

# Project *brief*

Thünen Institute of Forest Ecosystems

2023/47a

## Presenting environmental data – Insights from the intensive forest monitoring

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- Publicly available environmental data becomes increasingly important.
- Here we present three examples for citizen use.

### Background and aims

Measuring environmental data provides an overview of forest conditions. In addition to the economic use of forests, in which measured data plays a role for the forest and timber value chain, forests provide numerous other ecosystem services. Research data can be used to inform citizens and to strengthen the general public's understanding of forest ecosystems. It is particularly important to put measured parameters into an understandable context and to present the data in a clear way.

We introduce three projects and products which present environmental data measured at the Thünen Institute or in cooperation with others.

#### Stickstoffeinträge auf Level-II-Flächen

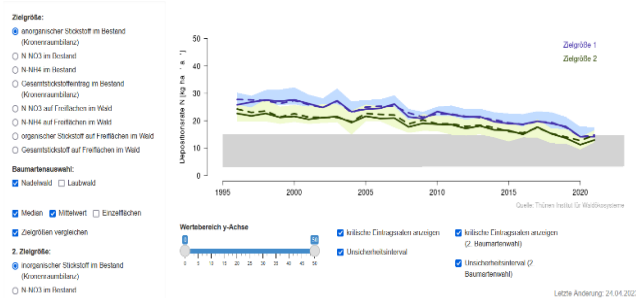


Fig. 1: Screenshot of the presentation of results of the nitrogen deposition on Level II plots (Source: <https://blumwald.thuenen.de/level-ii/>).

### Examples

**Example 1:** Within the intensive forest monitoring (Level II), data from 14 survey areas has been collected on a total of 68 forest areas across Germany since 1996. The plots present environmental gradients of soil, climate and substance inputs are measured for the main tree species beech, oak, pine and spruce. The data collected is not only published in scientific publications, but can also be displayed interactively in graphical form via various web applications (Fig. 1; <https://blumwald.thuenen.de/level-ii/>).

**Example 2:** The Thünen Institute of Forest Ecosystems operates a web application. It displays data from its own forestry research station in Britz, Eberswalde as aggregated daily values (<https://wo-apps.thuenen.de/apps/britz/>). In addition to presenting individual data sets, the application provides an overview of the extensive measurements of environmental data that are collected by the research station. Besides the graphical representation of the measurements, the raw data can also be downloaded, giving interested parties a detailed insight.

**Example 3:** In the 5G Smart Country project, intelligent forest sensors and a 5G connection are used to measure the condition of the forest with the goal of more sustainable management in the face of climate change (Fig. 2). In cooperation with the project partners of the 5G Smart Country project and the districts

Wolfenbüttel and Helmstedt, data was collected on several test areas for the Smart Forestry sub-project and graphically processed in a freely accessible manner.



Fig. 2: Example of a data recording in the 5G Smart Country project (Ostfalia Am Exer, Wolfenbüttel; Source: <https://5g-smartforestry.ostfalia.de/>).

These examples all provide insights into the extensive possibilities with regard to the presentation of environmental data. The increased interest in the condition of the forest by politics, citizens, and researchers needs to be covered with different forms of presentation.

### Further Information

#### Contact

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#### Duration

12.2021-08.2024

#### Project-ID

2443

#### References

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DOI:10.3220/PB1702465113000

