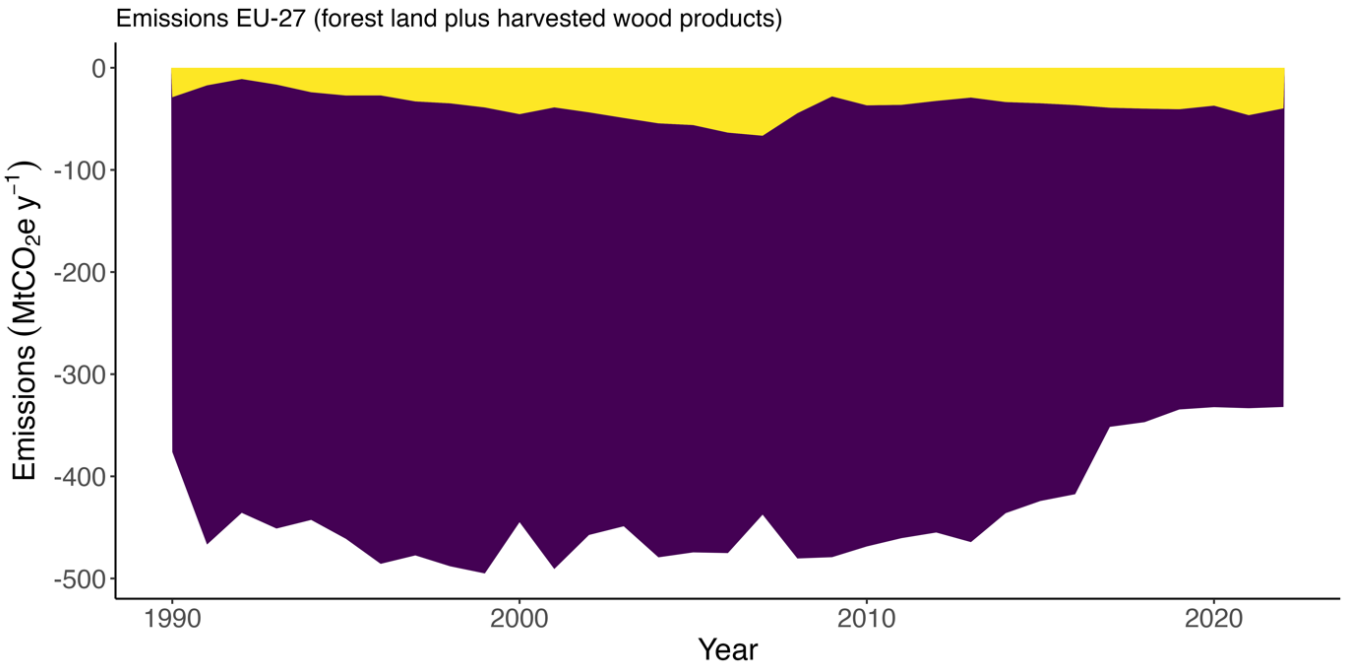
Supporting EU Climate Goals through Improved Satellite based Monitoring and Modelling

Mirco Migliavacca, Giacomo Grassi, Alessandro Cescatti, Ana Bastos, Guido Ceccherini, Philippe Ciais, Greet Janssens-Maenhout, Emanuele Lugato, Miguel D Mahecha, Kimberly A. Novick, Josep Peñuelas, Roberto Pilli, Markus Reichstein, Valerio Avitabile, Pieter S.A. Beck, José I. Barredo, Giovanni Forzieri, Martin Herold, Anu Korosuo, Nicolas Mansuy, Sarah Mubareka, Paul Rougieux, Rene Orth

European Commission

Motivation

Widespread decline of forest carbon sink in Europe\

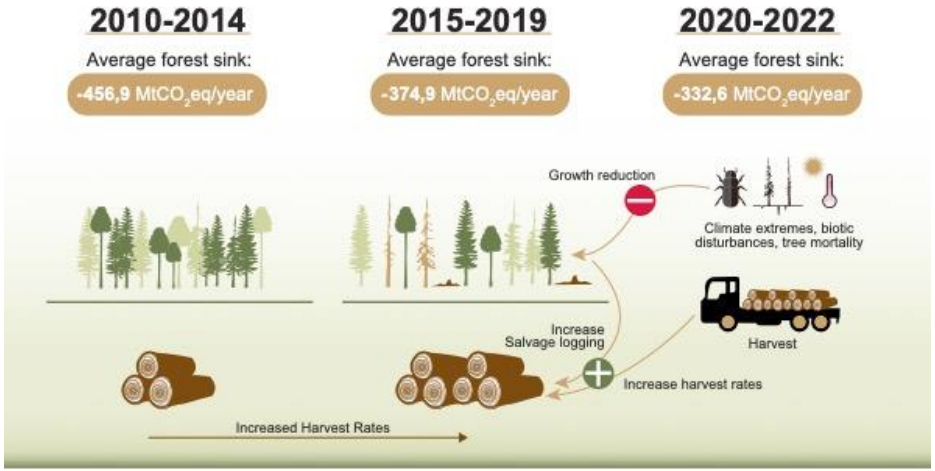


European Commission

How can research support climate policies?

What are the causes?

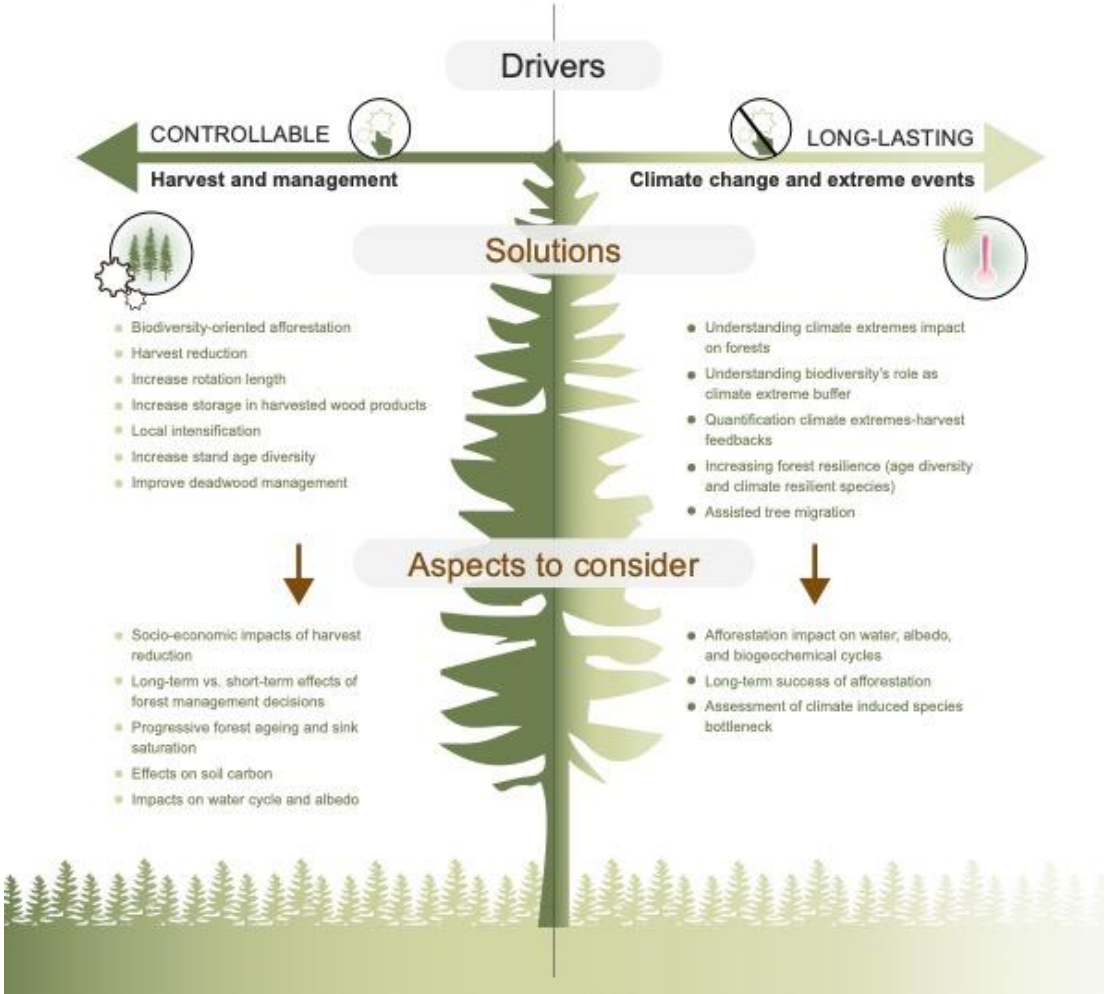
Migliavacca et al.,2025 Nature (in press)

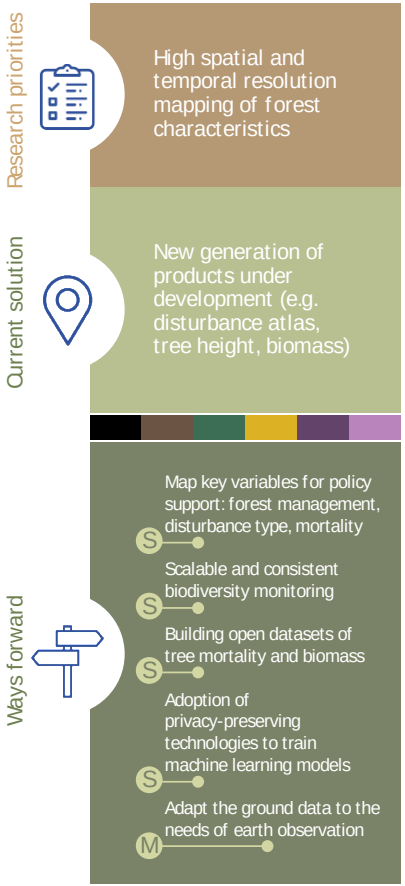


How much is the importance of long-lasting vs controllable (mgmt) drivers?

European Commission

Is it possible to reverse the trend?

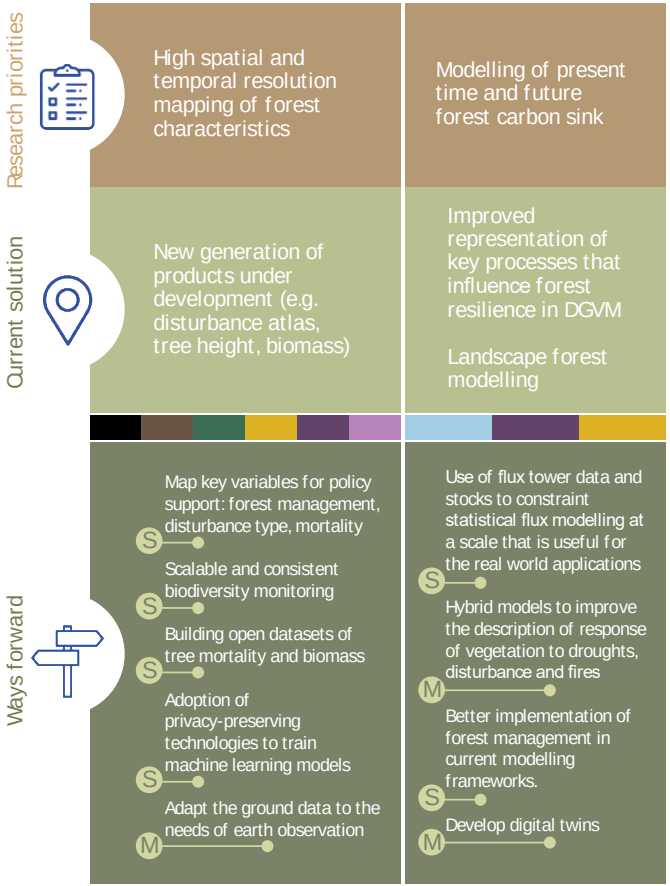




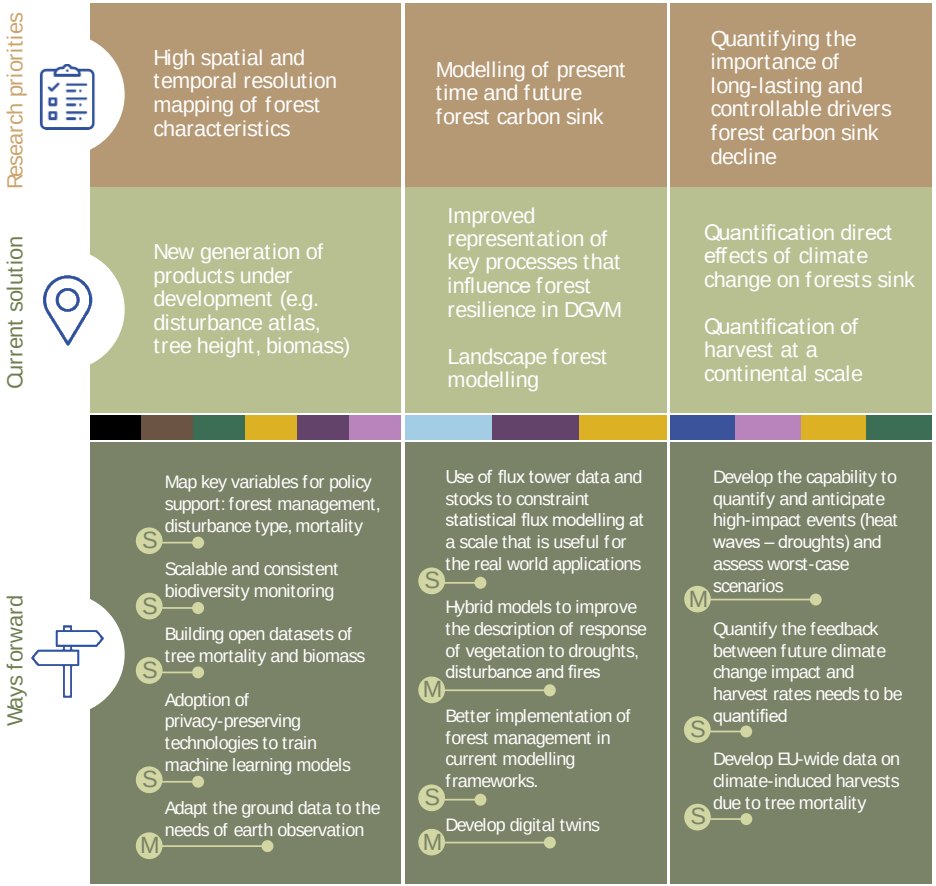
LULUCF | European Climate Law | Soil Monitoring Directive Proposal | Nature restoration law | Biodiversity strategy | Carbon Removals Certification | Forest monitoring law | Forest strategy | S Short-term (1 to 3 years) | M Medium-term (3 to 5 years) | L Long-term (<5 years)

Migliavacca et al., Nature (in press)

European Commission

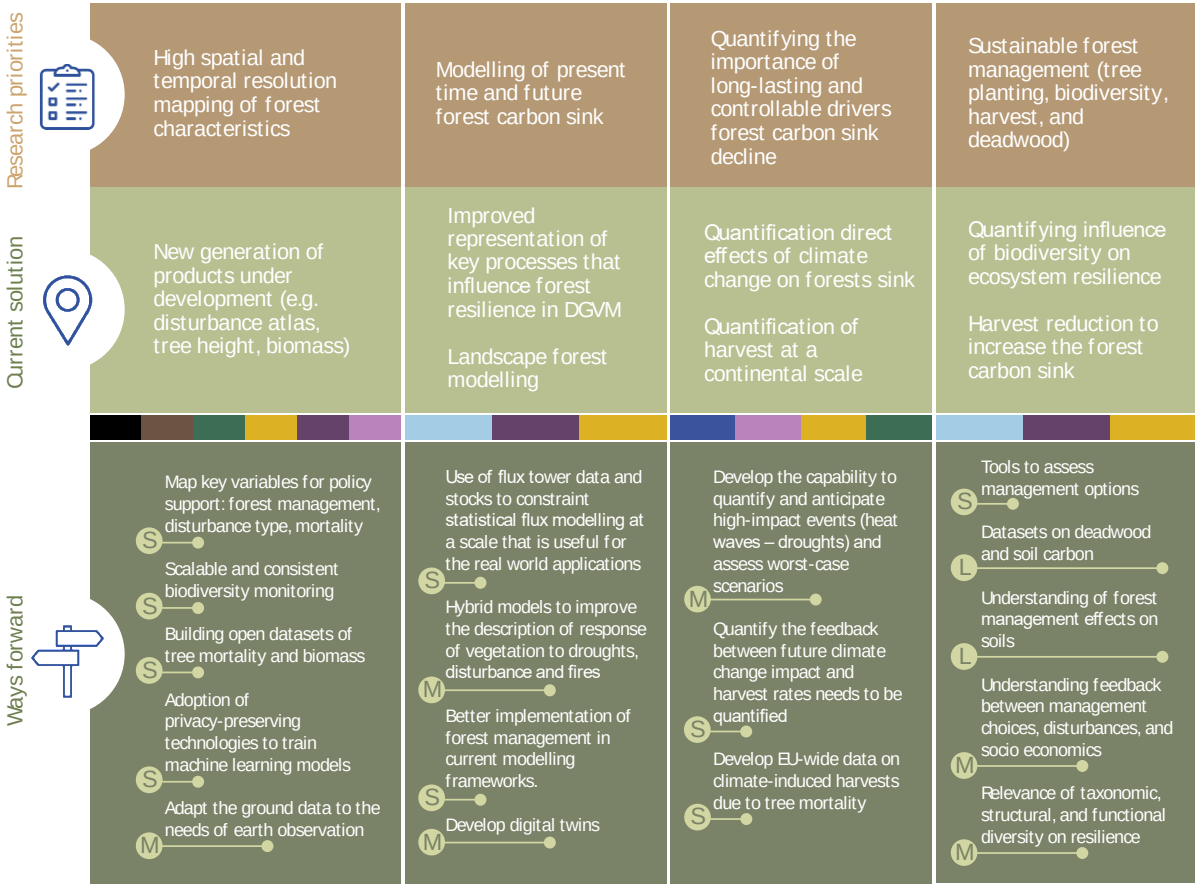


Migliavacca et al., Nature (in press)

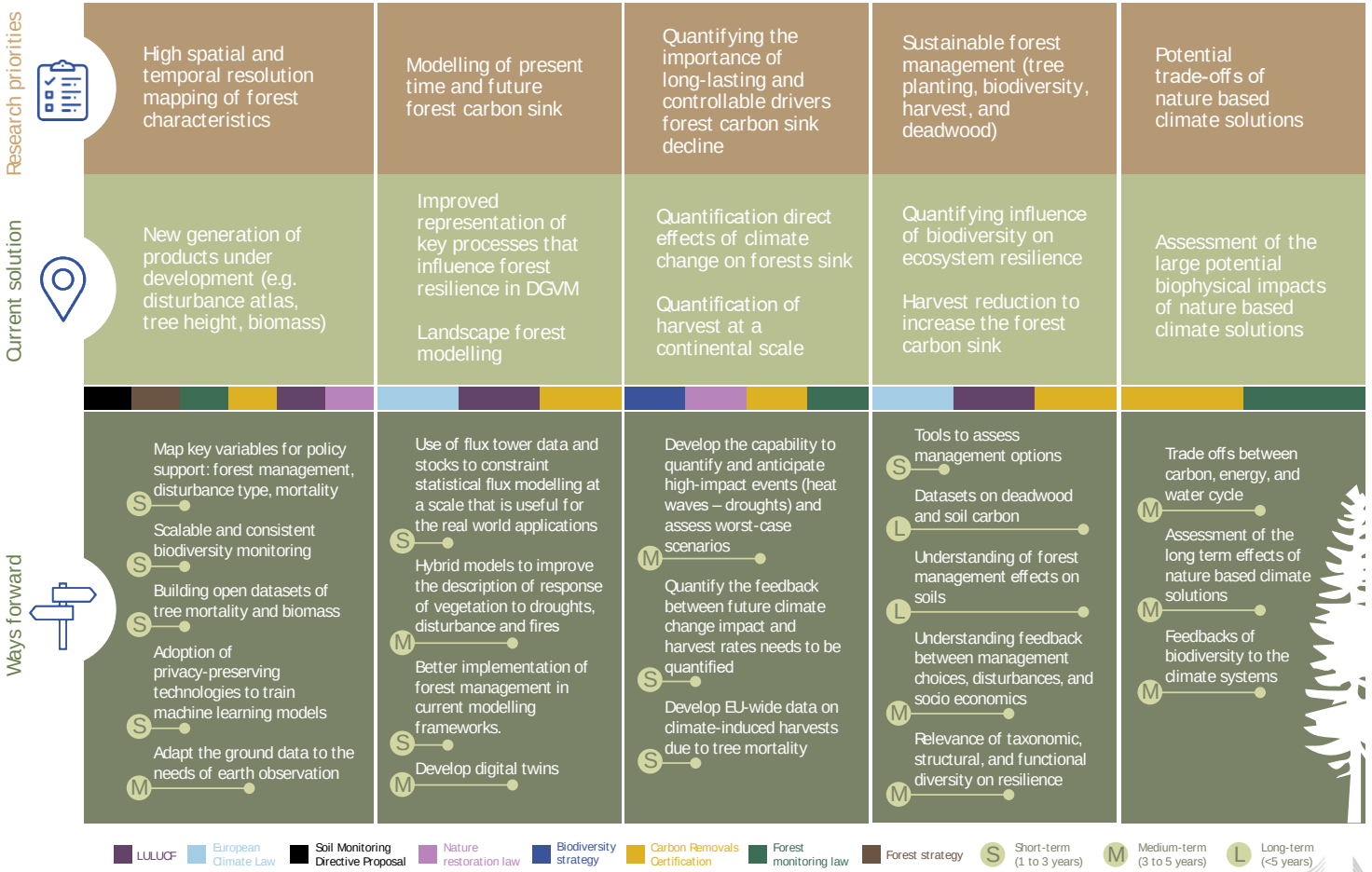


Migliavacca et al., Nature (in press)

European Commission



Migliavacca et al., Nature (in press)



Migliavacca et al., Nature (in press)

How can research support climate policies?

Timely and EU-wide consistent spatially resolved information on state of forest and carbon cycle dynamics

Understanding and timely predicting the relative contribution of the long-lasting vs controllable drivers

Develop tools to assess potential trade offs in NbCS and forest management decisions