



Franciscans International
ENVIRONMENTAL PROGRAMS

EcoAudit

Make This World A Better Place



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Let's start with our communities!

Loss of species; pollution of water, air and soil; scarcity of water in some regions of the earth, while floods and heavy rain-storms devastate other regions; a changing climate due to global warming — today, we are facing all these crises.

Throughout history Christian religious life, especially Franciscanism, recommended a simple life style in accordance with nature. One driving force to exercise restraint towards nature was the awareness that the whole universe is God's creation. Caring for God's valuable creation still is a concern of the Franciscan family. But what can we do given the actual situation? The detrimental impact of industry and commerce on nature seem overwhelming. Still, in open market societies every individual participating in market mechanisms plays an important role. Changes can and must be achieved on various levels of our societies.

Religious communities can play an important role in exemplifying sustainable living. Based on our Christian faith in the tradition of St. Francis, we can adjust our lifestyles towards a greater sustainability. Sustainability implies a way of life that does not seek the consumption of goods but rather good relations with our whole environment, be it our brothers and sisters, the people we share our lives with, or with all the creatures. Animals, plants, even soil and mountains: they all play a role in our lives. St. Francis gave us an example in finding the face of the creator in every creature. He respected the needs of every creature as the story of the wolf of Gubbio tells us. By attending to the needs of the people and of the wolf, he was able to restore peace and harmony in Gubbio.

Apart from being religious, we Franciscans are members of our societies, hence our lifestyles are influenced by the societies within which we live. We tend to use the resources available to us in the same ways as other members of the societies we inhabit. Some of these ways are good and sustainable while others not. To make our lifestyles more sustainable implies that we will translate certain values of Franciscanism into the world of today.

But how are we actually going to achieve this? How much do we really contribute to an unsustainable lifestyle and where are the pragmatic possibilities for a change? How should we modify our lives in ways that really make a difference?

One of the ways is through an environmental audit. The process of an audit aims to propose concrete actions for those who have already decided to reduce their ecological footprint. It is quite a technical procedure which shall give you concrete figures. These in turn can be used to verify and quantify the reduction, or in worst cases, the increase in your consumption of water, energy, etc.

What is an audit?

An environmental audit is a process of observation, reflection and action involving all players – all the brothers and sisters of a community. This process may be framed as an audition of our impact on creation and should comprise all parts of our life, our work, our praying, as well as our life in community. Entering in such a process is a practice which should be renewed on a regular basis as life needs constant reform.

How to audit

What is an audit process and how should we conduct it? An environmental audit generally comprises four steps:

- 1 • A **reflection** on the fundamental values that can help us to lead a more sustainable lifestyle. This is best done by making a set of guidelines which constitutes our environmental policy.
- 2 • A thorough **examination** of the actual impact of our lifestyle on the environment. This can be done by the members of the communities themselves or with the help of experts. We later recommend 10 areas of your life that can be examined. However, instead of doing all audits at once, start by only tackling the areas that you believe are most relevant to your lifestyle.
- 3 • The development of a **program** to substantially, but realistically improve our interaction with the environment. This must be based on a sound evaluation of the examination (see point 2), and should help you formulate specific goals. A responsible person must be assigned to monitor and ensure the achievement of the goals.
- 4 • Forming a **declaration** based on the facts, goals and initiated measures is a good way to ensure success of your EcoAudit process. You may even publish this declaration.

In due time, the process must be repeated in order to evaluate whether the goals have been achieved or not. In your review, you should also identify further tasks and challenges, which had not been recognized previously.

For the process to continue, it needs to be managed by a small group of dedicated sisters or brothers who will keep the wheel spinning. Therefore, some set procedures should be instituted to help ensure that the auditing continues.

What to audit

Possible aspects of life to examine are

- prayer
- work
- community life

Reasonably enough, our prayer, our spiritual life and our pastoral work should be audited with different mechanisms than those used for our work spaces and community lives.

Therefore, in this paper, only some proposals will be given in regard to our spiritual lives and pastoral work. Considering our lifestyle pattern, the suggestions for an audit will be very concrete and sometimes perhaps a little technical. But try to bear with them, as they will help us thoroughly evaluate the impact of our communities on the environment.

Prayer and work for the improvement of the situation of God's creation

Drawing upon Franciscan source texts, St. Francis' exhortation to the Praise of God can be an inspiration for our own praying.

It is remarkable how integral his approach to the praise of God is. From the saints and the heavens to the rivers and birds, all of creation is present in his praying.

This inclusiveness of all creation in our prayer could help us not to lose sight of God's creation.

Some hints will be given here. This list is in no way exhaustive but may give some inspiration to start from:

- Including nature in our prayers and liturgical celebrations.
This could either mean to bring nature into the liturgical room (i.e. as a decoration) or to perform a blessing of plants or animals (e.g. on the feast of St. Francis).

Another way could be to celebrate liturgies consciously in nature meaning to include the surrounding nature in the liturgy.

- A large number of feasts of saints are traditionally founded in blessing the fruits of the earth or similar. Celebrating or revitalising the traditions where nature plays a big role could be a good way to be more inclusive of nature.

Another way in which we can care for creation is by interacting with people to help:

- raise awareness for environmental issues.
- educate, especially kids and young people, on a more environmentally sound way of living.
- reflect on our relation with nature from a theological perspective, perhaps as a dialogue between theologians and ecologists.

Change your lifestyle

Making up an environmental policy

As a first step, it is necessary to ground our environmental approaches in our Franciscan spirituality. In this manual it seems inappropriate to give a lot of spiritual background as most of our orders and congregations already have very inspiring documents which state our spiritual fundamentals and our positions towards the care for the creation.

These documents can serve as a good source for the formulation of an environmental policy statement. However, you should not stop at the spiritual foundation but refer to it to derive concrete fields of action that your community wants to address within this environmental audit.

As an organization and an office, Franciscans International has agreed on its own environmental policy statement, which is available on our website (www.franciscansinternational.org)

Checking your community

This part is the more technical part as it calls for specific actions, like collecting data and proposing measures of change.

Areas of everyday life that can be modified to make our living more sustainable are:

- water
- waste
- electrical energy
- heating or cooling (if it is not done electrically)
- choice of materials (paper, cleaning substances etc.)
- hazardous substances
- mobility
- land use
- food
- finance and investment

It might be necessary to split up the work and assign different people to oversee the various areas of concern. For some communities, it might not be feasible to audit all areas at once. Still, it is very important to start with at least one area of concern. So feel free to pick and choose the areas that you feel are most important, or easiest for you to evaluate. The work to be done in each area will comprise three steps:

- 1 • inventory,
- 2 • evaluation of data, and
- 3 • improvements.

These three steps build up on each other. This implies that to make a reasonable improvement, you will first have to make an exhaustive inventory and evaluate your data. To get the data, we have to first calculate parameters that will give us facts and figures to compare with other communities or organizations over time.

Let's step into the real business:



Water

Water is used for various purposes – cooking, hygiene, washing, irrigation, etc.

To evaluate the amount of water used, bills are a good resource to consult. If bills are not available, a regular inspection of the water meter is another possible approach.

It is important to obtain data over a longer period of time. Data showing the development over at least one year is necessary to balance out effects caused by seasons or (ir)regularly occurring events which might have a significant impact on the water usage. These can be periods of holidays or bigger events.

A.1 • Inventory

Get ahold of water bills. Look for all water meters and start to make up a statistic by noting the amount of water used during a day, a week and a month over one year (always choose the same day of the week or month to obtain good data).

Try to determine the amount of sewage produced by your community.

The aim is to obtain the actual **usage** of drinking water or production of sewage [u] in **volume** [V] per **person** [p] and **period of time** [t] (day = d , week = we , month = mon , year = a).

This is calculated as following:

$$u = \frac{V}{p \cdot t} \quad \text{or} \quad \frac{L}{p \cdot d} \quad (\text{liter}) \quad (\text{day})$$

Collect the data and calculate a statistic to visualize the usage over time. Look for all possible locations where water can be withdrawn (tubs, toilets, etc.). Look for leaks. Try to come up with a figure on sewage production (e.g. by estimating and subtracting the amount of water used for drinking and cooking or by adding up the amount of non-drinkable water used for cleaning or hygienic purposes).

Also look for the draining system of rain water and the amount of territory sealed so that precipitation can not enter the soil. This adds to the amount of sewage produced.

A.2 • Evaluation of the data

If available, try to compare your data with other communities or organizations. We will supply an online databank where the collected data can be entered and compared. Your own data will be handled with confidence and will only be used to create an average parameter for your region and the world.

Of course, a re-evaluation after one year is necessary to see the changes made.



A.3 • Improvements

Consider the figures obtained in the inventory and the evaluation in context of the policy statements of your community. Make up a realistic goal you want to achieve as a community. Then think about measures which can be taken in order to achieve that goal. These may comprise changes in technology as well as changes in behaviour. Prioritize the measures, taking into account the financial means necessary to change technologies used in your house (e.g. introduce an interruptible flush.)

Steps two and three are nearly identical for all areas of concern so we will focus on the inventory step for the following areas of concern.



Waste

Waste, to an extent, is unavoidable. But it is necessary to recognise that not all waste is waste. A large amount of the wastage is already avoidable at the stage of production, especially when it comes to packaging.

Quite a few of the materials we use, such as bottles, can be directly reused. A lot of the materials considered to be waste are actually reusable raw materials like glass, metals, paper and also most plastics.

Some of the non-recyclable waste may rapidly decompose once exposed to the powers of nature (i.e. bacteria, micro-organisms and even insects). Other non-recyclables will persist for centuries to come.

We thus need to differentiate between:

- **recycled waste:** waste which is recycled by the garbage collectors
- **paper**
- **glass**
- **metals**
- **special waste:** these are materials that need special treatment so that they do not harm human beings or the environment, e.g.: batteries, lacquer, aggressive chemicals, etc.
- **organic waste:** waste which decomposes easily. This has to be looked at if the composting is not done on your own ground.
- **food waste:** if not used for compost.
- **residual waste:** all the remaining waste which is to be disposed or burned.

The different criteria of waste imply that we have to collect waste materials separately based on their ability to be reused or to decompose to dust and earth. At the same time, when buying products we should think about the way they are made and packaged to better gauge what kind of waste they will cause.

The following method will focus on how to handle waste once it has occurred:

B.1 • Inventory

First, it is necessary to look for all the places where waste is produced in the community or organisation. Food waste should also be taken into account.

Then, look for what different kinds of waste are produced and how they are handled.

Find out the amount of waste produced, according to its type if possible. Again, bills from the garbage collectors might help.

If not, resort to measuring the waste volume or weight.

The following parameters can be obtained:

Waste production

This is the total amount of all kinds of waste produced over a period of time. This figure may be obtained by sampling over one week and multiplying that amount to estimate the amount for one year. Repetition of the sampling over a two or three week period can help obtain better data. If weighing is not possible, some estimates can be given as follows:

Residual waste is normally compressed to a higher density in smaller containers, therefore the average mass of a

- 120 Liter bin is 18 kg (density 150 kg/m³)
- 240 Liter bin is 30 kg (density 125 kg/m³)
- 1100 Liter bin is 110 kg (density 100 kg/m³)

These are only estimated values and they may vary strongly depending on region and habits of people.



The equation to calculate waste production is based on the mass or volume, as given below.

waste production according to mass

w_p = waste production, m = total mass of waste,
 p = person, t = time

$$w_p m = \frac{m}{p \cdot t}$$

waste production according to volume

w_p = waste production, V = total Volume of waste,
 p = person, t = time

$$w_p V = \frac{V}{p \cdot t}$$

As the total amount is obtained by summing the masses or volumes of the various kinds of waste, production of each individual kind of waste can also be monitored using the same calculations. Hence, the percentage of the various kinds of waste can easily be calculated. This gives important insight into the practices of the community in regard to waste management.

It might be of further interest to monitor how much CO_2 will be released by the waste we produce. To do so, we need to examine the residual waste (which is either burned or in the long run decomposes to CO_2 and other components).

Once we know the total amount of residual waste, we need the percentage of paper, glass, metals, plastics, kitchen and garden waste, wood, composite material (like tera-pak), textiles and ceramic in the residual waste. This can be estimated but it is better to weigh it.

The proportion of carbon (in regard to mass) is

- 35% for paper,
- 0% for glass, metal and ceramics
- 68% for plastics
- 20% for kitchen and garden waste,
- 41% for wood
- 29% for composite material, and
- 31% for textiles.

Multiplying the mass of carbon (in kg) by 3.67, one obtains the mass of carbon dioxide (in kg) released by the waste.

It is quite a tedious calculation to make, but certainly worthwhile!

B.2 • Evaluation of the data

If available, try to compare your data with other communities or organizations. We will supply an online databank where the collected data can be entered and compared. Your own data will be handled with confidence and will only be used to create an average parameter for your region and the world.

Of course, a re-evaluation after one year is necessary to see the changes made.

B.3 • Improvements

Consider the figures obtained in the inventory and the evaluation in context of the policy statements of your community. Make up a realistic goal you want to achieve as a community. Then think about measures which can be taken in order to achieve that goal. These may comprise changes in technology as well as changes in behaviour. Prioritize the measures, taking into account the financial means necessary to change technologies used in your house (e.g. introduce separated waste collection systems.)



Electrical Energy

Electricity is an energy form indispensable to most of our lives. Light, stoves, washing machines, dryers, dishwashing machines, computers, TV sets, etc. all need electrical energy. Our modern lives cannot function without electricity. However, our usage of electricity is still in want of improvement.

C.1 • Inventory

The first step is to get ahold of all electrical devices used in your community. List them with their power requirements (given in Watts [**W**] or Kilowatts [**kW**]). This helps identify the main energy consuming devices.

Secondly, find out the total energy use of your community by using the bills of your energy provider or by a regular check of the electricity meter. Start to record a statistic by noting the amount of electric energy used during a day, a week, a month (always choose the same day of the week or month to obtain good data) over one year. Also find out the total costs for electric energy over that period of time.

It is important to obtain data over a longer period of time. Data showing usage over a minimum of one year is necessary to balance out effects of seasons or (ir)regularly occurring events which might have a significant impact on the energy usage. These can be holiday periods or bigger events.

Calculate the specific energy use in time. This can be done either by energy usage per area or per person. This figure is calculated as follows:

<p>The energy usage per area, u_A, is calculated</p> $u_A = \frac{E}{A \cdot t}$ <p>where E is the total energy in kWh, A the area in m^2, and t, the time in $d = \text{day}$, $we = \text{week}$, $mon = \text{month}$, $a = \text{year}$.</p> <p>The energy usage over one year is then given in</p> $\frac{kWh}{m^2 \cdot a}$	<p>The energy usage per person is calculated</p> $u_p = \frac{E}{p \cdot t}$ <p>where E is the total energy in kWh, p the number of people in the community, and t the time in $d = \text{day}$, $we = \text{week}$, $mon = \text{month}$, $a = \text{year}$.</p> <p>The energy usage per person over one year is then given in</p> $\frac{kWh}{p \cdot a}$
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The energy costs per area or per person for each year can be calculated once you know the total cost of a kWh of energy. This is done simply by dividing the total cost of one year including basic fees etc. by the total number of kWh used in that year.



The energy cost per person or area for the year is then calculated by multiplying the u_A or u_p with the cost per *kWh*.

Collect all the data and record a statistic for the energy using devices and the energy usage over time.

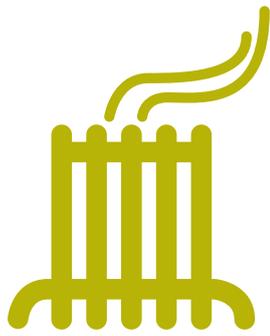
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Of course, a re-evaluation after one year is necessary to see the changes made.

C.3 • Improvements

Consider the figures obtained in the inventory and the evaluation in context of the policy statements of your community. Make up a realistic goal you want to achieve as a community. Then think about measures which can be taken in order to achieve that goal. These may comprise changes in technology as well as changes in behaviour. Prioritize the measures, taking into account the financial means necessary to change technologies used in your house.



Heating/Cooling

This chapter deals with the problem of heating or cooling. Heating will often be done by burning wood, coal, gas or oil, or sometimes by long-distance heating. There are also electrical heating systems which are more difficult to inventory as these are often accounted for within the electric energy criteria.

Cooling or air conditioning systems usually work on electricity, thus also contributing towards the electric energy usage. Still, they should also be accounted for separately from other electrical energy usage.

A separate analysis of heating and cooling is necessary as these functions are integral to our daily lives. Our abilities to work and sustain good health depend a lot on temperature, especially in colder regions of the world. Hence, the well being of people and communities can be dependent on their heating and cooling facilities. But we may have to inconvenience ourselves a little to achieve more environmentally friendly temperature regulation.

D.1 • Inventory

Find out the total energy use for heating and cooling over a fixed period of time, preferably a year. The easiest way is to look up your bill for heating, if heating is not done electrically. The bill should state the energy usage in [*kWh*] **kiloWatt-hours** or [*MWh*] **MegaWatt-hours** (1 MWh = 1000 kWh) as well as the total cost of heating.

In case heating is done electrically (cooling will nearly always be electric), there might be a counter for energy usage on the device itself. If this is not the case, an estimate can be made by recording the time of usage (in [*h*] hours) of the electrical heating/cooling system. This number of hours multiplied by the power required by the device (in [*W*] **Watt** or [*kW*] **kiloWatt**) gives you the energy used in [*kWh*] **kiloWatt-hours**.

Once the energy usage for heating and/or cooling for the community during a year is figured out, the usage per person and year ($u_{h/c,p}$) is easily calculated.

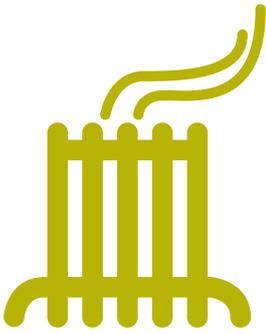
Where E is the **total energy** used in one year, p is the **number of people** living in the community and t is the **time**:

$$u_{h/c,p} = \frac{E}{p \cdot t}$$

A similar number can be obtained for each cubic meter of heated or cooled space.

Where V is the **volume** in [m^3]:

$$u_{h/c,V} = \frac{E}{V \cdot t}$$



It is also necessary to evaluate the level of satisfaction of all people living in the community. Ask everyone to rate how satisfied they are on a scale of 0 to 10 – where 10 means full satisfaction. Calculate an average.

You must also look for defects in the building. Leaks or heat bridges, like metal frames for windows and doors, or windows not closing fully are important faults which need to be addressed.

Hence, the problem of insulation is the same for heating and cooling systems. The aim is always to keep up a temperature difference between the inside and outside of a room. The laws of physics always work towards an equilibration of temperature, therefore it is of utmost importance to prevent an exchange of heat, be it from inward out or outward in.

D.2 • Evaluation of the data

List the defects you detected in your building. If available, try to compare your data with other communities or organizations. We will supply an online databank where the collected data can be entered and compared. Your own data will be handled with confidence and will only be used to create an average parameter for your region and the world.

Of course, a re-evaluation after one year is necessary to see the changes made.

D.3 • Improvements

Consider the figures obtained in the inventory and the evaluation in context of the policy statements of your community. Make up a realistic goal you want to achieve as a community. Then think about measures which can be taken in order to achieve that goal. These may comprise changes in technology as well as changes in behaviour. Prioritize the measures, taking into account the financial means necessary to change technologies used in your house. Look especially for insulation problems like holes in walls and heat or cold bridges where heating or cooling systems are applied.

Think about whether a simple fan could do as well as an air conditioning system.



Materials

Each and every product we use or buy has an impact on nature as energy, water and other raw materials are needed for its production. As users, we can never really know if the manufacturing of the product was done in an environmentally sound manner. However, in many countries products bear indicators – like eco labels – to show that they are environmentally friendly. Still, it is necessary to examine the criteria used for granting this label. There are more or less serious ones depending on who grants the label.

If more people use eco-friendly products, in the long run this will cause a change in production practices. Also, most environmentally friendly products contain less hazardous substances meaning that they are also healthier for us.

Other than the “eco-friendly” labels, one can also avoid products that bear warning signs indicating hazardous substances. These signs are usually orange colored with black icons on them. We will deal with such substances in chapter F.

When selecting a product that will end up entering the water cycle or be disposed of in nature, for instance cleaning products, one must look at its biodegradability. Substances like acetic-acid or citric-acid which occur naturally are very good cleaning substances and already widely used in commercial eco-friendly products. As these acids are naturally occurring, they can be easily degraded by nature. On the contrary, most chlorine-based products are much more difficult to degrade.

Most plastics and foils we use are designed to last a long time, meaning that once discarded they will not degrade for decades or even centuries. On the other hand, products made from cellulose (like paper, cotton or hemp) degrade quite fast. And by now even biodegradable plastics are available.

The presentation of products is another important aspect to look at. Often we find more package than actual product. Generally, this is a waste of material as the package will be discarded immediately after purchase and will therefore contribute substantially to the waste production of the community.

Consequently, the choice of material should take into account the environmental impact of the product during its production, use and also when discarded.

E.1 • Inventory

Keeping in mind the above criteria, take a look through the stocks of cleaning material, paper, etc. Write down the percentage of environmentally sound products and materials you use. This can be a helpful figure. It may not be as precise as the ones signified before, but is nonetheless a good reference point.

E.2 • Evaluation of the data

If available, try to compare your data with other communities or organizations. We will supply an online databank where the collected data can be entered and compared. Your



own data will be handled with confidence and will only be used to create an average parameter for your region and the world.

Of course, a re-evaluation after one year is necessary to see the changes made.

A.3 • Improvements

Consider the figures obtained in the inventory and the evaluation in context of the policy statements of your community. Make up a realistic goal you want to achieve as a community. Then think about measures which can be taken in order to achieve that goal. These may comprise changes in technology as well as changes in behaviour. Prioritize the measures, taking into account the financial means necessary to change technologies used in your house.



Hazards

The best way of dealing with hazardous substances is not to use them at all. Finding non-hazardous alternatives to paint or cleaning substances is the best option.

In the future, hazardous substances will bear labels with the globally agreed signs below (diamond color is actually red):



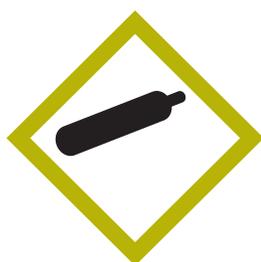
explosive



inflammable



oxidising



fission under pressure



corrosive



toxic



carcinogenic,
mutagenic, etc.



harmful to environment



emphasis to the
other warnings

Sometimes though, using hazardous substances is unavoidable as there are no alternatives available. In order to handle them properly so that they do not cause harm to you, people surrounding you and the environment, it is necessary to store such substances safely and securely, be careful in their handling and use the bare minimal amount needed



F.1 • Inventory

Inform yourself of which substances are classified as hazardous and find out how to properly handle them. Familiarize yourself with the labels – study the icons on the previous page and learn their meanings. Instructions and precautionary measures are often given on the containers of such products – read them carefully and act accordingly. Look for the places where hazardous substances are stored in your community. If not already done, assign a responsible person to be in charge of those substances.

This person should make a list of all hazardous substances present, their purpose, level of danger, storage location and actual quantity. Find out how much of a substance is used over the period of one year.

The person responsible should inform the people using these substances about the danger of the substance and about proper means to protect themselves.

F.2 • Evaluation of the data

If available, try to compare your data with other communities or organizations. We will supply an online databank where the collected data can be entered and compared. Your own data will be handled with confidence and will only be used to create an average parameter for your region and the world.

Of course, a re-evaluation after one year is necessary to see the changes made.

F.3 • Improvements

Consider the figures obtained in the inventory and the evaluation in context of the policy statements of your community. Especially try to look for alternative substances that can cause less harm to people and the environment. Make up a realistic goal you want to achieve as a community. Then think about measures which can be taken in order to achieve that goal. These may comprise changes in technology as well as changes in behaviour. Prioritize the measures, taking into account the financial means necessary to change technologies used in your house.



Mobility

Nowadays, transportation of people and goods is in most cases related to the burning of fossil fuels. Traveling long distances is not possible without modern means of transportation. Therefore, it is necessary to have a look at our mobility.

It is not difficult to understand that moving about 1000 kg – which is about the average weight of a small car – in addition to your own weight needs a lot of energy and produces a decent amount of CO₂.

G.1 • Inventory

Ask all members of your community about their means of transportation.

How many km per day do they travel:

- **on foot/by bike** (meaning by muscle force)
- **by car/motorbike**
- **by public transportation** (bus, train, etc.)
- **by plane**

Calculate the total amount of kilometers traveled over the period of one year by the different means of transportation (km done by muscle force may be omitted, as they do not contribute to energy usage or CO₂ production).

Sum up the kilometers traveled by the whole community and you obtain the amount of person kilometers [pers • km] traveled by car, public transportation and plane for one year.

When multiplying the amount of pers.km by the specific factors of CO₂ production per pers.km you obtain the absolute amount of CO₂ produced by your community in one year. By dividing this number by the number of people in the community you obtain the average CO₂ production per person and year of your community.

These specific factors for CO₂ production (based on German average data) are:

car/motor bike: 0,198 kg(CO₂)/pers.km

public transportation: 0,0801 kg(CO₂)/pers.km

plane : 0,321 kg(CO₂)/pers.km

needless to mention that the factor for **muscle force** is 0,000 kg(CO₂)/pers.km.

In order to complete the inventory it is also necessary to ask for how satisfied people are with their different means of transportation (use a 10 point system; 10 being full satisfaction, 0 being none)

If possible try to get ahold of data of the year before.

G.2 • Evaluation of the data

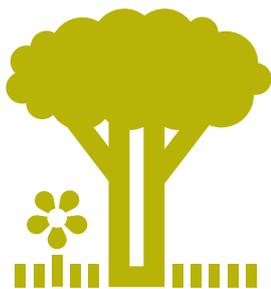
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Land Use

The land we own or that is given to us for our use is the most immediate environment that we can have control over.

Our territory should invite us and all of God's creation to live in harmony. Therefore our land shall be shaped in a way that, along with our existence, local species will also have space to grow on, live in and enjoy the fruits of our soil.

The way we use our land can say a lot to other people, as our land is visible all those who live in our vicinity.

As well as being a sign to the outer world, our land is also a means to our well being and our own immediate connection to Sister Mother earth:



The two pictures illustrate two extreme possibilities of land use. In this case the first and more beautiful alternative is also the more environmentally sound one

H.1 • Inventory

First, you need a map or at least an outline of your land. With that in hand, perform a first inspection of your land. Search for areas of special interest for the inventory, perhaps particularly beautiful or ugly areas which represent the high diversity of your land. Or pick any area that you would like to study in further detail.

Then check for the biotic factors like the texture of the soil, its coverage etc. Examine the condition of the soil and look for the various plants and animals you can find on it. Mark all this data on your map.

An important factor in knowing how inviting your territory is to plants and animals is how much of your land is sealed by asphalt or concrete.

A high degree of sealing indicates that rainwater can't enter the soil and plants do not find space to grow. The exclusion of plants and animals might be necessary sometimes; still the minimum amount of sealing necessary is recommended.

The degree of sealing can be calculated by measuring the area sealed and dividing this by the overall size of your land.

Monitoring the various species living on here gives an idea of the diversity surrounding us. While evaluating your land's biodiversity, make sure to note the different types of species - local and regional vs. exotic species.



While exotic species can be interesting and refreshing, they might have a negative impact on the surrounding area. Even exotic plants may spread out over your land and suppress the local plants because there are no animals eating them. Local plants are generally very dependent on local conditions, so new species preying on these conditions may disturb the original equilibrium significantly.

A last but also very important question is how satisfied we are with our land. A survey of all people in the community applying a 10 point system is a good indicator.

H.2 • Evaluation of data

Once the map has been completed, you might judge different areas according to their usability and their ecological value. After one year, make your next inventory. Mark the areas that have improved and also those that may have deteriorated.

You can use the degree of sealing as a way of monitoring change. Also make sure to include the change in satisfaction of the people living in that place.

H.3 • Improvements

Consider the figures obtained in the inventory and the evaluation in context of the policy statements of your community. Make up a realistic goal you want to achieve as a community. Then think about measures which can be taken in order to achieve that goal. These may comprise changes in technology as well as changes in behaviour. Prioritize the measures, taking into account the financial means necessary for a change.



Food

It might seem odd to look at food in the context of an environmental audit, but ultimately, food is our most direct contact with nature. By eating food, we incorporate pieces of nature into ourselves.

To examine the food we eat, we must look at two things:

- 1 • the impact the food has on us
- 2 • the impact the food has made on the environment during its production and its conveyance to you.

We will skip the first aspect as it is dealt with in various other fora and entities.

I.1 • Inventory

Look for the products bought for nutrition. By sampling the fridge and your stock at various times over the year, find out the percentage of products which have been produced locally and seasonally.

Calculate the percentage of pre-prepared or even pre-cooked products and also the percentage of really exotic products which have been transported long distances.

Another interesting figure might be the percentage of ecologically grown and produced products. Finally, consider the percentage of fair trade products.

Most fair trade products support small local producers who normally work in a more environmentally sound manner than the big companies.

I.2 • Evaluation of the data

If available, try to compare your data with other communities or organizations. We will supply an online databank where the collected data can be entered and compared. Your own data will be handled with confidence and will only be used to create an average parameter for your region and the world.

Of course, a re-evaluation after one year is necessary to see the changes made.

I.3 • Improvements

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\$ £ € Finance

When we hand our money over to someone else to take care of, that also has an environmental impact. Banks and other financial entities might function in non-environmentally sound ways so that they can maximize profit.

J.1 • Inventory

Ask your bank whether they have a policy in place to ensure that their environmental impact is as positive as possible. If they do not, your request can be a first step for them to start thinking about this.

To monitor how environmentally friendly your community is in terms of its finances, calculate, where possible, the percentage of money given in finance and investment to banks that have a pro-environment policy.

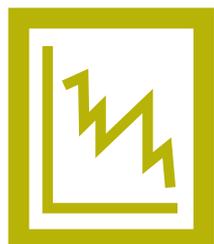
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J.3 • Improvements

One suggestion is to switch to a bank with a better environmental policy. But do not let this deter you from coming up with your own creative ways to tackle the situation! We will be grateful to receive and include any of your ideas on more environmentally friendly finances, and will be sure to include them in our next correspondence.



Environmental Program

Once the large inventory is done and the people responsible for the various individual inventories have finished their work, organize a meeting where the collected data can be evaluated by everyone. In this meeting, areas of improvement must be identified and your improvement goals should be set. Also create and institute follow up measures to achieve your goals. To make sure the goals are accomplished, people should be selected and assigned to be in charge of implementing them.

A summary of the above then constitutes the Environmental Program of the community.



Environmental Declaration

To draft an environment declaration, consult the data collected during the inventory and the Environment program adopted by your community. Summarize them into a forceful declaration that can be published and re-evaluated after a year.

As mentioned at the beginning, the audit is an ongoing process of constant improvement. Permanently assigning people to be in charge of the inventory and implementing your goals for improvement will help set up an environmental management system for the community. Once the process has been performed the first time, the next time you will find that the amount of work decreases tremendously. In the long run, experience helps and those who have become familiar with the process will be easily able to teach and duplicate your environmental audit.

Franciscans International invites everyone who decides to apply this Environmental Audit process to report back to us on their experiences and difficulties. Make sure to share your ideas on how to improve the audit process with us. You can do all this by consulting our website, emailing ecoaudit@fiop.org or writing to

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