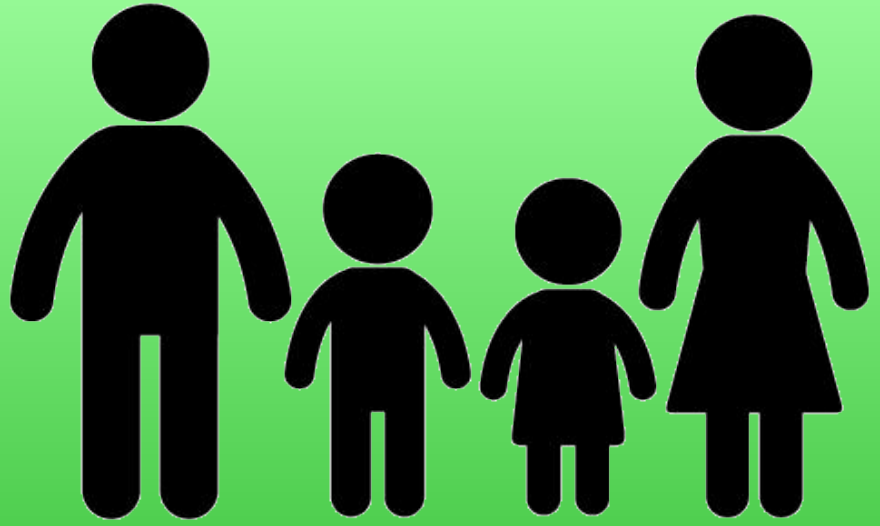
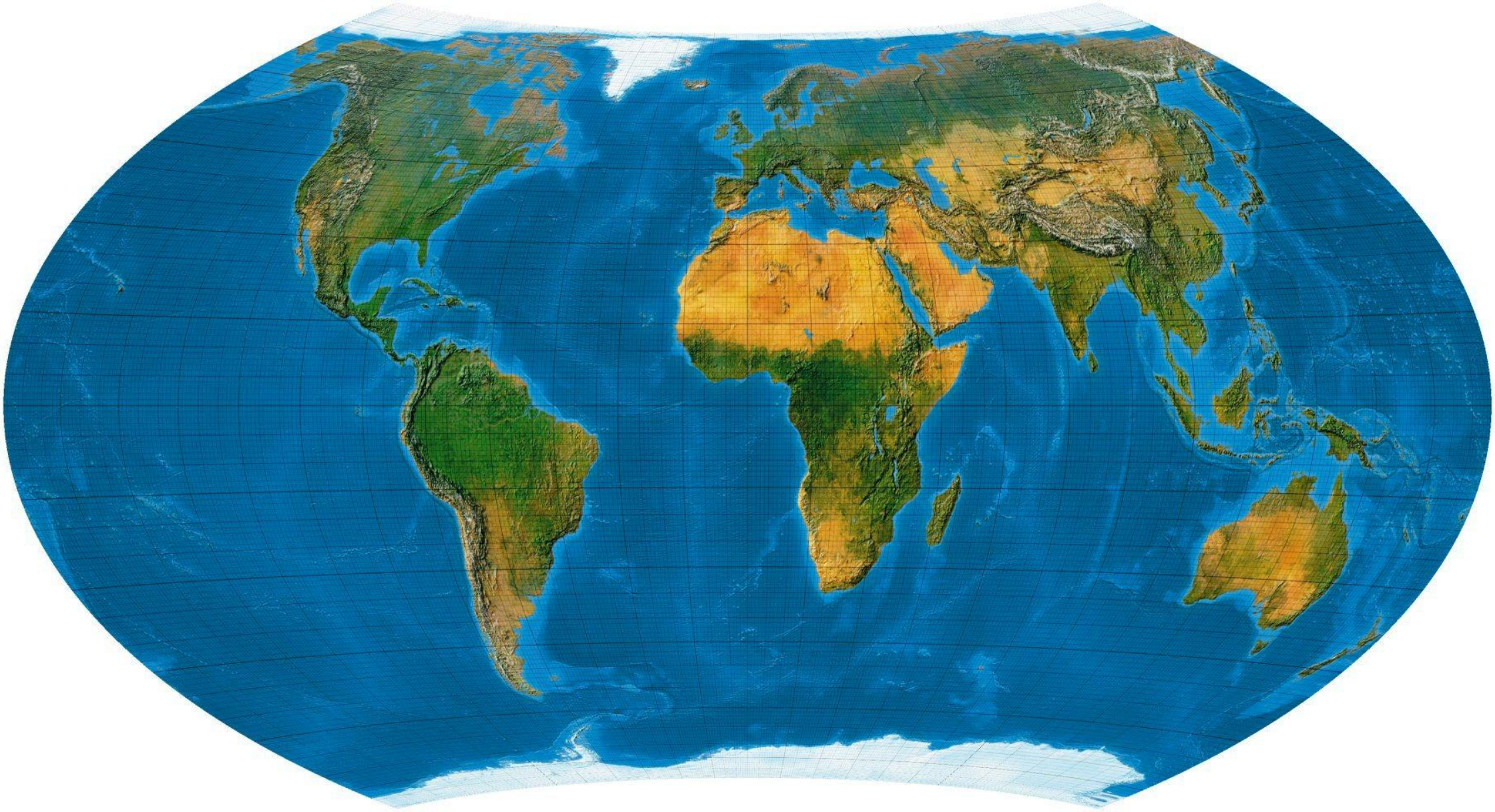
The 1000 m^2 civilization

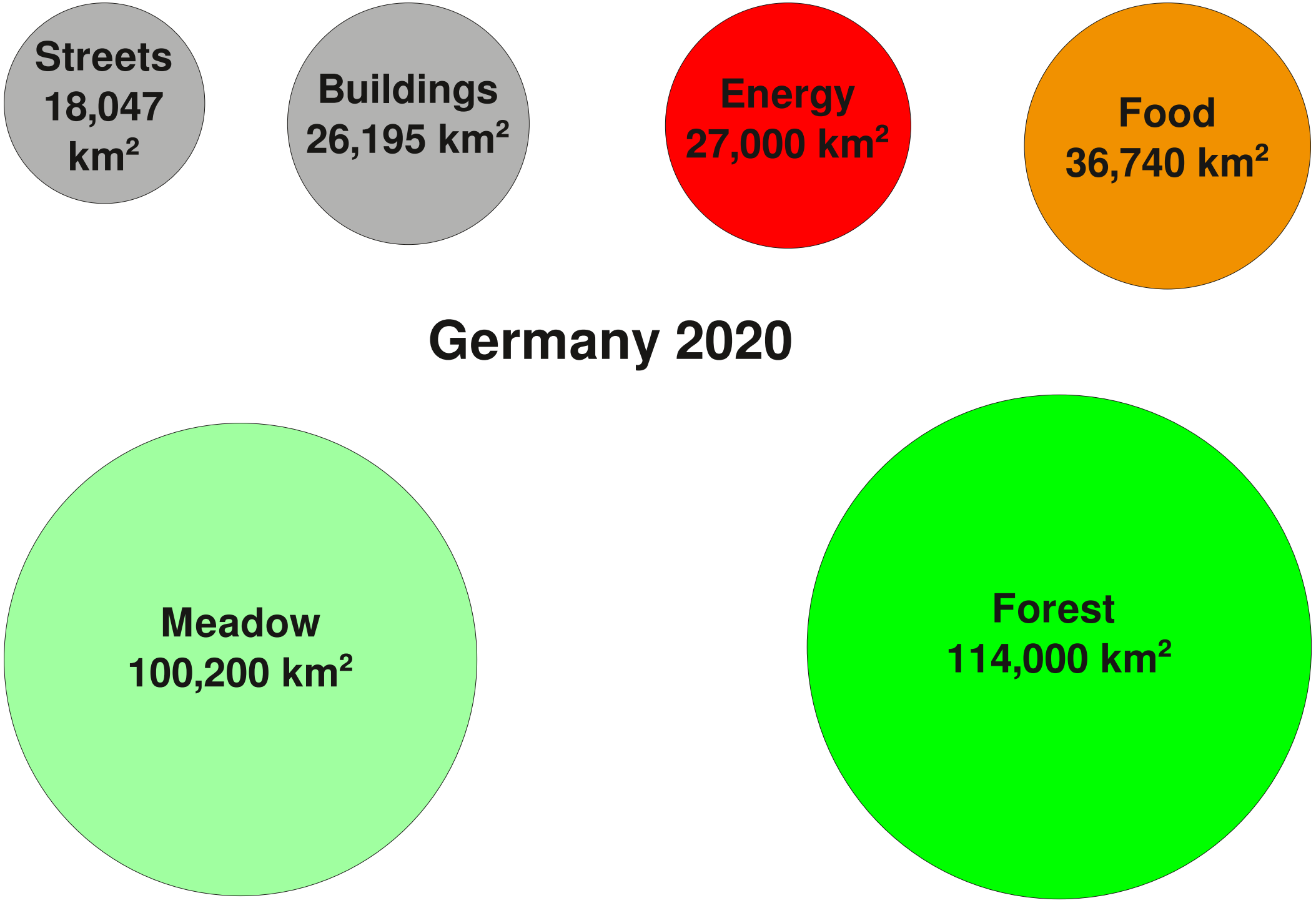


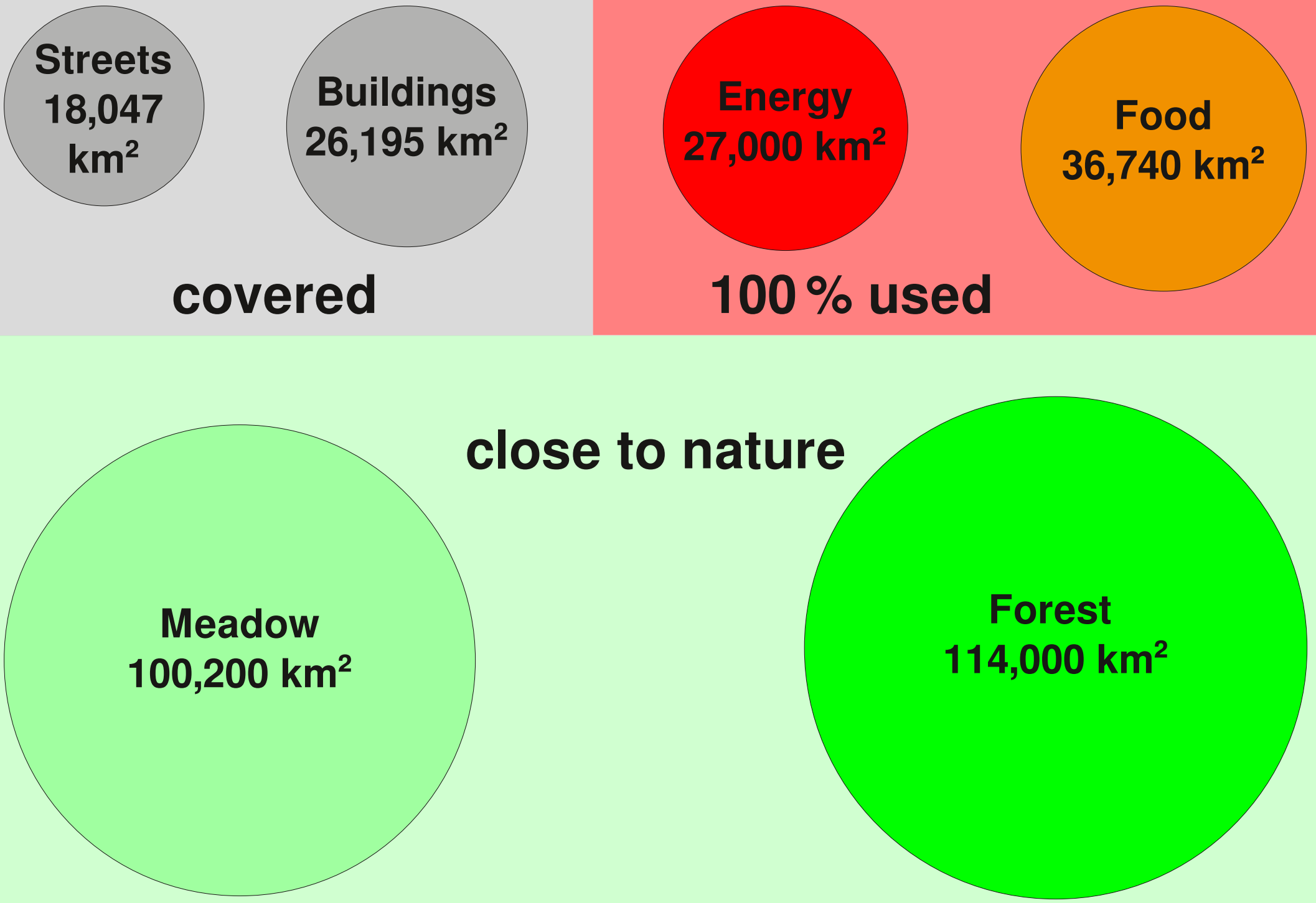
4000 m^2

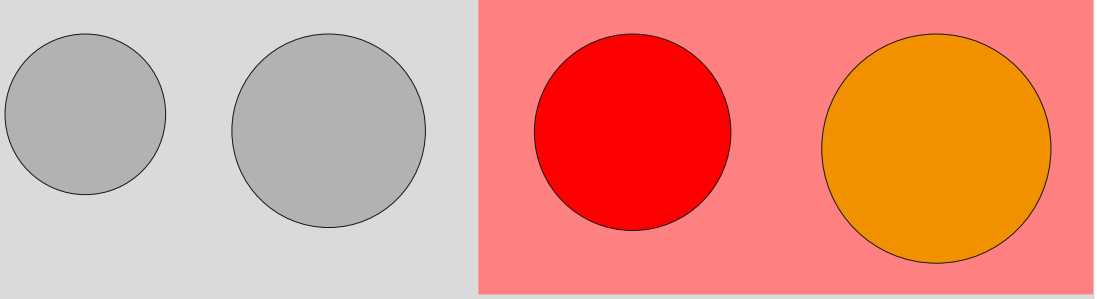
10 billion people

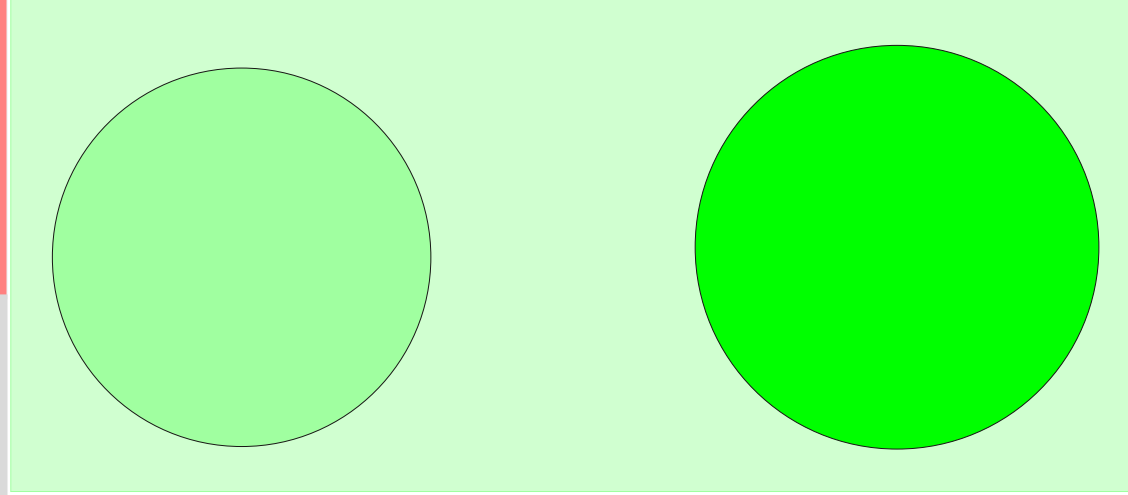


10 million km^2


Streets
18,047
km²
Buildings
26,195 km²
Energy
27,000 km²
Food
36,740 km²
Germany 2020
Meadow
100,200 km²
Forest
114,000 km²


Streets
18,047
km²
Buildings
26,195 km²
covered
Energy
27,000 km²
Food
36,740 km²
100 % used
close to nature
Meadow
100,200 km²
Forest
114,000 km²





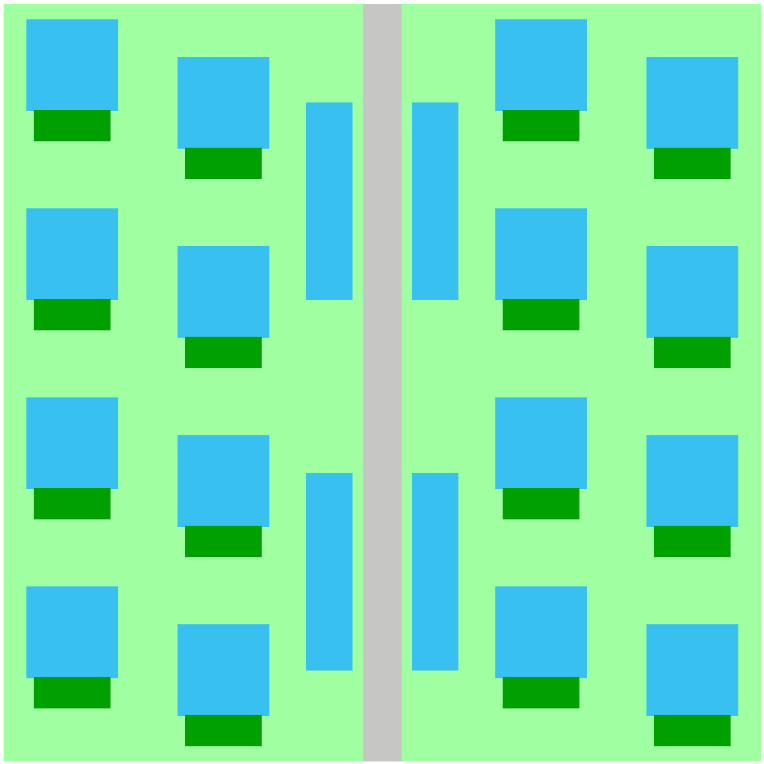
CO2 emission 1 kg = 1 m^2
733,897 km^2

18,047 km^2 roads
26,195 km^2 Buildings
27,000 km^2 plants for energy
36,740 km^2 food
10,020 km^2 10 % partial use meadow
11,400 km^2 10 % partial use forest
129,402 km^2 before CO2 emissions
733,897 kt CO2 emission
863,299 km^2 equivalent total
10,399 m^2 per inhabitant

18,047 km^2 roads	22,000 km^2 roads
26,195 km^2 Buildings	48,000 km^2 buildings + food
27,000 km^2 plants for energy	0 km^2 plants for energy
36,740 km^2 food	0 km^2 food
10,020 km^2 10 % partial use meadow	5,810 km^2 5 % partial use meadow
11,400 km^2 10 % partial use forest	7,300 km^2 5 % partial use forest
129,402 km^2 before CO2 emissions	75,400 km^2 before CO2 emissions
733,897 kt CO2 emission	0 kt CO2 emission
863,299 km^2 equivalent total	75,400 km^2 equivalent total
10,399 m^2 per inhabitant	906 m^2 per inhabitant

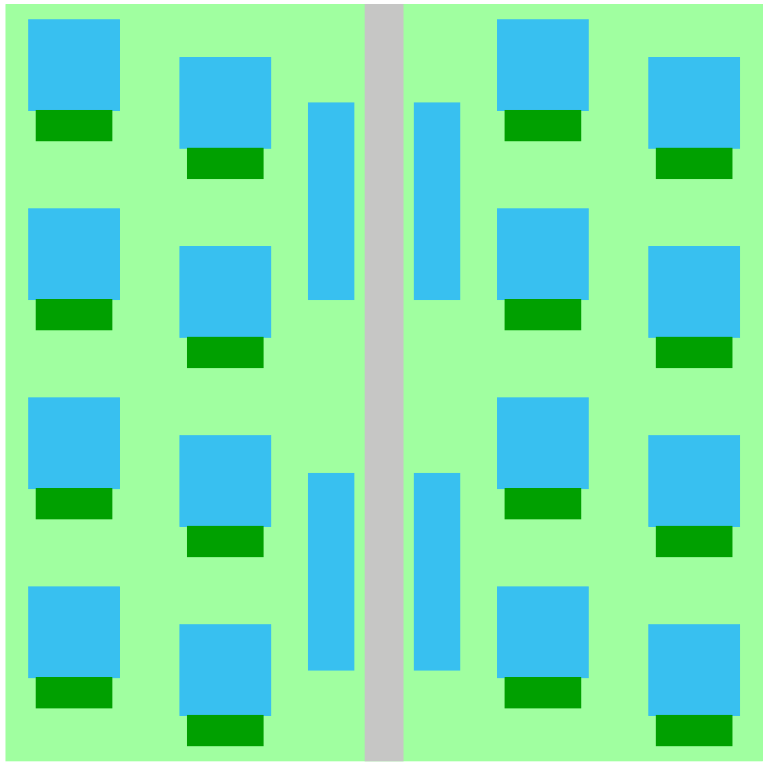
Yield per hectare compare

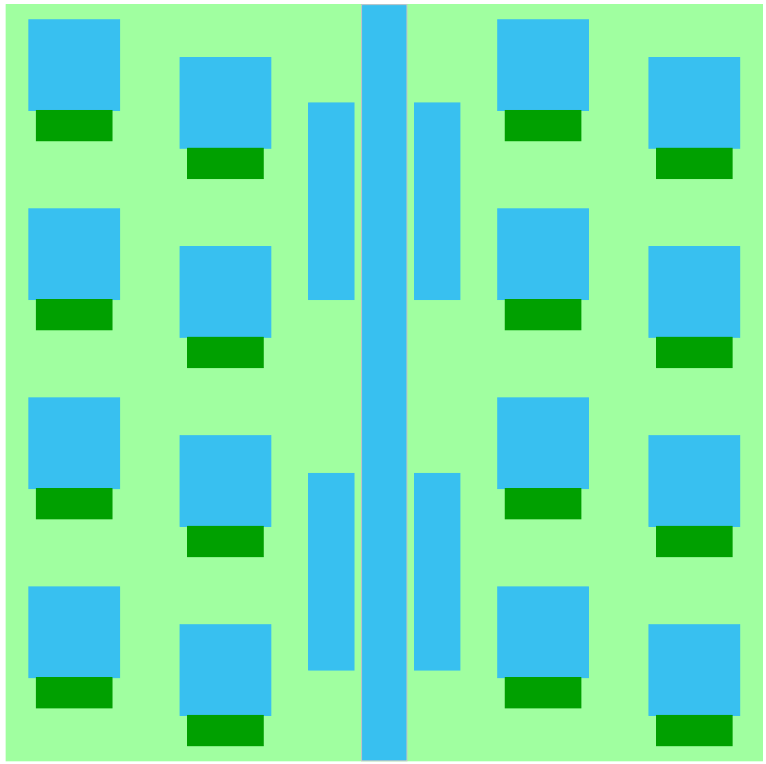
Maize for “biogas”



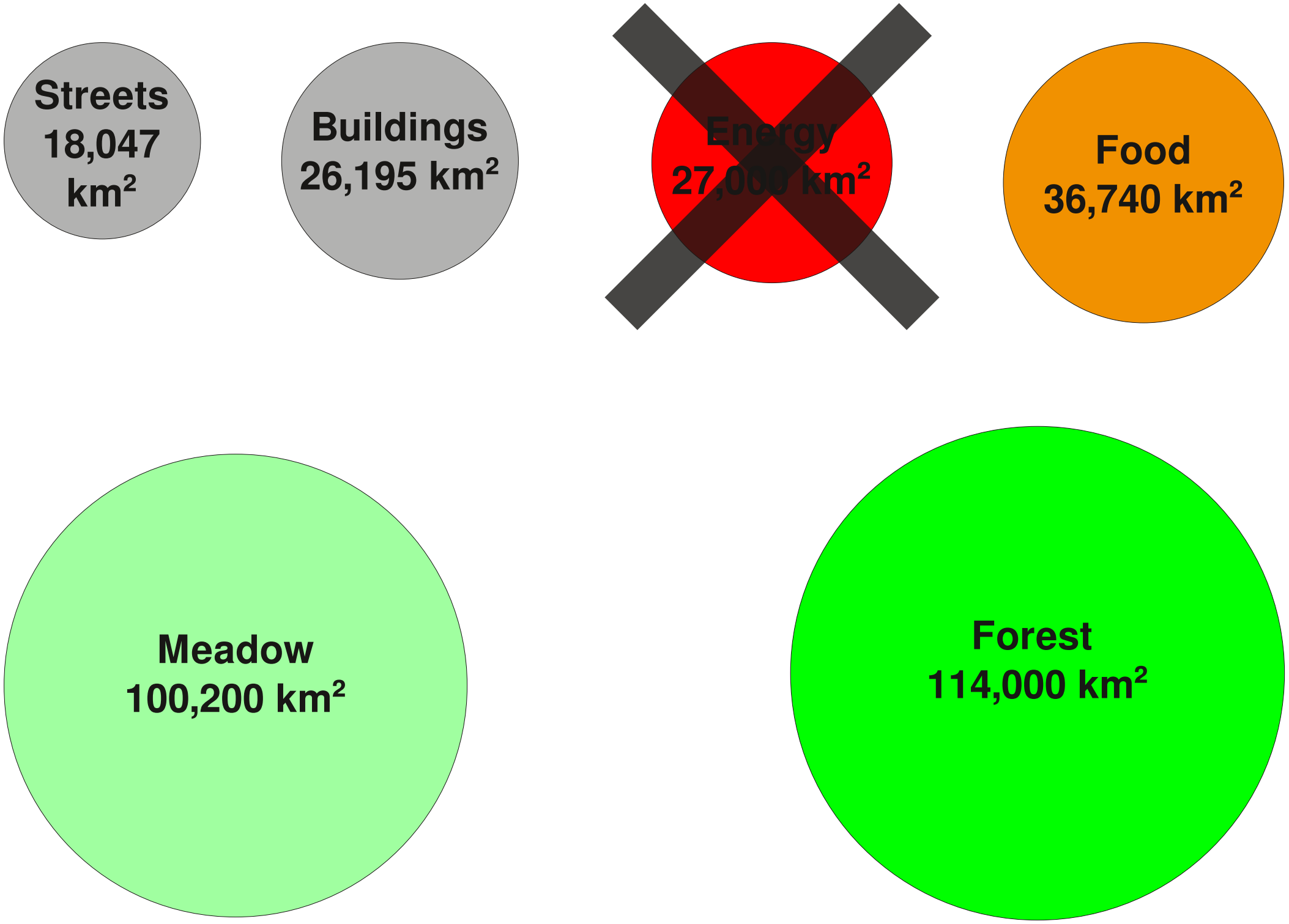
Electricity yield	16 MWh	512 MWh
Electricity production	Continuously 2 kW	Demand-based up to 272 kW
Electricity price / kWh	EEG compensation ~ 16 Cent	free market prices only
Sales	only via EEG	EEX to grid frequency market
Equipment	Share 2 kW gas engine	640 kW PV 1600 kWh batteries
Food production	none	Vertical Gardening 800 m^2
Living space	none	1,440 m^2

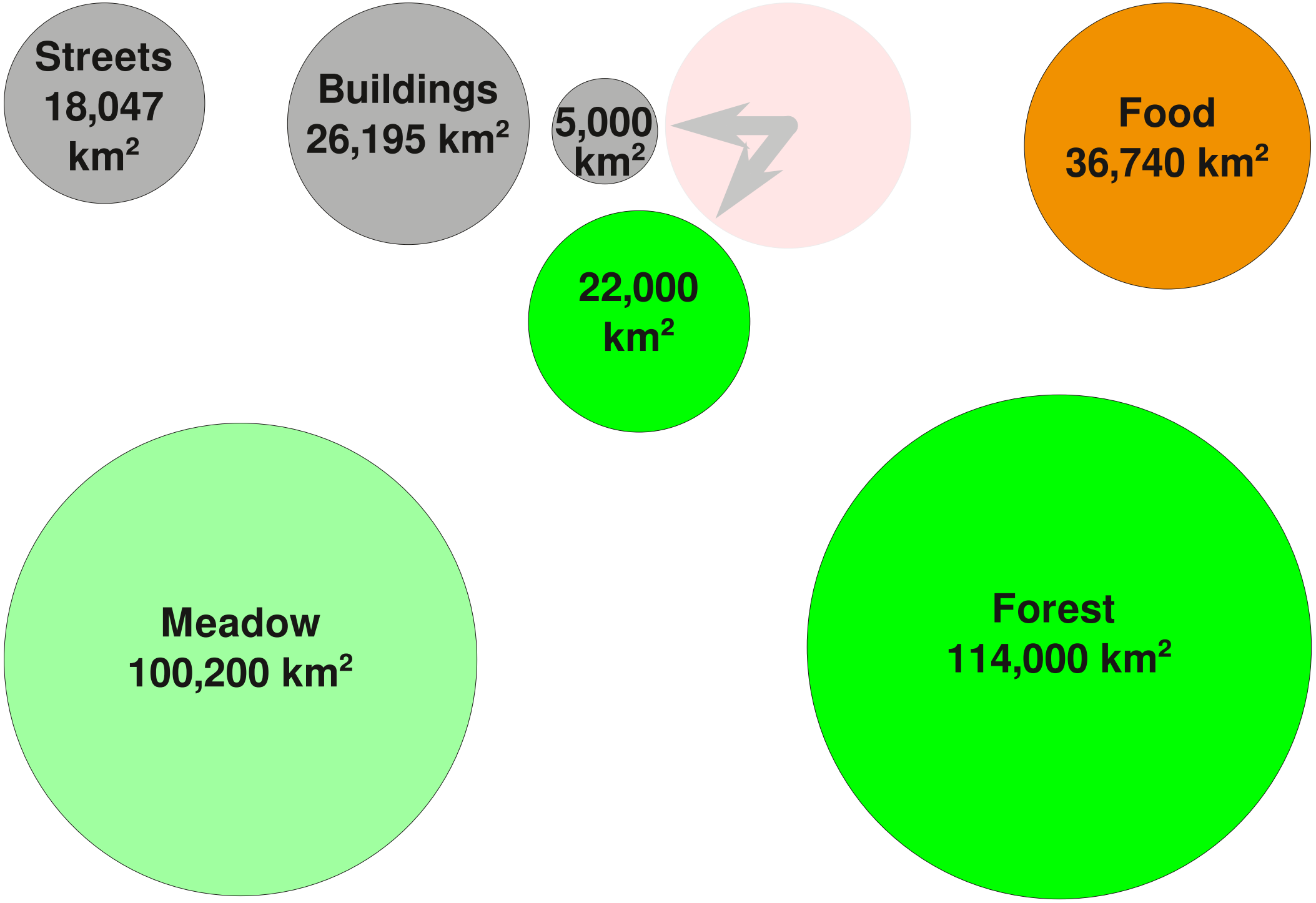
Small detail improvement:

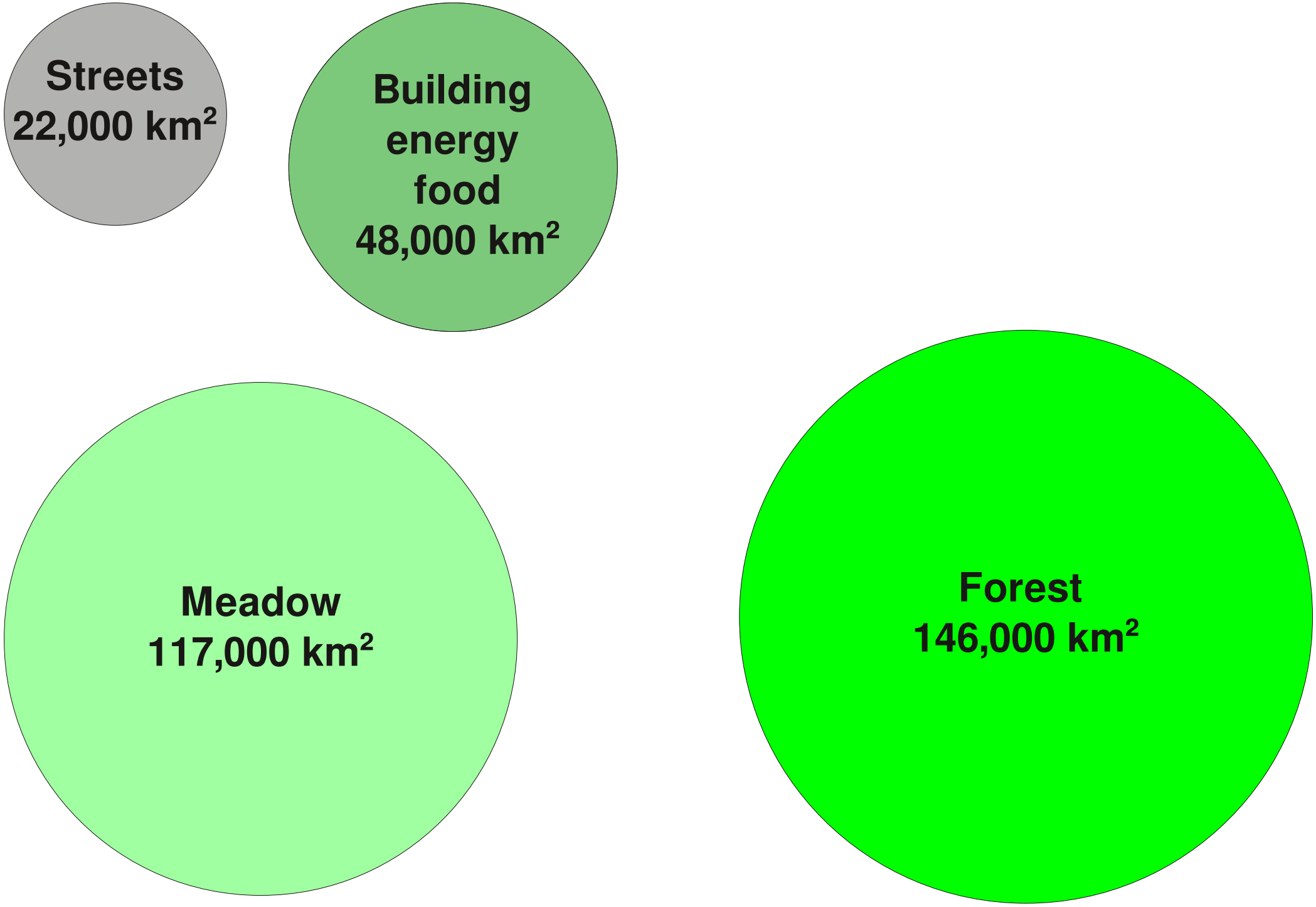




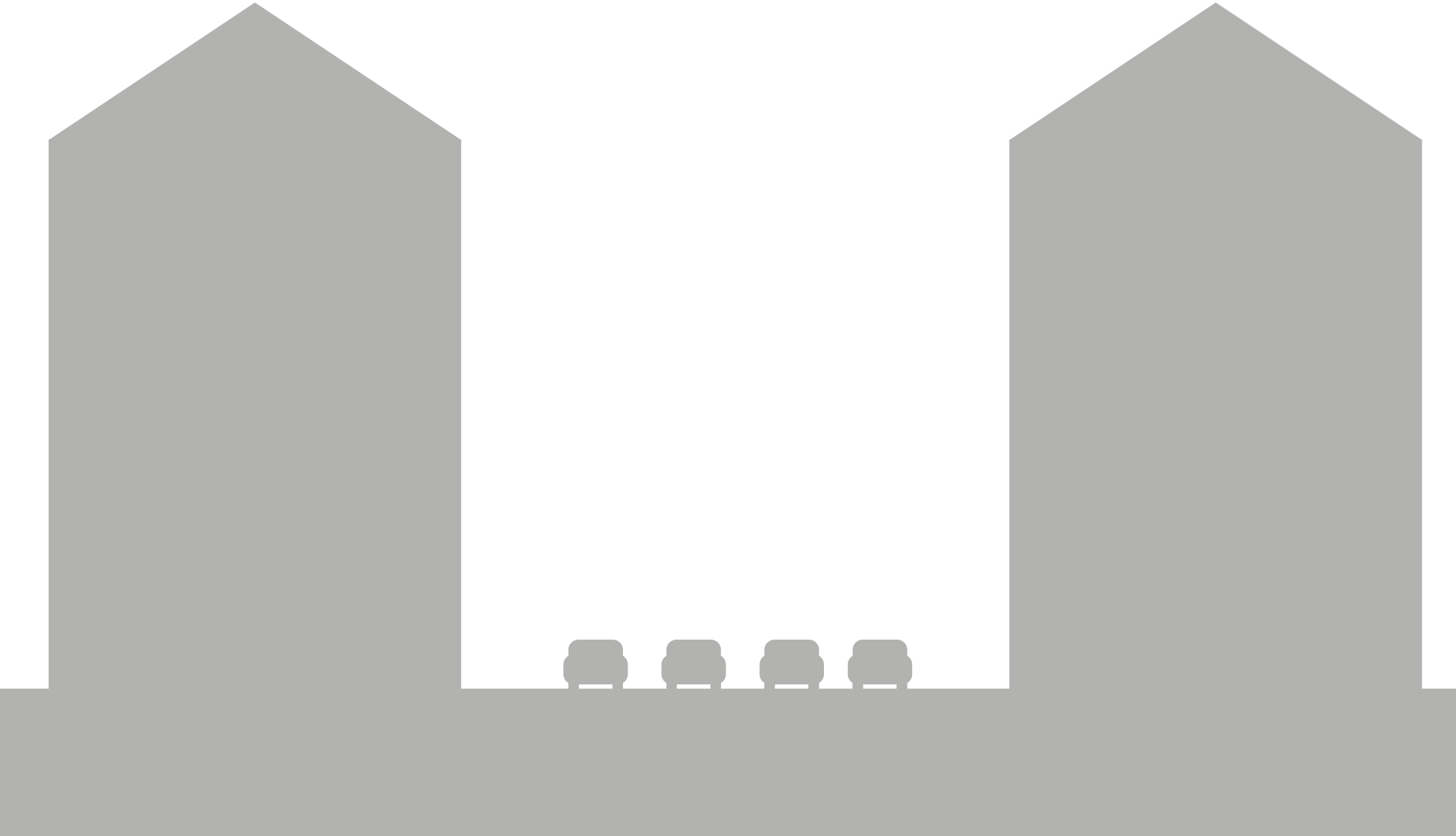
Electricity yield	512 MWh	620 MWh
Electricity prod.	Demand-based up to 272 kW	Demand-based up to 272 kW
Electricity price / kWh	free market prices only	free market prices only
Sales	EEX to grid frequency market	EEX to grid frequency market
Equipment	640 kW PV 1600 kWh batteries	750 kW PV 2000 kWh batteries
Food production	Vertical Gardening 800 m^2	Vertical Gardening 800 m^2
Living space	1,440 m^2	1,440 m^2


Streets
18,047
km²
Buildings
26,195 km²
Energy
27,000 km²
Food
36,740 km²
Meadow
100,200 km²
Forest
114,000 km²


Streets
18,047
km²
Buildings
26,195 km²
5,000
km²
Food
36,740 km²
22,000
km²
Meadow
100,200 km²
Forest
114,000 km²


Streets
22,000 km²
Building
energy
food
48,000 km²
Meadow
117,000 km²
Forest
146,000 km²

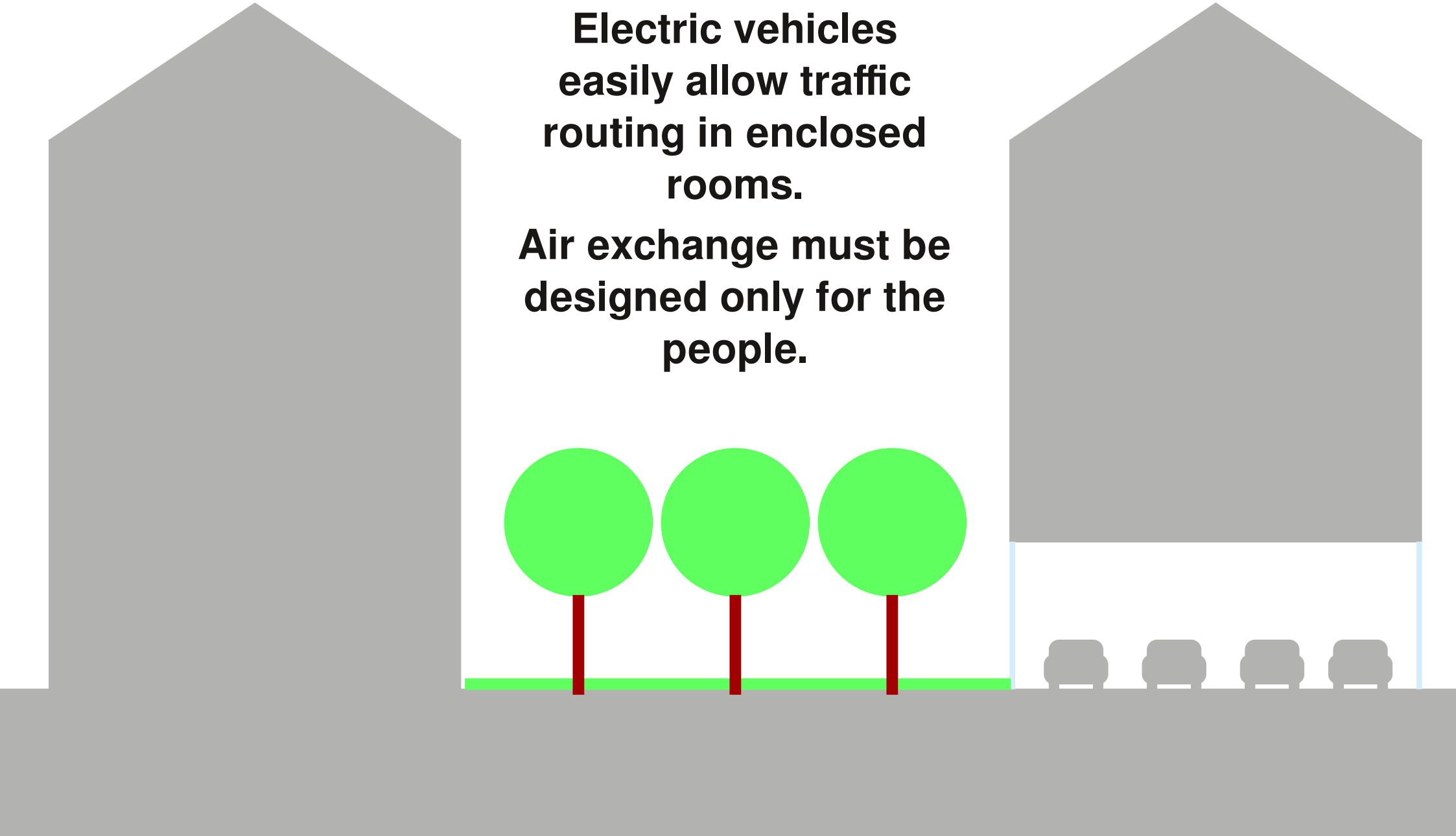
Should cities continue to look like this? Seriously?



We need to rethink cities completely!

Electric vehicles easily allow traffic routing in enclosed rooms.

Air exchange must be designed only for the people.



Thought experiment:

Square meter *
Years *
Use valuation *
Nature valuation =
Land use tax

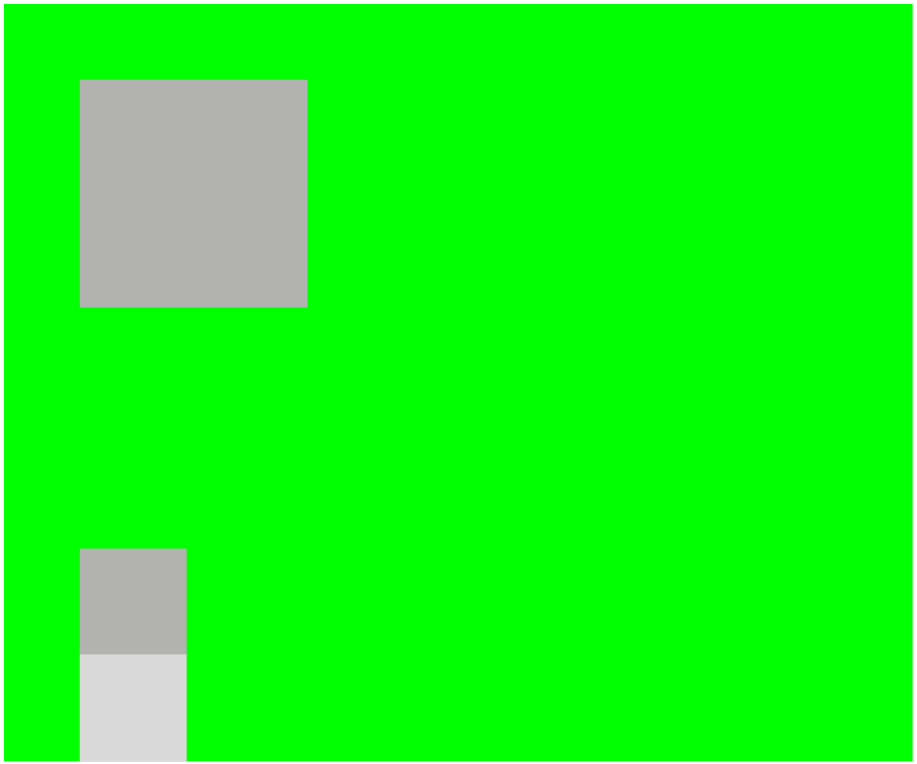
5,000 m² commercial enterprise

20 employees

5,000,000 € annual turnover

5,000 € land use tax

No problem!



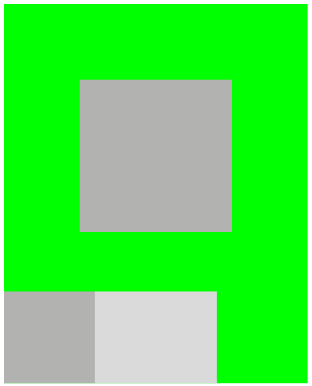
3,000 m^2 old house

3,000 € land use tax

In the past, when land was very cheap, people bought very abundant.

No problem if the residents are still rich.

Otherwise divide it into 3 to 6.



500 m² house

500 € land use tax

No problem!

1 ha = 10,000 m^2 maize for biogas

16,000 kWh * 0.16 € =

2,560 € turnover

800 € market price

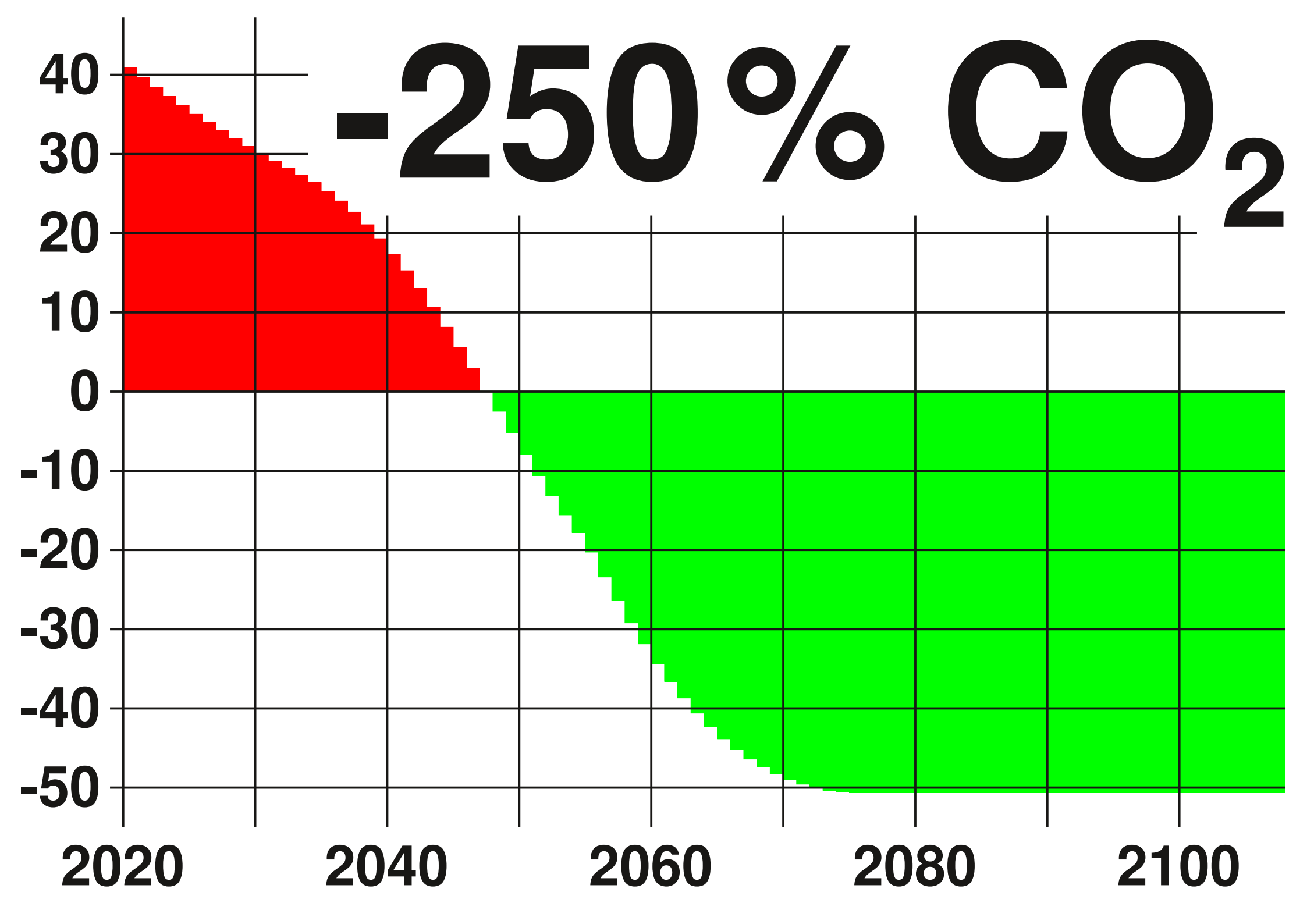
1,760 € EEG subsidy

10,000 € land use tax

1 ha = 10,000 m^2 fruits and vegetables
Photovoltaic, DAC CO2,
Vertical Gardening Aeroponic

rating with 1% nature,
as dry desert area

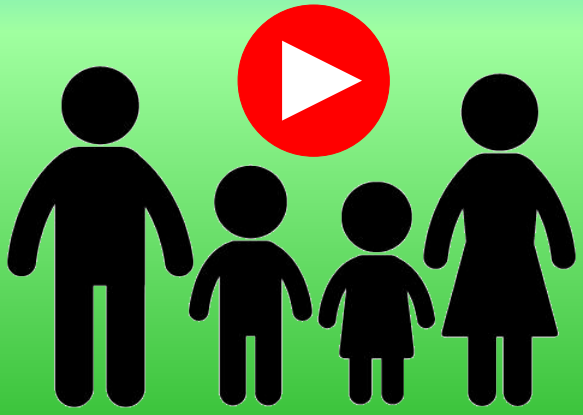
100 € land use tax.


-250% CO_2
40
30
20
10
0
-10
-20
-30
-40
-50
2020
2040
2060
2080
2100

enable

UBI

The 1000 m^2 civilization



4000 m^2