

# Program of FORECOMON 2021 and 37th Task Force Meeting, WSL, Birmensdorf, Switzerland, 7-12 June 2021

Webinar ID: <https://wsl.zoom.us/j/66260494277>

| Program       | Monday, 7 June 2021   | ID   |
|---------------|---|--|
| 15:00 - 17:00 | Guided Tour through the City of Zurich  | Moderator: Peter Waldner                                     |
| 18:00 - 20:00 | Welcome Reception at the Landesmuseum Zurich<br>Opening Keynote: Forests in transition - learning from current extremes to assess future pathways | Moderators: Peter Waldner & Marcus Schaub<br>Andreas Rigling |

| Program              | Tuesday, 8 June 2021  | ID                               |
|----------------------|---|----------------------------------|
| 08:00 - 09:00        | Registration & coffee   |                                  |
| 09:00 - 09:30        | Opening / welcome   | Moderator: Marcus Schaub         |
| 09:00 - 09:05        | Opening of FORECOMON 2021   | Marcus Schaub                    |
| 09:05 - 09:10        | Welcome by the acting WSL Director  | Christoph Hegg                   |
| 09:10 - 09:15        | Welcome by the Federal Office for the Environment   | S. Augustin & M. Reinhard        |
| 09:15 - 09:20        | Welcome by ICP Forests Chair  | Marco Ferretti                   |
| <b>Session 1</b>     | <b>The Classics - Long-term trends in forest ecosystem processes as affected by air pollution, drought or other extreme weather events</b>          | <b>Moderator: Marco Ferretti</b> |
| 09:30 - 09:50        | Keynote: Accounting for time: long-term effects of N addition on forest biogeochemistry and C sequestration   | Federico Magnani 187             |
| 09:50 - 10:05        | Nitrogen deposition is the most important environmental driver of continental-scale forest growth in Europe   | Sophia Etzold 183                |
| 10:05 - 10:20        | Chronic nitrogen deposition effects under climate change in an Austrian karst catchment   | Thomas Dirnböck 202              |
| <b>10:20 - 10:50</b> | <b>Coffee break</b>   |                                  |
| 10:50 - 11:05        | Acidification and recovery of forest ecosystems in central Japan during the past few decades  | Hirofumi Sase 159                |
| 11:05 - 11:20        | What is the current carbon storage and future carbon sequestration potential of forest soils in the UK?   | Elena I Vanguelova 186           |
| 11:20 - 11:35        | Trends in water chemistry in Europe and North America   | Heleen A De Witt 189             |
| 11:35 - 12:20        | Poster pitching; 20 x 2 min per poster slide (see Program for Poster Pitching)  | Moderator: Marco Ferretti        |
| 12:20 - 12:25        | Wrap up of Session 1  | Co-moderator: Lars Vesterdal     |
| <b>12:25 - 13:30</b> | <b>Standing lunch</b>   |                                  |
| <b>Session 2</b>     | <b>The Exchange - Methodologies and models applied within ICP Forests and beyond</b>  | <b>Moderator: Kai Schwärzel</b>  |
| 13:30 - 13:50        | Keynote: Responses of Swiss forests to long- and short-term environmental changes   | Nina Buchmann 182                |
| 13:50 - 14:05        | The Dimensions of the Phosphorus status of European beech forest ecosystems   | Friederike Lang 217              |
| 14:05 - 14:20        | Ectomycorrhizal fungal communities and functional genes drive forest productivity across the ICP Forest Network                                     | Mark Anthony 191                 |
| 14:20 - 14:35        | The water budget of forests – the big unknown outside of our intensive monitoring plots?  | Heike Puhlmann 132               |
| <b>14:35 - 15:05</b> | <b>Coffee break</b>   |                                  |
| 15:05 - 15:20        | Linking in situ measurements with remote sensing in Level I and II ICP Forests network in Romania: Prototyping a national forest monitoring system  | Ovidiu Badea 178                 |
| 15:20 - 15:35        | Canopy and growth response of beech trees after the 2018 drought in Switzerland   | Brigitte Rohner 142              |
| 15:35 - 15:50        | Continuous approximation of leaf area index and phenological phases within deciduous forests based on temperature measurements                      | Anita Christine Zolles 196       |
| 15:50 - 16:05        | Long-term irrigation in a drought-stressed pine forest accelerates carbon cycling and leads to vertical redistribution of soil organic carbon pools | Claudia Guidi 167                |
| 16:05 - 16:20        | Where does the water come from? Variations in soil water uptake depth in a beech forest during the 2018 drought                                     | Arthur Gessler 120               |
| 16:20 - 17:05        | Poster pitching; 20 x 2 min per poster slide (see Program for Poster Pitching)  | Moderator: Kai Schwärzel         |
| 17:05 - 17:10        | Wrap up of Session 2  | Co-moderator: Nathalie Cooles    |

| Program              | Wednesday, 9 June 2021   | ID  |
|----------------------|--|---|
| <b>Session 3</b>     | <b>The Mechanisms - Air pollution effects on forest ecosystem functioning under extreme and/or prolonged unfavourable climate and weather conditions</b> | <b>Moderator: Stefan Fleck</b>                    |
| 08:30 - 08:50        | Keynote: Forest soil carbon cycle under drought - linking experiments, monitoring and natural gradients across Switzerland                               | Frank Hagedorn 154                                |
| 08:50 - 09:05        | Beech nutrition depends on defoliation, soil and climate across Croatia  | Mladen Ognjenović 211                             |
| 09:05 - 09:20        | Mechanisms explaining N stock and acidity dynamics in German forests between 1990 and 2007 and possible climate change feedbacks                         | Stefan Fleck 164                                  |
| 09:20 - 09:35        | Foliar uptake of gaseous elemental mercury by European forests   | Lena Wohlgemuth 146                               |
| <b>09:35 - 10:05</b> | <b>Coffee break</b>  |   |
| 10:05 - 10:20        | Impact of pollen on throughfall biochemistry in European temperate and boreal forests  | Arne Verstraeten 145                              |
| 10:20 - 10:35        | Ectomycorrhizal functionality after 5 years of summer drought in a mature forest   | Fabian C Weikl 144                                |
| 10:35 - 10:50        | Patagonian forests vulnerability to climate change: Consequences for management and conservation   | Guillermo Martinez Pastur 140                     |
| 10:50 - 11:05        | Environmental factors, leaf traits and ozone visible symptoms are interrelated in Viburnum lantana   | Michele Faralli 216                               |
| 11:05 - 12:00        | Poster pitching; 20 x 2 min per poster slide (see Program for Poster Pitching)   | Moderator: Stefan Fleck                           |
| 12:00 - 12:05        | Wrap up of Session 3   | Co-moderator: Bruno de Vos                        |
| 12:05 - 12:15        | Closing up of FORECOMON 2021   | Marco Ferretti                                    |
| <b>12:15 - 13:15</b> | <b>Lunch</b>   | <b>Guides: Maria Schmitt &amp; Anne Thimonier</b> |
| 13:15 - 16:00        | Guided Tours on WSL Campus   |   |
| 19:00                | Conference & Task Force Meeting Dinner in Zurich   |   |

| Program       | Thursday, 10 June 2021                                | ID   |
|---------------|---|--|
| 08:30 - 12:35 | 37th ICP Forests Task Force Meeting (upon invitation) |  |
| 12:35 - 14:00 | Lunch   | Moderators: Marco Ferretti & Kai Schwärzel |
| 14:00 - 15:20 | 37th ICP Forests Task Force Meeting                   |  |

| Program       | Friday, 11 June 2021                                  | ID  |
|---------------|---|---|
| 09:00 - 12:00 | 37th ICP Forests Task Force Meeting                   | Moderators: M. Ferretti & K. Schwärzel            |
| 12:00         | Closing of the 37th ICP Forests Task Force Meeting    |   |
| 12:00 - 13:00 | Lunch   |   |
| 13:00 - 20:00 | Excursion into Inner Alpine Forests, leaving from WSL | Guides: Peter Waldner, Esther Thürig, Peter Brang |

| Program | Saturday, 12 June 2021                            | ID  |
|---------|---|---|
| All day | Excursion into Inner Alpine Forests (continued)   | Guides: Peter Waldner, Esther Thürig, Peter Brang |
| 20:00   | Closing of Excursion at Zurich Main Train Station |   |

## Program for Poster Pitching (2 minutes per poster slide)

| Program          | Tuesday, 8 June 2021  | ID                               |
|------------------|---|----------------------------------|
| <b>Session 1</b> | <b>The Classics - Long-term trends in forest ecosystem processes as affected by air pollution, drought or other extreme weather events</b>                            | <b>Moderator: Marco Ferretti</b> |
| 11:35 - 12:20    | Impact of drought on soil CO <sub>2</sub> efflux and vertical partitioning of soil CO <sub>2</sub> production at a beech and a pine forest site in north-east Germany | Joachim, Hubert 110              |
| 11:35 - 12:20    | European beech and oak show different resource dynamics in most years   | Nussbaumer, Anita 112            |
| 11:35 - 12:20    | Monitoring of mercury in tree foliage in Austria  | Tatzber, Michael 121             |
| 11:35 - 12:20    | Fluxes and stocks of nitrogen in the litterfall and soil in evergreen broadleaves and fir forests   | Michopoulos, Panagiotis 123      |
| 11:35 - 12:20    | Identifying effects of climate conditions on foliar nutrition   | Krüger, Inken 128                |
| 11:35 - 12:20    | Site types revisited: comparison of traditional Russian and Finnish classification systems for European Boreal forests  | Pohjanmies, Tähti 135            |
| 11:35 - 12:20    | Phosphorus leaching in beech forest soils as affected by fertilization and seasons  | Fetzer, Jasmin 137               |
| 11:35 - 12:20    | Comparison of soil profile in natural beech/mixed and managed spruce forests  | Fadrhosová, Věra 139             |
| 11:35 - 12:20    | Leaf morphological traits and leaf nutrient concentrations in European beech stands across a water availability gradient in ICP Forests Level II plots                | Salehi, Maryam 148               |
| 11:35 - 12:20    | Long-term changes in leaf morphological traits of European beech and Norway spruce along multiple gradients in Switzerland  | Zhu, Joachim 157                 |
| 11:35 - 12:20    | Forest monitoring from the cloud - Soil water content case study  | Pascu, Ionut-Silviu 158          |
| 11:35 - 12:20    | The potential of throughfall measurements for the derivation of canopy attributes   | Fleck, Stefan 170                |
| 11:35 - 12:20    | Trends and fluxes of soil solution chemistry focusing on nitrate leaching responses to air pollution in Italian forest soils  | Andreetta, Anna 175              |
| 11:35 - 12:20    | Ground-level ozone and nitrogen deposition in the Czech Republic: assessment of long-time trends and spatial changes  | Hůnová, Iva 176                  |
| 11:35 - 12:20    | Assessing the risk of elevated nitrate leaching from Swiss forests  | Waldner, Peter 180               |
| 11:35 - 12:20    | The effect of ozone and nitrogen deposition on the vitality of <i>Fagus sylvatica</i> and <i>Picea abies</i> in Switzerland   | Braun, Sabine 199                |
| 11:35 - 12:20    | Long-term monitoring of forest ecosystems of the taiga zone of European Russia  | Aparin, Boris Fedorovich 201     |
| 11:35 - 12:20    | Tree health and annual and periodical radial growth in coniferous trees in northern Italy   | Ferretti, Marco 204              |
| 11:35 - 12:20    | Deposition properties in 18 Level II forest monitoring sites in Turkey  | Öztürk, Sitki 208                |
| 11:35 - 12:20    | Evaluation of air temperature and precipitation values in Turkey  | Ekemen, Gülçin 209               |
| 11:35 - 12:20    | Assessment of air pollutants at Level II forest monitoring sites in Turkey  | Kaya, Sezer 210                  |
| <b>Session 2</b> | <b>The Exchange - Methodologies and models applied within ICP Forests and beyond</b>  | <b>Moderator: Kai Schwärzel</b>  |
| 16:20 - 17:05    | Trade-offs between ecosystem service provision and the predisposition to disturbances: a NFI-based scenario analysis  | Temperli, Christian 106          |
| 16:20 - 17:05    | Assessment of land use change on environmental security   | Polevshchikova, Iuliia 126       |
| 16:20 - 17:05    | Monitoring forest carbon exchange in complex terrain  | Jocher, Georg 130                |
| 16:20 - 17:05    | Assessing biodiversity from space: Functional diversity across spatial scales and optical sensors   | Helfenstein, Isabelle S. 134     |
| 16:20 - 17:05    | Bridging forest inventories to improve international reporting on biodiversity  | Portier, Jeanne 149              |
| 16:20 - 17:05    | Canopy nitrogen fertilization of two Italian temperate mountain forests: an isotopic approach to quantify the fate of atmospheric nitrogen depositions                | Da Ros, Luca 152                 |
| 16:20 - 17:05    | High frequency stable isotope signals as proxy for physiological responses to climate - Dual isotope approach at a European scale                                     | Vitali, Valentina 155            |
| 16:20 - 17:05    | Design-based improvements in change estimation for the Swiss NFI through integration with external monitoring networks and data sources                               | Massej, Alexander 171            |
| 16:20 - 17:05    | 14-years of tree-growth monitoring along a 1400 m elevation transect in the Lötschental   | Fonti, Patrick 172               |
| 16:20 - 17:05    | Architectural requirements for forest monitoring data integration in EnviDat  | Iosifescu Enescu, Ionut 173      |
| 16:20 - 17:05    | A new experimental plantation network to test the future climatic suitability of 18 tree species in Switzerland   | Brang, Peter 184                 |
| 16:20 - 17:05    | A case study for the effects of telecom's microwaves on forest trees  | Monteleone, Maria C 188          |
| 16:20 - 17:05    | Assessing tree vitality to evaluate forest health: can tree-ring stable isotopes be used as indicators?   | Cherubini, Paolo 190             |
| 16:20 - 17:05    | Combining spectral and molecular approaches to capture leaf pigment dynamics  | Petibon, Fanny 197               |
| 16:20 - 17:05    | Forest monitoring towards the definition of stomatal-flux critical levels for forest protection against ozone: the MOTTLES approach                                   | Paoletti, Elena 205              |
| 16:20 - 17:05    | A concept for a consolidated humus form description in forest soil investigations in Europe   | Wachendorf, Christine 213        |
| 16:20 - 17:05    | Large-scale mistletoe inventory in Central Poland   | Wójcik, Roman 214                |
| 16:20 - 17:05    | Ion Exchange Resin method for quantifying bulk (throughfall) deposition   | Vos, Marleen A.E. 218            |
| 16:20 - 17:05    | Artificial electromagnetic fields (telecoms) as forests' pollutants. Plans for testing monitoring procedures three protected forests of Italy                         | Monteleone, Maria C 219          |
| <b>Program</b>   | <b>Wednesday, 9 June 2021</b>   |                                  |
| <b>Session 3</b> | <b>The Mechanisms - Air pollution effects on forest ecosystem functioning under extreme and/or prolonged unfavourable climate and weather conditions</b>              | <b>Moderator: Stefan Fleck</b>   |
| 11:05 - 12:00    | The contribution of ambient aerosols to 'wax degradation' and decreasing drought tolerance  | Burkhardt, Jürgen 109            |
| 11:05 - 12:00    | Why are Scots pines dying in the Swiss Rhône valley?  | Hunziker, Stefan 113             |
| 11:05 - 12:00    | How soil carbon and nitrogen changes in the topsoil formed under different tree species?  | Babur, Emre 114                  |
| 11:05 - 12:00    | Are forests thickening due to rising CO <sub>2</sub> ? Insights from Swiss forests and mechanistic modelling  | Marqués, Laura 116               |
| 11:05 - 12:00    | The effects of land use types on the soil organic carbon content  | Uslu, Omer Suha 122              |
| 11:05 - 12:00    | Impact of extreme climate factors on forests drought in Republic of Serbia  | Češljarić, Goran 124             |
| 11:05 - 12:00    | Analysis of floodplain forest sensitivity to drought  | Kowalska, Natalia Barbara 129    |
| 11:05 - 12:00    | Carbon allocation in <i>Picea abies</i> (L. Karst) roots during recovery from a five-year long drought  | Danzberger, Jasmin 133           |
| 11:05 - 12:00    | Root carbon-nutrient balance determines downy oak survival and recovery from drought  | Ouyang, Shengnan 143             |
| 11:05 - 12:00    | Predicting the spread of <i>Gonipterus scutellatus</i> forest pest under climate change in Spain using Universal Kriging model  | Adame, Patricia 151              |
| 11:05 - 12:00    | Impact of the European drought 2018 on tree health and mortality in Swiss forest ecosystems   | Sturm, Joan 162                  |
| 11:05 - 12:00    | Plasticity of tree fine root traits under drought and irrigation  | Brunner, Ivano 165               |
| 11:05 - 12:00    | Above- and belowground metal accumulation and growth responses in young afforestations on model brown field sites   | Günthardt-Goerg, Madeleine 166   |
| 11:05 - 12:00    | Urban air quality in Mongolia: concentrations, sources and future needs of studies  | Soyol-Erdene, Tseren-Ochir 179   |
| 11:05 - 12:00    | Air pollution and climate change effects on tree growth at Ulaanbaatar city, Mongolia   | Batkhuuyag, Enkh-Uchral 192      |
| 11:05 - 12:00    | Is foliar water uptake fostered by aerosol deposition?  | Koch, Irmgard 194                |
| 11:05 - 12:00    | Direct impact of atmospheric aerosols on the ecophysiology of <i>Cinnamomum camphora</i>  | Chi, Chia-Ju Ellen 195           |
| 11:05 - 12:00    | Can trees take up airborne nanoparticles through their leaves?  | Balilkaya, Paula 198             |
| 11:05 - 12:00    | Can forest trees take up nanoplastic from their roots and transport them in their aboveground tissues?  | Murazzi, Maria Elvira 200        |
| 11:05 - 12:00    | Missing adequate growth response of coniferous tree species to climate warming at the Alpine forest line  | Oberhuber, Walter 203            |
| 11:05 - 12:00    | 10-year monitoring of ecosystem responses to understory removal in a dry oak-pine forest of Central Valais, Switzerland   | Vollenweider, Pierre 212         |