

ISS proposal

Puszcza Swietokrzyska

Jarek Burczyk

P20

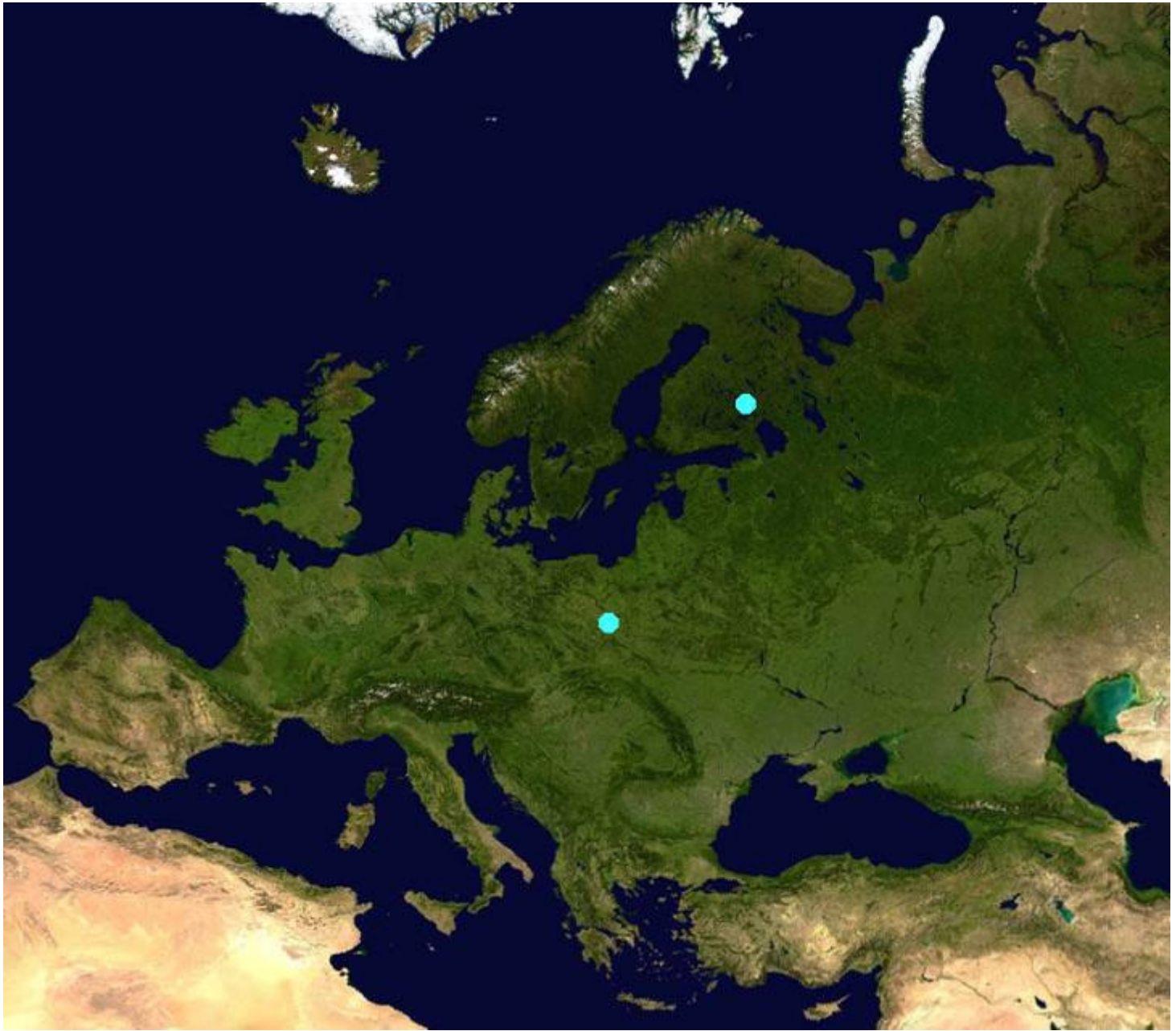
Poland

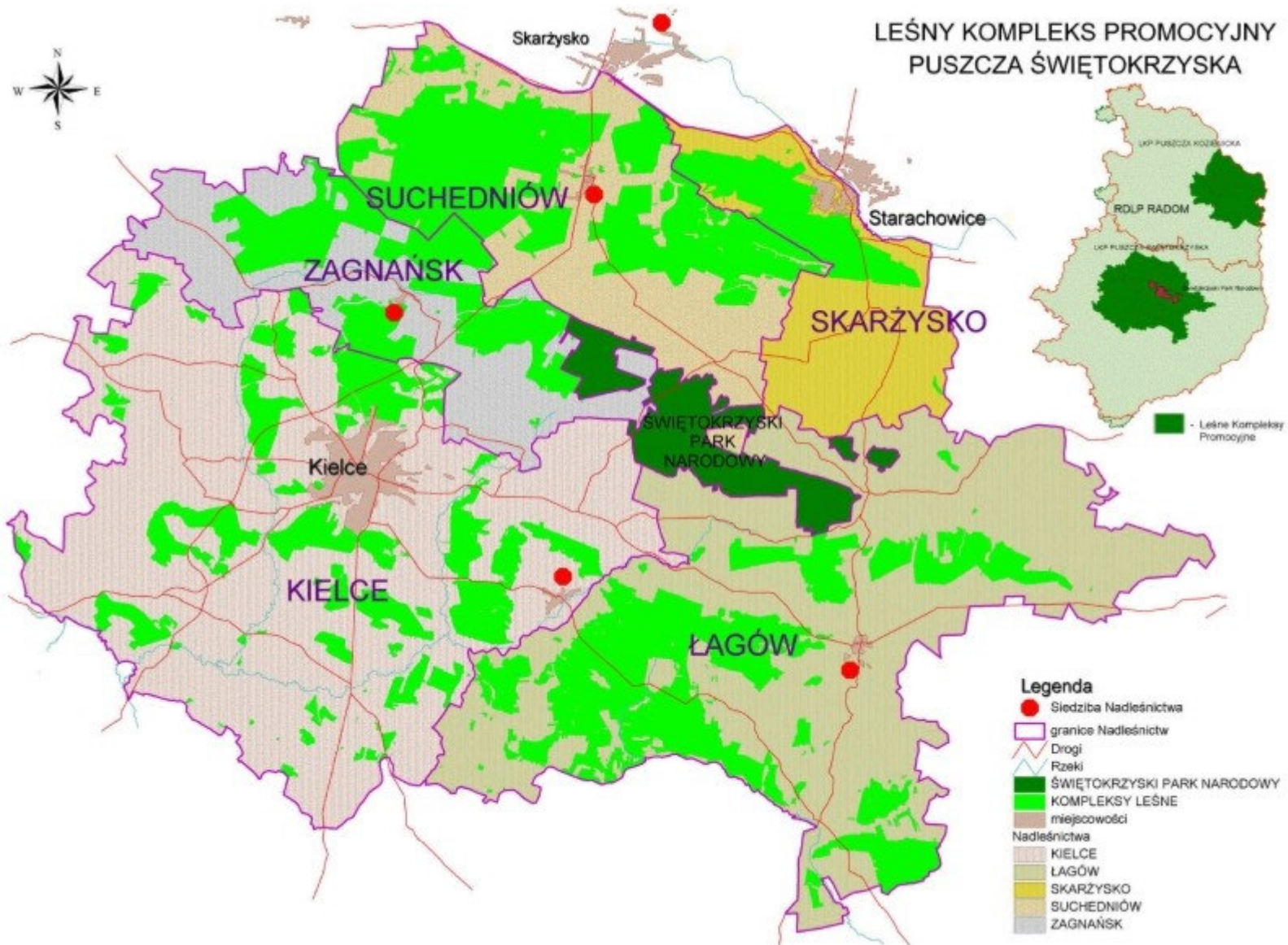




Synthetic information

1. Site name **Puszcza Swietokrzyska**
2. Corresp. partner - P20b, Forest Research Institute
– Jan Kowalczyk
3. Geographic information
 - longitude (E = 20°42' ± 00°08)
 - latitude (N = 51°02' ± 00°04)
 - elevation (320 ± 80 m a.s.l.)
 - total area covered by the ISS **17328,98** ha
 - country **Poland**









Synthetic information

4. Ecological information

- ISS represent **untouched** and **temperate** terrestrial ecosystem
- **All model and target species (genera) are present** in the ISS except *Castanea* sp. Poplar (*Populus tremula* L.) is growing only in selected areas as a contamination.

5. Legal status

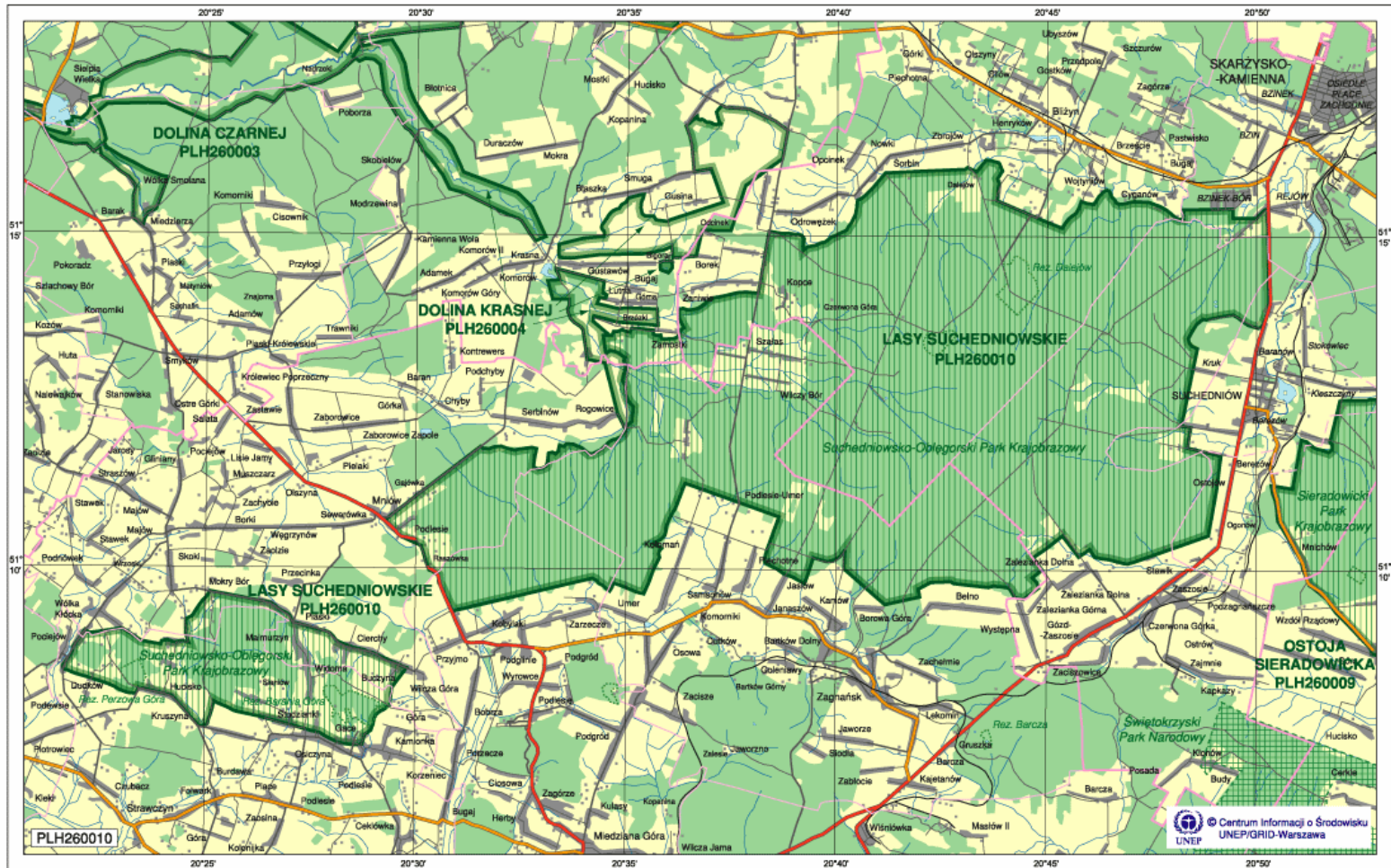
- ownership of the land – **State Forests**
- protection status – More than a half of the proposed area are protective forests (**Landscape Park** area). Belongs to Forest Promotional Complex. Proposed as **Natura 2000** (PLH260010). It also includes 2 strict forest reserves (Swinia Gora – 50,8 ha and Dalejow – 87,9 ha).
- inclusion in other national/international Networks – Yes (one permanent plot in the National Forest Monitoring Program)

6. Past research history

- previous ISP at European level – none
- previous research at national level - Yes, provenance tests, genetic diversity studies



Natura 2000





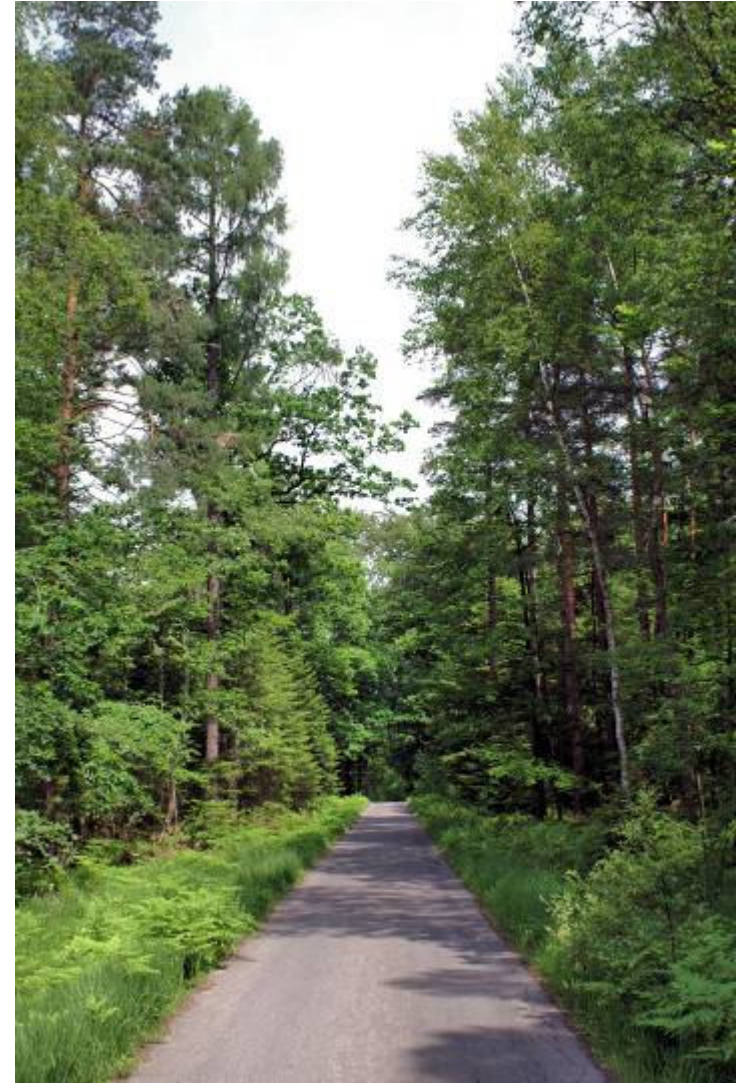




Technical facilities

- Location close to the national road no. 7 connecting Warsaw and Krakow, about 2 hours drive from international airports in Warsaw and Krakow
- Good roads inside forest (closed for public access) allow for an easy access to the center of the forest complex
- ISS will be maintained by the IBL - Forest Research Institute (P20b)
- Site has an integrated data base (including numerical maps, GIS), as a part of large information system of State Forests (SILP)
- Good relationships established with local forestry managers.
- Lodging opportunities in nearby town Suchedniow.

Good roads inside ISS





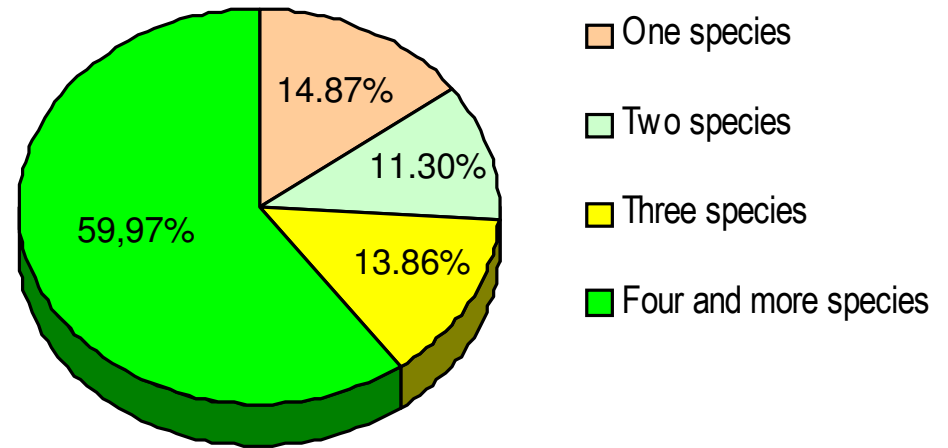
Scientific value

- Swietokrzyskie Mountains are among the oldest (caledonian orogenesis) mountains in Europe
- Geological diversity generated large variability of soils and moisture regimes (several streams) which affects the variable composition of forest stands and the existence of mixed forests
- According to historical records in 1834 there was a large forest fire which covered 3238 ha. This promoted natural regeneration of several species, especially larch.
- The gene pool is presumably of local origin
- Suspected refugia of several plants (and trees) during last glaciations
- This is the area where migrating routes of various forest tree species have met after glacial periods.



Scientific value

– within site diversity



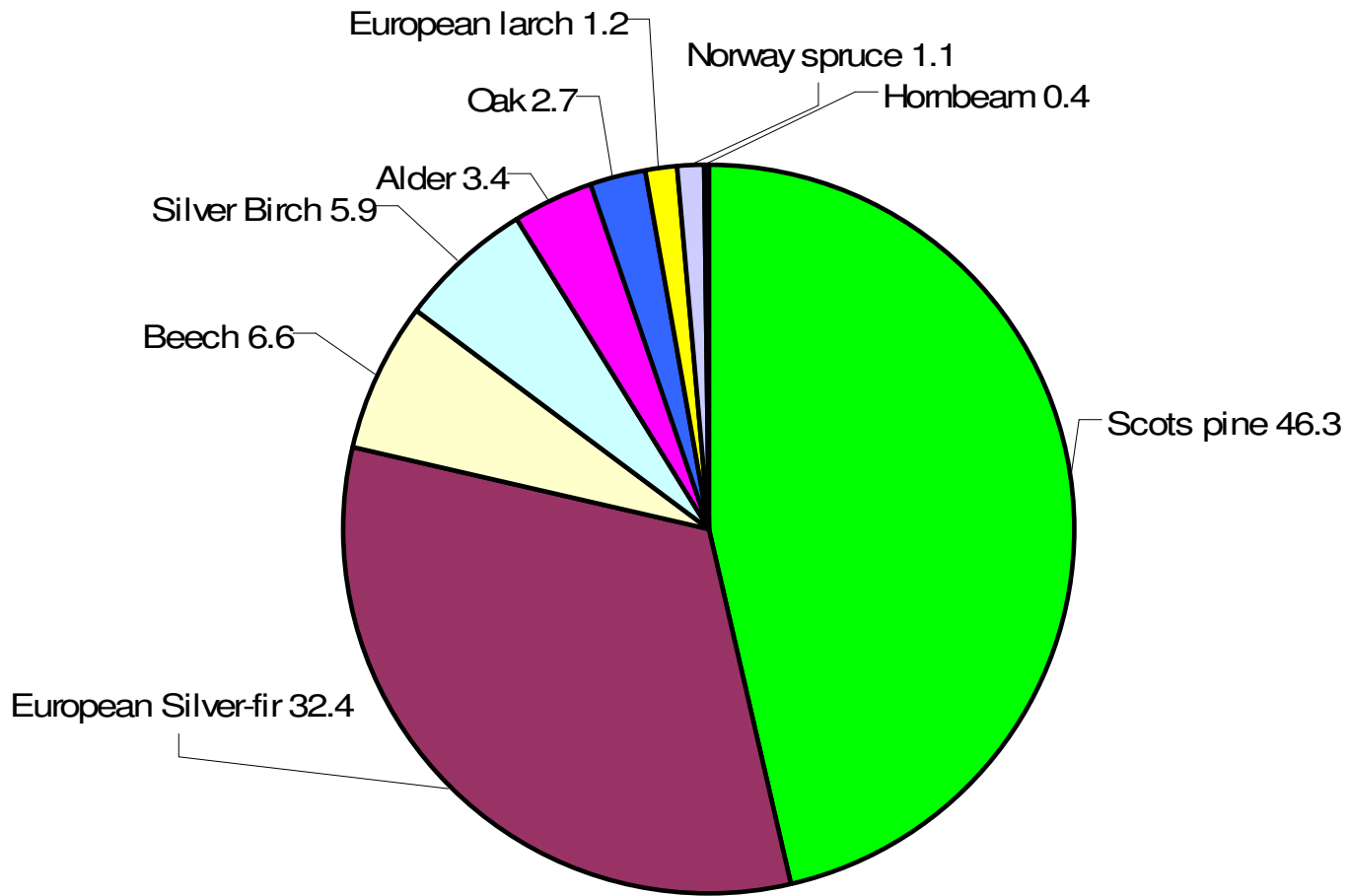
Majority of forests result from **natural regeneration**, although there are **some areas planted artificially** after partial cuttings.

Swietokrzyskie Forests are among **the most diverse forests in Poland**. The diversity of insects and fungi species seems large although it has been weakly studied.

The local forests are relatively healthy, not suffering from massive pest attacks.

High biological diversity: **1017 vascular plant species** (56 protected plants), 100 bird species,

Species diversity





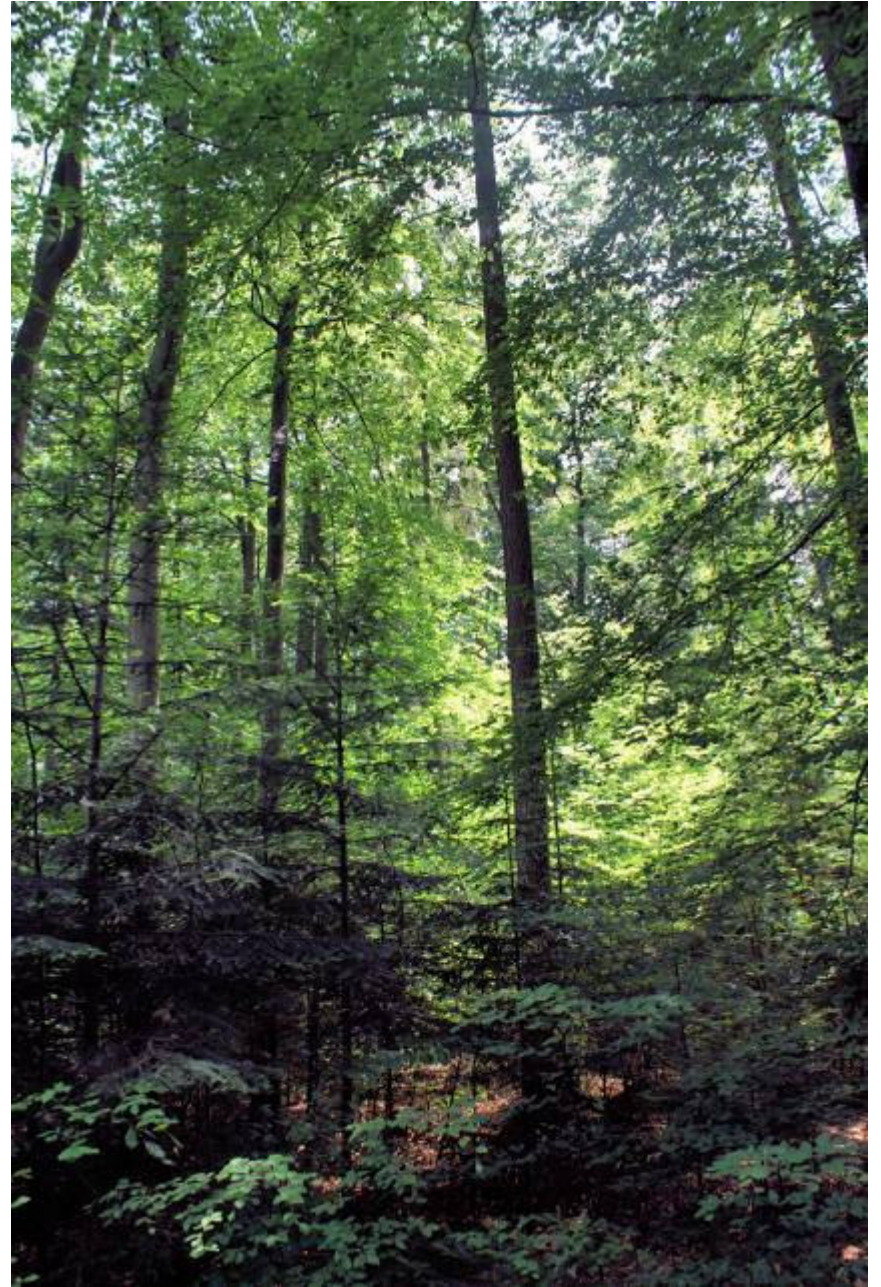




























Local expertise of the correspondent

- Competence in forestry sciences (IBL, IDPAN), site description, database management,
- Studies on genetic diversity using neutral markers (trees and fungi)
- Modeling contemporary processes (gene flow, hybridization, colonization, reproduction and its determinants) in forest trees.
- Scientific teams working on related species (mycorrhizal fungi and insects).
- Molecular genetic laboratories (all P20 partners).
- Access to forestry numerical maps (GIS) and databases (SILP)



Scientific value

- main interest for JERA 3, JERA 4, and other JERA or SEA activities
- An example of sustainable management of forests
- Large number of forest tree species (model and target) and related taxa
- High within stand and between stand variability (also stand repeatability)
- Mostly natural regeneration
- The most eastern temperate location of ISS
- Large potential for studying natural processes (within and among species dynamics)
- Large potential for relating genetic and site variability
- National research projects redirected towards this area