

Meteorological station

The meteorological station used for registered the data in the Tarlung river basin situated in the central part of Romania is composed from:

1. Datalogger CR1000 – Campbell Scientific;
2. RHT sensor with shield – Campbell Scientific (for air temperature and relative humidity);
3. SR50A sensor with ultrasound – Campbell Scientific (for snow level);
4. SBS500H rain gauge sensor – Campbell Scientific;
5. Sp-500 sensor – Apogee Instruments (for recording solar radiation);
6. SQ-110 sensor – Apogee Instruments (for recording photosynthesis radiation)
7. 5-TM sensor – Meter Group (for recording soil moisture)

The coordinates for this station are: $25^{\circ} 44' 17.2723''\text{E}$ and $45^{\circ} 31' 27.0951''\text{N}$

Rain gauges equipped

For this watershed, another three rain gauge has been installed inside of forest take into account the characteristics of the forest. The rain gauges are equipped with the following sensors:

- Rain Gauge sensor
- EC-5 sensor – Meter Group (for recording soil temperature and humidity)

Now we characterise the forest for each rain gauges station installed inside of the forest as follow:

Rain gauge 1: $25^{\circ} 43' 41.0906''\text{E}$ and $45^{\circ} 30' 45.8446''\text{N}$

The composition is 60% Beech, 30% Spruce and 10% Fire with 30-year stand age and 90% canopy closure.

Rain gauge 2: $25^{\circ} 44' 33.3530''\text{E}$ and $45^{\circ} 30' 55.2496''\text{N}$

The composition is 60% Spruce, 30% Fire and 10% Beech, with 100-year stand age and 70% canopy closure.

Rain gauge 3: $25^{\circ} 44' 25.0981''\text{E}$ and $45^{\circ} 31' 25.3142''\text{N}$

The composition is 50% Fire, 40% Spruce and 10% Beech, with 100-year stand age and 70% canopy closure.

The data recorded at the meteorological station consist of:

- Precipitations (PP) in millimetre recorded as an average value of 10 minutes;
- Air temperature (AirTC) in Celsius degrees minimum, maximum and average;
- Maxim air humidity (RH) in percent;
- Photon flux in units of micromoles per square meter per second (PPFD);
- Solar radiation in watt per square meter (RAD);
- Wind speed (WS) meter per second maximum and average;
- Wind direction (WD) in degrees;
- Soil moisture (SM) in cubic peter per cubic meter.
- NAN represent unregistered data

The data recorded at the rain gauges station consist of:

- Precipitations (PP) in millimetre recorded as an average value of 10 minutes;
- Soil moisture (SM) in cubic peter per cubic meter;
- Soil temperatures (ST) in Celsius degrees.