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How to Reach Net Zero Emissions? On the Permissibility of Negative Emission Technologies and the Danger of Moral Hazards

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Abstract : In order to reach the goal of the Paris Agreement to not overshoot 1.5°C of warming above pre-industrial levels, various countries including the UK and Switzerland have committed themselves to net zero emissions by 2050. The employment of negative emission technologies (NETs) is very likely going to be necessary for meeting these national objectives as well as other internationally agreed climate targets. NETs are methods of removing carbon from the atmosphere and are thus a means for addressing climate change. They range from afforestation to technological measures such as direct air capture and carbon storage (DACCS), where CO2 is captured from the air and stored underground. As all so-called geoengineering technologies, the development and deployment of NETs are often subject to moral hazard arguments. As these technologies could be perceived as an alternative to mitigation efforts, so the argument goes, they are potentially a dangerous distraction from the main target of mitigating emissions. We think that this is a dangerous argument to make as it may hinder the development of NETs which are an essential element of net zero emission targets. In this paper we argue that the moral hazard argument is only problematic if we do not reflect upon which levels of emissions are at stake in order to meet net zero emissions. In response to the moral hazard argument we develop an account of which levels of emissions in given societies should be mitigated and not be the target of NETs and which levels of emissions can legitimately be a target of NETs. For this purpose, we define four different levels of emissions: the current level of individual emissions, the level individuals emit in order to appear in public without shame, the level of a fair share of individual emissions in the global budget, and finally the baseline of net zero emissions. At each level of emissions there are different subjects to be assigned responsibilities if societies and/or individuals are committed to the target of net zero emissions. We argue that all emissions within one's fair share do not demand individual mitigation efforts. The same holds with regard to individuals and the baseline level of emissions necessary to appear in public in their societies without shame. Individuals are only under duty to reduce their emissions if they exceed this baseline level. This is different for whole societies. Societies demanding more emissions to appear in public without shame than the individual fair share are under duty to foster emission reductions and are not legitimate to reduce by introducing NETs. NETs are legitimate for reducing emissions only below the level of fair shares and for reaching net zero emissions. Since access to NETs to achieve net zero emissions demands technology not affordable to individuals there are also no full individual responsibilities to achieve net zero emissions. This is mainly a responsibility of societies as a whole.

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