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Is geo-management a defensible response to climate change? An NGO perspective

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As understanding and acceptance of the urgency of addressing climate change continue to grow, interest (and, in some cases, faith) in our potential to ‘engineer’ planetary systems to our supposed advantage is also gaining currency. Whether premised on a perceived ability to control incident solar radiation, manipulate atmospheric conditions or to stimulate carbon sequestration in the deep oceans, geo-engineering proposals share the common assumptions that deliberate human interventions in the climate system are a feasible, predictable and, at some stage, desirable or necessary response to counter the major unintentional perturbations of climate change and ocean acidification. That such fundamental interventions are being debated at all is a measure of desperation at the failure so far to bring greenhouse gas emissions under control, combined with the assumption that we either can not or will not act in time to prevent increasingly severe impacts.

In reality, the consequences (whether positive or negative) of geo-engineering ‘solutions’ are subject to enormous uncertainties and indeterminacies. Aside from the very real potential for unforeseen and possibly irreversible unintended side-effects, geo-management schemes may not even achieve their intended aims and could, in some cases, even exacerbate the very problem they are deployed to address. In short, they may be no ‘solutions’ at all. At the same time, and despite reassurances to the contrary, speculation that such geo-technological fixes may be just over the horizon will inevitably draw attention and incentive away from the deployment of emission reduction measures at source when they are so urgently needed. In addition to the superficial attractiveness to decision-makers and society as a whole of delegating responsibility for addressing climate change to others, albeit a handful of geo-engineers, the promise of profit from carbon credits, even if only in the informal sector, could well result in increasing pressure for early commercial deployment.

Given that the intention of geo-management is, by definition, to bring about deliberate, open-ended changes to the very planetary systems on which we rely for survival, and given the likelihood that any benefits and harm which result will not be distributed equitably between nations, to deploy such schemes as a contribution to climate change mitigation would be a wholly unwise and unsustainable response to the current crisis. It is vital that any proposals for research utilizing geo-management techniques be evaluated using a consistent and precautionary set of rules in order to ensure they represent a legitimate contribution to scientific knowledge.