

The Netherlands progress report on the conservation of amphibians and reptiles

Actions and initiatives at national level (3 minutes)

- At the end of this year we will be able to publish an updated national Red List on herpetofauna.
- We monitor and we have an Early Warning System (EWS) for all alien invasive herpetofauna species that are mentioned on the list of invasive alien species of Union concern. This is done by eDNA (for instance for the bullfrog) and also by professionals and citizen science. We also monitor alien invasive fish species that could be harmful for amphibians.
- With regard to these alien species, since 2019 clutches of pond sliders (*Trachemys scripta* species) are monitored to observe the development of the eggs. In 2020 small embryos were detected. This means that potentially, with ongoing climate change, the eggs may fully develop in the future, such has occurred in Germany.

With regard to Bsal:

- We have and will continue to have a national EWS for Bsal and other pathogens
- Later this year the provinces, who are responsible departments for the species conservation in the Netherlands, will list the research requirements that are needed to ensure a rapid response when Bsal is detected. Hopefully we will be able to conduct this research in 2022.
- Finally – and this is also mentioned in the questionnaire, we intensively monitor a Bsal outbreak in the centre of the Netherlands in a population crested newts (*Triturus cristatus*) and smooth newts (*Lissotriton vulgaris*). Here Bsal was detected in 2018. This is work in progress, but what we see is that prevalence, depending on the pond, can be 10% for the smooth newts and around 80% for crested newts.
- At the same site we used eDNA to see if Bsal had spread from the 2 ponds that we monitor. Bsal was detected for the first time in 2018, and this year we found it in ponds at 2km distance \geq from the outbreak site
- The fire salamander population in the south of the Netherlands does not show any signs of recovery, but the Bsal status is unknown. Another threat is that the larvae are flushed away during heavy rains. Which means that there is hardly successful reproduction