

Forests provide many ecosystem services, i.e biodiversity, hydrological protection and climate change (CC) mitigation, crucial for our planet. To allow forests to play such a key role it is important to implement Sustainable Forest Management (SFM), i.e. managing forests meeting the requirements of the 3 pillars of sustainability. To reach the goal of SFM it is crucial to assess the impacts related to forest management. These are unavoidable, but assessing and understanding their main drivers will help to develop mitigation actions and Best Management Practices (BMPs). There is much to do in this topic. The majority of previous studies had a sectorial approach, instead forests are complex systems and should be evaluated with a wider perspective. Moreover, the majority of literature has focused on coniferous.

Instead, climate change scenarios forecast higher impacts of CC on coniferous than on broadleaf species, like beech. Thus, the importance of beech silviculture will probably increase, while instead there is still a knowledge gap about the comprehensive implications of forest management on the functioning of these forests.

The goal of AlmSusFor is properly to carry out a comprehensive evaluation of the impacts of forest management on beech forests. Research on the impacts to soil, residual stand, regeneration, ecological processes and biodiversity of the typical forest management system of beech high stands in Mediterranean (Italy) and Central European (Poland) contexts will be carried out, identifying the current bottlenecks in terms of silvicultural treatment and harvesting systems. In this way it will be possible to establish a solid and reliable base for the development of BMPs. Knowledge regarding forest operations will be merged with ecological one, to develop ground-breaking research activities, with the aim of contributing to the contemporary challenges of the forest sector, which are complex and tough, but for sure crucial for the future of our planet.