Climate models underestimate costs to future generations
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Coordinating Lead Author of one key chapter on policy instruments in the Working Group III of the Fifth Assessment Report of the UN (IPCC) climate report that is scheduled to be presented on Sunday 13 April in Berlin.

'Our purpose with this article in Nature is to discuss models that will enable us to calculate a necessary minimum level for the global environmental damage of emitting an additional ton of carbon dioxide. This cost is very relevant given the attempts of the White House to raise the so-called social cost of carbon in the U.S. to 37 dollars per ton. All U.S. authorities (such as the Departments of Energy or Transport) must take this cost into account in calculations of investments in roads and energy supply,' says Sterner.

The social cost of carbon correspond to the money saved when damages due to climate change are avoided as a result of the countries of the world undertaking policy that leads to reduced emissions of CO2.

'Sweden has already gone further than what the U.S. is discussing, since we have a CO2 tax of about USD 150 per ton, or SEK 1 per kilo, of CO2 emissions from transports and energy,' says Sterner.

The article in Nature is entitled Improve Economic Models of Climate Change. The authors point to several weaknesses of the most commonly used climate models. However, they write that the models are useful, notwithstanding the significant uncertainties – since they do provide a minimum level and thus enable politicians to reduce the effects of climate change to some extent.

Also, the authors continue, modelers, economists and natural scientists must leave their ivory towers and cooperate with each other in order to identify research gaps and weaknesses, with a view to continuously improve their models. Economic
climate models need to be updated more often to keep up with new research findings. If this is not done, the damage caused by CO2 emissions will be underestimated also in the future, which means that political decision-making around the world will continue to underestimate the true economic effects of climate change.

More information:
www.nature.com/news/global-war ... imate-change-1.14991

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