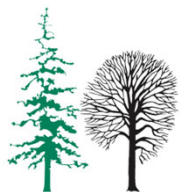


# Holandska brestova bolezen: trenutno stanje in napoved

Niki Ogris

14. slovensko posvetovanje o varstvu rastlin, 5. 3. 2019, Maribor



---

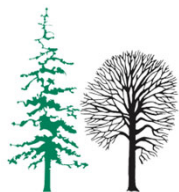
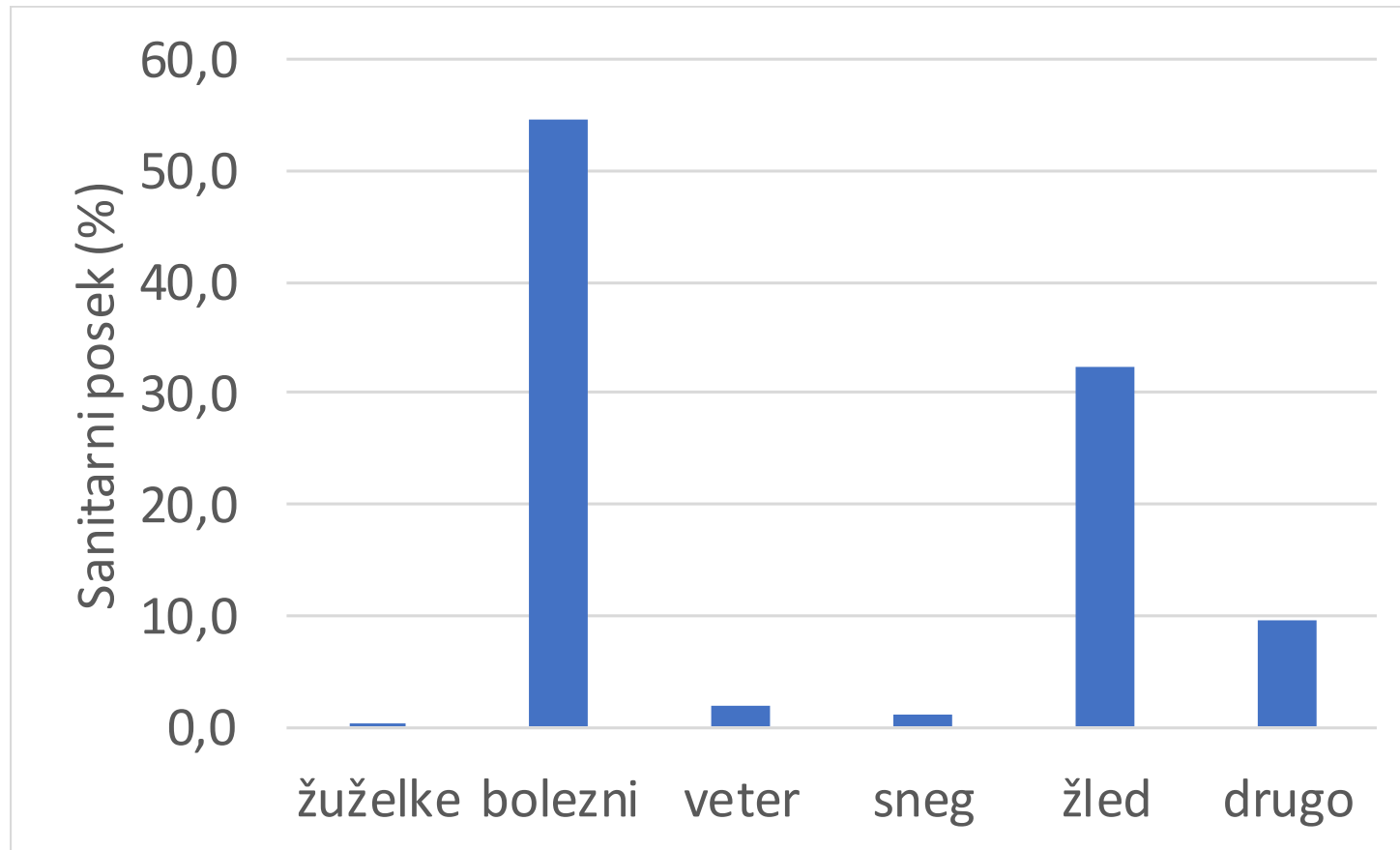
**GOZDARSKI INŠTITUT SLOVENIJE**  
*SLOVENIAN FORESTRY INSTITUTE*

# Holandska brestova bolezen

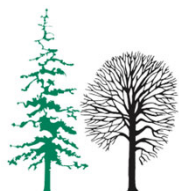
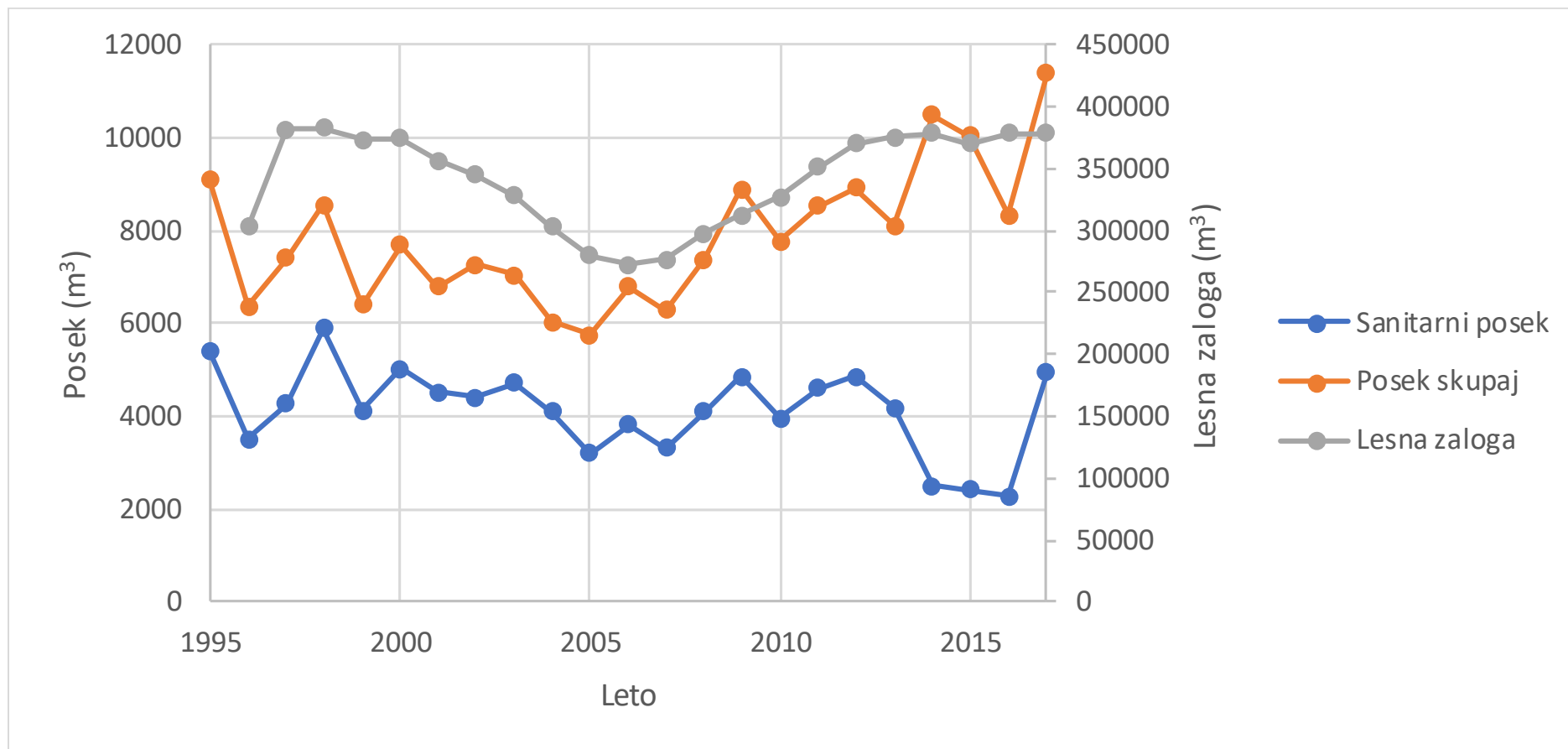
- Povzročitelja: glivi *Ophiostoma ulmi* in *O. novo-ulmi*
- Traheomikoza - bolezen prevodnega sistema.
- Vektorja:
  - *Scolytus scolytus* (veliki brestov beljavar)
  - *Scolytus multistriatus* (mali brestov beljavar)
- *O. ulmi*: prva najdba v Sloveniji 1929
- Drugi val - *O. novo-ulmi*: v 1980-ih
- Gostitelji: bresti (*Ulmus spp.*). V Sloveniji tri vrste:
  - *Ulmus glabra* – gorski brest
  - *Ulmus minor* – poljski brest
  - *Ulmus laevis* – dolgopecljati brest



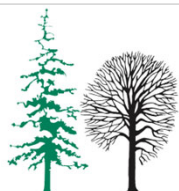
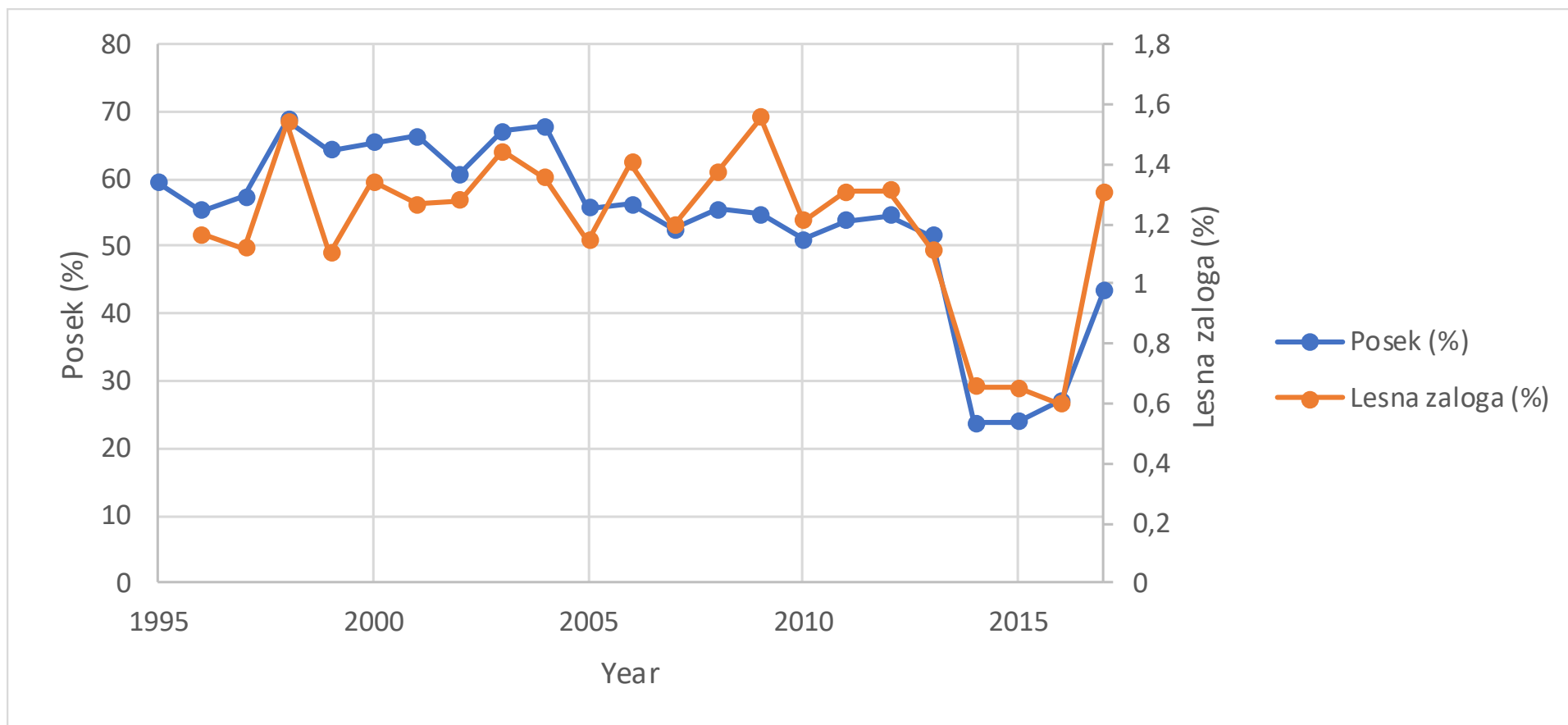
# Sanitarni posek bresta 2013-2017



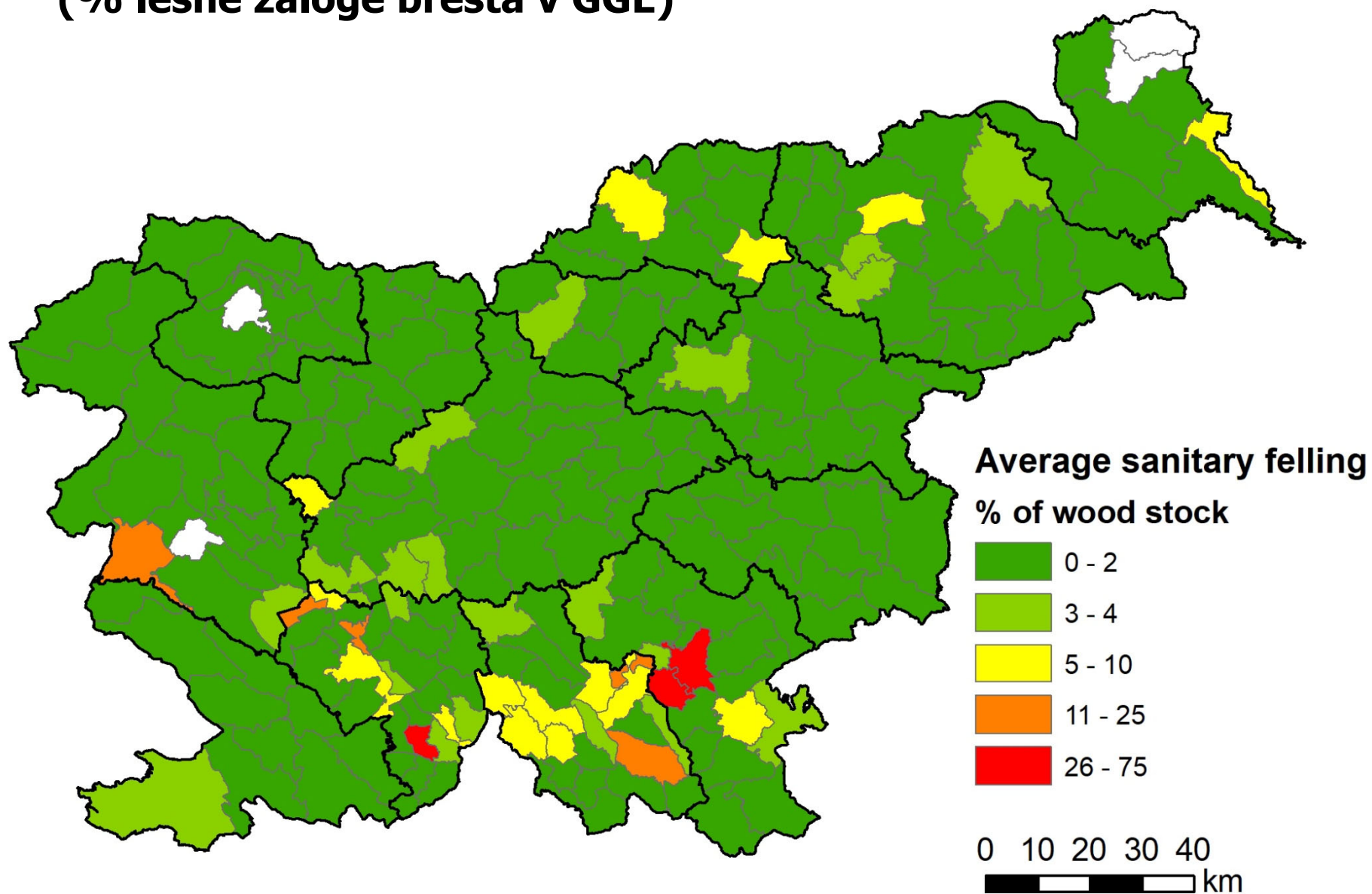
# Sanitarni posek bresta 1995-2017



# Delež sanitarnega poseka bresta zaradi HBB glede na (1) cel posek bresta, (2) lesno zalogo bresta

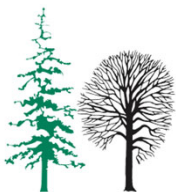


# Povprečni sanitarni posek brestov zaradi HBB 1995-2017 (% lesne zaloge bresta v GGE)

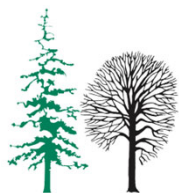


# V tujini

- Na Švedskem:
  - na otoku Gotland 2005: ukrepanje - 90 % preživel, drug otok Öland > brez ukrepanja > preživel samo 5-10 % brestov
  - večino samo še *O. novo-ulmi*
- Raziskave odpornosti
  - razvoj odpornih hibridov, npr. 'Groeneveld' in 'Dodoens'
  - uporaba modernih metod za editiranje genov CRISPR-Cas9
  - endofitska gliva *Rhodotorula* - sev P5



## Brestov panj z ampulami glifosata med skorjo in lesom





# Zaključki

- Stanje stagnira in se morda celo malenkostno izboljšuje.
- Pomanjkanje raziskav za to zelo pomembno bolezen.
  - predvsem iskanje odpornosti



# Ash Dieback and Dutch Elm Disease: Current Situation and Prospects in Slovenia

NIKICA OGRIS\*

*Slovenian Forestry Institute, Večna pot 2, SI-1000 Ljubljana, Slovenia*

\* *Corresponding author: nikica.ogris@gozdis.si; tel. +38612007800*

Ogris, N. 2018. Ash Dieback and Dutch Elm Disease: Current Situation and Prospects in Slovenia. *Baltic Forestry* 24(2): 181–184.

## *Abstract*

Ash dieback has been present in Slovenia since 2006, and Dutch elm disease since 1929. We have evaluated their current situation in Slovenia based on sanitary felling. Sanitary felling of ash has risen exponentially from 2009 to 2017. In 2017, 76,101 m<sup>3</sup> of ash or 69% of total ash felling was due to ash dieback, which represents 2% of ash wood stock. Geographically more damaged forests (0.5–2.1% of ash wood stock per forest management unit) were in the eastern part of Slovenia. We suspect that the sanitary felling of ash will escalate due to the current exponential trend, and wood stock of ash will drop by 20–40% in next 10 years. From 1995 to 2013, between 51 and 59% of elms was sanitary felled due to Dutch elm disease. Trend of sanitary felling was disturbed between 2014 and 2016 because of the catastrophic ice damage that happened in 2014. The most damaged areas are in the southern part of Slovenia, where 11–75% of elms wood stock per forest management unit was damaged due to Dutch elm disease. However, in the most cases, only up to 2% of elm wood stock was sanitarily felled. The prospect for elms is becoming better over the years as sanitary felling due to Dutch elm disease is slightly lower, and the total wood stock of elms has risen from 2007 to 2013 and remained on that level since then. Therefore, we believe that elms are slowly recovering from Dutch elm disease. However, other damaging factors threaten elms.

**Keywords:** *Hymenoscyphus fraxineus*, *Chalara fraxinea*, *Ophiostoma ulmi*, *Ophiostoma novo-ulmi*, sanitary felling, *Fraxinus*, *Ulmus*, trend



# Zahvala

- Podatki – ZGS
- JGS GIS nalogi 2A in 2B, financer MKGP

