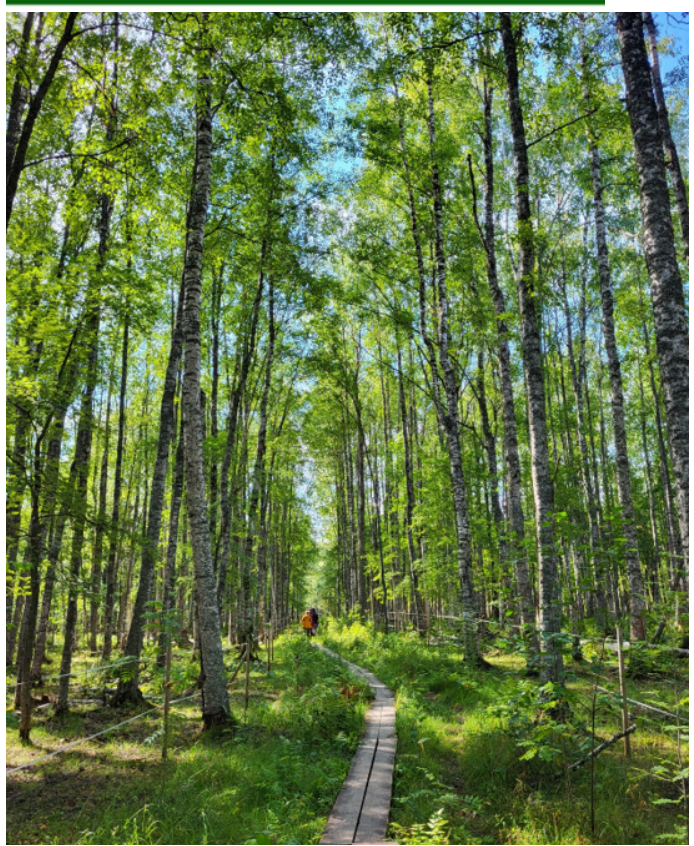




# Agroforestry Ecosystem Services

[www.af4eu.eu](http://www.af4eu.eu)



Outdoor activities in forest grazing area in the city of Joensuu, Finland (Photo: Tanja Kähkönen).

Ecosystem services can be classified in four categories: provisioning, regulating, supporting and cultural services. All the ecosystem services are provided in varying degrees in different agroforestry systems. Provisioning services include products that we can obtain from the ecosystem. Regulating systems refer to regulation of ecosystems and benefits associated with it. Supporting services support existence of other ecosystem services. Cultural services include for instance spiritual, aesthetic and recreational benefits.

Besides providing food, wood material and energy as provisioning services, and recreational and landscape benefits as cultural services, agroforestry provides especially regulating and supporting ecosystem services. In agroforestry, benefits from ecosystem services strengthen the structures of the system itself, for instance windbreaks improve habitats for livestock and pollinating insects, reduce erosion and increase crop production. In riparian buffers for instance nutrient leaching and water erosion from the surrounding land area is reduced, new habitats for increasing biodiversity are created, water quality is improved, and shade is created which creates suitable habitats for fishes during summer heats, while reducing the overgrowth of the riverbed. With forest grazing, biodiversity is enhanced, productivity linked to healthy animals whose welfare is increased by the tree from high temperatures and wind speed, and wider pressure to ecosystem is decreased when the same land area is used for wood production and animal production.

With all the ecosystem benefits, agroforestry has potential as a regional risk management tool for climate change, for instance as trees balance temperatures through evaporation and absorption of water, agroforestry management practices have a significant potential to enhance temperature regulation locally. The development of nature value based markets in the future may create new business for agroforestry as a farming management practice.

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