

# Challenges in eradication of *Agrilus planipennis* in Slovenian forests: are we ready?

Maarten de Groot, Matevž Triplat,  
Andreja Kavčič, Nikica Ogris, Eva  
Groznič, Barbara Piškur



---

**GOZDARSKI INŠTITUT SLOVENIJE**  
SLOVENIAN FORESTRY INSTITUTE

23.11.2016

EN

Official Journal of the European Union

L 317/4

**REGULATION (EU) 2016/2031 OF THE EUROPEAN PARLIAMENT OF THE COUNCIL****of 26 October 2016**

**on protective measures against pests of plants, amending Regulations (EU) No 228/2013, (EU) No 652/2014 and (EU) No 1143/2014 of the European Parliament and of the Council and repealing Council Directives 69/464/EEC, 74/647/EEC, 93/85/EEC, 98/57/EC, 2000/29/EC, 2006/91/EC and 2007/33/EC**

*Article 26***Simulation exercises for priority pests**

1. Member States shall carry out simulation exercises concerning the implementation of the contingency plans at intervals set according to the biology of the priority pest or pests concerned and the risk posed by that pest or those pests.

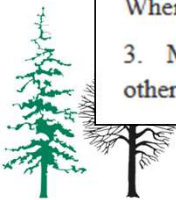
Those exercises shall take place with regard to all priority pests concerned within a reasonable period of time and with the involvement of the relevant stakeholders.

Those exercises shall not be required where the Member State concerned has recently taken measures for the eradication of the pest or pests concerned.

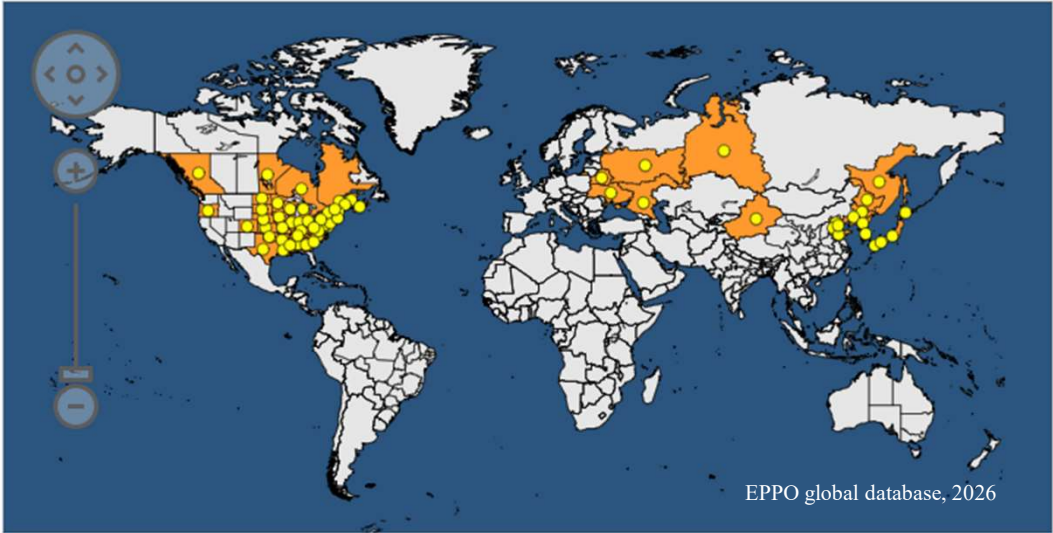
2. Simulation exercises concerning priority pests whose presence in one Member State could have an impact on neighbouring Member States may be carried out together by those Member States on the basis of their respective contingency plans.

Where appropriate, Member States may carry out those simulation exercises with neighbouring third countries.

3. Member States shall, on request, make available a report on the results of each simulation exercise to the Commission and to the other Member States.



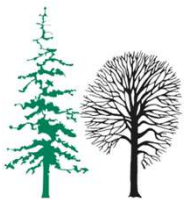
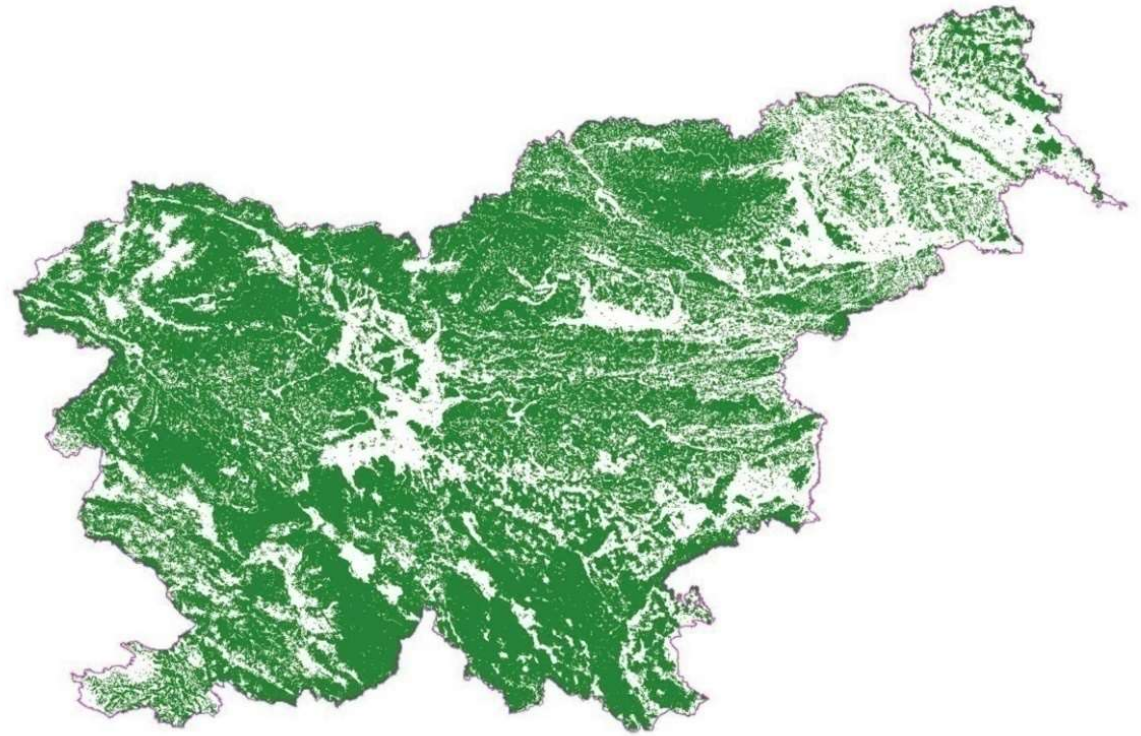
# *Agrilus planipennis*



**SLOVENIAN FORESTRY INSTITUTE**

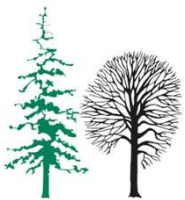
# Slovenia

- **Forest area:** 1.2 million ha (58%)
- **Ownership:**
  - private forests 75%,
  - state forests 22% and
  - forests of local communities 3%
- **Number of forest properties:** 314,000 (forest owners: 461,000)
- Transport crossroad Europe
- Heterogenous landscape

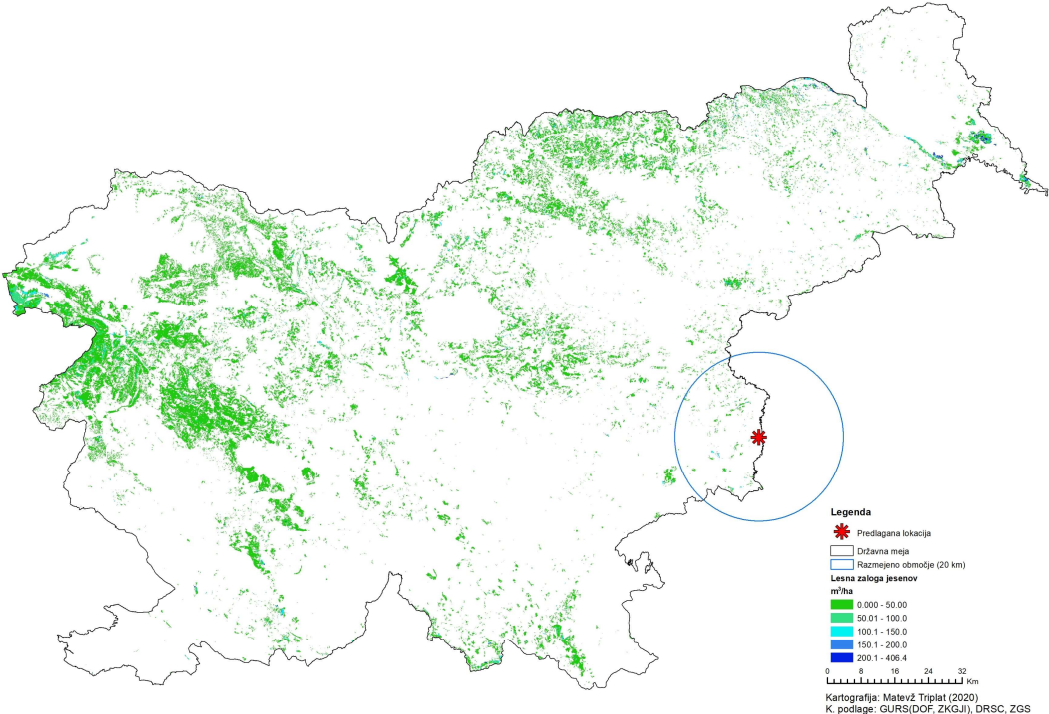


# Aim

- to test a country's preparedness for an outbreak of a particular quarantine species in 2020

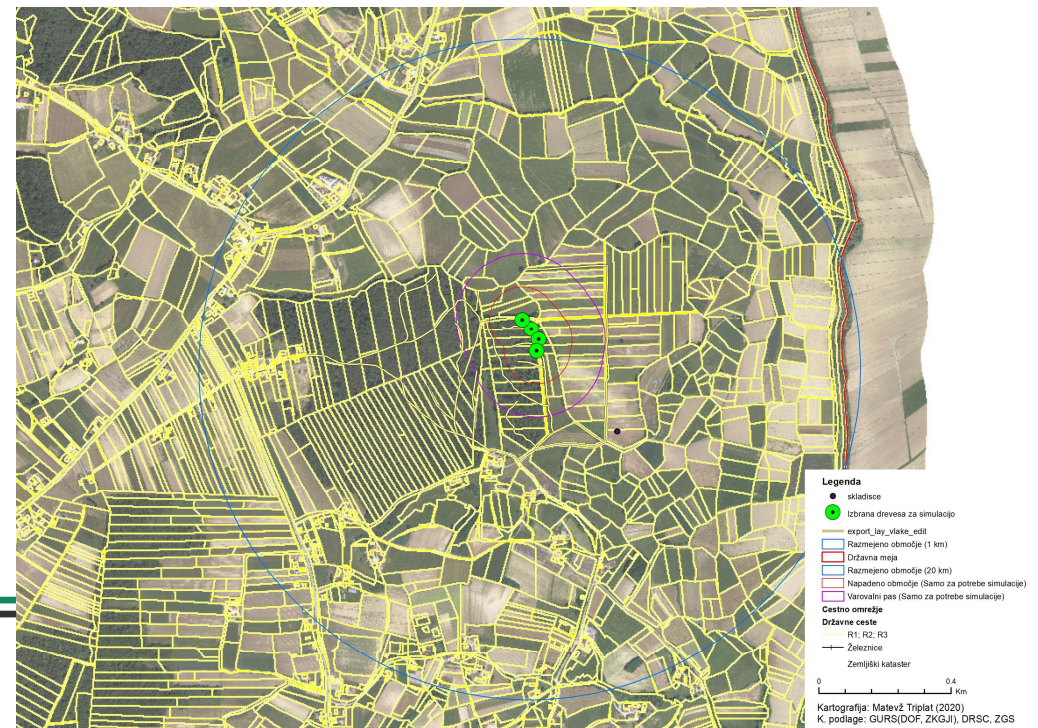


# Selection of the location



# Simulated attacked area and buffer zone

- 4 attacked trees
- Potential host plants: 1.346 trees / 174,59 m<sup>3</sup>
- Landscape: Agriculture, Forest (7.1 ha)
- Ownership:
  - 27 parcels (state, private)
  - 0,5 ha average area
  - 38 owners
  - Parcels owned by Croatians
- Border Slovenia-Croatia
- Natura 2000



**GOZDARSKI INŠTITUT SLOVENIJE**  
SLOVENIAN FORESTRY INSTITUTE

# Simulation workshop

- September 2020
- 28 people from 5 different stakeholders
  - the **national plant health organization** in Slovenia:
  - **forestry inspection**: Inspectorate for Agriculture, Forestry, Hunting and Fisheries
  - **landowners**: Slovenski državni gozdovi, d.o.o. (SiDG)
  - **plant health authorized organizations**: Slovenian Forest Service (SFS), Chamber of Agriculture and Forestry of Slovenia (CAFS) and Slovenian Forestry Institute (SFI).





© Simon Zidar



© Simon Zidar

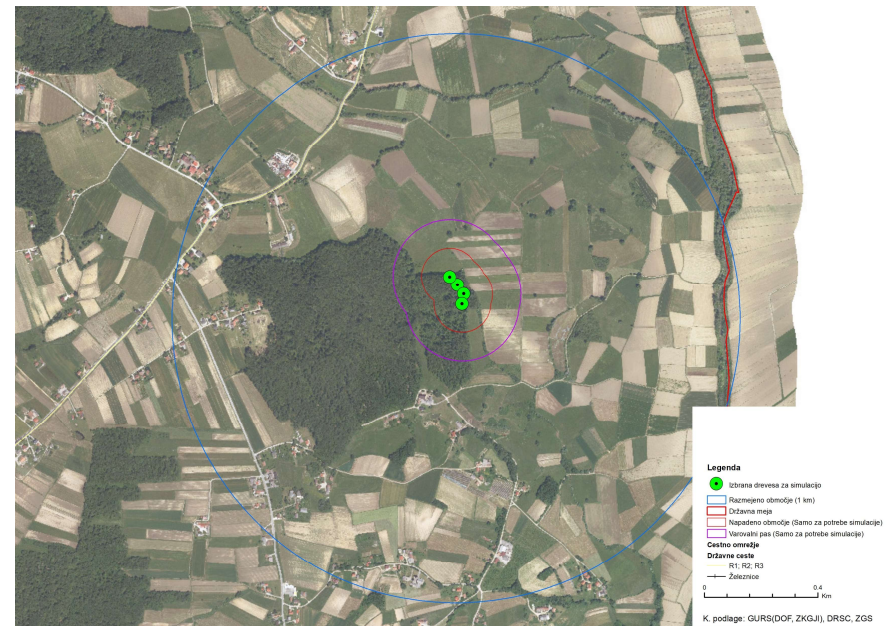


# Proposed measures

## Standard EPP0 2013

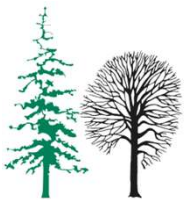
### PM9/14(1):

- Regulated area of 20 km radius
  - 1.346 host trees
  - > prevent movement of possible infested wood and plants.
- Delimiting survey: 1 km radius
  - 362 trees
- the location of infested trees:
  - 100 m radius of all host trees cut down (infested area).
  - 984 trees



# Measures in regulated area

- Visual inspections and traps
- Prevent movement of infested materials outside regulated area
- Use for industrial purposes (within a regulated area, before next flight season)



# Eradication

- Inspection of felled trees -> **manual debarking of sections & inspection**  
**~ approx. 70 minutes per tree)**



©Urban Žitko



© Simon Zidar

# Eradication

- Destruction of felled trees as soon as possible (15 May–15 August) or before the beginning of the beetle activity period
- Felling with stump removal



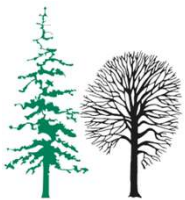
# Eradication

- Treatment:
  - Wood irradiation (ionizing radiation) -> **not available**
  - Removal of bark together with sapwood, minimally 2.5 cm
  - Burning -> **pollution**
  - Deep burial -> **water protection area**
  - **Chipping (max 2.5 cm)**
- Destruction of infested wood by processing into chips, transport in airtight sealed containers, and incineration in incineration facilities



# After treatment

- Cleaning of machinery



# IDENTIFIED CHALLENGES



Integration of forestry legislation and plant health legislation



Educating professionals and forestry contractors who will be involved in the eradication of quarantine pests



Securing financing and have a clear cross-sectoral coordination



# IDENTIFIED CHALLENGES



Improve of the existing educational programmes in the forestry education process with emphasis on quarantine species and their eradication



Structuring intervention groups in the event of an outbreak and acting quickly regardless of ownership

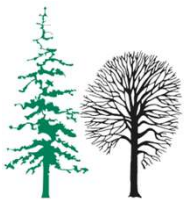


Raising awareness of general public



# Acknowledgments

- All stakeholders involved in the simulation exercise
- Funding:
  - *Strokovne naloge zdravstvenega varstva rastlin v gozdarstvu (UVHVVR)*
  - *Javna gozdarska služba*
  - *CRP V4-1823 Razvoj organizacijske in tehnične podpore za učinkovito ukrepanje ob izbruhu gozdu škodljivih organizmov*



**Poišči izvajalca gozdarskih storitev**

Sečnja z motorno žago    Spravilo s traktorjem    Gojenje    Žičniško spravilo

Strojna sečnja    Izdelava sekancev    Prevoz lesa    Gozdno gradbeništvo

Izberite regijo    Išči izvajalca po nazivu...

**Iskanje**



# Cost estimation for 2020

- Cost of production processes: felling with a chainsaw, cost of tractor skidding, cost of wood chip production: **€8,928.81 (€44.94/m<sup>3</sup>)**  
Value of the felled timber at the truck-access road: **€10,592.67** → **minus costs = €3,944.75**
- **Uprooting scenario:** value of wood chips **€6,675.77** → **minus costs = -€2,253.04**
- **Economic damage (loss of income from the owner's perspective):** difference between potential income from sale and actual income = **-€6,197.79 (-€31.19/m<sup>3</sup>)**
- **!!!! The calculations do NOT yet include the cost of phytosanitary inspections!!!!**
- Other damages and impacts were not assessed.

