



How big is your ecological footprint?

Objectives

By the end of this activity, members of the faith community will grasp the devastating impact of overconsumption on resources and they will be stimulated to care for Creation.

Duration

Duration: Community lunch: 60 minutes
Activity: 75 minutes

Material

- Microphone and lectern, small table for animator
- Laptop, projector and screen
- Ecological footprint questionnaire
- Pledges (picture of footprint)
- Pencils and Calculators
- Globe, Large Bible and candle

Suggested location

Location: Large room

Community lunch (60 min.)

1. This community meal takes place after the Sunday service.
2. The faith community members were invited to this activity a month ago. The announcement was made at the microphone and in the church bulletin.
3. Each participating family brings a dish to share. The challenge: to offer local products.
4. Serve fair trade coffee and tea.



Introduction (15 min.)

1. Ask to clean the tables after lunch for the activity.
2. Distribute one "Ecological Footprint" sheet per family (provide a pencil if needed).
3. A word of welcome. Introduce yourself and thank them for coming.
4. Explain how to define ecological footprint and how to fill out the questionnaire. Indicate the score that best answers each question and contributes to the final calculation.

What is an ecological footprint?

The Ecological Footprint is an estimate of the amount of land and water needed to meet your food, products, services, housing, waste elimination and energy needs. Your ecological footprint is expressed in "global hectares" (ha), basically the surface of land necessary to produce the necessary resources for one year.

What is the average ecological footprint?

On Earth, the available area of biologically productive soil per person is 1.8 ha, and this excludes the needs of other animals.

Some typical ecological footprints:

Canada: 8.9 ha / person

Italy: 3.6 ha / person

Pakistan: 0.8 ha / person

Sometimes the ecological footprint is expressed otherwise. Knowing that there are 1.8 ha available per person, we calculate how many planets would be needed to allow Earth's 7 billion human beings to live AS YOU do. Here is where we see if your rate of consumption is fair and sustainable.

In Canada, the average is almost 5 planets. How big is your ecological footprint?

Calculate your ecological footprint (20 min.)

1. Each family answers each question honestly as best they can.
2. They then calculate the totals to assess their ecological footprint.
3. Facilitators are ready to help participants if required.
4. If possible, have calculators available.

Pledge (20 min.)

1. When the families are almost finished, pass out a sheet with the picture of a footprint to each person.
2. Participants write in the picture of a footprint the number of planets equivalent to their ecological footprint and they also write down three commitments to reduce their ecological footprint.
3. Participants proceed to the front, one by one, and the facilitator posts their sheet on the wall as a sign of the commitments they have made.



Prayer **(Conclusion)** (10 min.)

1. Light a candle placed near the globe and the Bible.
2. Read aloud these 3 biblical texts.

God said, "See, I have given you every plant yielding seed that is upon the face of all the earth, and every tree with seed in its fruit; you shall have them for food. And to every beast of the earth, and to every bird of the air, and to everything that creeps on the earth, everything that has the breath of life, I have given every green plant for food." And it was so. (Genesis 1:29-30)

*O Lord, how manifold are your works!
In wisdom you have made them all;
the earth is full of your creatures. These all look to you
to give them their food in due season;
when you give to them, they gather it up;
when you open your hand, they are filled with good things.
(Psalm 104:24,27-28)*

*The word of the Lord came to me: Mortal, prophesy against the shepherds of Israel: prophesy, and say to them—to the shepherds: Thus says the Lord God: Ah, you shepherds of Israel who have been feeding yourselves! Should not shepherds feed the sheep? You eat the fat, you clothe yourselves with the wool, you slaughter the fatlings; but you do not feed the sheep. [...] Is it not enough for you to feed on the good pasture, but you must tread down with your feet the rest of your pasture? When you drink of clear water, must you foul the rest with your feet? And must my sheep eat what you have trodden with your feet, and drink what you have fouled with your feet?
(Ezekiel 34:1-3, 18-19)*

3. Short biblical comment

God gives food to all creatures, to all humans. To do this, God establishes ecosystems that work, balances that allow for food productivity. When we waste, we steal food from others.

Evaluation (10 min.)

In small groups, answer the following question:
What have I gained from this Ecological Footprint exercise?

Activity outline

Complete each of the categories for a typical day in your home. Add the points in each category to obtain a subtotal, and transfer each subtotal to the summary chart. Use the grand total to calculate your ecological footprint.

Water Use	My Score
1. My shower (or bath) on a typical day is:	_____
No shower / no bath (0)	
Short shower 3-4 time a week (25)	
Short shower once a day (50)	
Long shower once a day (70)	
More than one shower per day (90)	
2. I flush the toilet:	_____
Every time I use it (40)	
Sometimes (20)	
3. When I brush my teeth,	_____
I let the water run. (40)	
4. We use water-saving toilets. (-20)	_____
5. We use low-flow showerheads. (-20)	_____
Water Use Subtotal:	<div style="border: 1px solid black; width: 80px; height: 20px; background-color: #90EE90;"></div>

Food	My Score
1. On a typical day, I eat:	_____
Meat more than once per day (600)	
Meat once per day (400)	
Meat a couple times a week (300)	
Vegetarian (200)	
Vegan (150)	
2. _____ of my food is grown locally or is organic	_____
All (0)	
Some (30)	
None (60)	
3 I compost my fruit/vegetable scraps and peels.	_____
Yes (-20)	
No (60)	
4. _____ of my food is processed.	_____
All (100)	
Some (30)	
None (0)	
5. _____ of my food has packaging.	_____
All (100)	
Some (30)	
None (0)	
6. On a typical day, I waste:	_____
None of my food (0)	
One-fourth of my food (25)	
One-third of my food (50)	
Half of my food (100)	
Food Subtotal:	<div style="border: 1px solid black; width: 80px; height: 20px; background-color: #90EE90;"></div>

Transportation	My Score
1. On a typical day, I travel to school by:	_____
Foot or bike (0)	
Public transit / school bus (30)	
Private vehicle; carpool (100)	
Private vehicle; 1 student (200)	
2. Our vehicle's fuel efficiency is...	_____
Less than 8 L/100km (-50)	
8 to 10 L/100km (50)	
11 to 14 L/100km (100)	
More than 14 L/100km (200)	
3. The time I spend in vehicles on a typical day is:	_____
No time (0)	
Less than half an hour (40)	
Half an hour to 1 hour (100)	
More than 1 hour (200)	
4. How big is the car in which I travel on a typical day?	_____
No car (-20)	
Small (50)	
Medium (100)	
Large (SUV) (200)	
5. Number of cars in our driveway?	_____
No car (-20)	
Less than 1 car per driver (0)	
One car per driver (50)	
More than 1 car per driver (100)	
More than 2 cars per driver (200)	
6. Number of flights I take per year?	_____
0 (0)	
1-2 (200)	
More than 2 (400)	
Transportation Subtotal:	<div style="border: 1px solid black; width: 80px; height: 20px; background-color: #90EE90;"></div>

Shelter	My Score
1. My house is :	_____
Single house (suburbia)(50)	
Single house on small lot (city) (0)	
Townhouse/ attached house (0)	
Apartment (-50)	
2. Divide number of rooms per person, by the number of people living at home.	_____
1 room per person or less (-50)	
1-2 rooms per person (0)	
2-3 rooms per person (100)	
more than 3 rooms/person (200)	
3. We own a second, or vacation home that is often empty.	_____
No (0)	
We own/use it with others. (200)	
Yes (400)	
Shelter Subtotal:	<div style="border: 1px solid black; width: 80px; height: 20px; background-color: #90EE90;"></div>

Thanks to the
Institute for Sustainable Energy
www.sustainenergy.org

Energy Use

My Score

1. In cold months, our house temperature is: _____
15 to 18 °C (50)
19 to 22 °C (100)
22 °C or more (150)
2. We dry clothes outdoors or on an indoor rack. _____
Always (-50)
Sometimes (20)
Never (60)
3. We use an energy-efficient refrigerator. _____
Yes (20)
No (50)
4. We have a second refrigerator / freezer. _____
Yes (100)
No (0)
5. We use 5 or more compact fluorescent light bulbs (CFL's). _____
Yes (-50)
No (100)
6. I turn off lights, computer, and television when they're not in use. _____
Yes (0)
No (50)
7. To cool off, I use: _____
Air conditioning: car (50)
Air conditioning: home (100)
Electric fan (-10)
Nothing (-50)
8. My clothes washer is a: _____
Top load (100)
Front load (50)
Laundromat (25)

Energy Use Subtotal:

Clothing

My Score

1. I change my outfit every day and put it in the laundry. (80) _____
2. I am wearing clothes that have been mended or fixed. (-20) _____
3. One-fourth of my clothes are handmade or secondhand. (-20) _____
4. Most of my clothes are purchased new each year. (200) _____
5. I give the local thrift store clothes that I no longer wear. _____
Yes (-50)
No (100)
6. I never wear _____ % of the clothes in my closet. _____
Less than 25% (25)
50% (50)
75% (75)
More than 75% (100)
7. I buy _____ new pairs of shoes every year. _____
0-1 (0)
2 to 3 (20)
4 to 6 (60)
7 or more (90)

Clothing Subtotal:

Stuff

My Score

1. All of today's garbage could fit into a: _____
Shoebox (20)
Small garbage can (60)
Kitchen garbage can (200)
2. I recycle all my paper, cans, glass and plastic. (-100) _____
3. I reuse items rather than throw them out. (-20) _____
4. I repair items rather than throw them out (-20) _____
5. I avoid disposable items as often as possible. _____
Yes (-50)
No (60)
6. I use rechargeable batteries whenever I can. (-30) _____
7. We have _____ number of electronics? (Computer, Stereo, iPod...) _____
0-5 (25)
5-10 (75)
10-15 (100)
more than 15 (200)
8. How much equipment is needed for typical activities? _____
None (0)
Very little (20)
Some (60)
A lot (80)

Stuff Subtotal:

Summary

Transfer your subtotals from each section and add them together.

Water Use _____
Food _____
Transportation _____
Shelter _____
Energy Use _____
Clothing _____
Stuff _____

Grand Total _____ ÷ 300 = **Earths**

If everyone lived like I do we would need that many Earths to sustain the people of the world.

Worldwide there are 1.8 biologically productive hectares available per person, and this doesn't include all of the other plants' and animals' needs.

Some average footprints:
Canada: 8.9 hectares/person
Italy: 3.6 hectares/person
Pakistan: 0.8 hectares/person

*If everyone lived like _____,
it would take _____ Earths
to support the people of the world.*

*Three things I pledge to do
to decrease my footprint:*

What if the Earth were an Apple?

The Earth seems like such a large place, will we ever have too many people for Earth to produce the things we need to survive? How about the plants and animals that live here? Is there enough for all of us? How much of the Earth is actually available to produce the food we need and to clean up our wastes? What's your guess? 100 % of the surface, 50%, less?

Using an apple to represent the Earth, cut the Earth into four pieces. Now throw out three of the pieces that represent the oceans. Oceans make up 75% of the Earth's surface area. Slice the remaining piece of Earth in half and push aside one piece representing inhospitable lands, such as deserts. What's left is 1/8th of the apple. But that's not the amount available to us. Slice the 1/8th into four sections and throw out three of them. These represent areas that are too cold, too steep, or too rocky to produce food. Peel the skin off of the remaining 1/32nd slice of the apple and push the rest aside. This small amount of skin represents the Earth's crust, the area that has enough topsoil to produce the food on which we all depend. The Earth's topsoil is only five feet deep on average and produces a relatively fixed amount of food. Over-farming and erosion take away billions of tons of topsoil each year. Each inch of topsoil takes on average 100 years to form.

The Earth doesn't seem quite as big anymore does it? Natural resources are limited and must be used wisely so that all of us can live on this small piece of Earth. Let's look and see how your daily decisions affect the amount of natural resources you and your family use.

Living Sustainably on the Earth

A. Water

1. Take showers instead of baths. If you already take showers shorten them
2. Don't brush your teeth or shave with the water running
3. If you have a lawn, water early in the day or late in the evening if possible

B. Agriculture/Food

1. Grow some of your own food
2. Buy organically grown veggies
3. Keep water in the refrigerator so you don't have to run the faucet for cold water
4. Reduce your meat consumption, substitute tofu for meat
5. Help non-profit organization to plant trees in developing countries
6. Support local farmers/ farm stands
7. Support /join groups that help restore ecosystems

C. Transportation

1. Ride your bike or walk to work or school or the store
2. Take a bus, vanpool or carpool
3. Drive an energy-efficient vehicle
4. Keep your car tuned and tire pressure at correct levels
5. Group your trips with the car

D. Personal actions that support sustainability are:

1. Be frugal. Use only what you need. Buy less so that you produce less waste
2. Be efficient. Promote energy efficiency and use resources in your daily life efficiently
3. Be a recycler. Recycle all wastes that you can and buy products from recycled materials
4. Compost organic waste
5. Help restore the environment, replant, and protect wetlands
6. Print all assignments on both sides of the paper
7. On a long trip take a train or a bus, not a jet.

E. Home

1. Plant wildlife friendly yards.
2. Discuss environmental ethics with your family and friends
3. Select nontoxic alternatives for cleaning products, pesticides and paints
4. Don't discard anything down storm sewers, recycle
5. Don't use an in sink disposal

F. Energy

1. Shut off lights, stereo, computers... when not in use
2. Draw curtains at night, use insulated curtains
3. Add insulation, caulk, and weather stripping
4. Use fluorescent bulbs where possible
5. Keep thermostat at 20°C in winter and 25°C in summer.
6. Dress more warmly
7. Turn down thermostat on water heater
8. Install flow reducers on faucets and showerheads
9. Do only full loads of laundry
10. Dry clothes on a line outside
11. Repair leaky faucets
17. Heat only used areas
18. Install an automatic thermostat

