

CLIMATE CHANGE

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Dear friends,

It is not my intention to start a discussion on climate change. Rather I would like you to remember the answers to the below questions before stepping into any climate change discussion. The answers can be easily verified by googling the internet in the open and scientific literature and data. Reason to set up this list of Q&A's is my experience that many people still do not know the answers to some elementary simple concepts.

23 Q&A's simple questions on the green house effect

- [01] where does the green house effect come from?

Answers:[01] It is there because we have an atmosphere

- [02] if this effect would not exist, what would be the average temperature on earth?

Answer:[02] about 30 degrees lower

- [03] which green house gas (GHG) is responsible for the majority of the effect?

Answer: [03] it is water vapor.

- [04] how big is this influence in % of the total effect?

Answer: [04] it is about 95%

- [05] which other green house gasses do we know, filling in the remaining part?

Answer: [05] CO₂, CH₄ and NO_x

- [06] which part of the CO₂ in Air is due to human activities compared to the natural existence?

Answer:[06] about 40 giga ton/y compared to 1000 giga ton/y

- [07] what is the biggest storage for CO₂ and how many % is this in terms of all carbon in the world, including fossil fuels?

Answer: [07] it is about 87%

- [08] where is the rest of CO₂?

Answer:[08] 12% is captured in fossil fuels and existing life on earth; 1 % is in the air

- [09] how big is the impact of the man made CO₂ on the green house effect?

Answer:[09] we don't know but it is probably less than 0,2%

- [10] what happens if you lower your heater at home (or the sun cools down)?

Answer:[10] it slowly cools down

- [11] what happens if you raise your heater (or the sun gets warmer)?

Answer:[11] it slowly gets warmer

- [12] what happens if water gets warmer?

Answer:[12] there will be more water vapor

- [13] if there is a lot of water vapor in the air, what happens?

Answer:[13] there will be more clouds

- [14] what happens if a cloud gets in between you and the sun?

Answer:[14] it is getting colder

- [15] can cold water contain less or more dissolved CO₂?

Answer:[15] cold water can contain more CO₂

- [16] what is the solubility of CO₂ in sea water at a 100 meter depth compared to that at the surface.

Answer:[16] at least ten times more at 100 meter depth

- [17] does it make sense to burn all fossil fuels in a period of 200 years?

Answer:[17] probably not

- [18] would that influence climate change?

Answer:[18] we don't know, the effects are probably very limited!

- [19] what happened with the average global temperature, measured by satellites over the past 10 years?

Answer: [19] it went down!

- [20] what happened with the CO₂ concentration in the atmosphere over the past 10 years?

Answer:[20] it went up!

- [21] if there is a direct relation between CO₂ and rising temperatures, does the former answers make sense?

Answer:[21] obviously, not likely

- [22] should we work on a sustainable society?

Answer:[22] yes, that does make sense! There are many good reasons to do so.

- [23] should we be careful in picking the right projects to do so?

Answer:[23]yes, we should!

Moral

The set of parameters influencing the changes of the climate are very complex and intermingled. We have still very limited knowledge about how these parameters work together. The only valid answer regarding whether mankind is influencing the climate significantly or not is: "We don't know!". But it might be not green house gas emissions.

Focusing on CO₂ emission reductions could be in the end a complete wrong concept. Someone could come up with an idea for cooling down the seas. Great idea to capture multigiga tons of CO₂, but the question is, does it make sense.

Nevertheless, I would like to restate and emphasize that, working on topics supporting a sustainable society is a very good idea. But if we maintain thinking that it is related to CO₂ we might end up with a complete stupid set of solutions.