Source of renewable energy for sustainability

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As highlighted in the previous sections, while renewable energy sources are a strong enabler of climate action, as well as a number of other SDGs, they can also have a range of negative social, environmental and economic impacts. Consequently, there are several significant conclusions to draw that affect how we should think about climate policy:

Ignoring the potential negative impacts of RESs in the singular pursuit of net zero carbon emissions has the potential to result in disastrous consequences and the perverse outcome that solutions intended to increase the sustainability of humankind actually have the opposite effect. We need to heed the lessons of history to avoid another "hole in the ozone layer" by trying to "fix" a specific issue without considering all potential consequences in an integrated fashion. For policy makers, this can be combated by more cross-agency participation in the management of renewable energy zones and planning, so that trade-offs of a proposed solution can be more apparent.

RESs have enabling relationships with a much broader range of SDGs, not just climate action (SDG 13) and affordable and clean energy (SDG 7), which, if ignored, can significantly underestimate their positive impact on sustainability. This includes the potential to improve the living conditions of communities through the creation of employment opportunities, improved access to resources or reduced health risks, as well as through supporting the biodiversity of the surrounding environment. While there is mounting political pressure to deliver on decarbonization targets, these synergies are at risk of not being capitalized on, and the multiple benefits of implementing renewable energy projects need to be framed in a more holistic way.

The enabling and inhibiting relationships between renewable energy sources and the SDGs identified in this paper provide a step toward the information needed to develop climate policy and associated action plans that ensure that we can achieve net zero emissions by implementing RESs in a sustainable manner. This will enable us to address the climate crisis in a manner that avoids mistakes of the past and creates a positive future for our planet.

In the original version of this article, the middle and family names of Sam Anthony Culley were incorrectly structured. The name was displayed correctly in all versions at the time of publication. The original article has been corrected.

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