There might be ways to exploit renewable energy and also allow for protecting biodiversity

October 29 2015

Global expansion of bioenergy possesses serious threats to biodiversity, whereas solar energy could have potential for power provision with limited impacts on biodiversity.

Deployment of renewable energy is expanding all over the world. There is high competition between alternative land uses, and conflicts over limited land are likely to emerge between biodiversity conservation and expanded deployment of renewable energy.

Dr Andrea Santangeli in the University of Helsinki, Finland, and his colleagues in the UK have explored global expansion of land use for renewable energies versus biodiversity protection. They discovered that the conflicts and opportunities largely depend on the type of energy at stake, with bioenergy strongly conflicting with biodiversity protection while generating only limited power at a global level.

Conversely, solar energy and, to a lower degree, wind energy, may provide relatively large power supplies with minimal impacts on biodiversity.

"We found that using a very limited amount of land for generating energy from the sun can yield large amounts of power without impacting the best areas for biodiversity protection. However, this result only holds when restrictions on energy storage and transport are largely ignored,

which is unrealistic in the short term. Indeed, these findings highlight a major opportunity when political will and improved technologies make it possible to harvest renewable energy without such restrictions," says Andrea Santangeli.

Santangeli and colleagues also highlight that in the near future renewable energy most likely will not be able to make a very large contribution towards our total global energy consumption. So, other forms of energy still need to be considered.

More information: Andrea Santangeli et al. Global change synergies and trade-offs between renewable energy and biodiversity, *GCB Bioenergy* (2015). DOI: 10.1111/gcbb.12299

Provided by University of Helsinki

Citation: There might be ways to exploit renewable energy and also allow for protecting biodiversity (2015, October 29) retrieved 26 April 2024 from https://phys.org/news/2015-10-ways-exploit-renewable-energy-biodiversity.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.