

Relation between biodiversity – climate – human welfare in context globalized bioeconomy

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Abstract

Continued loss of biodiversity may compromise, on long term, the ability of ecosystems to adjust the climate, respectively, can accelerate or amplify global warming and lead to further changes, unforeseen and potentially irreversible in the Earth System.

Based on an extensive documentation, this paper aims to bring attention to the interdependence between biodiversity, climate and human welfare in globalized context.

Transforming ecosystems and exploitation of natural resources have resulted in substantial gains for human being and economic development. However, the benefits have not been equitably distributed, and the costs of changes in biodiversity have been either not recognized or not quantified. This is because ecosystems tend to be evaluated by people only in terms of direct benefits offered to supply services and cultural (e.g. food, fiber, respectively, recreational and aesthetic) which is a component relatively low of biodiversity. However, providing these services is backed by support services and regulation (e.g. primary productivity, respectively, pollination and climate regulation) for which the value of biodiversity is less visible, but no less important.

Ecosystem degradation, biodiversity loss and consequent changes in ecosystem services have also led to a decline in human well-being, in some groups, by exacerbating poverty and increasing social inequalities and regional disparities.

Interdependencies between biodiversity, ecosystems, human livelihoods and climate system, makes possible to approach the biodiversity loss, ecosystem degradation, sustainable development, climate change and their impacts, together.

Keywords: *biodiversity, ecosystems, climate change, human welfare*