

The Global Warming

- *Should we ever let the polar ice shields melt down that would result in a sea level rise of up to 74 meters. However this is far not the most nasty effect of global warming.*

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The sea level is going to rise by the rapid melt-down of glaciers and the already observable ice decline in polar regions. Nonetheless a full melt-down of glaciers would also cause a massive encroachment in the water balance that would lead to droughts in summer due to missing melt-off water and to heavy deluges (floods) because the precipitation no longer falls as snow.

However a heavy rise in the sea level would affect even more people. Not that just tropical island paradises would vanish in the sea forever but also that many big metropolises like Shanghai, New York or Amsterdam are directly situated at the sea. With Bangladesh a whole country could disappear in the sea. If we should ever let a full melt-down of the polar ice shields happen this would mean a rise of up to 74 meters (3000 inch) in sea level with even more devastating effects. As the supplemented map material shows that would cause almost everywhere wide-ranging floodings even though the attached card material only shows a rise in 60 meters (The maximum rise will be a bit less than 74 meters as the actual sea surface area enlarges by the flooding of new areas.).

In the year 2008 the North-West and North-East passage were free of ice for the first time and therefore already navigable by ships. Even an intermittent attenuation of the gulf stream could be measured. At the moment the warm water coming from the South which is more saliniferous due to evaporation cools down near Greenland and the North Pole after it has warmed up North- and West-Europe. Cold water is more heavy (as salty water is) and has a higher capacity for oxygen. It sinks down, flows back in directed to the south and thereby keeps the marine circulation of the gulf stream in motion. However an additional freshwater inflow from melting ice tears down the salinity and thereby the density of the water which inhibits the circulation. If the polar ice shields should ever disappear then there was no sufficient cooldown and the marine circulations could break down. Such a breakdown could appear suddenly if vast amounts of freshwater would be

released at once. Melting water has the displeasing feature to accumulate unnoticeably at the bottom of a glacier where it lubricates the ice shield at the top until it rushes down into the water.

Another consequence of the global climate change is the increasing appearance of another phenomenon, El Ninjo. Usually a cold ocean current brings arid weather to the strait West of South America beyond the Andes. The (temporary) reversion of this current is called El Ninjo. It causes warm and humid airmasses to reach the West of the Andes which there effect in enormous precipitations on a geographically relatively small area causing extreme floods and landslides. The whole water that is usually drawn to the West by the monsoon to Australia, SouthEast-Asia, India and East-Africa concentrates then over a small area whereby vast continental grounds are staying arid suffering massive droughts.

A breakdown of the gulf stream evoked a cold, more arid, Russian-continental climate to Europe. The Amazon dried out and the Sahara could receive more percipitation. The North and East of Europe suffered from Siberian temperatures for the beginning at least in winter. Besides the global warming itself and the accompanying acidification of the sea an attenuation of ocean currents would have massive impact on the ecological balance of the sea. Ocean currents are supplying deeper strata with oxygen and entrain large amounts of nutritive substances for krill and phytoplankton on their rise for the beginning of the maritime food chain. The increasing oceanic acidification by solvent carbondioxid will affect free-floating as well as sedentary maritime organisms like plankton alga and corals by inhibiting them to build their skeleton (Acids dissolve calcium carbonate (scale/lime)). Many coral reefs are already now endangered by another phenomenon. At rising water temperatures the alga leave their polyps whereby they bleach, starve and die off. If the supply of deeper maritime strata with oxygen ceases, a reducing clime could establish there like this can already be observed at the coast of Namibia. Then all other live dies off there by putrefaction and poisonous, stinking hydrosulfide is released into the atmosphere. It is generally assumed that the oceans will pass out at a quadruplication of the CO₂-concentration. A doubling in the CO₂-concentration complies with a warming of about three degrees

(Plancksches Strahlungsgesetz). Up to now the CO₂-concentration has already risen from 280ppm to 380ppm in comparison to the preindustrial age whereby of course other facts like overfertilization would play their role if oceans should pass out/ tip over (a.o. non biodegradable toxins, plastic:plankton ~ 1:60)

It remains to worry that from a certain degree of global warming on, a 'point of no return' could be reached. An advanced climate change could cause damage to forests (northern coniferous forests as well as tropical forests) by droughts, pests, fire and storms whereby massive amounts of carbon dioxide would be released. Woods are important carbon sinks. Even though the up-to-now positive influence of the CO₂ intake-capacity of the sea could be exhausted from a certain point on. Melted polar regions reflect less sunlight and would thereby contribute to a continued global warming. The thawing of permafrost soil in Siberia and Northern America would lead to the emanation of vast amounts of methane, a highly potent greenhouse gas. On the other hand 'methane ice' assembled by natural processes over millions of years might escape by changing ocean temperatures and currents.

Another highly nasty effect of a progressed global warming could be in the renewed emergence of an ozone hole near the polar regions. A warming of deeper atmospheric layers causes thereby a cooldown of higher layers, i.e. the stratosphere. Catastrophe can not rise because it is held down by greenhouse gases. The formation of ice clouds however promotes the decomposition of ozone. Once we have already had a dangerous ozone hole caused by chlorofluorocarbons used as propellants in aerosol cans. That time flocks of sheep in New Zealand have perished because they have gone blind by massive UV-radiation. This time a new

climate induced ozone hole could also hit Northern Europe.

[world maps for a sea level rise in 60m](#)

Expected sea level rises are a precisely predictable effect of global warming though far not the most pernicious one.

The assumption exists that all previous periods of mass mortality at the end of every aeon where more than 90% of all species have died out are attributable to an increased greenhouse effect (The last mass extinction on the contrary has been caused by the impact of a meteorite.). The superfluous CO₂ has thereby arrived by an increased volcanic activity over Millions of years in the atmosphere. If we burnt all available fossil energy resources that could result in a CO₂ concentration that is higher than in previous aeons, possibly unsuitable for many forms of higher life as they exist nowadays (see among other things the ozone hole, a possible pass out of the oceans, etc.). Only for the disappearance of Dinosaurs we have an alternative theory via the impact of a comet.

Show your support for an effective climate mitigation agreement in Copenhagen this December! The worst effects can still be prevented. Confining the global temperature rise at about two degrees is considered unperilous and ethical. However already a rise in 3 degrees would most likely lead to the collapse of important ecosystems like wide parts of the Amazon which could in turn trigger a chain reaction shifting us towards a super-greenhouse [7]. A stabilization of the CO₂ concentration at 450ppm which is consistent with a reduction of 50%-85% in ghg-emissions until 2050 could even be achieved with less than 0,12% of the annual

economic growth provided that sufficient technological progress is achieved. However at the moment we can not even be sure that all our leaders will show up in person on the climate conference. Promises made up to now are far not sufficient. Appointees do not have sufficient mandates. What our politicians will do is going to depend on the support in the population!

[support the climate conference](#)

References & current Links

[Greenpeace](#)

[e3g - Change Agents for Sustainable Development Copenhagen Climate Council Partners](#)

[Nabu](#)

[Global2000](#)

[BUND für Umwelt und Naturschutz](#)

[Climate Alliance](#)

[CAN - Climate Action Network](#)

[1] [UNEP Climate Change Science Compendium 2009 Klimawandel übertrifft schlimmste Szenarien \(klimainfo.ch\)](#)
[Klimawandel übertrifft schlimmste Szenarien \(epo.de\)](#)

[2] [IPCC - Intergovernmental Panel on Climate Change](#)

[3] [Homepage of the climate conference of Copenhagen](#)

[4] Potsdam institute for climate research
[*Potential Anthropogenic Tipping Elements in the Earth System seven quintessences on climate change Climate Change and Poverty*](#)

[5] [Largest CO2 Emitter-Countries](#)

[6] [calculation of sea level rise, Manfred Hiebl](#)

[7] [Global 2000: SOS Klima, Hintergrundpapier](#)

[8] other articles from www.elstel.com!