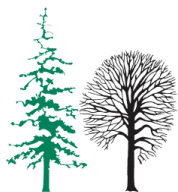


Vpliv podnebnih sprememb na globalno potencialno razširjenost rjavenja borovih iglic, *Lecanosticta acicola*

Nikica OGRIS, Rein DRENKHAN, Petr VAHILIK,
Thomas CECH, Martin MULLETT, Katherine TUBBY

16. Slovensko posvetovanje o varstvu rastlin, 6. marec 2024, Bohinjska Bistrica

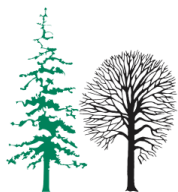


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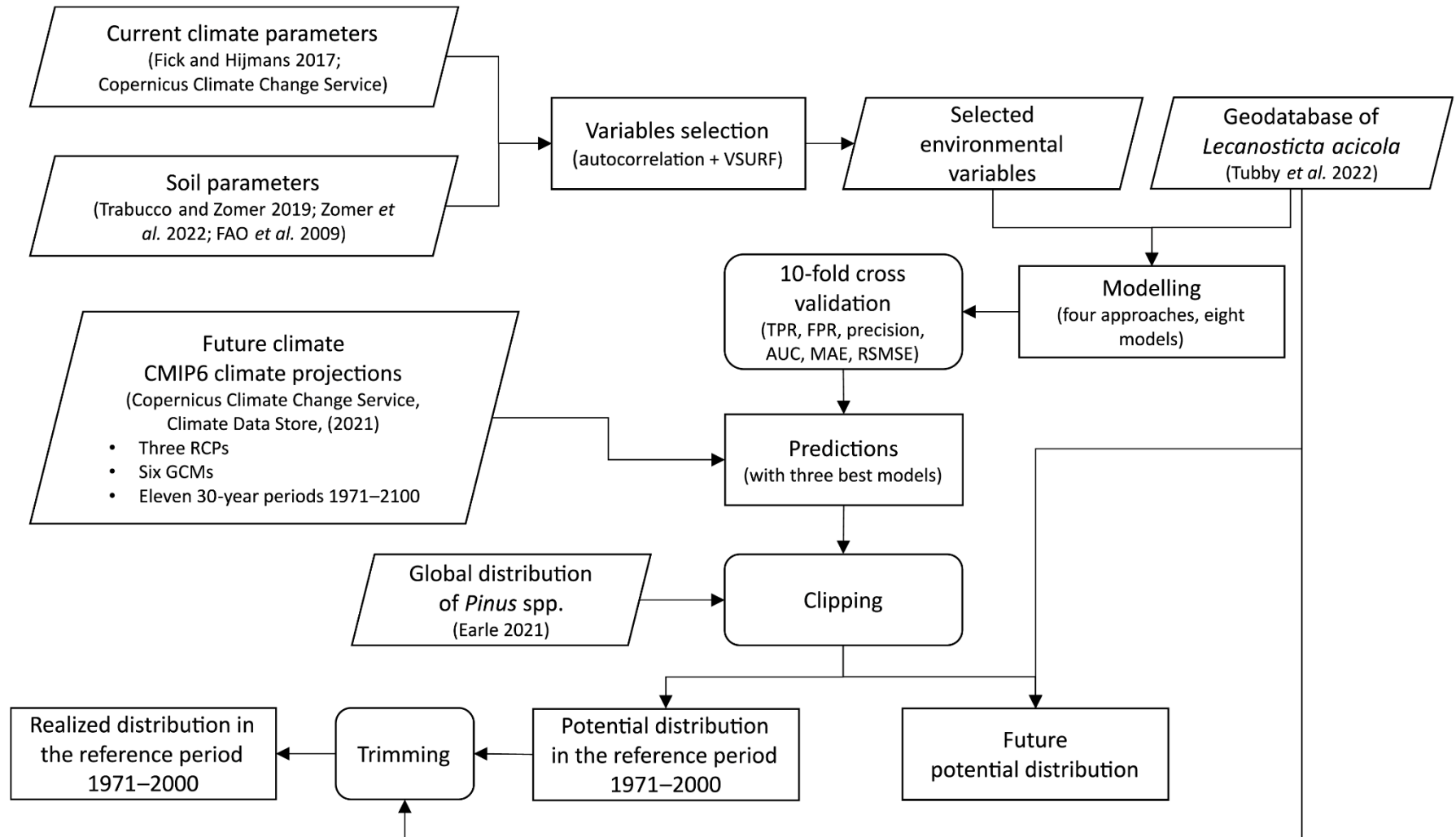


Uvod

- Bolezen izvira iz Severne Amerike in je bila vnesena v Evropo in Azijo.
- Intenziteta poškodb in razširjenost bolezni se je v zadnjih dveh desetletjih v Severni Ameriki in Evropi povečala kot odziv na podnebne spremembe.
- Cilj: napovedati potencialno razširjenost rjavenja borovih iglic glede na različne scenarije podnebnih sprememb 2001-2100.

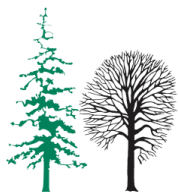


Metode dela

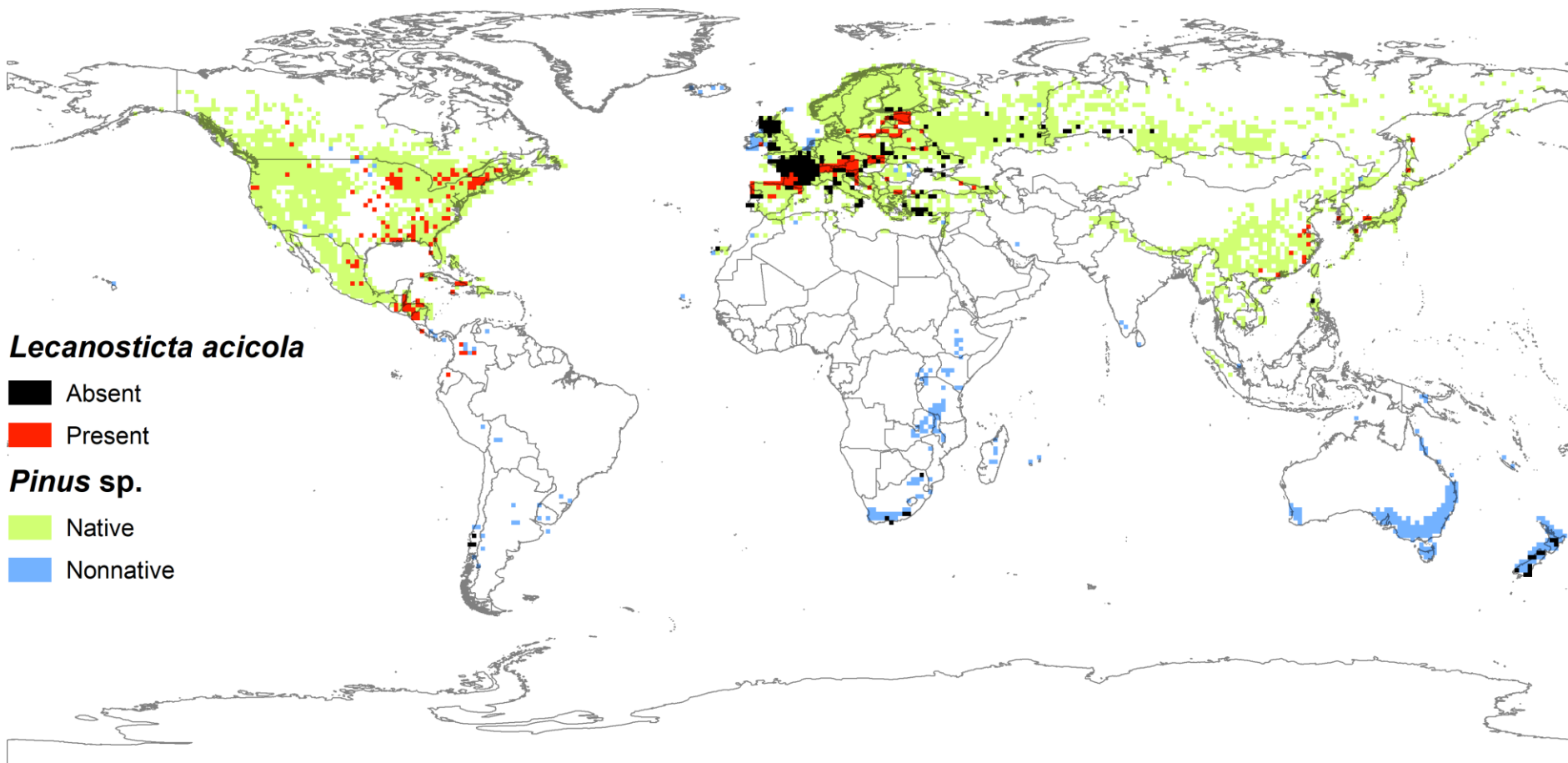


Zanesljivost modela

- Zanesljivost ansambla modelov je bila zelo dobra,
 - tj. z visoko natančnostjo (0,87) in
 - zelo visokim AUC (0,94).



Dejanska razširjenost

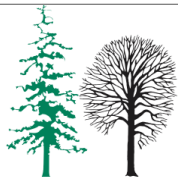


Lecanosticta acicola

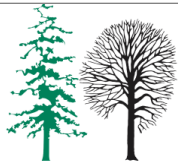
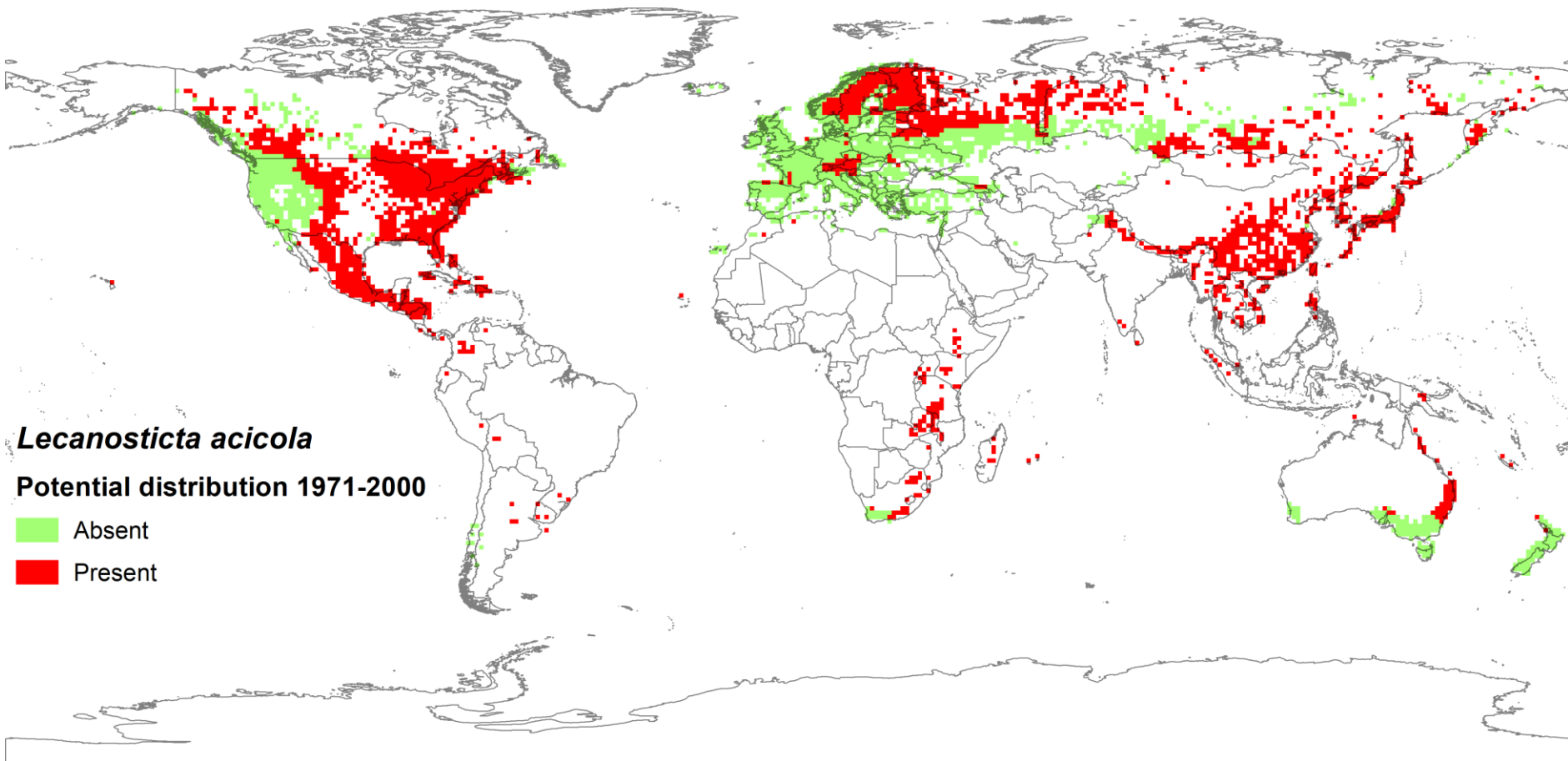
- Absent
- Present

Pinus sp.

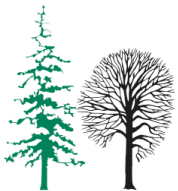
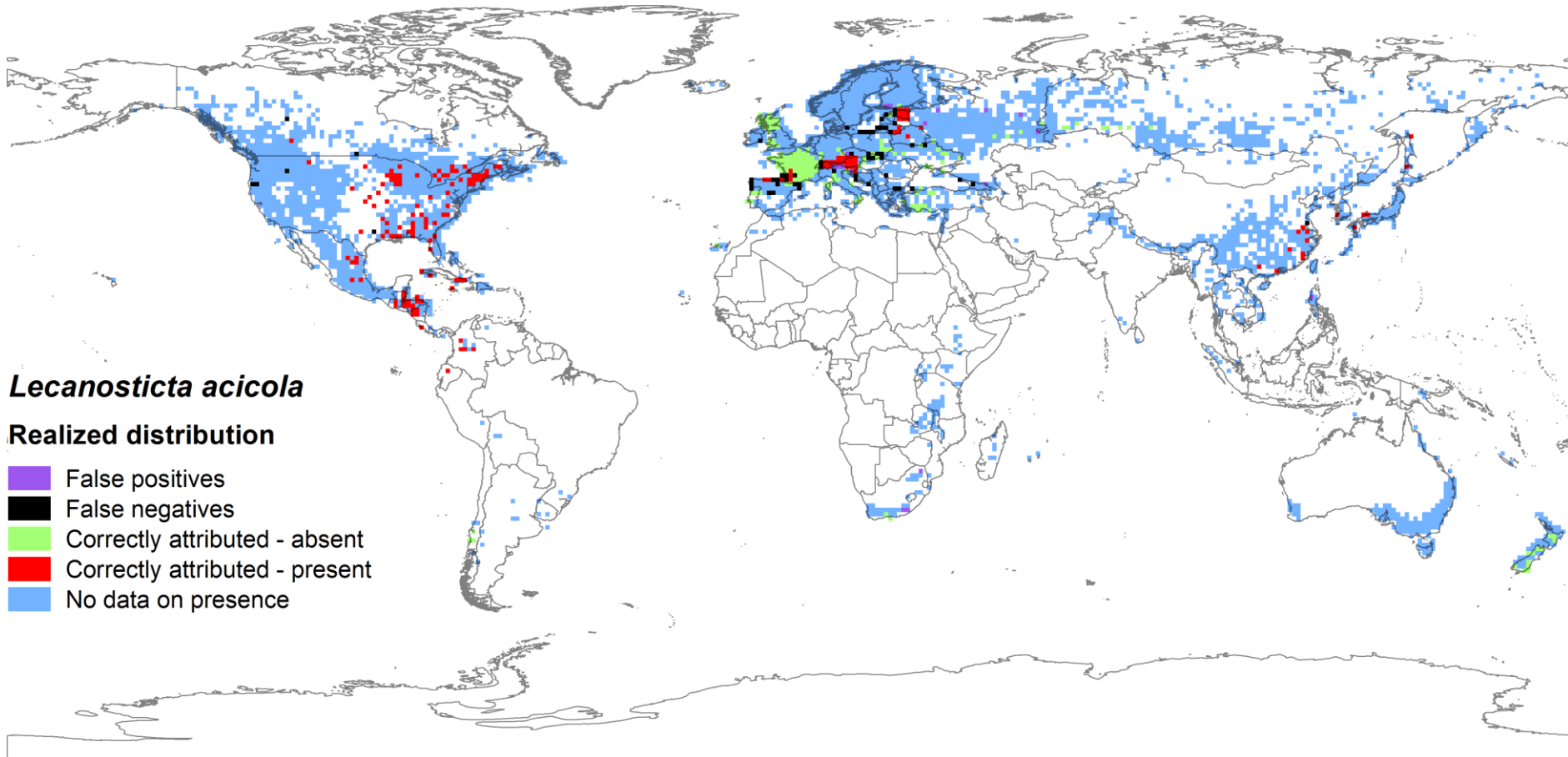
- Native
- Nonnative



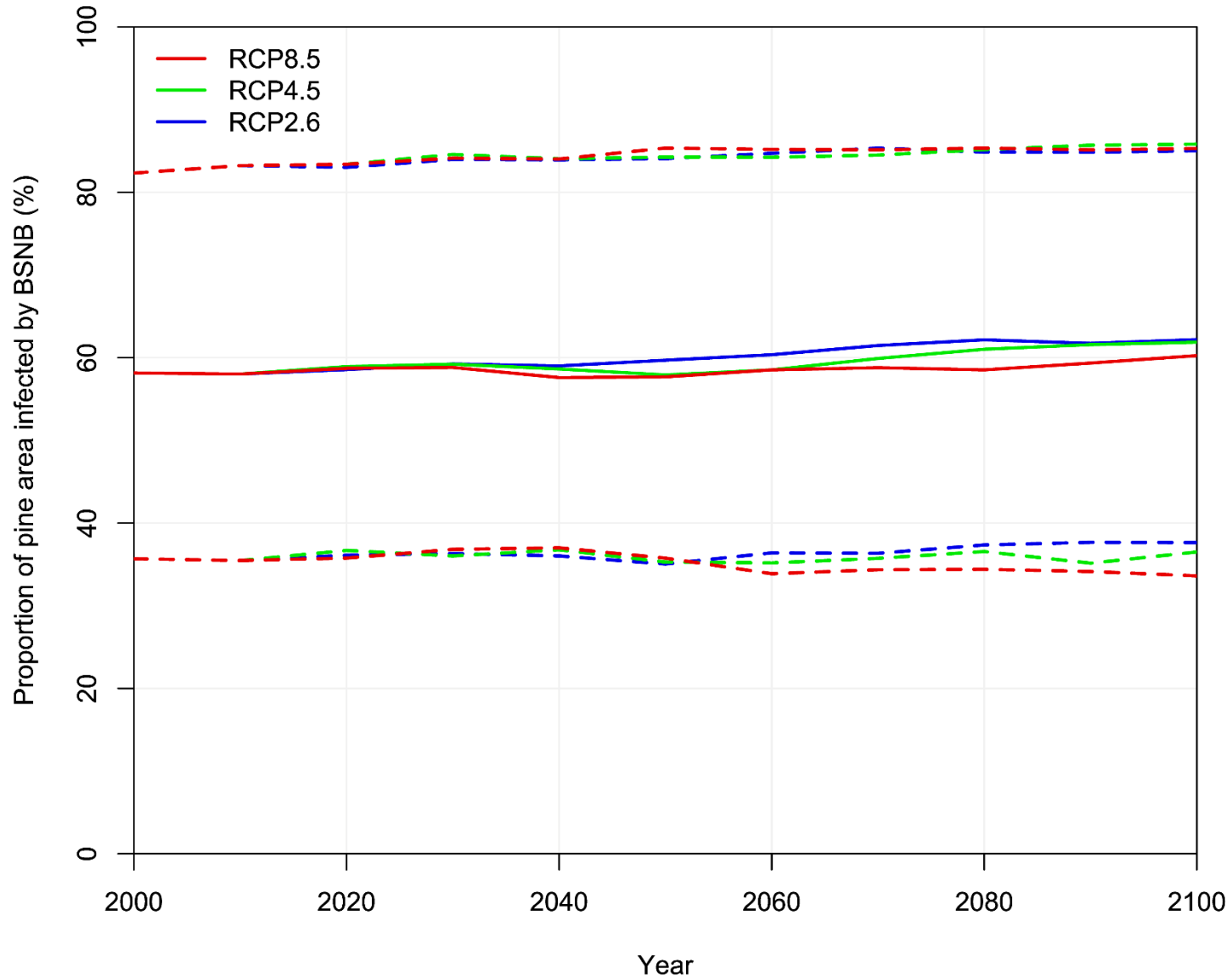
Potencialna razširjenost v referenčnem obdobju



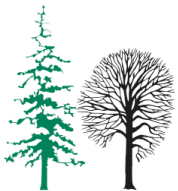
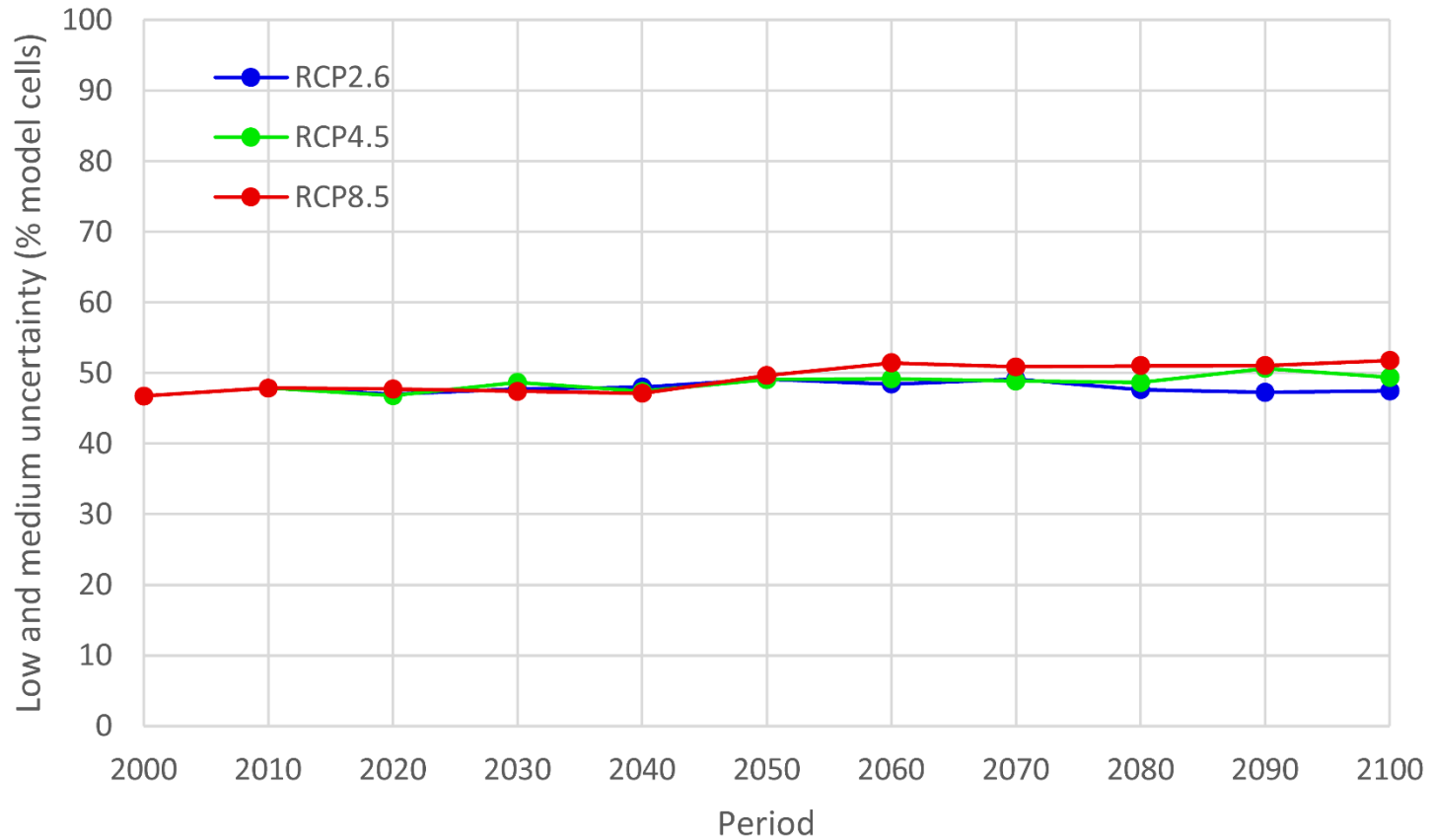
Realizirana razširjenost



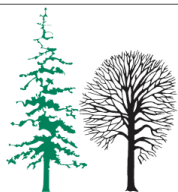
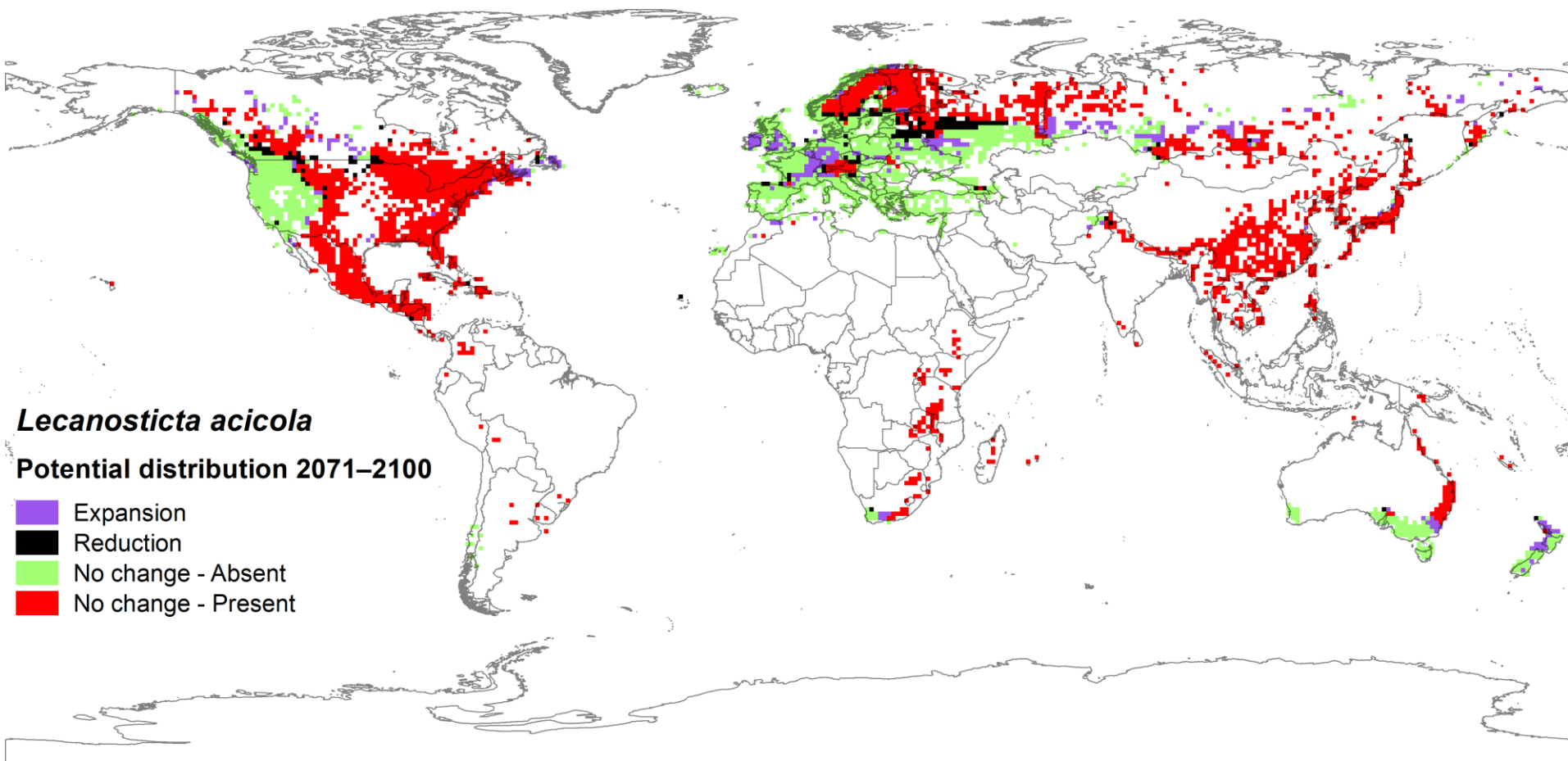
Vpliv scenarijev podnebnih sprememb na potencialno razširjenost



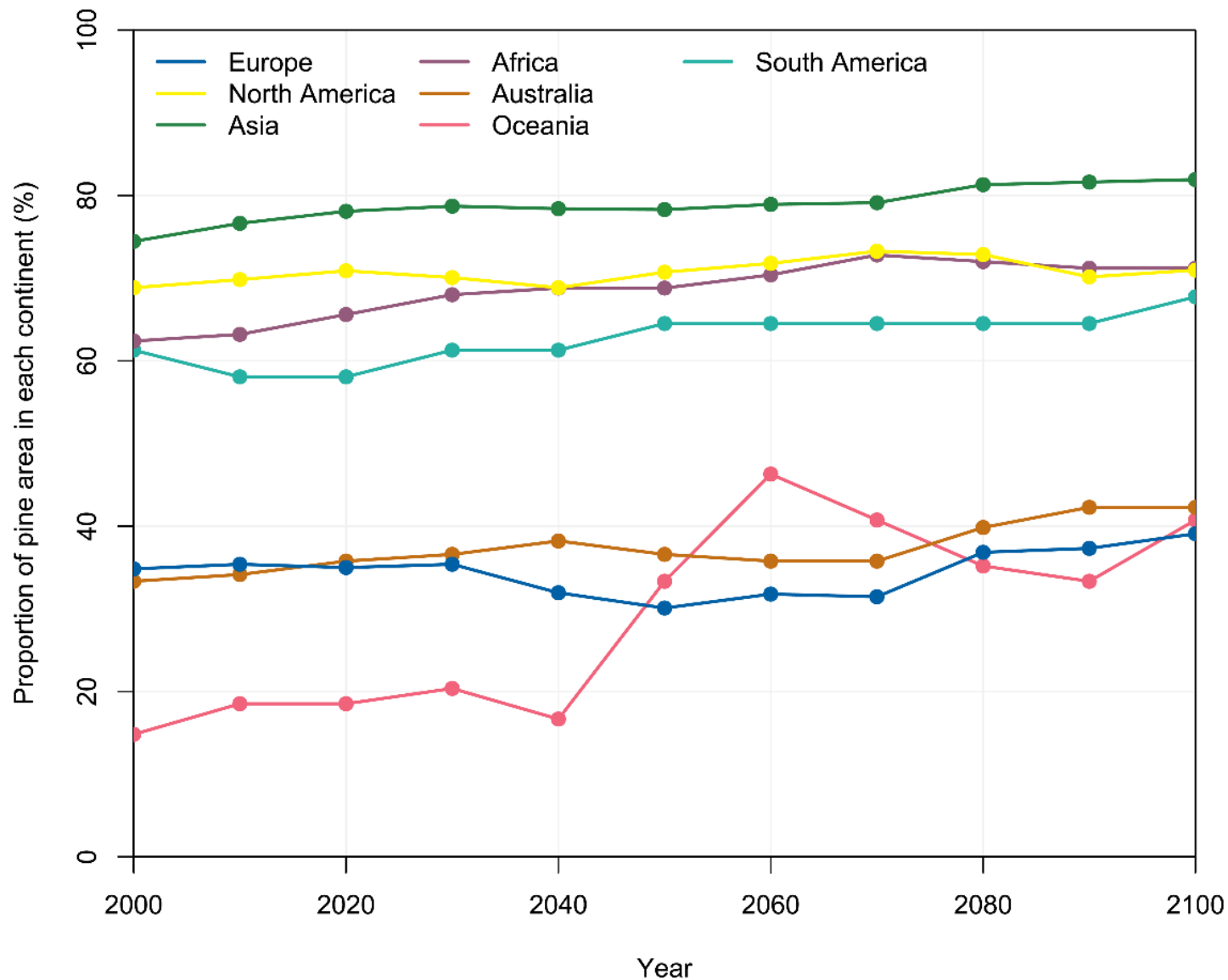
Negotovost napovedi



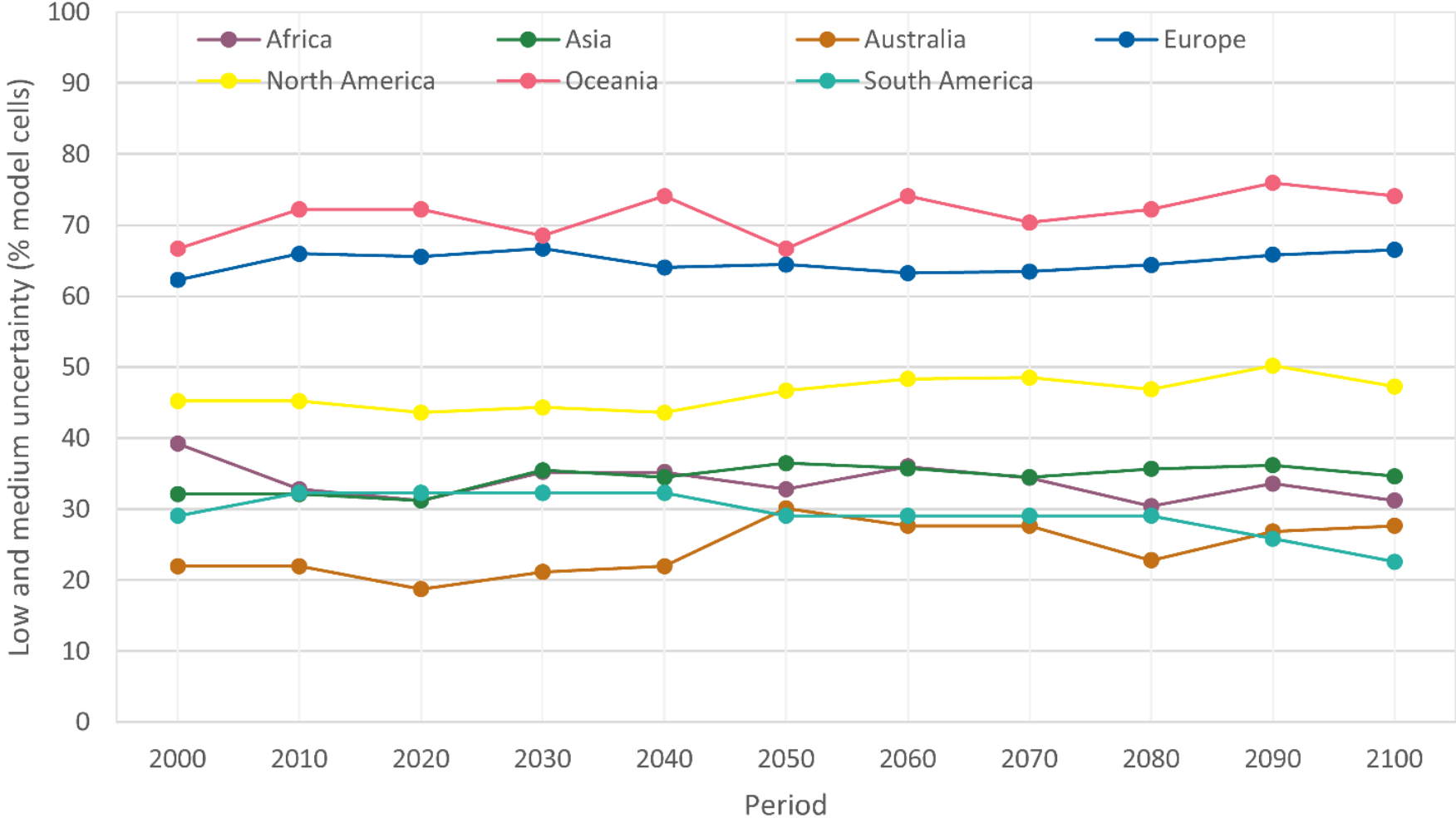
Potencialna razširjenost, RCP 4.5, 2071-2100



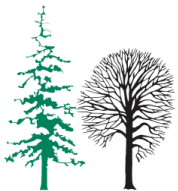
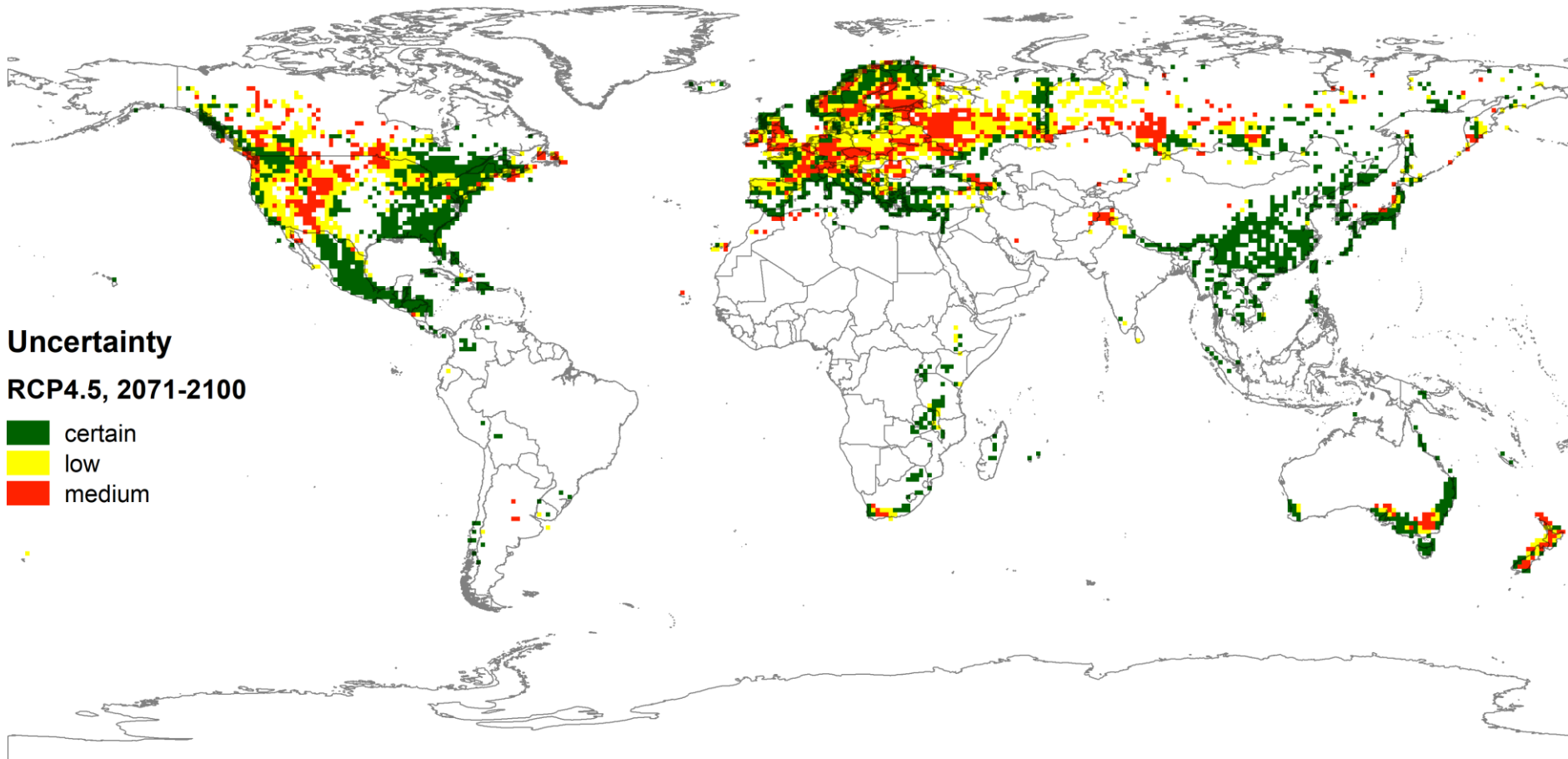
Potencialna razširjenost po kontinentih – RCP4.5



Negotovost napovedi po kontinentih

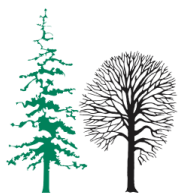


Negotovost napovedi, RCP 4.5, 2071-2100



Zaključki

- Dejanska razširjenost *L. acicola* v referenčnem obdobju 1971–2000 je pokrivala 5,9 % globalne površine borov.
- Ansambel modelov je napovedal potencialno razširjenost *L. acicola*, ki bi v referenčnem obdobju pokrivala povprečno kar 58,2 % globalne razširjenosti borov.
- Različni scenariji podnebnih sprememb (pet GCM, trije RCP) so pokazali pozitiven trend v možni širitvi območja *L. acicola* do konca 21. stoletja.
- 95 % interval zaupanja je bil širok in je zajemal 35,7–82,3 % globalne površine borov v obdobju 1971–2000 in 33,6–85,8 % v obdobju 2071–2100, kar kaže na visoko variabilnost različnih GCM napovedi.





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The potential global distribution of an emerging forest pathogen, *Lecanosticta acicola*, under a changing climate

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Martin Mullett^{5†} and Katherine Tubby^{6†}

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