



Which economic impacts does a weakening of the Atlantic thermohaline circulation have?

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In impact studies, global warming is often considered as a large-scale, steadily occurring climate change. Many impacts however will occur specifically in certain regions, and will specifically affect certain ecosystems and ecosystem services. In addition, the continuing climate change might lead to abrupt climate change phenomena, recently referred to as "tipping points". Here we focus on one of these tipping points, namely the thermohaline circulation (THC) in the Atlantic Ocean. This circulation transports vast amounts of heat northwards, which significantly contributes to the mild climate in Europe. From climate models and observations, a risk has been identified that the THC might weaken in the near future, and it cannot be excluded that this weakening becomes severe later on. The talk focuses on the impacts of such a THC weakening on marine and terrestrial ecosystems and human society in the region of Europe. Economic impacts are explicitly addressed and quantified, including fisheries, agriculture, and impacts of an additional sea level rise caused by a THC weakening.