

# The impact of photovoltaic panels on tea growth

Does photovoltaic shading affect plant growth?

... Shading from photovoltaic arrays on the roof of greenhouses can have a positive or negative effect on the growth of the cultivated plants, depending on the period during which the cultivation is carried out [11,33,34].

Can agrivoltaics be used in tea gardens?

Agrivoltaics, a method to combine agriculture and solar photovoltaics in the same plot of land, is also being considered for tea gardens. Tea garden managers will have to factor in wildlife movement spaces to sustainably integrate solar installations in such tea estates, note experts.

How does shade affect agrivoltaic production?

Additionally, leveraging shade for enhanced food production within agrivoltaic systems effectively offsets the impact on arable land caused by photovoltaic structures (such as panel supports and electrical cabins), estimated to occupy around 15-20% of the total agrivoltaic surface.

Do PV panels affect biodiversity?

Contrary to other types of renewable energies, such as wind and hydroelectricity, evidence on the effects of PV panels on biodiversity has been building up only fairly recently.

Do solar photovoltaic panels promote vegetation recovery?

Liu Y, Zhang R, Huang Z, Cheng Z, Lopez-Vicente M, Ma X, et al. Solar photovoltaic panels significantly promote vegetation recovery by modifying the soil surface microhabitats in an arid sandy ecosystem. *Land Degrad Dev.* 2019;30:2177-86. Lovich JE, Ennen JR. *Wildlife Conservation and Solar Energy Development in the Desert Southwest.*

Do photovoltaic installations affect biodiversity?

However, the currently available evidence regarding the effects of photovoltaic installations on biodiversity is still scarce. More research is urgently needed on non-flying mammals and bats as well as amphibians and reptiles. Solar thermal panels and floating PV installations should also be further investigated.

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