

GLOBAL WARMING

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THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 2007

„It is now beyond doubt that Earth’s climate is warming and very likely that most of the increase since the mid-20th century is the result of mankind’s activities.“

AMERICAN PHYSICIST’S COMMENTAR TO AL GORE’S FILM in 2008

„There is no convincing scientific evidence that the human release of greenhouse gases is causing or will in the foreseeable future, cause catastrophic heating of the Earth’s atmosphere and disruption of the Earth’s climate.“

DONALD TRUMP: On climate change

On November 6, 2012, Donald Trump tweeted: "The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive..."

On October 19, 2015:
"It's really cold outside, they are calling it a major freeze, weeks ahead of normal. Man, we could use a big fat dose of global warming!"



GREENHOUSE EFFECT



GREENHOUSE EFFECT



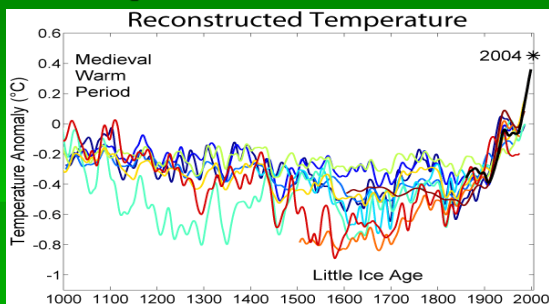
CAUSES OF GLOBAL WARMING

- a) Human activities
 - Fossil fuel combustion
 - Land use
 - Animal farms etc..
- b) Natural activities
 - Decomposition of natural materials
 - Forest fires
 - Volcanic activities
 - Changes of the Sun
 - Aerosols (water vapor)

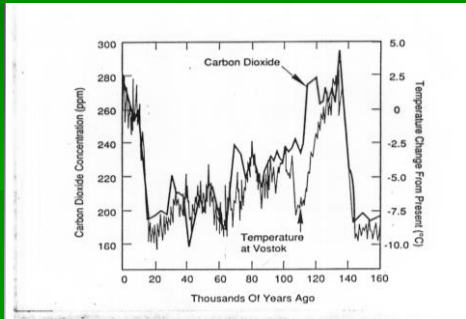
CAUSES OF GLOBAL WARMING

- Natural changes of temperature:
- 1000 a.c. – agricultural settlements in Greenland
 - 14. century – drop in temperature → decline of settlements in 15. century
 - 1645 – 1715 small ice period (freezing of Lamanche channel and Baltic Sea)
 - 18. century – temperature increase

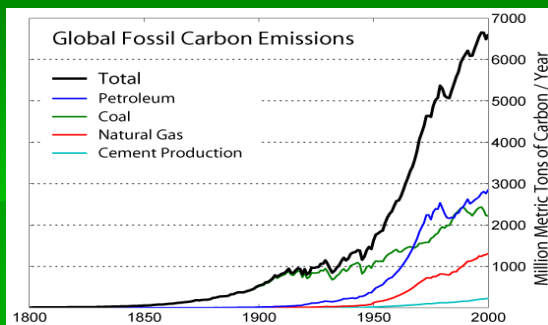
Average temperature development



RELATION OF TEMPERATURE AND CO₂



SOURCES OF CO₂ EMISSIONS



CONSEQUENCES ...



CONSEQUENCES ...



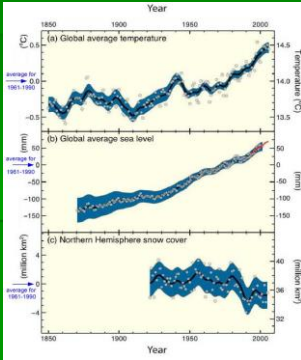
CONSEQUENCES ...



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CONSEQUENCES ...



CONVENTION ON CLIMATE CHANGE (Rio de Janeiro 1992)

Aim: the stabilization of greenhouse gasses concentrations in the atmosphere at the level that would prevent climate change

Tools: national inventories of greenhouse gasses sources and sinks
national action programs

Obligations: development of ecosystems as GG sinks
support technologies for emission reduction
monitoring, research, cooperation, info-exchange

CONVENTION ON CLIMATE CHANGE (Rio de Janeiro 1992)

Protocol 1997 Kyoto

Quantitative aims for GG emission reduction including their sinks

Commitment of Annex I parties to quantified reduction targets (5%) and a timetable for their achievement

Different obligations (CR – 8% reductions of GG concentrations during 2008 - 2012 comparing to the 1990)

Six gasses are covered by the emission reductions commitments (*CO₂, NO_x, methane, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride*)

CONVENTION ON CLIMATE CHANGE (Rio de Janeiro 1992)

Kyoto protocol – further obligations:

- International cooperation
- Reforms in energy and transportation sectors
- Support of renewable sources of energy
- Increase of energy efficiency
- Protection of forests and other green areas

CONVENTION ON CLIMATE CHANGE KYOTO PROTOCOL

Ways to fulfill obligations:

- a) Trade in GG emission
- b) Joint implementation of emission reduction commitments
- c) Clean development mechanism
- Any party may transfer to or acquire from any other party of Annex I emission reduction credits resulting from the projects

CONVENTION ON CLIMATE CHANGE AFTER KYOTO

- 2012 Doha Qatar ➔ Doha Amendments:
- Commitments to reduce GG emissions by at least 18% below 1990 levels from 2013 – 2020 (composition of parties is different, revised list of GG)
- Adaptation fund
- Monitoring and precise recording of trades

CONVENTION ON CLIMATE CHANGE AFTER KYOTO

2015 - Paris Agreement

- New global binding agreement
- New obligations after Kyoto protocol (2020)
- National obligations to reduce emissions of GHG on a voluntary basis

CONCLUSIONS

- Global warming is a problem that is to be solved
- There is no scientific evidence that global warming is caused solely by anthropogenic emissions
- There is no consensus on possibilities and ways to stop global warming
- EU – preference of economic approach
- USA – investments into scientific research, development of new technologies

CONCLUSIONS

Procedure to adopt international agreement :

- scientific definition and description of the problem, its causes and consequences
- presentation of the problem in the international community and its recognition as an international problem
- draft
- signature
- ratification or other expression of the consent to be obliged with the treaty

CONCLUSIONS

- If the problem is not sufficiently described and explained, it will be difficult to reach global consensus.
- It is not necessary to wait for the agreement, everybody can help.
- What can be done to save our planet?

Literatura

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