

1. **Dr. Hanna K. Lappalainen** is a docent and the Secretary General of the Pan-Eurasian Experiment (PEEX) Program at the University of Helsinki, Institute for Atmospheric and Earth System Research (INAR), Finland. She also serves as the Director of the of the Atmosphere and Climate Competence Center (ACCC) Impact Program. Dr. Lappalainen is the lead editor of the PEEX Science Plan and has extensive experience in coordinating large-scale research projects. Her contributions have been recognized with several honors, including the NASA Goddard Team Award for the EOS-AURA satellite OMI Team in 2005 and the Silver Medal from the International Eurasian Academy of Sciences (IEAS) in 2015. She co-leads “Arctic-boreal Hub” of the Universities of the Arctic network with Academician Markku Kulmala. She obtained her Ph.D. degree from the University of Helsinki, Finland and has been engaged in research on atmospheric biogenic volatile organic compounds and plant phenology. ORCID ID 0000-0003-3221-2318



2. **Prof. Alexander Baklanov** (PhD in Geophysics, 1983; Dr.Sci. in Meteorology and Climatology, 1998; Professor of Meteorology, 2008), has worked in atmospheric and environmental sciences since 1979, with research focuses on developing next-generation online coupled meteorology-chemistry models, boundary layer dynamics, and urban climate studies. He is a Professor at the Niels Bohr Institute, University of Copenhagen. Over the past 10 years, he served in Research Department of the World Meteorological Organization (WMO), where he was responsible for integrated modelling and cross-cutting urban research activities. He is a member of the Academia Europaea, the International Eurasian Academy of Sciences (IEAS), and Founding Editor of the *Urban Climate journal*. He led several international research projects on urban environment and climate, including ArcticRISK, NordRisk, FUMAPEX, MEGAPOLI, EnviroRISKS, EuMetChem, EnviroHIRLAM, PEEX MP, IMTECC, and IUS4CRC. He was the WMO focal point for the UN Initiative “United for Smart and Sustainable Cities”, the UN Coalition for Combating Sand & Dust Storms. He was one of the developers of the WMO methodology for Integrated Urban Hydrometeorological, Climate and Environmental Systems for sustainable cities. Currently, he is a member of GEO Resilient Cities and Human Settlements WG, and is a lead author for the IPCC Report on Climate Change and Cities. He has published 15 books and more than 300 journal publications. ORCID ID 0000-0002-5396-8440



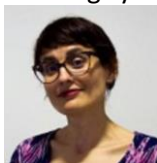
3. **Prof. Jaana Bäck** is an expert in biogeochemical cycles, terrestrial ecology and soil processes in boreal and arctic ecosystems, especially the feedbacks between ecosystems and atmosphere. She is contributing in the development of national, European and global research infrastructures for integrated, long-term Earth system observations. She is the Coordinator of the H2020 Advanced community project “eLTER PLUS”, and a Co-coordinator of the ESFRI process of the European Long-Term Ecosystem, Critical Zone and Socio-ecology RI. Prof. Bäck is leading the “Ecosystem processes” Research Group at the University of Helsinki, and is also responsible for the ecosystem research at the SMEAR network (www.atm.helsinki.fi/SMEAR/) also and serves on the SMEAR Board of Directors. In addition, she is a member of the national IPCC working group. ORCID ID 0000-0002-6107-667X



4. **Dr. Christos Arvanitidis** is CEO of LifeWatch ERIC (Seville, Spain) and Research Director at the Hellenic Centre for Marine Research (Institute of Marine Biology, Biotechnology and Aquaculture). He previously served as Head of the Biodiversity Laboratory, Coordinator of LifeWatchGreece, and National Delegate to the LifeWatch ERIC General Assembly. His research focuses on marine biodiversity, biodiversity informatics, functional diversity, and coastal ecosystems—specifically comparing biodiversity patterns across biological organisation levels/scales and developing interrelationship exploration approaches. He has participated in more than 100 research and education projects and published more than 100 peer-reviewed papers (including 3 monographs). He holds editorial roles, including the Associate Editor for *Diversity*, *Frontiers in Marine Science*, *Biodiversity Data Journal*, the Handling Editor for *Mediterranean Marine Science* and the Guest Editor for *Marine Ecology Progress Series*, *Journal of Sea Research*. As CEO of LifeWatch ERIC, Dr. Arvanitidis' current focus is on promoting open science in biodiversity and ecosystem research through technological innovation and developing collaborative interfaces between Research Infrastructures for the creation of new knowledge and innovation. ORCID ID 0000-0002-6924-5255.



5. **Dr. Sara Basart** has a core research background focusing on understanding the physical and chemical processes that control atmospheric aerosols, as well as assessing their impacts on climate, ocean biogeochemistry, air quality, human health, and socio-economic sectors. Her research relies on numerical modelling and the implementation of operational forecasting, which has equipped her with extensive expertise in high-performance computing (HPC) and data exchange protocols. Since 2023, she has served as a Scientific Officer at the World Meteorological Organization (WMO), where she takes charge of activities related to atmospheric composition modelling and its applications (including the development of early warning systems) under the Global Atmosphere Watch (GAW) programme. ORCID ID 0000-0002-9821-8504



6. **Dr. Natacha Bernier** currently holds the positions of Chief Scientist and Director of Higher Education at Météo-France. Météo-France, as France's national meteorological service, offers a broad portfolio of national services—ranging from daily weather forecasts and warnings for heatwaves, heavy rainfall, and avalanches to services supporting climate adaptation. In her role as Chief Scientist, Dr. Bernier is responsible for leading research and development initiatives, with the goal of ensuring the continuous improvement of all services provided by Météo-France. Prior to her current position, Dr. Bernier served as Director of the Meteorological Research Division at Environment and Climate Change Canada, and also held the role of Consulting Director for Earth System Science Research and Innovation at the World Meteorological Organization. ORCIDID 0000-0002-5780-6377



7. **Dr. Dominique Berod** serves as the Chief of the Hydrological Monitoring Section at the World Meteorological Organization (WMO). He is responsible for WMO's activities in hydrological observation, data, and information systems, which support global efforts focused on priorities such as climate resilience and early warning systems. He is a member of steering boards associated with global data centers and geospatial networks that address climate, water, and environmental issues. Before joining WMO in 2015, he held the position of Head of the Swiss National Hydrological Service from 2008 to 2014. Prior to that, until 2008, he served as the Head of the Flood Protection and River Restoration Unit in the Canton of Wallis, Switzerland. Dr. Dominique Berod holds a Master's degree in Environmental Engineering from the Swiss Institute of Technology in Lausanne (EPFL, 1989) and a Ph.D. degree in Hydrology from the same university—a degree earned in collaboration with Louisiana State University in Baton Rouge, USA (1994). ORCID ID 0000-0001-6362-4011



8. **Prof. Thomas G. Bornman** oversees the management of the Elwandle Coastal Node of the South African Environmental Observation Network (NRF-SAEON) and the Shallow Marine and Coastal Research Infrastructure (SMCRI)—both supported by funding from South Africa's Department of Science, Technology and Innovation. He earned his PhD from the University of Port Elizabeth (now Nelson Mandela University) and has since focused his research efforts on coastal and marine ecology. His research interests span a broad range of topics, including: 1) carbon sequestration and the biological pump; 2) blue carbon in coastal habitats; 3) estuarine greenhouse gas fluxes; and 4) coastal surface pCO₂ and air-sea fluxes. He serves as a co-lead for the EU-Horizon project "Knowledge and climate services from an African observation and Data research Infrastructure (KADI)" and is tasked with the development and implementation of a long-term Coastal Greenhouse Gas Observation Network in South Africa, alongside plans to expand this initiative across the African continent. ORCID ID 0000-0003-1868-479X



9. **Dr. Pier Luigi Buttigieg** serves as a Principal Investigator and Senior Data Scientist at the Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research. He specializes in digital architecture and strategy development, with a focus on knowledge representation as well as the mobilization, integration, and analysis of ocean and biodiversity data. In addition to leading his own research and providing service primarily within the framework of the EU's Horizon programme, Dr. Buttigieg offers guidance to multiple international research projects and infrastructures, chairs the UNESCO-IOC Ocean Data and Information System (ODIS), and holds a position on the Biology and Ecosystem Panel of the Global Ocean Observing System (GOOS). In 2025, he was awarded the International Oceanographic Data and Information Exchange (IODE) Achievement Award. He

obtained his PhD in Bioinformatics through a joint programme established by the Max Planck Institute for Marine Microbiology and Jacobs University Bremen. ORCID ID 0000-0002-4366-3088



10. **Gregory R. Carmichael** holds the position of Karl Kammermeyer Professor of Chemical and Biochemical Engineering at the University of Iowa. He also serves as Director of the Center for Global and Regional Environmental Research—an interdisciplinary center of significant scale, hosting over 80 faculty members. Dr. Carmichael’s research focuses on air pollution and climate change; for this field, he employs comprehensive computer models and big data to simulate the interactions between air pollutants, weather, and climate, estimate the resulting environmental impacts, and assess the effectiveness of diverse mitigation strategies for air pollution and climate change. He has published over 450 works and received numerous awards, including the Lawrence K. Cecil Award from the American Institute of Chemical Engineers (AIChE)—an honor recognizing outstanding contributions and achievements in chemical engineering that advance the preservation or improvement of the environment. He is also a Fellow of three prominent organizations: the American Institute of Chemical Engineers (AIChE), the American Geophysical Union (AGU), and the American Meteorological Society (AMS). Professor Carmichael serves on multiple international advisory boards focused on climate and atmospheric science, and chairs the Public Affairs and Advisory Committee of the American Institute of Chemical Engineers (AIChE). Additionally, he chairs the Environmental Pollution and Atmospheric Chemistry Scientific Steering Committee of the UN World Meteorological Organization (WMO)—a committee that oversees the UN’s Global Atmospheric Watch (GAW) programme, which is tasked with monitoring the health of the global atmosphere. Currently, he co-chairs the advisory group for the implementation of the WMO Global Greenhouse Gas Watch (G3W). This new service, which aligns in scope with global weather forecasting systems, is designed to regularly provide timely, authoritative, quantitative, and transparent observation-based data—specifically covering atmospheric greenhouse gas concentrations and emissions of carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). ORCID ID 0000-0001-8097-3475



11. **Juanjo Dañobeitia** holds the position of Professor of Marine Geophysics at the Spanish National Research Council (CSIC, Spain). Since 2024, he has served as an Advisor at the Tsunami Resilience Section of the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO). He previously acted as General Director of the EMSO European Research Infrastructure Consortium (EMSO ERIC) from 2017 to 2023. With over 40 years of experience in marine research and technology, he has published more than 150 papers indexed in the Science Citation Index (SCI). From 2000 to 2012, he served as Director of the Large-Scale Spanish Marine Infrastructure at the CSIC’s Universitat Politècnica de Catalunya (UTM-CSIC) in Barcelona. He has also held research positions at various European institutions, including the Complutense University of Madrid, ETH Zurich, Utrecht University, the University of Cambridge, and the Polytechnic University of Barcelona; in 2016, he joined the Marine Science and Earth Science Institutes of CSIC in Barcelona. Dr. Dañobeitia has participated in multiple high-level academic and institutional roles: he was a member of the European Strategy Forum on Research Infrastructures (ESFRI) High-Level Expert Group, has served on the Operational Committee of the European Ocean Observing System (EOOS) since 2020, and has been part of the International Science Advisory

Board/Ocean Observatory Council of Ocean Network Canada (ONC) since 2022. In 2023, he was an invited editor for *Frontiers in Marine Science* and currently serves on the International Advisory Board of the Alfred Wegener Institute's Polar Research Programme. He has received two prestigious honors: the "Orden de Isabel la Católica" (2010), awarded by the Spanish Ministry of Science and Innovation in recognition of his contributions to Antarctic research; and the "Orden del Mérito Civil" (2015), conferred by King Felipe VI of Spain for his exceptional contributions to the country in the fields of marine and polar sciences. ORCID ID 0000-0003-2620-8400



12. **Dr. Yann-Hervé De Roeck** leads the European Euro-Argo Consortium—the organization responsible for coordinating Europe's contribution to the Argo network of autonomous floats. This network delivers synoptic measurements of key physical and biogeochemical parameters across the world's oceans. He possesses extensive expertise in high-performance numerical modelling, which he applied during his tenure at Ifremer (French Research Institute for Exploitation of the Sea) across diverse fields: the design of new materials for marine applications, acoustic and geophysical imaging, and operational coastal oceanography. His experience in research infrastructure further includes the establishment and management of a public-private research institute focused on offshore marine renewable energy. ORCID ID 0000-0003-0310-7738



13. **Prof. Sagnik Dey** is the Vipula and Mahesh Chaturvedi Chair professor in Policy Studies and Head of the Centre for Atmospheric Science, IIT Delhi. He is also adjunct Professor at the Department of Health, Policy and Management, Korea University, Seoul. His research interest is to understand the interaction between air pollution and climate change and how such interaction impacts human health. He received the Devendra Lal Memorial medal from the American Geophysical Union in 2024, Fulbright-Nehru Academic and Professional Excellence Fellowship in 2017-2018, IIT Delhi Institute Chair Fellowship from 2019-2024, NASI-SCOPUS Young Scientist Award in 2012 and INSA Young Scientist Medal in 2008. He obtained his PhD from IIT Kanpur and has been involved in research and teaching. ORCIDID 0000-0002-0604-0869



14. **Dr. Evangelos Gerasopoulos** is the Vice-President of the National Observatory of Athens (NOA) and serves as the Director of the Institute for Environmental Research and Sustainable Development (IERSD/NOA). During his career, he has targeted his research towards studying physical and chemical processes in the atmosphere, being active in the fields of atmospheric composition and air quality research, Earth system processes and climate, climate change and relevant synergistic interactions, environment and health, Earth observation, urban sustainability and policy. He also serves as the Director of the Greek GEO Office, the focal point of Earth observation activities in Greece. As such, he acts as Head Delegate of Greece in the relevant international bodies in the field of Earth observation, i.e. Intergovernmental Group on Earth Observations – GEO and he co-chairs GEO's Programme Board. In collaboration with UNESCO's World Heritage Center, he leads the international Initiative "Urban Heritage Observatory (UHCO)" within the frame of the GEO Work Programme. ORCID ID 0000-0002-8579-8562



15. **Dr. Gregor T. Feig** leads the Expanded Freshwater and Terrestrial Environmental Observation Network (EFTEON) within the South African Environmental Observation Network (SAEON), a national research infrastructure under the South African Research Infrastructure Roadmap (SARIR). His work advances integrated long-term environmental observation through the establishment of instrumented research landscapes representing key ecological and social systems. He is a biogeochemist and atmospheric scientist whose research focuses on land–atmosphere interactions, biogeochemical cycling, and environmental change in South Africa. ORCID ID 0000-0002-5285-4783



16. **Dr. Shahzad Gani** is an Assistant Professor at the Centre for Atmospheric Sciences, Indian Institute of Technology Delhi, where he joined in February 2023. He holds a Ph.D. in Civil Engineering (2019) and an M.S. in Environmental Engineering (2016) from the University of Texas at Austin, and a B.Tech. in Civil Engineering from the Indian Institute of Technology Delhi (2013). Prior to joining IIT Delhi, he was a Postdoctoral Researcher at the Institute for Atmospheric and Earth System Research (INAR), University of Helsinki (2020–2023), where he continues to serve as a Visiting Researcher. His research and teaching focus on atmospheric aerosols, air quality, noise pollution, and science communication. ORCIDID 0000-0002-6966-0520



17. **Helen Glaves** holds the position of Senior Data Scientist at the British Geological Survey and serves as an Editor for *Earth and Space Science*—a journal published by the American Geophysical Union (AGU). In 2016, she was awarded the prestigious Ian McHarg Medal by the European Geosciences Union (EGU). Glaves has played a pivotal role in developing innovative methods for the storage and sharing of marine research data. She acts as Programme Manager for the Research Data Alliance (RDA), a collaboration she has been involved in since its establishment. Additionally, she coordinates the Ocean Data Interoperability Platform (ODIP)—an initiative that facilitates the cross-domain and cross-border sharing of ocean data among the scientific community. She led the advancement of ODIP into its second phase (ODIP-II), which focused on supporting the transfer of data in diverse formats between research centers. This phase utilizes the Natural Environment Research Council’s (NERC) vocabulary server—a tool developed jointly by the British Oceanographic Data Centre and the National Oceanography Centre—to ensure seamless data format transitions. Helen Glaves also served as President of the European Geosciences Union (EGU) from 2021 to 2023, leveraging her expertise to advance the field of geosciences across Europe. ORCID ID 00000001817944



18. **Dr. Silja Häme** is an aerosol physicist with over ten years of experience in atmospheric research, complemented by extensive in research coordination and project management, particularly in the development and implementation of national and European research infrastructures. She currently serves as the Coordinator of ACTRIS-Finland national activities and leads European ACTRIS Topical Centre Units hosted by the University of Helsinki, focusing on nanoparticles and condensable trace gases. She also works at the ACTRIS ERIC Head Office (established in 2023) and previously contributed to the interim ACTRIS Head Office beginning in 2017, playing a key role in the establishment and implementation of ACTRIS as a pan-European research infrastructure. Before her involvement with ACTRIS, Dr. Häme worked with the European research infrastructure AnaEE (Analysis and Experimentation on Ecosystems) as a project manager for AnaEE-Finland national activities and supported the establishment of AnaEE. She also contributes to Finnish flagship—the Atmosphere and Climate Competence Center (ACCC). She has made significant contributions to the following European research infrastructure projects, including: EU-FP7-AnaEE Preparatory Phase Project, EU-H2020-ACTRIS Preparatory Phase Project, EU-H2020-ACTRIS Implementation Project and EU-H2020-ATMO-ACCESS. She is a former Fulbright scholar (Columbia University, New York, USA 2012–2014). ORCID ID 0000-0002-3763-0407



19. **Dr. Eija Juurola** is the Director General of ACTRIS ERIC. ACTRIS, the Aerosol, Clouds and Trace Gases Research Infrastructure, is a pan-European research infrastructure delivering high-quality integrated datasets and services in the field of atmospheric sciences. Before joining ACTRIS during its implementation phase, she worked as the Head of Operations in ICOS ERIC, the Integrated Carbon Observation System. Dr. Juurola has long experience in developing and managing European research infrastructures. Her scientific background is in forest ecology, and she obtained the Ph.D. degree in University of Helsinki.



20. **Dr. Jörg Klausen** is Senior Scientific Advisor at the Measurements and Data Department of the Federal Office of Meteorology and Climatology MeteoSwiss in Switzerland and a member of the Swiss Academy for Natural Sciences' Atmospheric Chemistry and Physics commission. He further serves on World Meteorological Organization WMO expert and task teams related to atmospheric composition data management and metadata and national scientific and advisory committees related to Global Atmosphere Watch and the Global Climate Observing System, as well as the World Radiation Center at Davos. Dr. Jörg Klausen holds an MSc in chemistry and a PhD in Environmental Sciences from the Federal Institute of Technology Zurich ETHZ and has extensive experience in environmental organic and analytical chemistry and atmospheric monitoring and research. ORCID ID 0000-0003-2915-6028



21. Paolo Laj currently serves as the Head of the Global Atmosphere Watch (GAW) Programme within the Science & Innovation Department of the World Meteorological Organization (WMO). The GAW Programme

coordinates global initiatives to monitor and forecast atmospheric composition, and leverages this data to inform policy development related to climate, air quality, and public health. He has been deeply engaged in sustaining in-situ observation networks, with a focus on safeguarding data quality and interoperability to support climate- and air quality-relevant assessments. Prior to joining WMO in 2024, he held the position of Senior Scientist at Université Grenoble Alpes (France) and served as a Visiting Professor at the University of Helsinki (Finland). He played a key role in ACTRIS (Aerosol, Cloud and Trace Gases Research Infrastructure)—a European research infrastructure—contributing to its conceptualization, preparatory work, and implementation across multiple phases of its development. His scientific expertise centers on atmospheric composition—specifically aerosols, clouds, and reactive trace gases—and their interactions with climate systems and air quality. To date, he has published more than 170 peer-reviewed papers focusing on these research areas. ORCID ID 0000-0002-6586-0664



22. **Dr. Barry L. Lefer** currently holds the position of Associate Director for Research (Acting) in the NASA Earth Science Division at NASA Headquarters, Washington, DC, USA. He earned a B.A. in Environmental Sciences from the University of Virginia (1989), as well as an M.S. (1991) and a Ph.D. (1997) in Earth Sciences—Geochemical Systems from the University of New Hampshire. Following a postdoctoral appointment at the National Center for Atmospheric Research (NCAR) through the Advanced Studies Program, Dr. Lefer remained at NCAR for an additional five years, working in the Atmospheric Chemistry Division. In 2004, he joined the Department of Earth and Atmospheric Sciences at the University of Houston, where his research focused on multiple areas: the impact of clouds and aerosols on ozone photochemistry; photochemical reactions within snowpacks; measurements of industrial emissions; the relationship between meteorology and air quality; and the health effects of air pollution. In 2015, Dr. Barry Lefer joined the Earth Sciences Division at NASA Headquarters as Manager of the Tropospheric Composition Program (TCP). In this role, he served as Program Scientist for the TEMPO and MOPITT satellite missions, as well as for several airborne research projects—including SARP, KORUS-AQ, FIREX-AQ, TRACER-AQ, STAQS, and ASIA-AQ. In 2024, he took on the role of Rotational Deputy Associate Director for Research, and was appointed Associate Director for Research (Acting) in 2025. ORCID ID 0000-0001-9520-5495



23. **Dr. Henry (Hank) W. Loescher** currently leads Battelle’s strategic development initiatives for Environmental Research Infrastructures. His career has centered on the intersection of science, engineering, and project development for large-scale research facilities. As faculty at Oregon State University, he managed the U.S. Department of Energy (DOE) AmeriFlux program—a network encompassing over 120 observational sites across the entire United States. He was among the core architects who designed and led the development of the U.S. National Science Foundation’s (NSF) National Ecological Observatory Network (NEON)—the first continental-scale major research facility dedicated to ecology. He has led numerous NEON Science and Development Teams, including those focused on National Continental Design, Instruments, Mobile Platforms, and Aquatic Systems. Additionally, he served as Chief Scientist for the NSF’s Arctic Research Support and Logistics (ARSL) program, which oversees logistics support for all NSF, NOAA, and NASA Arctic research activities. Dr. Loescher continues to serve on advisory boards for a wide range of programs and research infrastructures. He has also spearheaded training initiatives for underserved groups, focused on data use and management for these national facilities. He works to establish international research opportunities for U.S. scientists and facility collaborations—including partnerships related to the Global Ecosystem Research Infrastructure (GERI). His

research interests involve identifying the biotic and abiotic controls on ecosystem-level carbon and energy balance across spatial and temporal scales; he has published over 100 works and remains an active member of the global biogeochemistry research community, as well as in the development of user facilities and innovation hubs. ORCID ID 0000-0002-0681-0368



24. **Dr. Michael Mirtl** is an ecologist and environmental engineer. He completed his PhD thesis on the influence of floodplain forest water regimes on tree photosynthesis and received training in plant physiology, biometrics, micrometeorology, and soil science at the University of Vienna, the University of Agricultural Sciences (BOKU), and the Technical University of Vienna. Dr. Mirtl leads the implementation of the “Integrated European Long-Term Ecosystem, Critical Zone & Socio-Ecological Research Infrastructure” (eLTER RI) on behalf of the Helmholtz Centre for Environmental Research – UFZ (Germany) and under the framework of the European Strategy Forum on Research Infrastructures (ESFRI). He serves as Coordinator of the eLTER Preparatory Phase Project, Chairman of LTER-Europe, and Chair of the International Long-Term Ecological Research (ILTER) International Collaborations Committee (ICC). Until 2017, Dr. Mirtl held the position of Head of the Department for Ecosystem Research & Environmental Information Management at the Environment Agency Austria. During this tenure, he coordinated Austria’s contribution to the UNECE International Cooperative Programme (ICP) on Integrated Monitoring of Air Pollution Effects on Ecosystems—a program that includes critical load assessment and dynamic modelling at long-term observation sites. He has extensive experience in developing research project concepts and management, having coordinated approximately 50 projects in fields such as deposition chemistry, karst hydrology, soil chemistry, remote sensing, bio-indicators, and biodiversity monitoring. Dr. Mirtl has overseen the design, logistics, and quality assurance/quality control (QA/QC) of Long-Term Ecosystem Research & Monitoring Platforms. He also served as a leading expert in the development of MORIS (an object-relational information system for ecosystem research data) and was a co-founder of the Austrian LTER-Network (where he has held the role of Chair of LTER-Austria since 2008) and the LTSER Platform “Eisenwurzten”. His areas of specialization include ecosystem research data analysis, ontology development, and semantic mediation. Since 2003, he has led conceptual work on integrating ecological and socio-economic research in LTSER—covering topics such as scaling issues and ecosystem services—and has formally represented eLTER as a partner in the Global Ecosystem Research Infrastructure (GERI) since 2019. ORCID ID 0000-0001-8942-1917

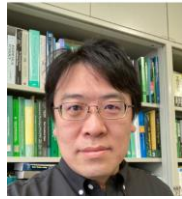


25. **Dr. Beryl Morris** is the Executive Director of TERN, Australia's national ecosystem monitoring observatory, a national research infrastructure funded principally by the Australian Government. Since 2016 she has established strategy, sourced funding, and set operational goals for delivery of TERN’s continental-scale network of expertise, sensors, surveys & tools to produce long-term open access data, samples, models and analytics to enable research and prediction about change in climate, biodiversity and soils for Australia’s terrestrial and coastal ecosystems. Beryl sits on several international committees, including those of Lifewatch ERIC, eLTER, ILTER, and GERI. She has worked in executive roles in both the public and private sectors and has been the CEO of several companies in the life sciences area and Director of listed companies and not for profits. Beryl has run award-winning national science communication programs, commercialised technology and

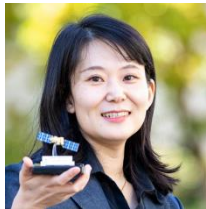
authored books and papers on a range of topics in the fields of science, education and management. Beryl has an international reputation in forensic entomology. ORCID 0000-0002-2704-9571



26. **Dr. Hiroyuki Muraoka** is a Professor of Forest Science at the Graduate School of Agricultural and Life Sciences, The University of Tokyo. He also serves as a group leader of Biodiversity Division, National Institute for Environmental Studies. Also, Dr. Muraoka facilitates biodiversity and ecosystem observations by researchers' networks and commit these activities as a co-chair of Japan Long-Term Ecological Research (JaLTER) and a co-chair of the Asia-Pacific Biodiversity Observation Network (APBON). Dr. Muraoka is a plant physiological ecologist, and his major research themes are plant and forest phenology, photosynthetic and carbon cycle responses to environmental changes. ORCID ID 0000-0003-1633-9079



27. **Dr. Hibiki Noda** is a Senior Researcher at the National Institute for Environmental Studies (NIES), Japan. She is currently involved in the Greenhouse gases Observing SATellite (GOSAT) Series Project and also works with ground-based observation networks such as the Phenological Eyes Network (PEN) and the Japan Long-Term Ecological Research Network (JaLTER). Her research focuses on vegetation remote sensing and plant physiological ecology, with a particular interest in integrating these two disciplines. She received her Ph.D. degree from the University of Tokyo, Japan, in 2007. ORCID ID 0000-0003-0467-0899



28. **Professor Clare Murphy (Clare Paton-Walsh)** teaches Analytical and Environmental Chemistry at the University of Wollongong, Australia. Her research is focused on understanding the changing composition and chemistry of the atmosphere, with long term interests in fire emissions, air quality and remote sensing of the atmosphere. Before joining the University of Wollongong, she worked for 12 years as a government scientist in the UK's National Physical Laboratory. ORCID ID 0000-0003-1156-4138



29. **Nicolas Pade** serves as the Executive Director of the European Marine Biological Resource Centre (EMBRC-ERIC), based in France. He holds a PhD in Molecular and Spatial Ecology from the University of Aberdeen (2009), where his research focused on utilizing molecular tools and satellite tracking techniques to determine the population genetic structure of species across ocean basins and the local movement patterns of oceanic predators. Following his postdoctoral research, Nicolas transitioned into roles focused on research management, European project coordination, and partnership development. In 2019, he was appointed Executive Director of EMBRC-ERIC; in this position, he has advocated for the role of biology in advancing marine research and observation. In 2021, Nicolas launched the European Marine Omics Biodiversity Observatory Network (EMO BON)—Europe's first coordinated genomics-based observatory—spanning 20 sites. This initiative involves implementing standardized protocols, best

practices, and detailed metadata standards to ensure consistency across its network. ORCID ID 0000-0003-2733-9752



30. **Prof. Andreas Petzold** is an atmospheric scientist with longstanding experience in the measurement of climate relevant gaseous species and aerosol properties across the troposphere in various environments. He is heading the Research Group for Global Observation at the Institute of Climate and Energy Systems–Troposphere (ICE-3) of Forschungszentrum Jülich in Germany and is Professor at the University of Wuppertal, Institute for Atmospheric and Environmental Research. One of his primary tasks is the coordination of the European Research Infrastructure IAGOS (www.iagos.org), jointly with colleagues from France and the U.K. Prof. Petzold also serves as a member of the Scientific Advisory Group Aerosols of the Global Atmosphere Watch programme of WMO. As a convinced supporter of the concept of research infrastructures, he is the member of the Board of Directors of European Environmental Research Infrastructures (ENVRI). ORCID ID 0000-0002-2504-1680



31. **Dr. Emmanuel Salmon** serves as the Head of Strategy & International Cooperation at the Integrated Carbon Observation System (ICOS). He earned his Ph.D. in Macromolecular Chemistry from the University of Strasbourg (France) in 1993, and subsequently worked as a researcher for ten years—focusing on biodegradable polymers and polymer-based electrolytes for application in alkaline batteries. From 1999 to 2008, he held a role in the Communications Department of a French Higher Education Institution in Paris, where he was responsible for internal communications and press relations. He then joined the French Foreign Service as a Scientific Attaché, serving at French embassies in Finland (2008–2012) and Sweden (2012–2016). Dr. Emmanuel Salmon joined ICOS in April 2017; initially, his role focused on leading ICOS' contributions to Horizon 2020-funded projects. These projects included mapping cooperation opportunities between European and international research infrastructures in environmental sciences, and designing a greenhouse gas observational network for the African continent. In 2019, he took charge of the newly established Strategy & International Cooperation Unit—a team he currently leads with two officers. His core tasks include expanding and strengthening ICOS' international connections to key global cooperation frameworks (e.g., UNFCCC, GEO, WMO), enhancing collaboration with other environmental research infrastructures (RIs), and supporting the integration of new European countries into ICOS. ORCID ID 0000-0002-7341-8868



32. **Dick M.A. Schaap** serves as Managing Director of MARIS (The Netherlands). A coastal engineer by background, he holds significant expertise in marine data management and is the founder of MARIS—a spin-off derived from a Dutch governmental initiative. He has extensive experience managing EU-funded projects focused on the development and operation of networks and infrastructures for marine and ocean data. MARIS itself is involved in numerous EU projects and initiatives, all aimed at enhancing the FAIR (Findable, Accessible, Interoperable, Reusable) principles and coverage of leading marine data infrastructures such as EMODnet, ENVRI, JERICO, EuroGOOS, and EOSC. Dick M.A. Schaap’s key roles include: acting as Technical Coordinator of SeaDataNet (a pan-European network of data centres); serving as Technical Coordinator of EMODnet Bathymetry and EMODnet Chemistry; and coordinating EMODnet Ingestion. He is also a core initiator of the Blue-Cloud initiative and currently acts as Technical Coordinator of Blue-Cloud 2026. ORCID ID 0000-0001-6562-068X



33. **Serge Scory** holds an MSc in Civil Engineering and an MSc in Oceanography. He previously served as the Head of the “Belgian Marine Data Centre” from its establishment in 1997; over the past four years, he has been part of the “Research Office” at the Royal Belgian Institute of Natural Sciences. He has extensive experience participating in Belgian and European projects across a diverse range of domains, including data management, research vessel development, polar science policy, and research infrastructure governance. Currently, he chairs the SeaDataNet AISBL, serves as a member of the Board of Eurofleets AISBL, and acts as one of the two Belgian delegates to the Council of the International Council for the Exploration of the Sea (ICES). ORCID 0000-0003-2692-8651



34. **Krishna AchutaRao** holds the position of Professor at the Centre for Atmospheric Sciences and Affiliate Faculty at the School of Public Policy at the Indian Institute of Technology (IIT) Delhi. He has also served as Dean of Faculty at IIT Delhi. He earned his PhD from Tulane University in New Orleans, USA. His research focuses on using climate models to understand how Earth’s climate is influenced by natural and anthropogenic factors, as well as how these climate changes impact natural and human systems. His current research areas include: attribution of extreme weather events and long-term climate change; climate change risk assessment; and climate change adaptation within a regional context. He is a member of the Joint Scientific Committee (JSC) of the World Climate Research Program (WCRP) and has served as a Lead Author for the Fifth and Sixth Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC). ORCID ID is 0000-0001-9064-5053



35. **Dr. Jaswant Rathore** serves as a Principal Project Scientist at the Centre for Atmospheric Sciences, Indian Institute of Technology (IIT) Delhi, India. His research focuses on three core areas: lidar remote sensing of aerosols and clouds, atmospheric boundary layer dynamics, and lidar instrumentation development. He

earned his Ph.D. in Engineering Sciences from the CSIR–National Physical Laboratory, Delhi. During his doctoral studies, he developed a 3D scanning lidar system and conducted research on aerosols over the western Himalayas. He later completed postdoctoral research at IIT Delhi, with a focus on aerosol–cloud–boundary layer interactions. ORCID ID 0000-0001-6266-3588



36. **Dr. Martin Steinbacher** is a Senior Scientist at the Laboratory for Air Pollution and Environmental Technology at Empa, which is the interdisciplinary research institute for materials science and technology in Duebendorf, Switzerland. He is responsible for long-term trace gas observations within the Swiss National Air Pollution Monitoring Network and leads the WMO Global Atmosphere Watch Quality Assurance / Science Activity Centre Switzerland (WMO GAW QA/SAC Switzerland). Currently, Dr. Steinbacher is chair of the World Meteorological Organization's Global Atmosphere Watch Expert Team on Atmospheric Composition Capacity Building and Education and is member of the Commission for Atmospheric Chemistry and Physics (ACP) of the Swiss Academy of Sciences. Previously, he chaired the Atmospheric Monitoring Station Assembly of the Integrated Carbon Observation System Research Infrastructure for many years. ORCID ID 0000-0002-2504-1680



37. **Prof. Georg Teutsch** holds a M.Sc. degree from the University of Birmingham (1980) and a Ph.D. degree from the University of Tübingen (Germany). He has been a Professor of Geohydrology at the University of Stuttgart and had a Chair in Hydrogeology at the University of Tübingen since 1993. His 40 years professional experience in academia and practice cover many fields from water resources assessment and water planning in a variety of environments to groundwater quality and contaminant remediation using innovative technologies. In 2004, he was appointed to the position of Scientific Managing Director of the German National Environmental Research Centre (UFZ) with the headquarter in Leipzig. In recent years Prof. Teutsch's specific interests have been advanced remote sensing and field-based techniques for the parametrization of complex environmental models. The UFZ is one of the leading research institutes in the field of integrated environmental assessment and with its more than 1,200 employees a major hub for landscape-oriented environmental research. ORCID ID 0000-0003-4413-1566



38. **Alex Vermeulen** serves as Director of the ICOS ERIC Carbon Portal—a platform hosted by Lund University, Sweden—and also acts as Deputy Director General of ICOS ERIC. He has long served as an editor of the annual WMO Greenhouse Gas Bulletin and holds multiple roles within WMO: he is a member of the WMO Scientific Advisory Group on Greenhouse Gases, the WMO Expert Group on Atmospheric Composition Data Management, and three WMO Greenhouse Gas Watch task forces (focused on network design, data management, and modelling). Beyond his extensive experience coordinating large-scale research projects, his areas of interest and expertise include micrometeorology, the dispersion of air quality-relevant species (across scales from roadside to global), greenhouse gases, land surface process models (LPDMs) and inverse modelling, as well as service development and research data management. ORCID ID 0000-0002-8158-8787



39. **Dr. Xiubo Yu** is a Professor at the Institute of Geographic Sciences and Natural Resources Research (IGSNRR), Chinese Academy of Sciences (CAS), and the Secretary General of the Chinese Ecosystem Research Network (CERN). He also serves as the Chief Technical Advisor to the UNDP-GEF Flyway Conservation Network. Dr. Yu is a leading scientist in ecosystem services, management, and policy, with extensive experience in coordinating large-scale international conservation projects and research networks. His significant contributions to wetland and waterbird conservation have been instrumental in several major initiatives, including the UNDP-GEF East Asian-Australasian Flyway project and the development of China's Coastal Wetland Conservation Blueprint. He holds a Ph.D. in Physical Geography from the Chinese Academy of Sciences and has authored over 130 peer-reviewed scientific papers and 25 monographs. ORCID ID 0000-0002-8266-2432



40. **Steffen Zacharias** is a soil hydrologist and Senior Scientist at the UFZ Helmholtz Centre for Environmental Research, Germany. He studied Land Management and Environmental Protection at the University of Rostock, Germany, and earned his PhD in Soil Physics in 1999. He has held the position of Senior Scientist at the UFZ Helmholtz Centre for Environmental Research since 2007. He leads a working group on soil research at the UFZ, with a primary focus on developing and applying methods to measure soil moisture across various scales. Since 2007, he has been a member of the Steering Group of Germany's TERENO observatory network and coordinates the operation of the TERENO observatory in Harz/Central German Lowland. He has extensive experience in international scientific affairs, with a specific focus on the soil-water nexus and the standardization and harmonization of environmental observation. He has contributed to large European projects dedicated to integrated environmental research, monitoring, and exploration. Furthermore, he played an active role in establishing several European research infrastructure networks, including ICOS, CZO-Europe, COSMOS-Europe, and eLTER. ORCID ID 0000-0002-7825-0072



41. **Dr. Leiming Zhang** is the Deputy Director of synthesis center of Chinese ecosystem research network (CERN). He currently works at the Institute of Geographic Sciences and Natural Resources Research, CAS. He also serves as a member of the Coordination Committee of ILTER. Dr. Zhang received his PhD at the University of Chinese Academy of Sciences in Beijing, China. From 2002, he joined CERN and ChinaFLUX. He has interests in the interaction between terrestrial carbon & water cycles and climate change. His research focus on the evaluation the variability and magnitude of ecosystem carbon sequestration capacity using field investigation, eddy covariance technique, dynamic chamber method and near-surface remote sensing. Dr. Zhang received the Second Prize of National Natural Science Award of China in 2024. ORCID ID 0000-0001-7041-539X



42. **Prof. Tuukka Petäjä** has over 20 years of research experience in experimental atmospheric sciences. He is the Vice-Director of Institute for Atmospheric and Earth System Research, where he is responsible for research in aerosol domain and the development of research infrastructures. He is also the Scientific Advisor for the ACTRIS research infrastructure, which holds ESFRI Landmark status. His research interests encompass a wide range of topics, including: 1) Aerosol-cloud interactions, 2) Development of mass spectrometric methods for atmospheric aerosols and trace gases; 3) Measurement techniques for aerosol particles; 4) Long-term monitoring and field campaigns; 5) Aerosol-cloud-climate-biosphere interactions, 6) Air quality, and 7) Arctic research. He is recognized as a highly cited scientist (since 2014, by Thompson Reuters) and has received Aerosol Foundation Award for multidisciplinary research (2022), the Vaisala Award (2013) for his contributions on combining state-of-the-art science and instrument development; He is also a receiver of Science and Technology in Society Future Leader Award from New York Academy of Sciences. He serves as the PI of Biogenic Aerosols–Effects on Clouds and Climate (BAECC), a multiplatform research campaign to elucidate the role of secondary aerosols to clouds, supported by U.S. Department of Energy. He is a board member of the PACES initiative, and is actively involved in coordinating EU projects including iCUPE, ACTRIS IMP, and RI-URBANS. ORCID ID 0000-0002-1881-9044



43. **Dr. Juerg Luterbacher** is a Professor of Climatology, Climate Dynamics and Climate Change, and former Director of the Department of Geography at the University of Bern, Switzerland where he also received his PhD. From 2020 to 2024, he was the Director of Science and Innovation and Chief Scientist at the World Meteorological Organization (WMO). He served as an elected member of the Scientific Advisory Board appointed by UN Secretary-General Guterres and is a member of the Academy of Sciences and Literature / Mainz, Germany. Dr. Luterbacher has shown outstanding leadership across a wide spectrum of climate science, contributing significantly to the development of a holistic Climate–Earth System approach. He co-developed and implemented the PAGES research strategy on past climate for Europe, the Mediterranean, and Asia, focusing on the last 2000 years. He was also a High-Level Advisory within the OECD Group on Losses and Damages and is a Member of the Climate Change on Earth Observations for Climate Change Impacts on World Heritage Cities/UN Flexible Mechanism. He was a Lead author of Chapter 5, “Information from Paleoclimate Archives” of the 5th IPCC Assessment Report. He has authored over 200 peer-reviewed scientific publications and has repeatedly recognized as a Thompson Reuters Highly Cited Researcher in the field of Geosciences. He is currently the coordinator of the Horizon Europe Project MedEWSa (www.medewsa.eu). ORCID ID 0000-0002-8569-0973



44. **Dr. James W. Hannigan** is a Project Scientist at the Atmospheric Chemistry, Observations and Modeling Lab at the National Center for Atmospheric Research, USA. He has more than 30 years' experience in infrared spectroscopy and remote sensing of the atmosphere. He applies these techniques to observe trace atmospheric constituents, enabling a better understanding of trends in long-lived species that affect climate and stratospheric ozone and shorter-lived emissions from biomass burning, anthropogenic pollution, and volcanic activity that impact air quality. He has developed trace gas instrumentation for airborne observations and participated in many field campaigns spanning from the Antarctic to the North Pole. Currently, he operates three ground-based stations within the Network for the Detection of Atmospheric Composition Change (NDACC) located at Pituffik, GR, Mauna Loa HI and Boulder CO. Dr. Hannigan serves as Co-Chair of the NDACC Infrared Working Group and has been a member of the Steering Committee since 2004, which coordinates more than 70 remote sensing sites worldwide. NDACC data are publicly available and widely used for understanding global trends, determining changes related to emissions or atmospheric dynamical perturbations, and validating satellite observations. He is also an advisor to CREGARS section of ACTRIS and conducts research supported by both the U.S. NSF and NASA. ORCID 0000-0002-4269-1677



45. **Prof. Markku Kulmala**, Academician, leads the Institute for Atmospheric and Earth System Research (INAR) at the University of Helsinki. He is active in international initiatives to establish and enhance comprehensive, continuous measurement networks all around the world, with a focus on addressing the complex interactions between air quality and climate change. Prof. Kulmala is a world leader in atmospheric aerosol science and one of the founders of “terrestrial ecosystem meteorology”. His research encompasses the SMEAR field stations and GlobalSMEAR network, forming the backbone of a global observational infrastructure. His work spans theoretical and experimental aerosol physics, atmospheric chemistry, observational meteorology, biophysics and the intricate feedback between the biosphere, aerosol, cloud, and climate. Prof. Kulmala has established a comprehensive research program that integrates long-term atmospheric observations, global modelling and deep theoretical and experimental insights into air quality-climate interactions. Prof. Kulmala is the Foreign Member of the Chinese Academy of Sciences, a council member of the World Academy of Sciences (TWAS), and a member of six other prestigious academies. He has received more than ten major international awards and holds nine honorary doctorates and professorships. ORCID 0000-0003-3464-7825

