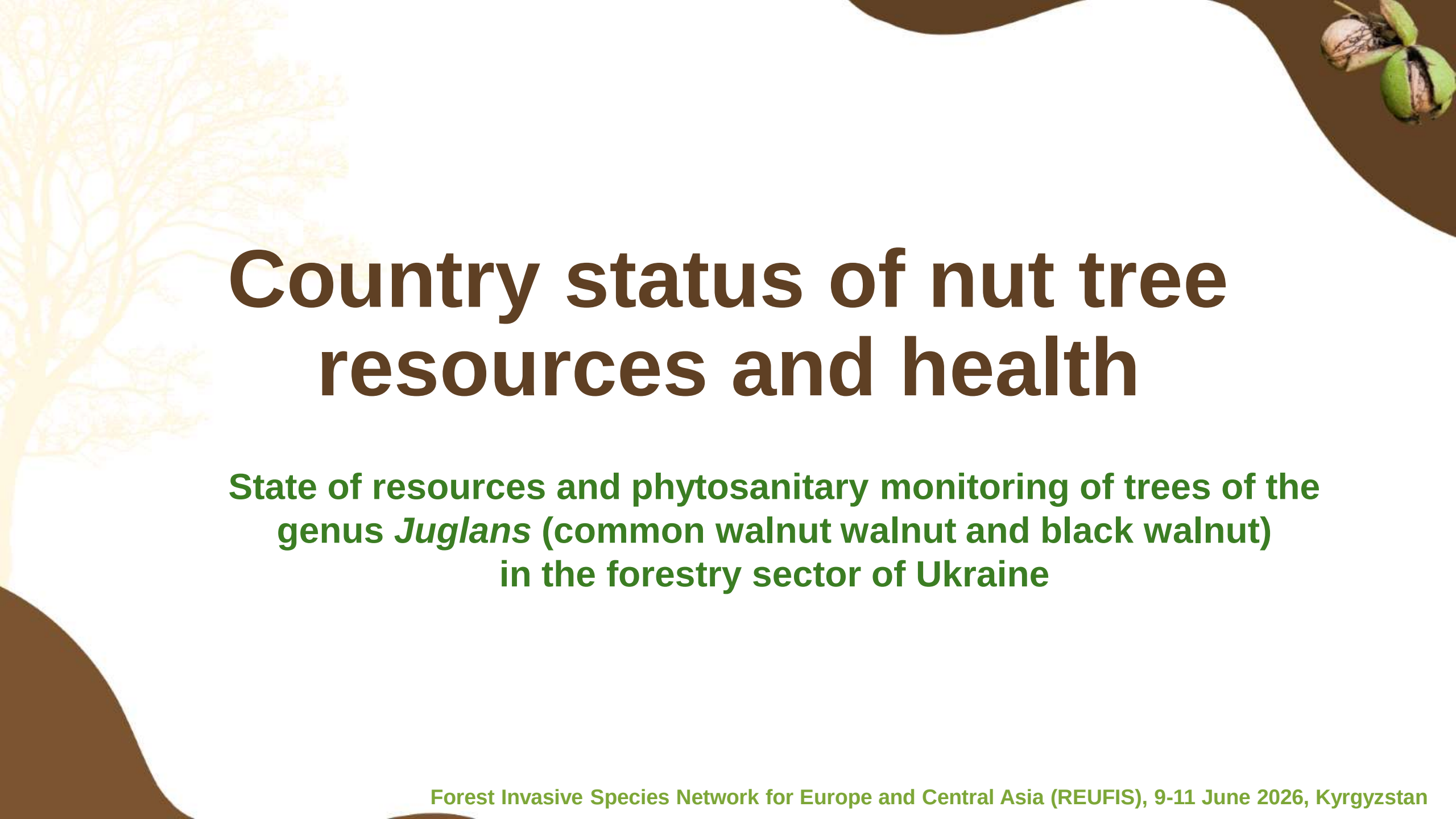




Country status of nut tree resources and health

State of resources and phytosanitary monitoring of trees of the
genus *Juglans* (common walnut walnut and black walnut)
in the forestry sector of Ukraine

Main nut tree species and distribution

Juglans regia (common walnut): A fully naturalized species. It is widely distributed in Southern Podillia, the Transnistrian region, and Odesa oblast, where it is cultivated in commercial orchards and used in protective forest shelterbelts.

Juglans nigra (black walnut): A highly valuable North American introduced species.

- **Optimal zone:** Podillia (Bershad Forestry Branch) — grown as part of mixed oak stands.
- **Adaptation zone:** Polissia (Popilnia Forestry Branch) — successfully established in a 50 ha plantation.



Main uses of nut trees

Fruit and nut production (*Juglans regia*):

A strategic raw material for both domestic and global confectionery markets; also harvested by state forestry enterprises.

High-value timber (*Juglans nigra*):

Used for the production of premium dark-brown wood for the furniture industry and veneer.

Ecological functions:

Common walnut is widely used in agroforestry (field shelterbelts), while black walnut serves as an intensive companion species to improve the growth performance and form of *Quercus robur*.

Trade (import/export) of nut products and germplasm

Global leadership:

Ukraine consistently ranks among the Top 10 global exporters of shelled walnuts (*Juglans regia*).

Germplasm resources:

Availability of a national state register of winter-hardy walnut varieties (e.g., “Bukovynskyi”, “Prydnistrovskyi”).

Permanent forest seed plantations (PFSP):

Establishment of systems for collecting elite seeds of *Juglans nigra* within branches of the State Specialized Forest Enterprise “Forests of Ukraine” (including the transition of the Popilnia Forestry Branch to full self-sufficiency in seed supply by the 8th year of growth).



Main insect pests and diseases of nut trees in the country



Entomological threats:

The codling moth (*Cydia pomonella*) is the primary pest affecting the fruits of *Juglans regia*. Occasional infestations of the fall webworm (*Hyphantria cunea*) are recorded in southern regions.

Phytopathogenic threats:

Walnut bacterial blight caused by *Xanthomonas arboricola* and brown leaf spot (*Marssonina*) caused by *Marssonina juglandis*, both of which lead to premature defoliation.



Current pest and disease control methods used in the country

Monitoring:

Regular forest health (forest-pathological) surveys of plantations and shelterbelts to ensure early detection of disease outbreaks.

Agrotechnical and chemical control:

Application of copper-based fungicides at early stages of vegetation in commercial plantations, along with the collection and destruction of infected leaf litter.

Biological and silvicultural methods:

Use of pheromone traps to monitor pest flight activity, and the establishment of resilient mixed stands instead of pure walnut monocultures (*Juglans regia*).

Needs/challenges in management of pest and diseases

Impact of climate change:

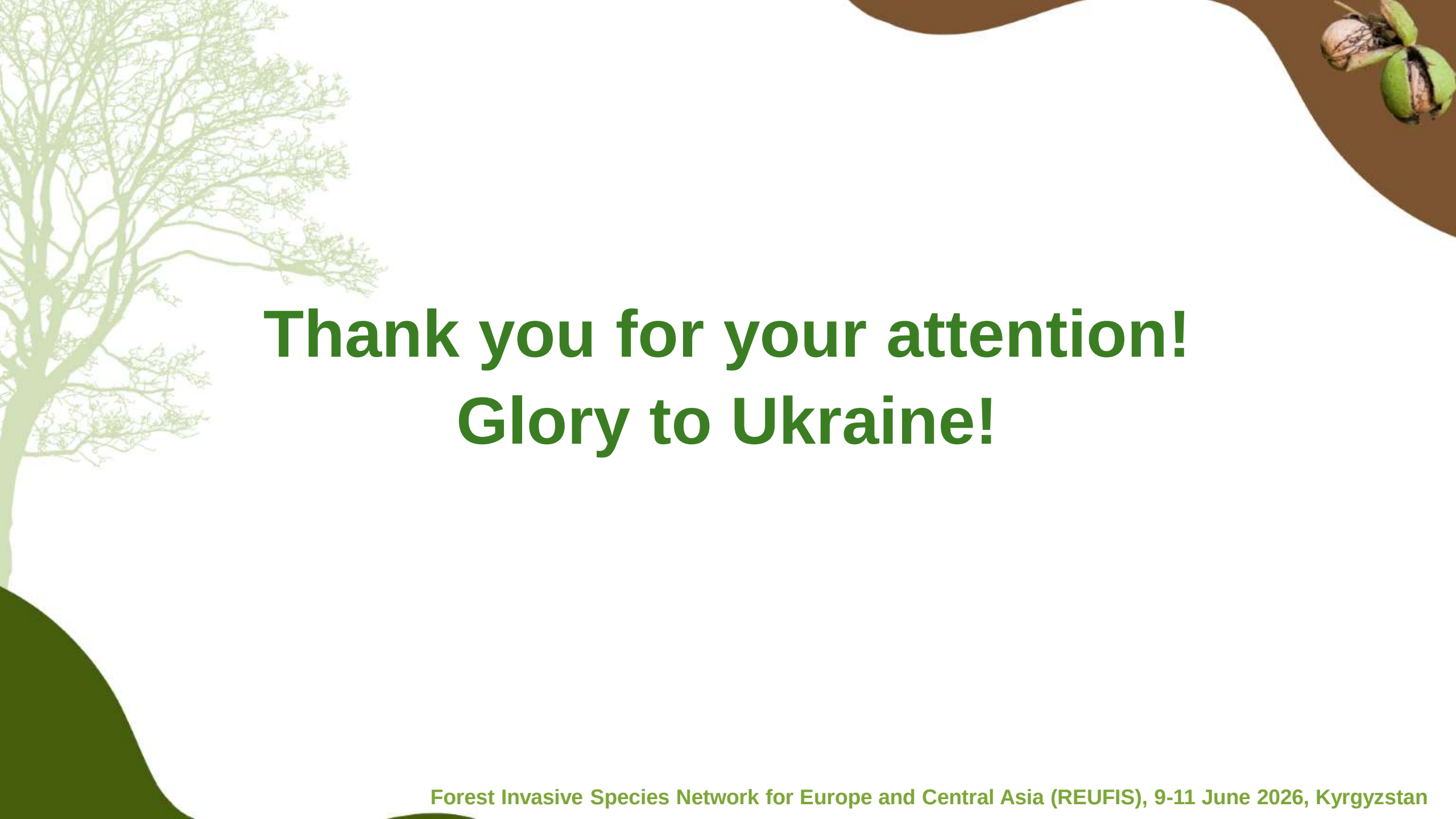
The extension of the growing season promotes the development of additional generations of the codling moth (*Cydia pomonella*) within a single season.

Neglected reservoirs of infection:

Roadside and field shelterbelts of *Juglans regia* are often poorly maintained and become sources of infection for forest stands.

Technical needs:

Modernization of phytopathological laboratories to implement rapid DNA-based diagnostic methods for the detection of latent invasive pathogens.



Thank you for your attention!
Glory to Ukraine!