

Biodiversity, an essential lever in the fight against climate change, especially with regard to forests

“Biodiversity-Productivity relationships are key to nature based-climate solutions” is an article published in the journal Nature in June 2021. Written by several scientists¹, it shows the importance of protecting biodiversity in order to reduce greenhouse gas emissions within a specific territory.

#1

Current environmental policies tend to view climate change as the cause of the ecological crisis, and the loss of biodiversity as a mere consequence of this crisis. However, biodiversity in fact has significant potential for reducing greenhouse gas emissions in its own right. Maintaining tree diversity could thus prevent a 9 to 39% reduction in primary productivity – which represents the additional production of biomass in various different territories – over the next 50 years. Nature-based solutions must therefore rely on ecosystems and integrate biodiversity as a climate stabilisation factor.

#2

While protecting and restoring forests in biologically diverse ways can help to mitigate climate change, 45% of countries with reforestation policies choose to focus on monoculture. In France, there are still no unambiguous instructions defining the diversity rate to be achieved through reforestation policies. It is not only the total area of forests but their status and quality that therefore need to be taken into account. The study of the characteristics of different tree species and their interactions is essential.

#3

The effects of tree diversity on forest productivity at the national level are intimately linked to the economic value of avoiding carbon emissions. The countries that will suffer the greatest economic damage from greenhouse gas emissions are those where climate change mitigation could make a significant contribution to maintaining primary productivity by safeguarding tree diversity. This is particularly the case for the United States and China – the two largest emitters – which therefore have a particular interest in promoting the preservation of the diversity of ecosystems today. To have a real impact, this effort must, of course, not divert the efforts being made to achieve a drastic reduction in emissions from industry and the energy sector.

The opinion of Pauline Bureau, the Vice-Chair of La Fabrique Écologique.

“Given its major interest for the mitigation of climate change, it is essential to rethink policies for maintaining and developing forest biodiversity.”

¹ Akira S. Mori, Laura E. Dee, Andrew Gonzalez, Haruka Ohashi, Jane Cowles, Alexandra J. Wright, Michel Loreau, Yann Hautier, Tim Newbold, Peter B. Reich, Tetsuya Matsui, Wataru Takeuchi, Kei-ichi Okada, Rupert Seidl and Forest Isbell