**DATA ACCOMPANYING REPORT**

**Sampling and Analysis of Litterfall**

***SP0001*** *Vitinva*

In order to implement the planned activities and apply the methodological approaches, the intensive monitoring program has been implemented at 3 field stations (sample plots) – Yundola, Vitinya and St. Oryahovo. Intensive collection of litterfall samples of the main tree species *Fagus sylvatica*, *Picea abies* and *Quercus frainetto* has been carried out from the beginning to the end of its formation in 2020.

***SP0003*** *Yundola*

For the litterfall sampling, each sample plot is equipped with 5 collectors for litterfall. The collector positions are in compliance with the requirements laid down in the Manual. The sampling surface of the each collector is 1m$^2$.

***SP0004*** *Staro Oryahovo*

The litterfall samples are collected annually, each month in a period of leaf fall.

- **Collecting of litterfall samples** – samples were collected, stored and mixed in accordance with the Manual. The frequency of litterfall sampling is monthly. Each of the stations was equipped with 5 litterfall collectors. The collector sampling area is 1m$^2$.

The sampling periods were respectively: for Vitinya station – from 27.05.2020 to 04.11.2020] for Yundola station – from 28.05.2020 to 05.11.2020; and for Staro Oryahovo station – from 16.06.2020 to 15.12.2020.

- **Analysis of litterfall samples** - the estimations of litterfall content covered all mandatory parameters in compliance with the Manual. Except the mandatory parameters, the following optimal ones were analyzed – Mn, Fe, Cu, Pb, and Zn (Al and Na, which are not reported).

**Analytical methods**, **units and limits of detection** for the elements are given as follows:

**Table 1.** *Units of measurement, detection methods and limits of detection used in determining the values of the parameters*

| Sequence number | Parameter | Units | Standardized internal methods for analysis | Detection limits |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| **1** | K | mg/g | AAS-flame technique (C2H2/Air) | 0.4 |
| **2** | Ca | mg/g | AAS-flame technique (C2H2/Air) | 3 |
| **3** | Mg | mg/g | AAS-flame technique (C2H2/Air) | 0.2 |
| **4** | N tot. | mg/g | Potentiometric titration | 3 |
| **5** | P | mg/g | UV-VIS Spectrophotometry techniques | 0.1 |
| **6** | C org. | g/100g | Micro Elemental-analyzers | 40 |
| **7** | S | mg/g | X-ray-energy dispersive | 0.2 |
| **8** | Mn | µg/g | AAS-flame technique (C2H2/Air) | 40 |
| **9** | Zn | µg/g | ICP-MS | 4.5 |
| **10** | Fe | µg/g | AAS-flame technique (C2H2/Air) | 60 |
| **11** | Cu | µg/g | ICP-MS | 3 |
| **12** | Pb | µg/g | ICP-MS | 0.2 |
| **13** | Cd | ng/g | ICP-MS | 30 |