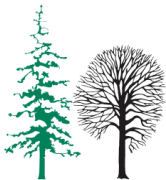


Količinska napoved sanitarne sečnje navadne smreke zaradi napada podlubnikov v Sloveniji

Maarten de Groot
Nikica Ogris

15. SPVR
Portorož,
1.-2. marec 2022



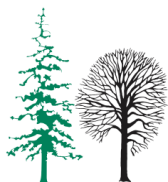
Uvod



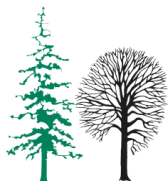
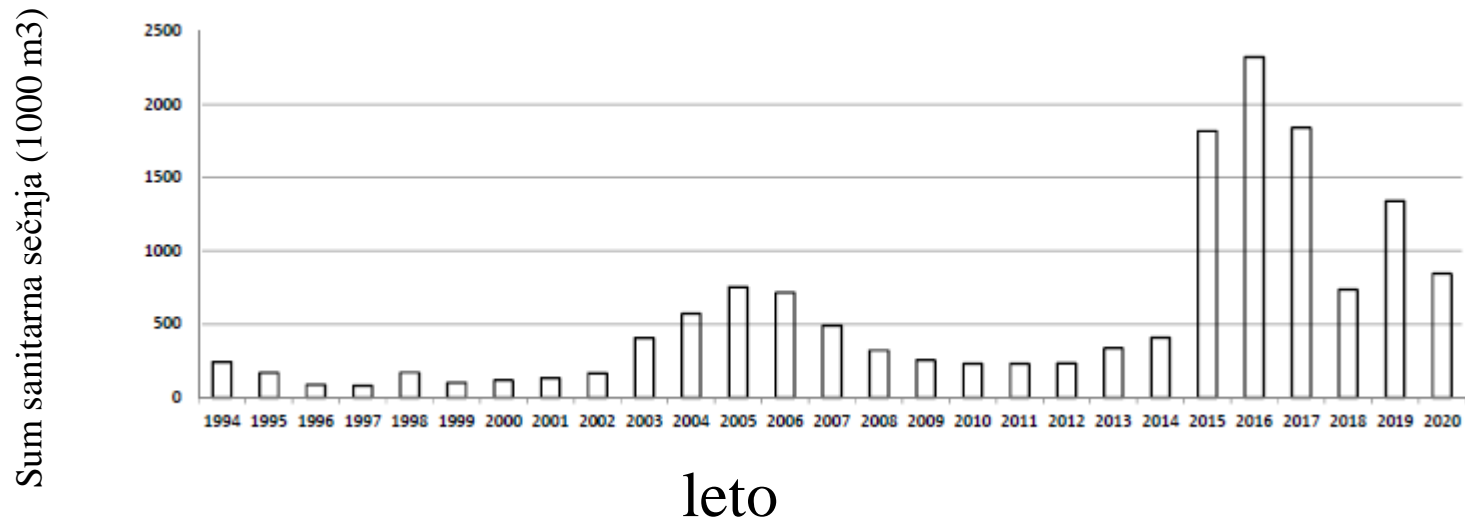
Foto: M. de Groot



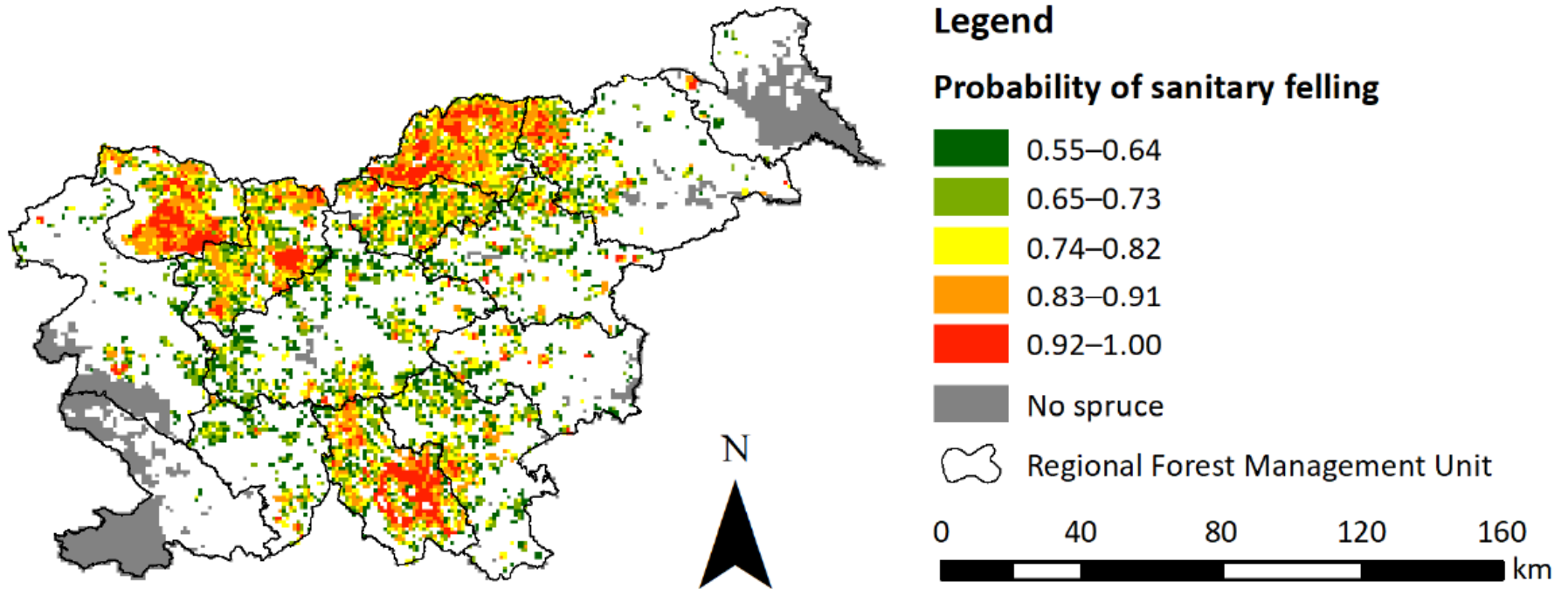
Foto: Daniel Adam, Office National des Forêts, Bugwood.org



Uvod

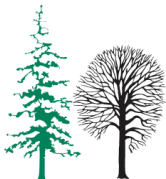


Uvod



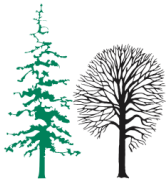
Cilj

- Napovedati količino sanitarne sečnje navadne smreke (v m³) zaradi smrekovih podlubnikov v Sloveniji.



Materiale in metode

- Različne podatkovne zbirke
- Modeliranje
- Kombiniranje napovedi verjetnostnega modela in količinskega modela.

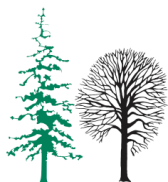


Rezultati

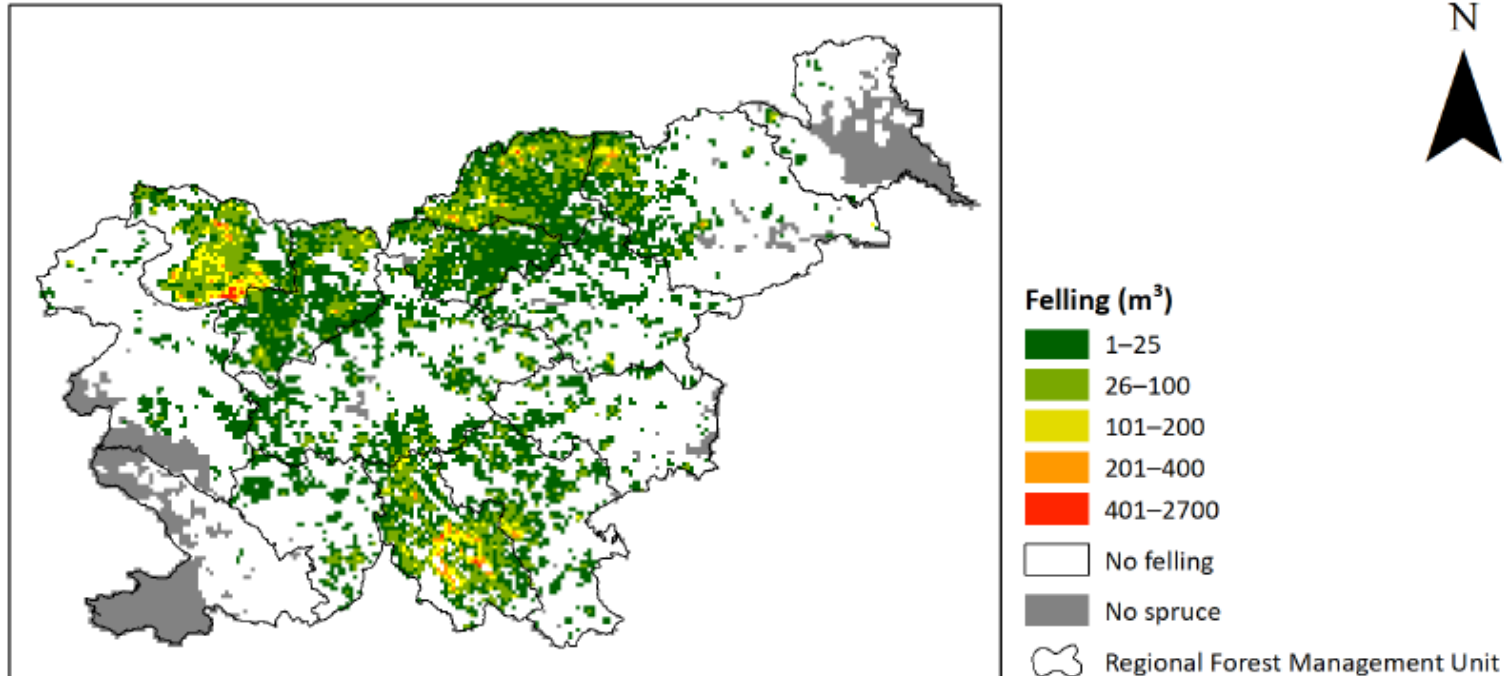
Parameters	Estimate
(Intercept)	-2.2044
$\log(1 + \text{slope})$	-0.0789
$\text{sqrt}(\text{soil depth})$	-0.0229
Soil cation exchange capacity	-0.0104
Soil base saturation percentage	0.0067
Temperature	0.0852
SPI	-0.2479
$\log(1 + \text{sanitary felling because of bark beetles})$	0.4052
$\log(1 + \text{sanitary felling because of abiotic factors})$	0.2092
$\log(1 + \text{amount of spruce})$	0.2996

Rezultati

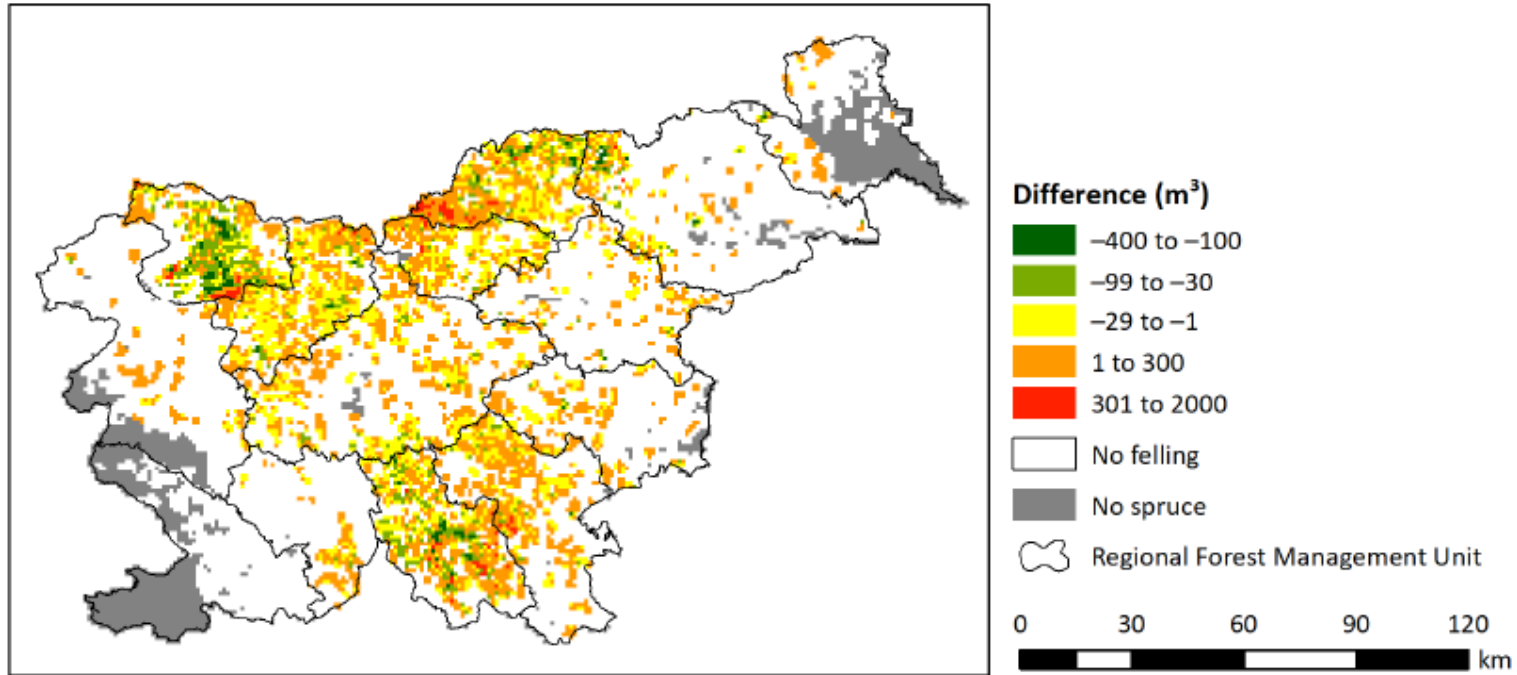
Validation Measures	Marginal Model	Conditional Model
RMSE	1.50	1.39
MSE	2.25	1.94
R ²	0.38	0.46
MAE	1.23	1.12



Rezultati

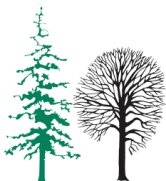


Rezultati



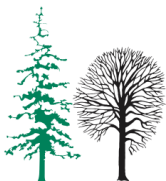
Sklepi

- Kvantitativni model kaže podobne rezultate kot verjetnostni model.
- Najpomembnejši spremenljivki sta količina smreke in sanitarni posek v preteklem letu
- Razlika med modeli (količinski model ne vsebuje):
 - sanitarne sečnje oslabljenih dreves
 - fosfor v tleh



Sklepi napoved

- Kombiniranje napovedi verjetnostnega modela in količinskega modela.
- Za povprečno količino sanitarne sečnje je napoved razmeroma dobra.
- Večja odstopanja na nivoju posamezne modelske celice.



Hvala za vašo pozornost!



Foto: M. de Groot



Foto: M. de Groot

