we eat and with whom we eat, and what role certain food plays on certain occasions like festivities. When thinking about other cities, regions, or countries we often associate the notion of 'culture' to food and the way of eating. In an international group this can be a good starting point that connects the getting to know each other with an introduction into the topic. We are usually much more aware of what we eat and how we eat than of the origin of our food, so this exercise lays a foundation for the following investigations and could also raise the interest in the topic.

Depending on the group size we recommend dividing the group into smaller (mixed) groups that can dive deeper into exchanging their ideas. After the group work share some main results and insights in the plenary. It is also nice to ask the small groups to visualize some of their discussion on posters that can be stuck to the wall of your seminar room. You can work with the following questions:

- What does your food, your meals look like on an average day?



- What do most people in your country, region, area eat for a typical breakfast, lunch, dinner?
- What did people eat in the past (like your grandparents), what influences the diet of people, which changes can you trace in your own eating during the last years?
- What are cultural practices of eating: is it more common to eat together in a group or family or alone, is there 2 or 3 main meals per day, which festivities are connected to food in a special way?
- Another perspective is to talk about funny culture specific things and include in the program funny exercises, for example, singing a food related children song, popular proverbs or talking about fairy tales that involve food.
- In an international setting (youth exchange) the method is good to include learning words of each language for food items and meals. (For example: in our project in the German participants also got introduced to Cyrillic writing when learning about food and dishes).

To invite a reflective approach to international/intercultural work we recommend a discussion about the question: 'What is considered as a typical or traditional dish?' When speaking about 'typical' and 'traditional' food you might soon find out, that for a good number of participants this is nothing they eat often, or they maybe don't even like it. Sometimes 'typical food' is an example of how stereotypes work. This exercise links to a critical understanding of (national) culture and can help to think in a more fluid and open way and question the construction of national cultures.

Food quiz: local, regional, organic, fair, sustainable...?

When addressing the issue of sustainable food, we must consider various aspects. This exercise is an easy and playful way to start exploring the different aspects and to get a first overview. You can use illustrations to invite discussion about certain aspects. (Pictures from our project can be freely used and are available [here](#)). Print the symbols as cards or DINa4 paper and show them to the participants together with the questions below.

Depending on the group size either work in plenary or divide the group into smaller teams and have them talk about single cards/topics and later collect results in the plenary.

It is good to compile some background information about the topics, so you can give some information on the questions and examples in case they need clarification.

Affordable food

- Can food be golden? Why?
- For whom can food be golden?
- Have you eaten golden food? What?
- What makes food expensive?
- Do you think more expensive food is better?
- What is good food?
- What do you think is affordable and good food?
- Do you think that food can be socially responsible?
- How can one get food without money?
- Can the higher price make the food more ecological? How?



Local food

- What do you see in these illustrations? Why do you think a banana has wings, an orange has car tires, and a strawberry rides a bicycle?
- Which of these fruits are grown in your region?
- Where do bananas come from?
- And where do oranges come from?
- What is your favorite fruit? Why?
- How do you get the fruits you eat?
- Do you think that by choosing the fruits you eat, you contribute to the quality of the environment? How? What about the quality of the social environment?



Biodiversity

- What similarities and differences do you see in the two men?
- Insects fly past one man and not near the other, why do you think so?
- How do you think the two men feel? Why is one smiling and the other not?
- What can be done to make the sad man happy?
- Which man do you associate the food you eat with? Why?



Label logics

When looking for sustainable food we might immediately think of labels that we can find on packages. Nowadays there is an almost endless number of labels to be found in any supermarket, so instead of giving orientation they might sometimes rather lead to confusion. Especially as some labels are more inspired by marketing interests and they fail being reliable standards. To maintain some orientation in the label-jungle we take the participants for a little tour and find out more about the various labels and standards.

When speaking about food sovereignty we look at organic, fair, regional. What do the labels that you know stand for?

- Which labels are most common in your town/country/shops?

- Which labels do you know?
- Which labels are you looking for when buying food?
- What do labels stand for?
- When working in an international group compare the labels you know and that are common in your country, region, town.

If participants are not familiar at all with labels – and you have enough time in your program - it might be worthwhile to send them to a market/supermarket, have them search for labels and document what they find.

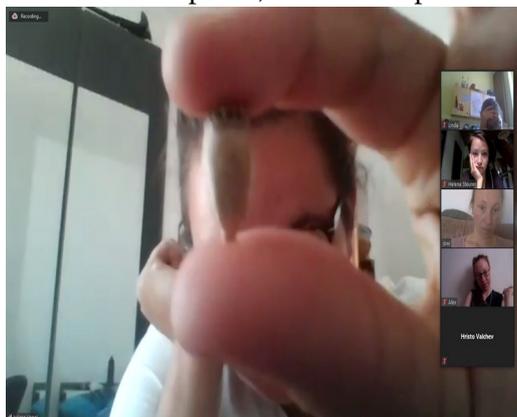
If participants already have some basic knowledge about labels you can provide a better understanding by explaining the histories of 2-3 labels. The European organic label has been shaped by political decision makers, the Fair-Trade label has been developed and monitored by the Fair-Trade association, while other labels have been developed by companies (or agencies paid by the companies). This little explanation might help participants to understand why labels are not always helpful and why we need to know more about them to judge their validity. Discuss in the group:

- whether there should be more or fewer labels
- whether the government should introduce stronger standards and limit labels
- whether it is good that private and business initiatives have all their labels compete openly on the market.

Starting with a seed

A seed is a simple and yet very strong symbol for nutrition and agriculture. It is also a very real starting point when we want to talk about sustainable agriculture and food sovereignty. Starting with a seed is thus a nice educational starting point. This exercise can be done in two ways, depending on the time you have.

If you have enough time in advance, give your participants the task to collect seeds before the actual meeting and bring them to your session. You can combine giving the task with an exercise in which participants create a container to store their seeds. Here a special envelope called *Linnaeus package* works best and can be easily prepared together (find a tutorial [here](#)). Now they can use it for collecting the seeds. They should also note where they collected the seed, give the name of each plant, and take a picture of the plant.



If you do not have enough time for preparation and/or to let participants collect their own seeds you can also provide a variety of seeds and have participants take/choose one or some. Provide each seed with some information about the plant and so on (either openly or hidden, that the first will have to figure out themselves what plant it is).

In the session you show the seeds to each other, explain the origin and by this gather knowledge about seeds. Depending on your group of participants the depth of their knowledge on seeds might vary. If you have teenagers from the city it could be less than youth from



the countryside, but it might as well depend on personal interest and family background. Make sure there is enough expertise in the group and team to really be able to define all seeds and give some important information. The topic of seeds connects the basics of biology (species, evolution, etc.), the history of farming, the development of modern agriculture and finally genetic modification. All this, of course, touches issues of food and nutrition. Decide what focus you want to give and how you provide the necessary information.

From a method to a small project: If the participants bring seeds that can easily be planted you can continue the method into a long-term activity by inviting the participants to plant their seeds and report on the development of the plant. It might be good if you bring more seeds to share during the meeting and maybe also provide some seeds that can easily be grown in the garden at home or on the balcony.

The story and journey of your bread

This educational method examines the origin of bread. Bread is a staple in most European cultures, many people eat it every day. It makes an ideal starting point to explore some more details of the food system in our countries or regions. Starting point is a normal loaf of bread as we might buy it in the nearest bakery and eat it on an average day. Depending on group size split into smaller group after introducing the task.

1. Describe what kind of bread it is and where you bought it.
2. Now create a chain of the 'ingredients' that made the bread: the shop that distributed it, the bakery that baked it, the mill that made the flour, the farmer that grew the grains, the agricultural company that provided the farmer with seeds and fertilizer. Some of the information might not be at hand, allow some time for a short research on the internet. Most likely the chain will not be complete even after some research. This already demonstrates how little we know about the origin of the food we eat, even for such a basic and simple daily item as bread. Have participants draw a poster of the chain and the things they found out and leave some space where information is still missing.
3. For all the links of the chain try to gather more information on the following dimensions of food production and complement the poster accordingly:
 - ecological aspects: what do you know about the environmental/ecologic standards in each link of the production chain?
 - social aspects: what do you know about working conditions, payments, etc. in each link of the chain?
 - political aspects: what do you know about the situation of regulations and guidelines for each link of the chain?

Of course, you could also look at a different item than bread. Or have different groups research about different food items, like coffee, French-fries, or any other popular food. We recommend choosing a simple and single ingredient food item. Looking at a Hamburger already makes it a very complicated story.

The road to food sovereignty - levels of taking action:

This method will built up on the analyses of the previous methods, so it is good to run it after your participants have already gathered some knowledge about the situation of the current food system. The next step after such an analysis, comparison and discussion is to look for alternatives that would bring a more just and sustainable food system. This can connect either to the method 'Journey of your bread' or after working with the 'Wimmelbild' (see below).



Following the dimensions *ecological, social, political* you can invite the participants to discuss on the following questions:

- What needs to be changed to make the journey of the bread more sustainable?
- Who would be the actors to drive such a change process?
- What can we as individuals/participants do? How could we start?
- In an international group you can compare the local/regional/national situation: what kind of starting point are you at? What initiatives and alternative options are already existing?

One could describe 4 levels of taking action, to give an orientation for the further discussion:

1. The first and easy way of taking action is in your individual consumer choice: buying the bread/food you prefer according to the standard you are looking for. This might be more or less easy, depending on where the participants are living and their social-economic standard.
2. The second level is to take joint action. While for individuals it sometimes can be difficult to find and support alternatives, for a group it is more feasible and affordable and has more effect. On this level of joint action, it is an option to form groups of people that take part in an alternative system of production and distribution, like solidarity farming initiatives, farmers markets or others. It might be helpful for participants to write a list of actors that then check how accessible they are for individuals, groups and institutions. Such actors are organic farms, organic seed banks and common seed bank projects, distributors of regional, organic food like solidarity farming, farmers markets and farm shops...and many more.
3. The third level is spreading the issue of sustainable food systems and making it a topic in organizations. Most people are either in school or university, in a job with a company and involved in some clubs and organizations, let it be a sports team, a choir or any other association. How about introducing aspects of sustainable food in these settings? It will reach out to many people and have a bigger impact, but it will also need some good communication process.
4. The fourth level is taking action on the political level. Many issues about food involve political decisions on a higher level as most agricultural frameworks are now decided by the EU. While consumer awareness is an easy step it is good to also have joint actions in mind that use the democratic foundation of political decision making. It is worth pointing out that political involvement (or activism) is an important lever in this topic and comes in many forms. It could mean inquiring with politicians / parliament members about certain issues of the topics, starting or taking part in petitions or public actions on a local/regional/national level, getting media attention for the topic ... and much more.

These four levels do not come as consecutive steps following each other. It is just meant to structure the various layers at which one can take action. It might be nice to discuss with the participants which level they find most easy to engage, which they assume to be the most effective and which they might hesitate to engage in. Also discuss how they would see the interrelation between the levels and their importance if it comes to create a change.

Last, but not least education should be mentioned. Spreading relevant information on the topic, showing the options for becoming active and also giving skills to people is crucial. Therefore education cuts across all four levels. If you have time and your participants are interested in



exploring the role education in more detail you could work out details how education contributes in each of the four levels.

City tours on (sustainable) food

Educational city tours have been developed in many cities, often addressing issues of sustainable consumption. They are usually running along the main shopping street, stop in front of certain shops and inform on the origins of popular consumer items. Such a city tour could easily focus on the topic of food, nutrition, and food sovereignty. If you know an organization offering such tours in your town, you might just book a tour for your group. (For Germany see <https://www.bundjugend.de/projekte/weltbewusst> www.weltbewusst.org)

If you have more time and resources the more interesting option is to create such a tour with your group. By doing so your group will learn more about the topic and creatively produce an outcome that can be shared with others.

If you already worked a bit on the topic you will surely have first ideas about details and will be able to connect them to various stops and shops.

Good places for a stop will be:

- Supermarket
- Fair trade shop
- Zero waste shop
- Farmers market
- Peoples kitchen project
- Deli or spice market or others
- Urban garden project site
- A popular fast food place
- Slow food place
- Student cafeteria and canteen and surrounding offers

How to develop your own tour

If you have enough time it is worthwhile to develop the tour on your own with the participants.

1. Decide on a general idea and outline of the tour. 2. Divide into small groups and have each group choose on topic. 3. Have groups work on the topic and research information, develop an interactive element, and decide for a shop/stop that seems most suitable. Here some general recommendations for developing a city tour:

- For the tour in general but also for each stop is important to find a good balance of information and interaction.
- A stop should not contain too much information otherwise it might be tiring or not all information can be digested and half of it will be forgotten when the next stop with even more information has been passed.



- Make each stop interactive and entertaining by using pictures, quiz questions, puzzles and other little tasks like drawing with chalk a global food network on the pavement.
- Combine critical information about non-sustainable finding of the business-as-usual with information about available alternatives and forms of action that can be taken to support a change. Avoid mere bashing of big companies and certain brands as it is not very effective in terms of education.
- Also show some positive examples in your tour. It could even be a 'positive examples only' tour that visits various places that already offer alternatives. (But be careful not to make it an advertising tour, keep it educational).
- When designing the whole tour make sure stops are not too far apart, so that it is easy to walk (or bike).
- Check whether the chosen stops offer enough space for a group to stop there (outside on the pavement or inside in the shop/mall/project) and the place should not be too crowded or noisy.
- Maybe some stop even allows to enter the shop and look around or talk to the owner. This is more likely with the stops about positive examples.

Take enough time for such a tour to be developed. Allow at least one weekend workshop or a number of group-meetings plus extra research time in between.

Share your own tour with others

If you develop your own tour and ran it for your group your participants might get enthusiastic about the format. So why not offer the tour to other people? You run it with other groups, e.g. school groups or youth groups or adults or the general public. Refine your tour and develop the details of information and interactive methods according to your target group: what will be interesting for them and why? How can you reach out to them in a way that goes beyond simply passing information?

Option: Action bound tours

If you want to create a tour that will be available for people to use individually without having to book you can use an app that is called *Actionbound*. Here you can program a route that leads the participant to various stops and gives them selected information on the way and/or the stops. In addition, they will also receive small fun task they have to carry out, so they will have to interact with their environment to find out more facts and the answer to the question given. The concept is based on an idea of a treasure hunt, so each right answer and fulfilled task will give you some credits.

Examples

You can create tours on various subtopics, for example here some tours that were created during our EcoNa project for touring the city of Lüneburg:

- 'Sustainable nutrition in our town'- visiting places that are connected (offering) sustainable products or food.
- 'Regional delicacy' - focusing regional products and products from local small scale businesses and their availability



- Global dimension of our food. Visiting places that are connected to the global dimension of food, like a Fair-Trade shop.
- Bicycle tour through your town and the surroundings. A tour with the bikes allows you to go a bit further, so you can actually visit the country side, maybe some farm, some nature reserve and some regional business. -
- Campus-Tour Rallye visit the places on your university campus that are related to food and nutrition, like the cafeteria but also maybe some departments that work on related topics.

Working with the „Wimmelbild“ (hidden objects poster)

One of the most beautiful outputs of the EcoNa-project EcoNa is the *Wimmelbild*, a hidden-objects poster with the subtitle: *Nutrition - from super consumption to the seed festival*.

The form of hidden object banners is familiar to people in Germany because there is a very popular series of children's books that only consist of such images, inviting kids to find things and connect items and characters to sub-stories within the big scenery. During the last years the form has been successfully adapted as graphic material for educational purposes.



You can find the full-size picture [here](#).

The picture can be used for various educational activities. Here we describe the main methods that we used in the project and that worked well. Further ideas and details can be found in this [brochure](#). (Available in Bulgarian and German)



Exploring the picture

First of all give the participants some minutes for just looking at the picture and follow their interest. Then invite the participants to discuss in small groups of 2-4 people the following questions:

- What catches your attention most in the picture? Why?
- Which person would you like to be for one day? Why? What would you do?

Either in small groups or in the big group you can now start collecting the stories that are shown in the *Wimmelbild*.

Exploring the picture

From the first explorations you can now pick up almost every scenery to follow the story into details and by this explore an aspect of food sovereignty in more detail. Here you can combine the *Wimmelbild* with most of the other methods described in this educational tool-kit. The *Wimmelbild* can create the background canvas for much of your workshop, seminar, summer camp.

Explaining the picture

To get an overview on the stories that are told in the *Wimmelbild* you can check the explanation by the creators of the picture. This can be useful for preparation, but also if you want to follow with the participants all the details and compare to the stories they found in the picture.

<https://youtu.be/BswNo0eLl0k> (German),

<https://youtu.be/IE-rKTH5N0I> (English).

The future we want – Utopian ideas for 2030

2030 seems far away, but it is less than ten years ahead and an important date - for the sustainable development goals and for international climate goals. So far politicians are aiming for high goals, but the real development is not happening as quickly as needed. There is a need for bigger ambitions and more lively ideas of a sustainable future that might look different from today's living. Therefore, we want to invite some more or less utopian ideas to map the future and the path leading towards it.

Utopias have created ambiguous scenarios in literature and politics - not all utopias are describing a better place! It might be good to briefly get familiar with the origin of Utopia and its main meanings. It is always good to ask participants about their ideas and knowledge about Utopia. Maybe in a different language and cultural setting it has a different connotation. Within transition studies utopias are regarded as a good tool as they broaden the view and open the horizon for bigger changes in society, not just a greening the business as usual. Making a change often starts with an idea about what can and should change. Some envisioned changes might be ambitious, but the idea of a different future is the starting point for social change and sustainable development.

“There is nothing like a dream to create the future!” (Victor Hugo)

First Step: Describe the year 2030 from the perspective of your own person:

For the method on utopian perspectives, you could continue working with the *Wimmelbild* if you used it already and participants are familiar with it (and liked it). Let participants choose one character from the picture starting with a short biographical note. Here one example for the person on the picture: 43 years old, speaks German and English, lives in the countryside and works as a teacher in the nearby town. Likes to cook and lives with his/her family in a house with a garden where they grow a few vegetables. But the most food is bought in the supermarket on the way home from school. In the utopia-exercise you can now consider their respective ideas, wishes, desires for an utopian future.



Starting the journey: Use the method of a 'imaginary voyage journey' to get the participants into the right mood for the utopian exercise. Let them relax, close their eyes and tell a story that takes their thoughts into an imaginary future in the year 2030. Give some inspiration while leaving many details open, so that the participants will use their imagination to paint the picture. Find a gentle ending of the imaginary journey after about 3-5 minutes and then continue with the following steps of the method.

First Step: Describe the utopian scenario for the year 2030 from the perspective of the person you chose to be (either yourself or a character from the *Wimmelbild*).

Invite participants to draw/paint their ideas and visions and provide respective materials like paper, paint, crayons, etc. Invite participants to be very creative but avoid too many science-fiction fantasies of totally new technologies that solve all problems or aliens taking over the world government. (That would be a creative approach but go a bit beyond the exercise.)

- How will places, cities, towns and nature look like?
- How will people behave and interact with each other?
- What will people eat? What will be hip and trendy? Will there be simply a different diet or is there going to be some totally new food items?
- How will food be produced, processed, and distributed?



- What will the economic situation and structures be?

Have participants share some of their ideas and display the paintings/products they created.

Second step: What could transitions look like?

As you now have a range of visions for a more sustainable situation in 2030, the big question is: how did we get there? Invite participants to discuss in small groups about the following questions:

- Looking from the 2020 perspective: what problem could be solved until 2030? How and by whom?
- Describe the road that led to the new situation: what happened in between, e.g. which steps were taken 2025?
- Transfer your focus on the local level: what could happen in our town, region during the next years that contributes to a positive utopian future that relates to the bigger picture we imagined?

Third step: Connecting ideas and reality: actions and actors.

After you designed your own utopias and developed a road map leading there it might be worth to invite other perspectives – and maybe give your ideas a kind of reality check. Try to meet (best visit) and interview farmers and other actors that are involved in the field and might play a role in your future scenario. Find out what their idea is about an utopian 2030 perspective? What do they perceive as challenges and opportunities? Maybe you can also find places or initiatives that could be described as one step ahead on the road to utopia: visit them, ask them questions, also about the experience, the difficulties, and the envisioned next steps.

Commons – who owns what and why?

A crucial question in agriculture and food sovereignty is: who owns the soil/ground /farming land? All over the world farms are getting bigger and bigger and there is a market driven development which could be described as 'grow or give up'. This process is being sped up by financial investors that are joining the game and buy grounds. It is a promising investment, because fertile farmable land is limited, despite the huge size of the planet earth. But this kind of investments mean that prices for example to rent land (most farmers only own a fraction of the land they farm) are rising. This puts especially smaller farmers under stress and in the end means higher prices for consumers as well without any benefit.

Invite the participants to discuss the following questions, preferably in smaller groups of 2-5 people:

- Air and water are generally considered as commons, but how about the ground and the environment?
- What is the legal status of land, forest, soil in your country?
- Who is owning the land and how is ownership developing?

Provide an introduction on the idea of commons. Either by giving a short presentation, invite a speaker or show a video from the internet.

Commons means not just natural environments, but also technologies and innovations. How is technological innovation distributed, what role do patents play. One big issue is that some companies are patenting seeds that are not newly developed but are trying to patent seeds that already existed which they claim to have discovered them. In many countries it can also be an



issue that machinery is very expensive and spare parts are not easily available. When farming depends on “foreign technology” it can mean a long-term dependence on technical assistance.

Sharing knowledge: methods for using and spreading Information

To get an insight into specific areas of food production it is important to get sufficient and solid information on the topic. Besides reading books and articles, it is always good to invite somebody who is an expert on the topic. This person, besides from giving an input will also be able to answer your questions and join a discussion. It might also be interesting to talk to people that are involved in the production, processing or retail of food and can share first-hand experience as a farmer, shop keeper, a chef in a restaurant, a baker etc.

Speakers, Videos, Presentation, Visits

For some basic information on various aspects and concepts you can also use the plentiful resources that the internet provides. You can play a video of a talk, an interview or presentation that you find very suitable. By this you can have many inputs and speakers that would be unthinkable to come for a visit to your group meeting. Documentary movies can also provide information and invite discussions. But make sure it does not just become a cinema session, so allow enough time to have a discussion afterwards and connect the watching of videos to other activities.

A very good idea is always to visit people and places for some real-life impression of the job and the field of work. It gives participants a much more vivid learning experience. But it will also take more time and some preparation. Preparation is not just about the logistics of getting there and arranging the visit. You will also need to prepare the visit in regard of the content: What kind of questions do you want to ask, what would you like to find out? Also allow time for an evaluation: how did the participants like the visit or meeting? What do they think about the answers and information provided? Especially when visiting businesses or companies you want to be prepared for a marketing-based presentation of the company's own aims and practices.

Create your own movie/podcast

Today it is very easy to create videos or audio files and share them on the internet. This can be a nice complementing method if your participants are interested in working with media. You can make videos when visiting places, interviews with people involved can be recorded with video or audio (of course they need to agree to it).

Creating video/audio needs a quite bit of time and know-how. Make sure you have somebody in your team that knows how to use the technology for recording and editing and has knowledge about how to create a podcast or video in terms of storyboard and design. Don't worry if it is not a professional video/audio in the end, you are not a TV station. But some basic quality helps to share the final product among other people and makes your participants happy and proud of their work.

Consider sharing the results online. Especially in your network and among friends, families, and peers it is worth to spread the result. There might be many videos about the topic on the internet already, but if participants create a video with their own questions and in their own area it will also be interesting for the local and peer-related target group.

Science Slam

If you like to create a big event you might consider a Science Slam. Science Slams are events that want to make insights from the academic world more accessible to the public (but also to Scientists from other fields) by presenting some key findings in a brief and entertaining way.



During the EcoNa project we ran a Science Slam at the University of Lüneburg. It was quite a some work to prepare it, but in the end 200 students visited the event and it was a big success. This is not a simple educational method to be carried out within the group, but it could be a group project if you decide to organize a science slam together. You will also learn a lot about project- and event management.

You will find more detailed information when searching on the internet about 'science slam'. Here just some key points from our experience:

- Find somebody who has experience with the form of a science slam as host and show-master for the event and for advise during the preparation.
- Find a partner that will be a good hosting institution, like the local university. Find a professor that supports the idea and will co-host the event so you will be well connected to the university. This makes it easier to use their rooms and to spread information about your event to many people. If your town has no university it could also be a cultural or educational institution.
- Take enough time to prepare, start with planning at least 6 months in advance, from booking a venue to writing a call for speakers/slammers and so on.

Human library

The method 'human library' is inviting people to learn from other people, but in a more interactive way as if experts were simply presenting or speaking about a topic. Experiences based!

To host a human library, you will have to invite a few 'experts' that are willing to share their knowledge and experiences of a topic that is related to their own life. The idea is that the human library is more based on experience than on theoretical knowledge. (So, while the science slam is more about knowledge and information in a scientific processed way, here it is more about getting some first-hand information from people that have an insight or experience which is not easily available for other people). They present themselves with their specific topic/experience like a book being on display. The participants can now choose which book they would like to browse in and go sit around the person. Each round of reading lasts about 15 minutes.

Participants can ask the person all questions they are curious about.

- For the topic around food sovereignty, it might be interesting to invite producers of food, either farmers or processing as well as people involved in the trade or in political campaigning.
- It might also be interesting to involve people that are rather part of the mainstream business and not part of the alternative movement.
- Because it will involve a bit of preparation it is good to plan it as a bigger event by inviting more people to participate or to host it as a kind of public event. In our project we had the human library happening at the farmers market in Sofia, so not just invited participants could benefit, but also spontaneous visitors that brought enough time and curiosity to engage in the method.
- The term library does not just refer to the sharing of knowledge and experience, but also to the setting and framework. Make sure it is a space that is respectful and allows a good and open communication.
- The method originates in the work to fight stereotypes and discrimination. See more about the method and its various forms
- of use at www.humanlibrary.org



Urban Garden Installation

General Idea

The idea of a garden installation is to combine the ideas of urban gardening, art installations and information/education. A garden installation will be placed in public space and aims at attracting the interest of the general public. Some core ideas of an urban garden installation are:

- it is attractive in its design and by this invites people to stop, look and be curious.
- it is green: it has lots of plants, fruits, crops, herbs, etc.
- it is about sustainability which will reflect in its design and the resources used.
- it is about food sovereignty, so it has rather crops than flowers.
- it is about education, so it has some information for the public.

During the last decade, urban gardening has become a popular trend in many cities. All over the world, community gardening projects have proven not just to be a source of supply with fruit, vegetables, herbs, etc., but also to be a powerful method to boost social engagement and cohesion. The gardens usually address sustainable development on various levels and give examples for a sustainable lifestyles and the idea of food sovereignty. The garden installation relates this concept and transforms it so that is temporary and smaller in scale. This makes it possible to access places that would not be available for a proper gardening project, like central urban areas

Creating such an urban garden installation is a project in itself that links the topic of food sovereignty to education. The process of designing, constructing, maintaining and evaluating it has various references to the concept of education of sustainable development. Running such a project will demand a lot of resources and will last some weeks or even months. Make sure you have the time and resources available and people are motivated to join. For sure you will have a great time with lots of fun activities and rich learning experiences.

We divided the process of making a garden installation into 5 steps: planning, designing, building, maintaining, closing-evaluating.

Step 1: Planning

The first step is assessing the resources available and the possibly additional resources needed: people, place, time... A good idea is to map the space on paper noting the place of water, organic matter, etc., and some energy flows and processes that interact or would interact with the ones planned around the garden.

Observation and Analysis of Possibilities and Limitations

There are some key questions to be analyzed at the site of your installation. The answers are important for the further planning:

- Is there enough water for the plants or is additional water needed? For how long? How often does it rain?
- Is it a rather sunny and dry place, like on an open square in the city? Is there some light limitation that you identified, e.g. from big buildings or trees?
- Is there enough space for the installation you have in mind to build – in relation to overall space and regarding regulations for public space?
- Is there enough time for the seeds/plants to grow according to the season?



- Is there soil provided and if so which quality does it have or do we have to bring in soil or manure?
- What else might the plants and installation need?

Some recommendation on timing: since the installation is about gardening, an installation happening in autumn and winter would be more difficult than one in spring and summer. During the nice-weather season you will also attract more visitors.

By this stage you have quite clear knowledge about what is the location that you are dealing with. Now you can move on and start with the design of your urban garden installation.

Step 2: Design

The key question is now: How to construct and design the installation? Of course it is good to look at other installations and gardening projects, or maybe asks experts from the field of design and architecture. There is no blueprint, but there are many different types of design of garden installations. As your garden installation is part of an educational project it is best to have a joint process of designing.

Invite the participants of your project to be creative and then go for a common idea and plan. Usually it is good to start with a very open and creative phase, that allows lots of brainstorming and will produce many small and big ideas. Then follows a phase when to sort ideas, see what can be combined, what is possible, what is impossible. Last but not least the final design should be decided on together in a democratic way, so that all participants feel happy about the installation that will be build.

The following details have to be considered in the planning and will have to be decided on before you start building the installation:

- In what shapes would you like to make the overall installation and the garden beds - straight lines, geometrical, curves, spirals, mandalas?
- If you are going to do an urban project, what materials are you going to use for garden pots/containers? It is common to grow on pallets, grow in bathtubs, grow in buckets, or build some raised beds (Hugelkultur).
- Can you possibly recycling/up-cycling in the design, e.g. when choosing the materials needed?
- Go for simplicity: can the construction be easily built and later dismantled? Can the installation be realized without any special equipment so you can work with the tools you have or that you could easily find in your community - friends, neighbors, etc.?
- What would you plant in the garden beds? Flowers, herbs, other plants? Do you have seeds or cuttings or if not, how would you get them? Check out if there is a project, community, neighbors, friends that work with organic/heirloom seeds and plants. If you are going to buy seeds from the shop look for organic ones.
- How does the watering function? Consider the need for watering in the overall design of the space. For example, if you have your installation in a sunny and dry place, like on an open square in the city one solution could be the protection of the soil surface with mulch - dry organic material with no seeds. This will compost slowly, emitting heat and increasing the soil humidity.
- Is there something growing that visitors could take home from the garden? Like herbs that can be used to make tea or for cooking?
- How and where is information about the installation and the general topic being displayed?



- Will there be an area where people can sit and rest and enjoy the garden installation?

General recommendation: Choose a holistic approach. By thinking carefully about the way, we use our resources - food, energy, shelter and other material and non-material needs - it is possible to get much more out of life by using less. We can be more productive for less effort, reaping benefits for our environment and ourselves, for now and for generations to come. This is the essence of Permaculture - the design of an ecologically sound way of living. Therefore, Permaculture is not only a topic of sustainable food and agriculture but can also be a guiding principle for designing the garden installation. Find more information in the respective chapter of this toolkit.

Information displayed:

If you chose a good location many people will be passing the installation. Some will stop shortly, some might take a break here and at least a few will really want to know more about it. Having people stop and get interested is one of the main aims of an public garden installation, so you need to think about the information that will be available:

What is the content and style of information displayed? Is there some short information for the visitors that are in a hurry and some longer version with details for those who are really getting into it? It is always good to combine the text with some pictures and maybe graphics and numbers.

Keep in mind: you don't just want to cater for your own crowd, namely other enthusiasts of gardening and ecology. You might want to get people curious and interested that would maybe not be super interested in the topic as such. Find people that have some knowledge about writing information displays and doing graphic design. The better the information is being presented the more people will pay attention!

Safety measures

Have in mind also that a garden installation in the city will attract people from all ages and may be visited by kids and young children. Therefore, the design should be solid and safe: no sharp edges, nothing one could easily trip over or fall off from. The whole installation should also be robust enough to survive stormy weather or people misusing it, like climbing on it. Depending on the location you might have to consider the possibility of vandalism as well.

Step 3: building

Tools and techniques

When it comes to the tools you might try to go for the well-known 3R's - Reduce, Reuse, Recycle. Avoid buying all the things you need from the shop or internet. Probably you can easily find some already used tools, borrow, or buy them from your family/neighbors/local seller or even try to make your own tools. There are plenty of options which can turn the wheel of consumption into a circle of sharing and caring. You can check in social media groups of people that like to exchange things as well as in pages of projects that are already running around you and ask about such tools that you need. It is also a chance to get more people informed or even involved about your garden installation.



Soil fertility - biodiversity sustaining, mulching, crop rotation

Soil fertility is very important for the plant's health and the well-being of the species in every gardening project. Maintenance of the soil fertility typically requires deeper understanding of the biology and ecology of plants so that one can be aware and use mulching, green manure, etc. to sustain and conserve the soil fertility well. See more on this in the chapter on Permaculture in this toolkit.

Seeds and plants

Depending on the time of the garden installation one can either plant seeds and wait for the plants to grow or plant plants. Use seeds from other people gardening or from your own garden. Invite people to contribute to the installation by giving seeds. It's easy to grow crops and flowers from seed you've saved the previous autumn. You will know where the seeds are coming from, you'll save money and it is extremely satisfying to see your seeds germinate after a winter in a package.

Step 4: Running and maintenance

Have an opening celebration to officially inaugurate your garden installation. You achieved to plan, design and built the installation – hurrah!

Activities at the installation

To make the installation more attractive and get more public attention you could use it as a meeting point for activities that start from here, like city tours. Or it could be, depending on the size and design, also a place where activities take places, like readings, music sessions, gardening workshops, plants and seed exchange fairs and so on...

Maintenance work

Discuss and clarify the following questions to make sure your garden installation stays in good shape and the project keeps being fun for all people involved: Who is taking care for the installation? Who will take care of the plants? Who is ready to repair things? Who takes care that the space stays clean?

And as the project unfolds: Is there any updating of the information displayed, do you want to change some topics according to the season or is there some kind of news board for activities and networking?

Safety measures

Be aware that gardening can be much fun and leisure but also requires to be careful and considerate when you are using sharp tools or electric items. Have in mind that while working on a garden installation in the city other people can be around, e.g. kids and young children, so you should avoid leaving unattended any hazardous items around.

Promoting the garden installation and its topics

Do you want to have more garden installations, gardens, and green places around you? If yes, then you could contribute to this a lot by motivating other people for the gardening idea, promoting your garden installation.

- Who could be your target group – your friends, neighbors, kids, average citizens or the broad public?



- How could you reach and motivate these people – by educational or informational tools, via social media, by inviting a journalist to report about your garden installation?
- What would be your message? How could you spread the message to other people?

Step 5: Closing and evaluation

The urban garden installation is generally to be a temporary installation, so it will be in its place for some weeks or month or maybe a full summer. In some cases there might be a chance to convert it into a permanent garden installation, but then you will have to sort out who is in charge of the maintenance. Most likely you will have a closing event that celebrates the installation and all the events that took place, all attention it received and how it contributed to spreading information, ideas, and inspiration on the important topic of sustainability.

Evaluate the project and the work on the garden installation. How did the whole process work out? Are you satisfied with the result? Did you reach out to people? Did you get feedback from people visiting? Did the media report and did they like it?

If your installation has been in place for a long while it is good to have some mid-term evaluation during the season. It is anyway very much recommended to have regular short evaluations in form of feedback talks among all people involved.

Plan further installations for the future: new places, new design, new participants?



Educational Gardens for Universities or Schools

While the urban garden installation is meant to be located in a public space and will be accessible for everybody, you can as well build a garden installation that is on private ground, for example with the premises of a school or kindergarten or other educational institution. Such a setting will allow for different designs and more practical gardening. It will also allow to connect deeper with the educational activities, for example if the garden installation becomes part of a school garden. In the EcoNa project we followed this approach with our Bulgarian partner organization. Our Educational Garden became a "growing classroom" in the yard of a kindergarten or school where children, teachers and parents join in and unite their efforts to grow herbs, vegetables, and fruits. This will need a bit of preparation and coordination, but in the end all the people that get involved are likely to have an enjoyable experience as well as an inspiration from their work with the elements of gardening. Keeping it the size of an installation (instead of starting a farm) makes it still manageable for coordinator and will also allow quicker results and the feeling of achievement for all the people involved. Such a garden installation is therefore a multi-dimensional educational tool. It addresses the topic of food, nutrition, sustainability, but also connects to issues of community building, volunteering, inclusiveness and many more.

Designing, building, maintaining an educational garden

Designing and building the educational garden installation follows largely the steps described above for the urban garden installation. Make sure the future users/participants are already involved in the planning. Especially in school the planning, designing, and building process is an important learning experience in itself and will also foster the feeling of ownership for the garden among the students.

Teachers might be somewhat familiar with the topic of sustainable development, probably less with the concept of food sovereignty and maybe the approach of Education for sustainable development is also rather new to them. It is important to go slow and make sure that the people involved are motivated and interested and receive enough support. The educational garden is their project!

In our project we trained the local teachers in the method of ecosystem design thinking (based on Permaculture design, see next chapter in this tool-kit) and guided them along the project so they would get support in each step and adapt it accordingly to their own target group (from kindergarten to university). Within 2 months the participants had to consistently create their own plan for Ecosystem design of a sustainable intensive ecosystem on a small area located in an urban environment. Following the principles of Ecosystem design, all teams independently analyzed their terrain and set all the important elements for the sustainable existence of an edible ecosystem - analysis of terrain, climate zone and features, relative location, natural resources, soil, water, irrigation, plant companion-plants, as well as a plan for technical construction and finally - a vision for sustainable development for the coming years. An additional condition in the implementation of the design of the Educational Gardens was that they were planned and created in places where the original ecosystem was damaged or completely destroyed. The lots for educational garden installations were small areas in the yard of the kindergarten, school or neighborhood, which had been neglected so far. During the project participants gradually turned into green and fertile intensive ecosystems with a high biodiversity index (diverse plants, insects, worms, beneficial microorganisms and many others).

We recommend the co-participatory community supported approach, which follows this keys:

- CO-DIAGNOSTIC - the availability of suitable space for the Educational Garden in the yard (natural light, shading, accessibility for watering, space for moving around the plant beds) is checked by expert analysis.
- CO-SELECTION - the selection of the garden plot is based on teachers' didactic vision and needs for creating an effective educational environment through motivational interviews with teachers.
- CO-DESIGN - model thinking is used jointly with teachers and children to choose appropriate local resources and materials to use and how to use them.
- CO-IMPLEMENTATION - based on a jointly developed vision, action plan and calendar of all activities. Tasks are discussed and distributed to all actors in the first two months of their project work.

Pictures from educational gardens build as part of our EcoNa project...





Gardening – back to the roots

This chapter provides practical information that can be used for the garden installations or to connect to the topics for the educational activities from the first part of this toolkit. In our educational activities we experienced that many people were very interested in the basics of gardening. Therefore - as a spin-off of the planned program - people collected knowledge and methods about gardening. It can be found in this chapter and can be used for the urban garden installation as well as or other gardening activities – starting on your balcony!

Permaculture - Earth Care, People Care, Future care

Permaculture is an innovative framework for creating sustainable ways of living. It is a practical method of developing ecologically harmonious, efficient, and productive systems that can be used by anyone, anywhere.

By thinking carefully about the way, we use our resources - food, energy, shelter and other material and non-material needs - it is possible to get much more out of life by using less. We can be more productive for less effort, reaping benefits for our environment and ourselves, for now and for generations to come. This is the essence of permaculture - the design of an ecologically sound way of living - in our households, gardens, communities, and businesses. It is created by cooperating with nature and caring for the earth and its people.

Permaculture is not exclusive - its principles and practice can be used by anyone, anywhere:

- City flats, yards and window boxes
- Suburban and country houses/garden
- Allotments and smallholdings
- Community spaces
- Farms and estates
- Countryside and conservation areas
- Commercial and industrial premises
- Educational establishments
- Waste ground

Ethics and principles of Permaculture

The foundations of permaculture are the ethics, which guide the use of the 12 design principles, ensuring that they are used in appropriate ways. These principles are seen as universal, although the methods used to express them will vary greatly according to the place and situation. They are applicable to our personal, economic, social and political life and can be of great favor. Each principle can be thought of as a door that opens into whole systems thinking, providing a different perspective that can be understood at varying levels of depth and application. More on Permaculture principles:

<https://permacultureprinciples.com/principles>

<https://www.youtube.com/watch?v=-CxP0ThlJr4>

Observation and planning of the landscape design

Observation is the first principle in permaculture and gardening generally because of its importance for the understanding of the landscape features and the energy flows that are essential for our future interactions. In observing nature it is important to take different perspectives to help understand what is going on with the various elements in the system. While observing we can tune in authentically to the natural cycles and form a holistic overview for the present situation. One can start with an exercise of “Landscape Reading” that looks at pictures of different landscapes and climate zones, figuring the main features in a joint discussion and analysis. Then you can move to the real environments of the participants, either by taking the groups to the specific nature or using the video-conference tool of your choice to connect participants in their gardening areas.

Parallel with observation comes the planning of the landscape design,

according to our observation. We can group the different elements and energy flows into the following groups:



Position and climate (micro-climate zones)

One of the most important things to do when you start your project and visit the terrain for the first time or when you see your apartment balcony from this perspective, is to check your compass, so to say, or to find out what is the position of the place/land according to the poles and sun. For example is it a sunny slope/balcony facing south or is it a shady hill/balcony facing north. Is it a place in between other buildings with a lot of wind or is it open and still. It is recommended to observe those conditions for long enough, to be able to recognize the various climate conditions on the spot and even the patterns of the climate. Such observation and checking will help you to understand the energy flows and figure out what micro-climate zones you will be facing.

Soil characteristics

Soil is a mixture of organic matter, minerals, gases, liquids, and organisms that together support life. Soil is a product of several factors: the influence of climate, relief (elevation, orientation, and slope of terrain), organisms, and the soil's parent materials (original minerals) interacting over time. The characteristics of the soil that you are going to interact with for your project is very important, the more fertile soil you have, the better garden you will grow.

So, what is the smell of the soil? Sandy or fungi-like? We are looking for the smell of the soil in the forest, let's call the smell 'champignon in the autumn'. If the soil is sandy it is probably too dry and depleted. We could help with adding some organic material like mulch or compost from our kitchen, garden or vermicompost (made from the worms' activities). Then cover the soil for several days to let live a bit - this new system is also looking for a new balance which takes time. What are the climate conditions connected with the soil surface? If there is too much sun, one solution could be the protection of the soil surface with mulch - dry organic material with no seeds. This will compost slowly, emitting heat and increasing the soil humidity, thus increasing



the mycelium within the soil and establishing a network of hyphae (fungi tubes), which could transport water and nutrients from one part of the garden towards the other. This delivers resilience when the environment is very dry.

Water characteristics

Water is life. It is essential for the well-being of everything and especially the well-being of the garden. We should secure a water source close to our project site and/or have a really good design of our space, so that it stays moist enough and we don't run dry on some occasion. How to do that? If the plot/space we are going to use is very dry, we might want to mulch it early enough before planting the seeds, so the regenerative processes have the time to start the soil transformation. Effective microorganisms might be of use.

On the other hand, it could be a shady humid zone with little sunlight during the day and with too much water, even staying on the surface. Is it moist enough to grow rice in? How much hours of light are there during the day? If there is too much water, try looking at the cause and if it cannot be changed, how to integrate this flow within the garden processes. Is there an option for a reed-like grass? Or maybe some other type of water-loving plants that will fit there.

Tips: With the understanding of these traits and figuring out those conditions you can go forward and you can ask yourself if there is enough water, sun and nutrients with a good soil, what else the seeds might want? Check the pH of the soil and its drainage.

If there is no light at all at the plot, plant some tree seeds very close to each other. When the time comes, the germinated plants will try to get more light and will get higher more quickly.

Land size and features (roads, terraces, topology)

Have we observed enough the space that we want to interact with enough? How did we interact with it? What is the 'sense of place'*? How would we interact with it? A good idea is to do a mapping of the space on paper noting the place of water, organic matter, etc., and some energy flows and processes that interact or would interact with the ones planned around the garden.

*The term 'sense of place' has been used in many different ways. For culture and environment and to stay at a safe place. It is a characteristic that some geographic places have and some do not, while to others it is a feeling or perception held by people.

Present vegetation and animals

Do you know what species of plants and animals are already living in the space that you are going to interact with for your project? Biological observation through species monitoring and assessment could be an ambitious project for someone new to such science. But nowadays there are plenty of possibilities to check what species are out there, from good old books for species identification to the modern photo identification applications and social media groups with participants that are passionate amateurs or scientific researchers in the field. You can choose your way. Once you know what is already there you can work with it and invite even more diversity. Always try to foster diversity in any form - allowing weeds to grow and support other plants, insects, invertebrates, vertebrates etc.; mixing seeds of different varieties of plants when you decide to plant. Choose local species and pay special attention if you are plant something not native, so it doesn't turn into an invasive species which harms the local ecosystem.

Planning, tools, and techniques

By this stage you have quite clear knowledge about the habitat that you are dealing with. On this you build your assumptions about the space/garden planning (see also chapter on urban garden installations above).



When it comes to the tools go for the 3R's - Reduce, Reuse, Recycle. That way you don't fall into the normal consumer pattern and buy all the things from the shop/supermarket, when probably you can find some already used tools easily, borrow or buy them from your family/neighbors/local seller or even try to make your own tools. There are plenty of options which can turn the wheel of consumerism into a circle of sharing and caring. You can check social media groups of people that like to exchange things as well as pages of projects that are already running around you and ask tools you need.

The techniques that you are going to apply in your garden are also a vast topic, you can decide to go forward with a permaculture design, including biodynamics and no-till or dive into some other special techniques. Our suggestion is to take one step at a time, so you can handle the obstacles and tests that nature is going to give you.

Different types of design of urban and rural gardens

A city farmer or urban homesteader - suggestions for urban gardening activities:

1. Apartment - balcony gardens, lazy potato bed, grow food in a builder bag, planter from juice carton.
2. Small urban plot/shared garden - improvised water systems, grow on pallets, grow in bathtubs, grow in buckets, bee hotels, green roof gardens, raised bed (Hugelkultur), geometrical gardens - spiral, keyhole, mandala gardens, soil improving basins, water gardens and ponds, edible hedges, perennial wildflower meadows, forest gardens and food forests.

Plants specifics and groups

Allelopathy - Allelopathy is a biological phenomenon by which an organism produces one or more biochemicals that influence the germination, growth, survival, and reproduction of other organisms.

Companion planting - Companion planting in gardening and agriculture is the planting of different crops in proximity for a number of different reasons, including pest control, pollination, providing habitat for beneficial insects, maximizing use of space, and otherwise increasing crop productivity. See an introduction here: <https://www.youtube.com/watch?v=5d0bULrnCb8> and find an overview chart here:

<https://offgridworld.com/permaculture-companion-planting-guide-chart>

Alternative agriculture - perspectives

There are different alternative agriculture practices that can be observed throughout the world. Some examples are::

Akira Miyawaki - <https://www.youtube.com/watch?v=l5jtg2q1gnU>

Masanobu Fukuoka - <https://www.youtube.com/watch?v=HveaqQy9hUc>

Ernst Gotsch - <https://www.youtube.com/watch?v=ST9NyHf09M>

Shubhendu Sharma - <https://www.youtube.com/watch?v=mjUsobGWhs8>

Soil fertility - biodiversity sustaining, mulching, crop rotation

Soil fertility is very important for the plant's health and the well-being of the species in every project. Maintenance of the soil fertility requires a good understanding of the biology and ecology of plants so that one knows how to use crop rotation, mulching, green manure, etc. to sustain the soil fertility.



Soil improvements - green and animal manure

In agriculture, green manure is created by leaving uprooted or sown crop parts to decay on a field so that they serve as a mulch and soil supplement. The plants, used for green manure, are often cover crops, grown primarily for this purpose. Typically, they are plowed under and incorporated into the soil while green or shortly after flowering. Green manure is commonly associated with organic farming and can play an important role in sustainable annual cropping systems.

Leguminous green manures such as clover and vetch contain nitrogen-fixing symbiotic bacteria in root nodules that fix atmospheric nitrogen in a form that plants can use. This performs the vital function of fertilization. If desired, animal manures may also be added with caution because some e.g. chicken manure can be very strong, and might cause overfertilisation.

As biological organisms exist as a network of multiple species orchestrated synergetic population, the presence of beneficial microorganisms in any soil system is what precisely distinguishes a "living soil" from an eroded or dead soil. These microorganisms are specific for every place, so they can be obtained and cultivated before inoculation. The inoculation is done twice per season and results in higher resilience, dry resistance and more intensive taste of the produce. This is not a manure or a chemical additive, but a living bio-culture that will help your soil regenerate. Studies have shown that, not only does the use of effective microorganisms in agricultural soil suppress soil-borne pathogens, but also increases the decomposition of organic materials and consequently the availability of mineral nutrients and important organic compounds to plants. The effective microorganisms (EM, or beneficial microorganisms) are photosynthetic bacteria (*Rhodospseudomonas* spp.), lactic acid bacteria, (*Lactobacillus* spp.) and yeasts (*Saccharomyces* spp.).

In addition to EM functions, there is an emergence of vesicular-arbuscular mycorrhiza (VAM fungi), known to enhance the plant's absorption capability of soil phosphates, increasing in the root zone in the presence of amino acids secreted by the beneficial bacteria. This will result in mutually beneficial synergy for a living resilient soil, which means healthy and thriving plants.

Botanical classification and nomenclature briefly

Plant taxonomy is the science that finds, identifies, describes, classifies, and names plants. So if you want to dig deeper into seeds and gardening it is worth learning a bit about plant taxonomy, which is closely related to plant systematics. In practice, "plant systematics" involves relationships between plants and their evolution, especially at the higher levels, whereas "plant taxonomy" deals with the actual handling of plant specimens.

Plant classification is the placing of known plants into groups or categories to show some relationship. Scientific classification follows a system of rules that standardizes the results, and groups successive categories into a hierarchy: family, genus, species. The classification of plants results in an organized system for the naming and cataloging of future specimens, and ideally reflects scientific ideas about inter-relationships between plants. The set of rules and recommendations for formal botanical nomenclature, including plants, is governed by the International Code of Nomenclature for algae, fungi, and plants abbreviated as ICN.



Seeds

Save your seeds! It's easy to grow crops and flowers from seed you've saved the previous autumn. You will know where the seeds are coming from, you'll save money and it is extremely satisfying to see your seeds germinate after a winter in a package. It also gives you the option to save seeds from plants that have performed best in your conditions - the biggest, tastiest sweet pepper plants, the most vigorous tomatoes. The next generation plant will be much more suited to your local soil, growing conditions and weather than something from a shop-bought seed that came from hundred or thousands kilometers away. There are many written tutorials and streamed videos about how to collect and save your seeds.

Examples of seed saving and exchange projects:

The seeds of Vandana Shiva - <http://vandanashivamovie.com>

Svalbard global seed vault - <https://www.youtube.com/watch?v=B95Pem9XW7k>

Example of a company for ecological seed production: <http://en.runabergsfroer.se>

How to make seed bombs - DIY seed bombs at home:

<https://www.youtube.com/watch?v=u8SLovl3Se4>

Make your own Linneaus seed package:

<https://bartramsgarden.org/wp-content/uploads/seedpacketfold.jpg>

Find organic seeds in special mail-order shops or via non-commercial organizations, here examples from Germany:

<https://www.dreschflegel-saatgut.de>, <https://www.bingenheimersaatgut.de>

<https://www.nutzpflanzenvielfalt.de>

Composting

Composting is an aerobic method (meaning that it requires the presence of air) of decomposing organic solid wastes. It can therefore be used to recycle organic material. The process involves





decomposition of organic material into a humus-like material, known as compost, which is a good fertilizer for plants. Composting requires the following three components: human management, aerobic conditions, and development of internal biological heat. The compost itself is beneficial for the land in many ways, including as a soil conditioner, a fertilizer, addition of vital humus or humic acids, and as a natural pesticide for soil. Compost is useful for erosion control, land and stream reclamation, wetland construction, and as landfill cover.

The compost story: <https://www.youtube.com/watch?v=bqDQD8cvO5Y>

Designs of different compost bins/stations & processes:

<https://www.gardensthatmatter.com/wp-content/uploads/2016/11/Compost-flowchart.jpg>

Compost pile tricks: https://www.youtube.com/watch?v=x0xrnOR_mY4

Worm compost at home:

<https://www.youtube.com/watch?v=Berf8Sy0SCI&t=108s>

<https://www.youtube.com/watch?v=JvUgdDZx66E>

There are many videos about composting and gardening available online, you will surely find some in your own language if that makes it easier for your participants. Or just create a new videos with your own composting experience.



Editorial

Information about the organizations involved in the EcoNa project:

Janun e.V.

www.janun.de

JANUN is the youth environmental network in Lower Saxony and was founded in 1989. The association connects different youth and environmental associations, project workshops and other groups engaged in the protection of nature. Within the JANUN members and projects, a wide range of ecological and social topics are covered. JANUN helps to create awareness for the environmental and social problems and alternatives among the youth and encourages to act on them on an individual and political level. JANUN creates opportunities and offers networks and support for youth in their volunteer work.

EcoCentric Foundation

<http://ecocentric-foundation.org>

EcoCentric is a nonprofit organization that aims to raise environmental awareness among all social, economic and age groups of the civil society. EcoCentric was established in 2011 to promote the principles of sustainable development that balance the interests of society, environment and economic development. For ten years, EcoCentric has been specializing in research and application of practices in the field of education for sustainable development (ESD), as well as in the development and dissemination of information and training materials on ESD.

Naturalistichno Association

<http://www.naturalistichno.org>

We, at Naturalistichno organisation, together with our partners and collaborators are experimenting with existing permaculture and ecological designs. We also develop new ways of designing urban gardens and gardening installations which involve various other aspects connected with gardening, for example: art, architecture, innovations and smart solutions, cultural integration, sustainable usage of public spaces and aesthetic recreational landscaping. Our values are based on care for the environment and other beings as well as conscious usage and equal share of natural resources. Through a problem-based and participatory approach, we develop innovative educational approaches to solve seasonal challenges in order to garden organic food crops right in the middle of the cities.

ZAEDNO – Communication for Support and Development Foundation

<https://www.zaedno.net>

"ZAEDNO – Communication for Support and Development" Foundation (ZAEDNO) is a Bulgarian youth non-governmental, non-commercial and non-political organization, registered in 2005, and working for public benefit. ZAEDNO is a Bulgarian word meaning: coming TOGETHER; towards one goal. Our mission is to work for the harmonious development and positive life change of young people and their communities through educational, environmental, voluntary and social programmes and risk-prevention activities. Our team is made of professionals in the field of youth development, Montessori pedagogics, social services and innovations in



education. Our main focus and priority is the development of a methodology for creating educational kindergartens in the yard of the kindergarten or school, and their use for training in ecosystem design, experiential learning and integrated development of children.

CVS Foundation

<https://cvs-bg.org>

CVS Bulgaria promotes the development of societal values and encourages responsible behavior towards peace, social justice and nature protection culture. This is achieved by organizing volunteer initiatives and educational programs. Its work aims to contribute to a pacifist, informed, aware and active society which is open and responsible towards nature, others and itself.

Values that activities of CVS are respecting are also the ones on which vision and goals of CVS are based: peace, awareness, tolerance, responsibility, solidarity, equality, initiative, respect, democracy, positivism.