MULTILATERAL ASSESSMENT SLOVENIA

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SB50, June 2019
Bonn

Welcome to the age of Anthropocene

Slovenia

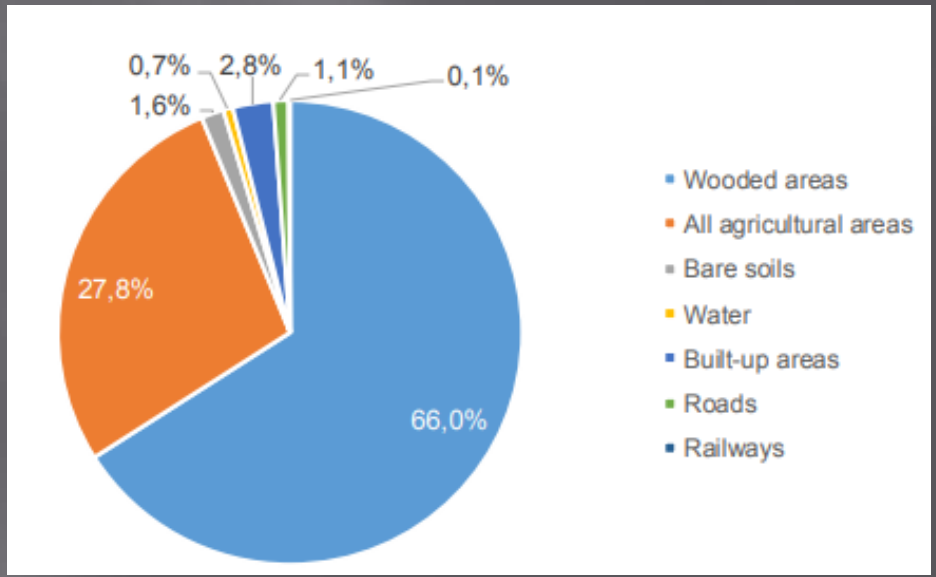
Area: 20.273 km2

Average altitude: 550 m

Population: 2.080.908 mio

GDP per capita in 2018: 22.182 EUR

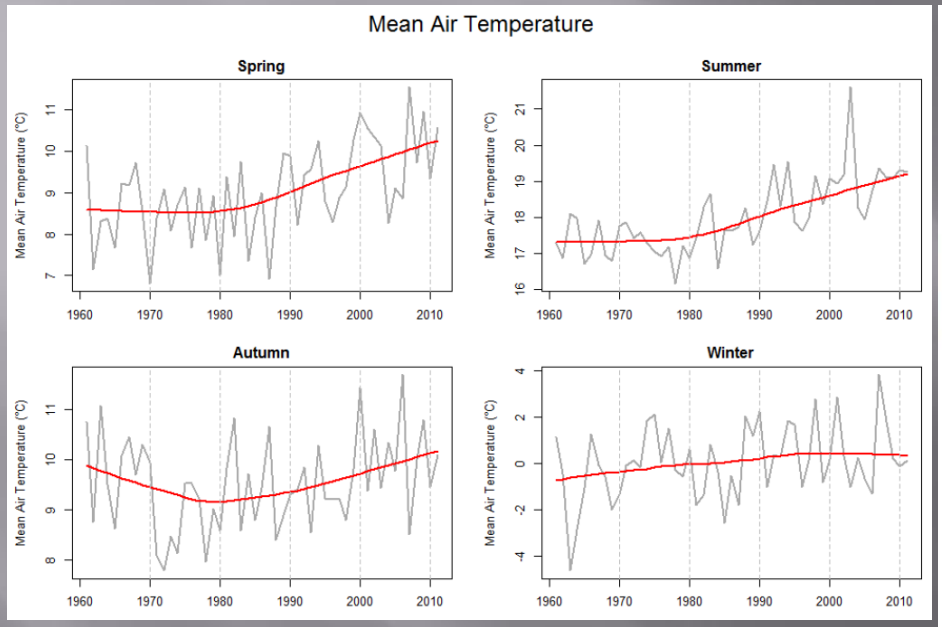
GHG Emissions (2015): 16,83 Mton CO2 eq. 8,4 ton CO2 eq. p.c.(excl. LULUCF)

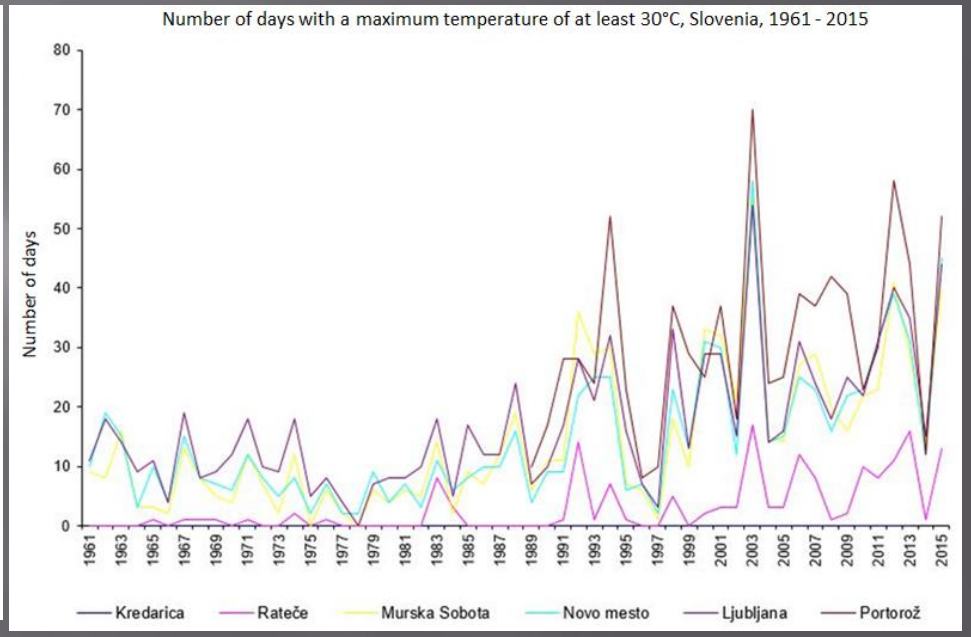


Climate Targets 2020 & 2030 & 2050

- Quantified economy wide emission reduction target (QWERT) for the EU and Member States of -20 % by 2020/1990
- Current NDC 2030 for the EU and Member States is -40% reduction of GHG by 2030/1990
- Climate target for 2030 for the EU and Member States should be adjusted and upgraded in accordance with the Paris agreement and IPPC 1.5 Report and balanced between current and future generations
- Net-zero GHG emissions target by 2050 for all EU Member States

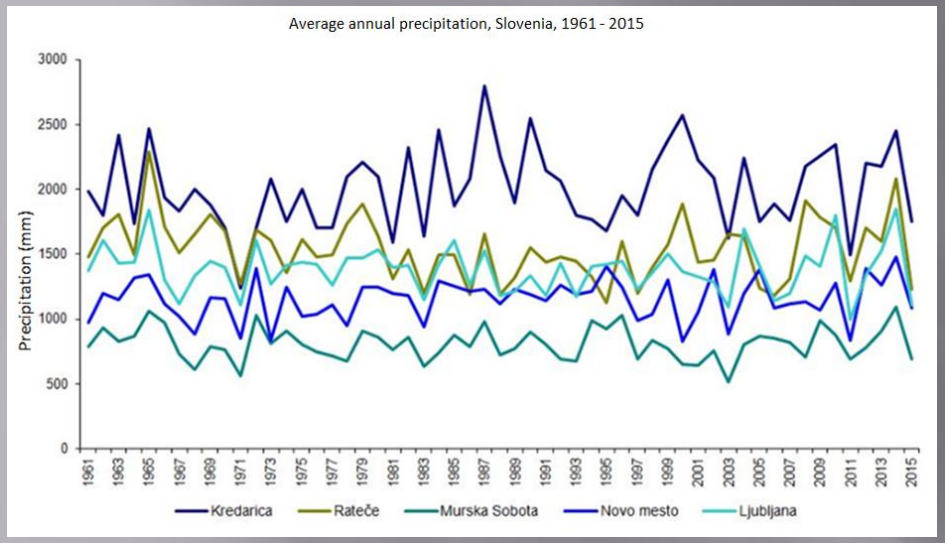
Climate Crisis in Slovenia



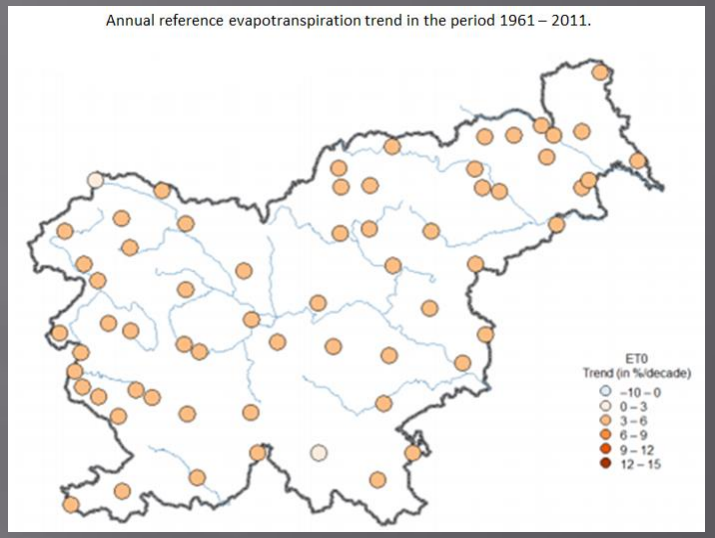


- In the period 1961–2011, the most significant changes were seen in the average annual air temperature, which on average increased by 1.7 degrees Celsius.

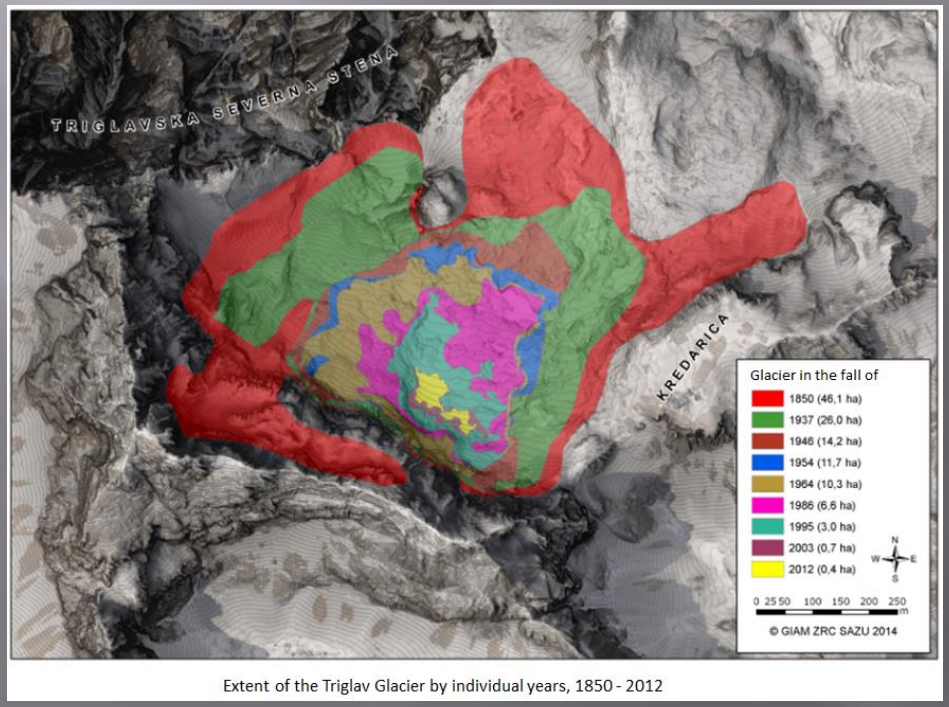
- In the second half of the 20th century there were less days with the temperature above 35° C than in this century so far; this shows that heat waves are becoming more intense.



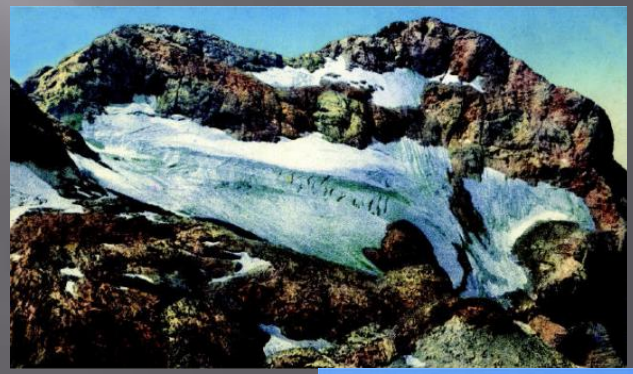
Yearly average precipitation for the entire Slovenia decreased in the period 1961-2011 by approximately 160 mm.



At almost the whole territory of Slovenia, evapotranspiration has increased in the recent 40 years by more than 10%.

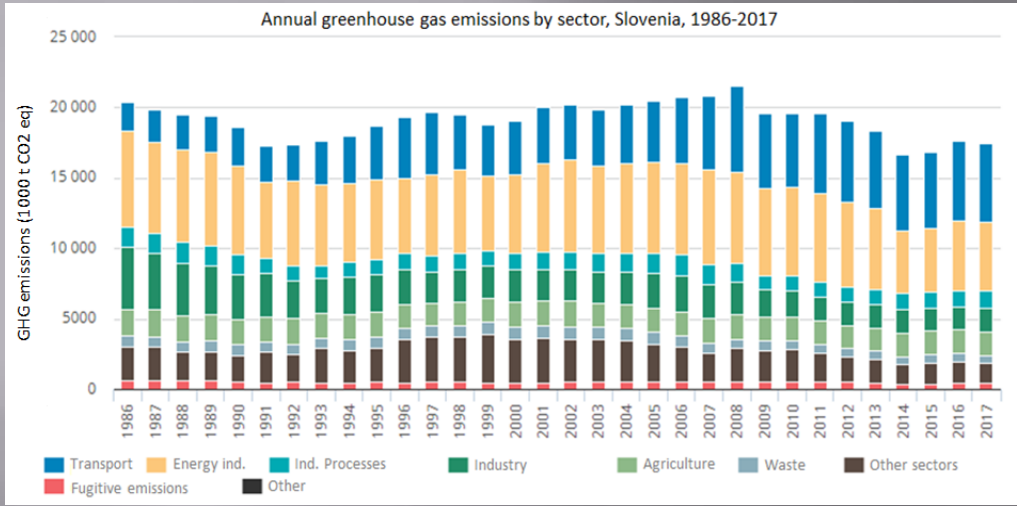


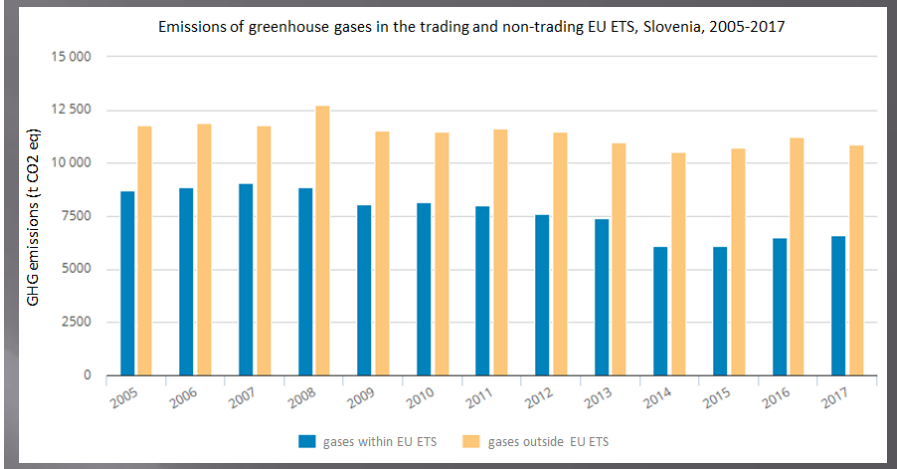
Extent of the Triglav Glacier by individual years, 1850 - 2012

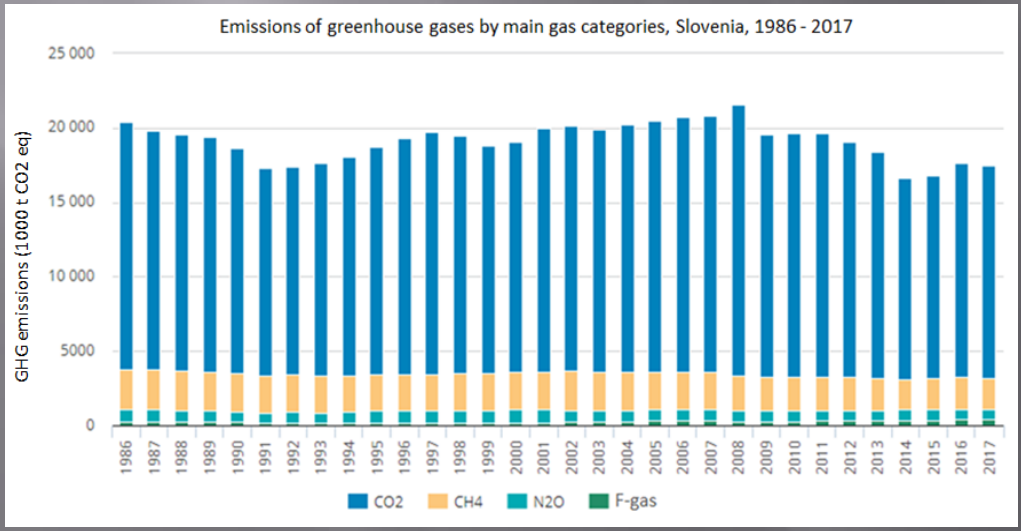


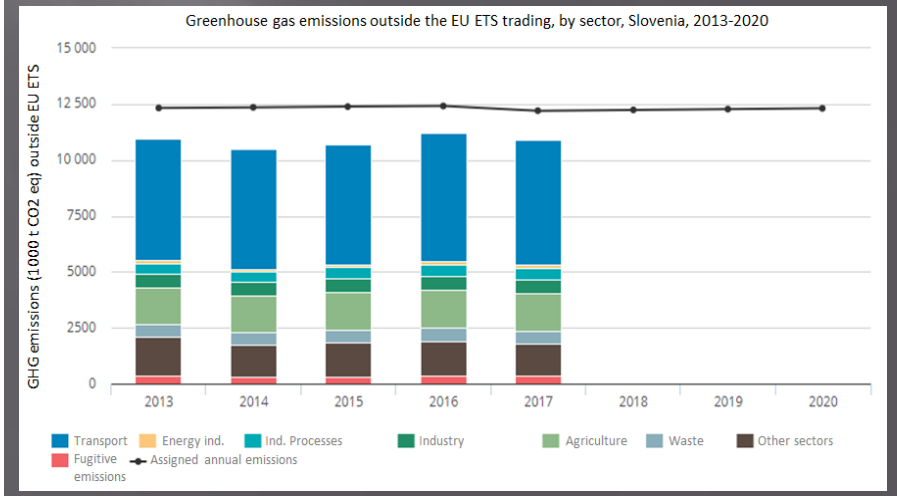
The Triglav Glacier seen from Begunje Peak at the end of the 19th century when it measured 40 ha, and in 2017 when it shrank to less than 1 ha.

GHG Emissions





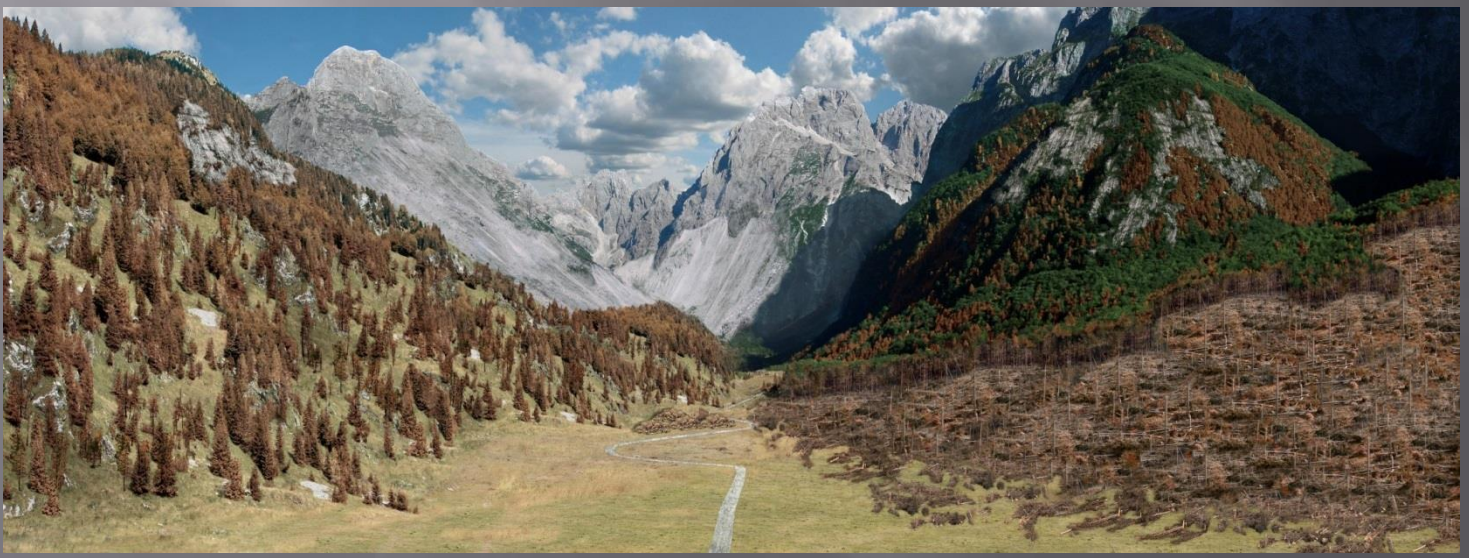




The Future?

Mangart

Mangart at the end of the century



The consequences of the rising temperature: the death of spruce forests.

The lowland forests in which spruce and fir are dominant, will be affected the most by climate change. In recent years, due to temperature fluctuations and pronounced drought periods, more and more pests have been detected, for example, bark beetles, whose number is in Central Europe grew rapidly.

The forest boundary will move even higher due to higher temperatures and because the ability to relocate flora is low in the mountains, there is a risk that many plant species will not be able to relocate and will therefore die out.

Piran

The consequences of rising temperature: rise in sea level.

The rise of the Adriatic sea level is likely to follow more or less the global sea level change.

The expected consequences of climate change in coastal areas will be generally negative: rising sea levels, sea water warming, increased water disasters and problems with salinization.

Piran at the end of the century

Anthropocene

"We shall require a substantially new manner of thinking if mankind is to survive"
Albert Einstein

Slovenian Framework for Climate-Environmental-Development crisis up to 2050 – six pillars

In Anthropocene we have to wake up into reality

Anthropocene – Two main global problems

- **Climate-environment-development crisis in comprehensive context**
- **Technological destruction – unregulated introduction of Artificial Intelligence - AI and rapid development of bioengineering**

Sixth Mass Extinction

Climate-Environment-Development Crisis

- Is the Green Growth possible?

- Green Growth
- Green Economy
- Sustainable Economic Growth
- Sustainable Growth

Is the Green Growth possible?

"Green Growth" criteria:

- **1. Absolute Decoupling of global GDP from global Material Footprint – MF and**
- **2. Absolute Decoupling of global GDP from GHG remaming Carbon Budget of +1.5 ˚C +2 ˚C timely**

Is the Green Growth possible?

Global Material Footprint - MF

- **66 billion tons 2008**
- **93 billion tons 2018**
- **180 billion tons 2050 (conservative forecast)**

Planetary limit - MF

- **50 billion tons**

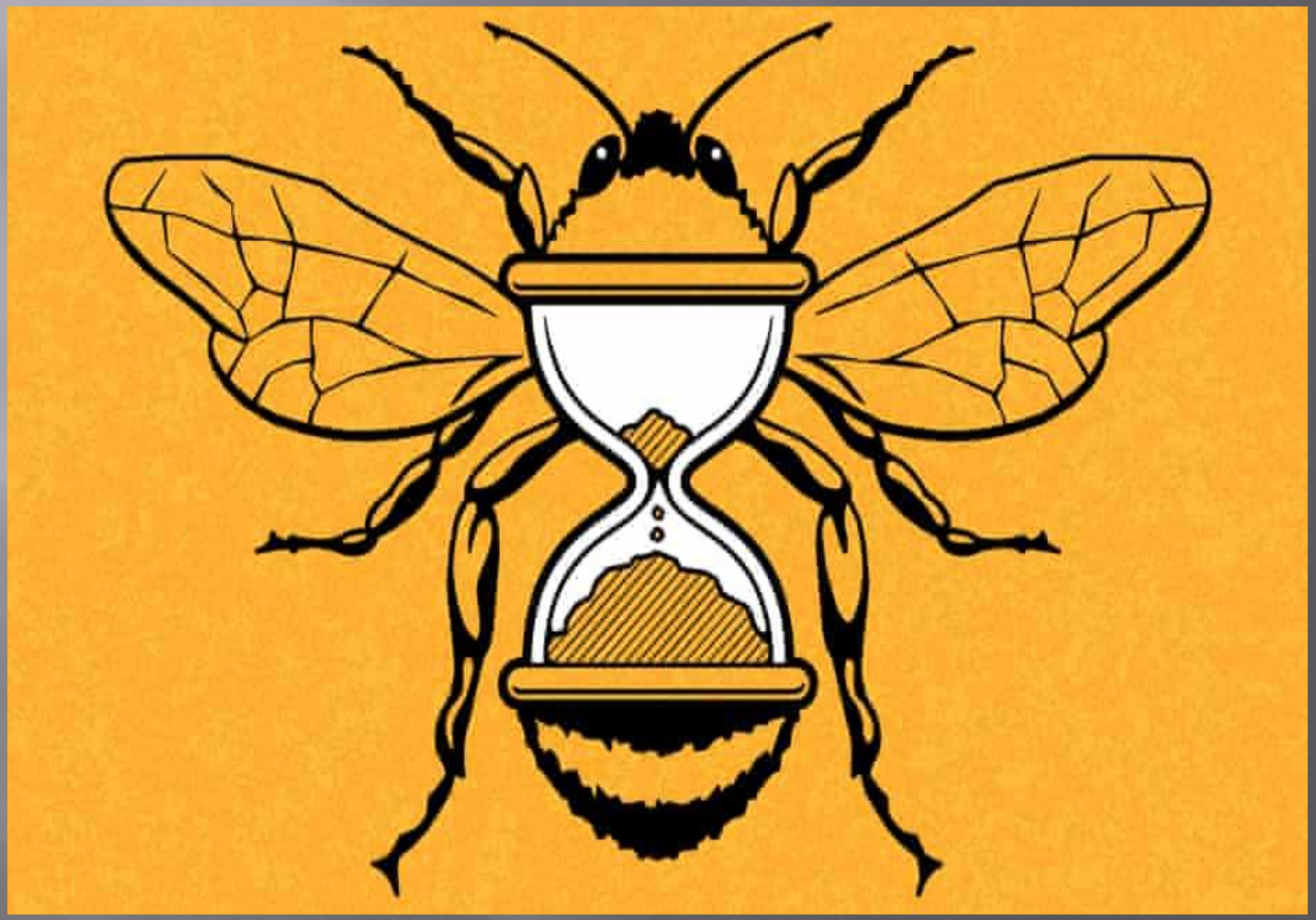
Is the green growth possible?

- **Current economic model and global 3% GDP growth per year doubles the global economy every 24 years (2043), four times in 48 years (2067)**
- **Current 80 trillion USD global economy doubles to 160 trillion USD in 24 years etc.**
- **93 billion tons of Material Footprint today for this economy doubles by 2050 and increases 11 fold by 2100 which is around 1000 billion tons (planetary limit is 50 billion - so 20 fold less)**

Is the green growth possible?

- Models show - absolute decoupling of the GDP from MF is not possible if the world continues the current global economic growth trend of 3 % GDP
- Models show - global MF has to decrease from current more than 90 billion tons to app. 50 billion tons in line with planetary limits
- Models show - “green growth” is possible only at global yearly GDP growth less than 1 %

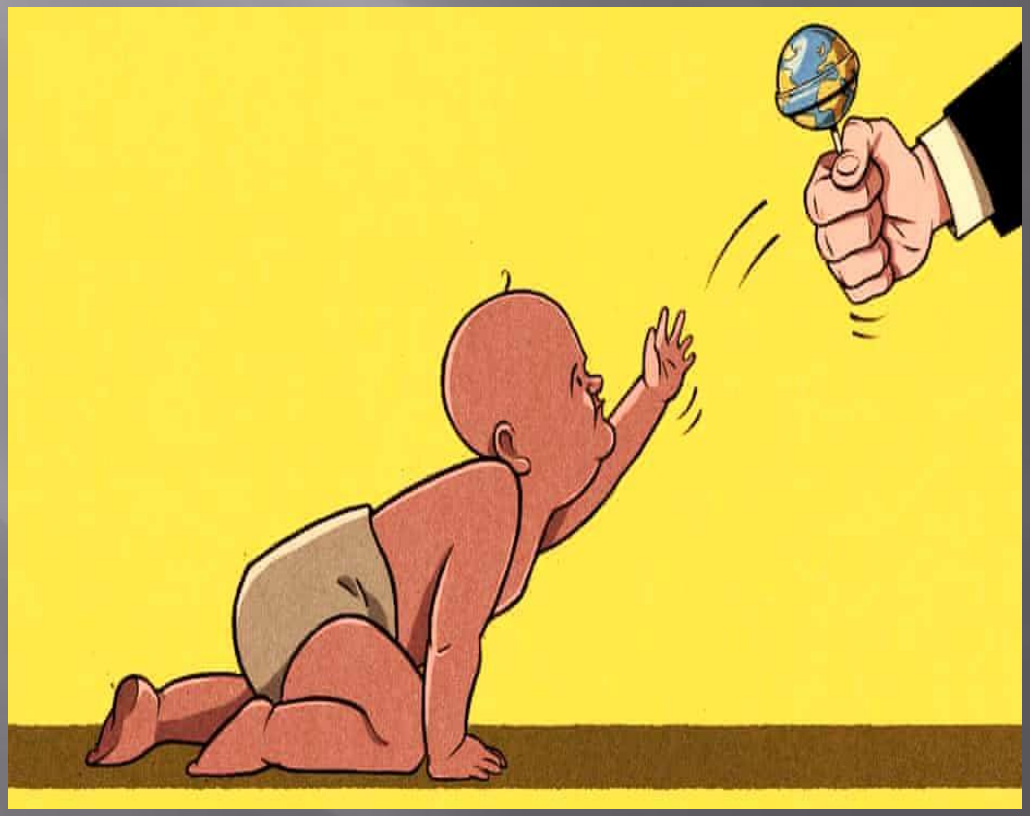
Window of Opportunity is Rapidly Closing



Is current economic growth compatible with Paris Agreement?

- In order to reach the PA target within the remaining carbon budget of +1.5 ˚C at global GDP – economic growth below 1 % per year -- the decrease of global GHG emissions has bo be min. 7 % per year, and for +2 ˚C min. 4% per year
- Empirically the "green growth" for the carbon budget of +2 ˚C is possible only with radically agressive policies and measures of decreasing the global GHG emissions in the frame of the global economic growth – GDP around 0%-0,5% in the long run and if we start this radical project today
- Global Carbon budget of +1.5 ˚C is empirically not reachable any more or only at negative global GDP (so called de-growth), meaning the developed countries have to go more negative with de-growth in order to giving developing countires with positive GDP some time to catching the level of prosperity of developed countries

We, humans not only cause the colossal climate-environmental-development crisis, we are also aware of that.
So we are fully responsible.



In Anthropocene we have to wake up into reality that we can live and survive only in harmony with nature, planet Earth and its limits