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## Qualifications

Geoecology, PhD, University of Bayreuth  
2009 Mar 1 → 2014 Nov 30

Geoecology, Diploma, University of Bayreuth  
2003 Oct 1 → 2009 Feb 28

## Employment

### Research engineer

Centre for Environmental and Climate Science (CEC)  
Lund University  
Lund, Sweden  
2015 Sept 21 → present

### Research engineer

Dept of Physical Geography and Ecosystem Science  
Lund University  
Lund, Sweden  
2015 Sept 21 → present

### Researcher

BECC: Biodiversity and Ecosystem services in a Changing Climate  
Lund University  
Lund, Sweden  
2023 May 17 → present

## Research output

### Widespread Pesticide Distribution in the European Atmosphere Questions their Degradability in Air

Lammel, G. & et al., 2024 Feb, In: Environmental Science and Technology. 58, 7, p. 3342–3352 11 p.

### European Obspack compilation of atmospheric carbon dioxide data from ICOS and non-ICOS European stations for the period 1972-2023; obspack\_co2\_466\_GLOBALVIEWplus\_v8.0\_2023-04-26

ICOS Ri, 2023, ICOS ERIC - Carbon Portal.

### High-resolution inverse modelling of European CH<sub>4</sub> emissions using the novel FLEXPART-COSMO TM5 4DVAR inverse modelling system

Bergamaschi, P., Segers, A., Brunner, D., Haussaire, J. M., Henne, S., Ramonet, M., Arnold, T., Biermann, T., Chen, H., Conil, S., Delmotte, M., Forster, G., Frumau, A., Kubistin, D., Lan, X., Leuenberger, M., Lindauer, M., Lopez, M., Manca, G., Müller-Williams, J., & 6 others O'Doherty, S., Scheeren, B., Steinbacher, M., Trisolino, P., Vítková, G. & Yver Kwok, C.,

**Method comparison of indirect assessments of understory leaf area index (LAI<sub>u</sub>): A case study across the extended network of ICOS forest ecosystem sites in Europe**

George, J. P., Yang, W., Kobayashi, H., Biermann, T., Carrara, A., Cremonese, E., Cuntz, M., Fares, S., Gerosa, G., Grünwald, T., Hase, N., Heliasz, M., Ibrom, A., Knohl, A., Kruijt, B., Lange, H., Limousin, J. M., Loustau, D., Lukeš, P., Marzuoli, R., & 10 others Mölder, M., Montagnani, L., Neiryneck, J., Peichl, M., Rebmann, C., Schmidt, M., Serrano, F. R. L., Soudani, K., Vincke, C. & Pisek, J., 2021 Sept, In: Ecological Indicators. 128, 107841.

**Retrieval and validation of forest background reflectivity from daily Moderate Resolution Imaging Spectroradiometer (MODIS) bidirectional reflectance distribution function (BRDF) data across European forests**

Pisek, J., Erb, A., Korhonen, L., Biermann, T., Carrara, A., Cremonese, E., Cuntz, M., Fares, S., Gerosa, G., Grünwald, T., Hase, N., Heliasz, M., Ibrom, A., Knohl, A., Kobler, J., Kruijt, B., Lange, H., Leppänen, L., Limousin, J-M., Ramon Lopez Serrano, F., & 16 others Loustau, D., Lukeš, P., Lundin, L., Marzuoli, R., Mölder, M., Montagnani, L., Neiryneck, J., Peichl, M., Rebmann, C., Rubio, E., Santos-Reis, M., Schaaf, C., Schmidt, M., Simioni, G., Soudani, K. & Vincke, C., 2021 Jan 27, In: Biogeosciences. 18, 2, p. 621-635 15 p., 34.

**Evaluation and optimization of ICOS atmosphere station data as part of the labeling process**

Yver-kwok, C., Philippon, C., Bergamaschi, P., Biermann, T., Calzolari, F., Chen, H., Conil, S., Cristofanelli, P., Delmotte, M., Hatakka, J., Heliasz, M., Hermansen, O., Komínková, K., Kubistin, D., Kumpp, N., Laurent, O., Laurila, T., Lehner, I., Levula, J., Lindauer, M., & 15 others Lopez, M., Mammarella, I., Manca, G., Marklund, P., Metzger, J-M., Mölder, M., Platt, S. M., Ramonet, M., Rivier, L., Scheeren, B., Sha, M. K., Smith, P., Steinbacher, M., Vítková, G. & Wyss, S., 2021 Jan 5, In: Atmospheric Measurement Techniques. 14, 1, p. 89-116

**Effects of drought and meteorological forcing on carbon and water fluxes in Nordic forests during the dry summer of 2018**

Lindroth, A., Holst, J., Linderson, M., Aurela, M., Biermann, T., Heliasz, M., Chi, J., Ibrom, A., Kolari, P., Klemetsson, L., Krasnova, A., Laurila, T., Lehner, I., Lohila, A., Mammarella, I., Mölder, M., Löfvenius, M. O., Peichl, M., Pilegaard, K., Soosar, K., & 4 others Vesala, T., Vestin, P., Weslien, P. & Nilsson, M., 2020 Sept 7, In: Philosophical Transactions of the Royal Society B: Biological Sciences. 375, 1810, p. 20190516

**The Kobresia pygmaea ecosystem of the Tibetan highlands – Origin, functioning and degradation of the world's largest pastoral alpine ecosystem: Kobresia pastures of Tibet**

Miehe, G., Schleuss, P., Seeber, E., Babel, W., Biermann, T., Braendle, M., Chen, F., Coners, H., Foken, T., Gerken, T., Graf, H-F., Guggenberger, G., Hafner, S., Holzzapfel, M., Ingrisich, J., Kuzyakov, Y., Lai, Z., Lehnert, L., Leuschner, C., Li, X., & 16 others Liu, J., Liu, S., Ma, Y., Miehe, S., Mosbrugger, V., Noltie, H. J., Schmidt, J., Spielvogel, S., Unteregelsbacher, S., Wang, Y., Willinghöfer, S., Xu, X., Yang, Y., Zhang, S., Opgenoorth, L. & Wesche, K., 2019 Jan 15, In: Science of the Total Environment. 648, p. 754-771

**Methane and carbon dioxide fluxes over a lake: Comparison between eddy covariance, floating chambers and boundary layer method**

Erkkilä, K. M., Ojala, A., Bastviken, D., Biermann, T., Heiskanen, J., Lindroth, A., Peltola, O., Rantakari, M., Vesala, T. & Mammarella, I., 2018 Jan 19, In: Biogeosciences. 15, 2, p. 429-445 17 p.

**Effects of low thinning on carbon dioxide fluxes in a mixed hemiboreal forest**

Lindroth, A., Holst, J., Heliasz, M., Vestin, P., Lagergren, F., Biermann, T., Cai, Z. & Mölder, M., 2018, In: Agricultural and Forest Meteorology. 262, p. 59-70

**Evapotranspiration and water balance of high-elevation grassland on the Tibetan Plateau**

Coners, H., Babel, W., Willinghöfer, S., Biermann, T., Köhler, L., Seeber, E., Thomas, F., Ma, Y., Yang, Y., Miehe, G. & Leuschner, C., 2016, In: Journal of Hydrology. 533, p. 557-566

**Carbon pools and fluxes in a Tibetan alpine Kobresia pygmaea pasture partitioned by coupled eddy-covariance measurements and <sup>13</sup>C<sub>2</sub> pulse labeling**

Ingrisich, J., Biermann, T., Seeber, E., Leipold, T., Li, M., Ma, Y., Xu, X., Miehe, G., Guggenberger, G., Foken, T. & Kuzyakov, Y., 2015, In: Science of the Total Environment. 505, p. 1213-1224

Eddy-covariance measurements as a tool for ecological and hydrological studies on the Tibetan Plateau  
Biermann, T., 2014 Jul 1, Bayreuth. 163 p.

Pasture degradation modifies the water and carbon cycles of the Tibetan highlands

Babel, W., Biermann, T., Coners, H., Falge, E., Seeber, E., Schleuß, P. M., Gerken, T., Leonbacher, J., Leipold, T., Willinghöfer, S., Becher, L., Spielvogel, S., Guggenberger, G., Schuetzenmeister, K., Shibistova, O., Hafner, S., Li, X., Xu, X., Yang, Y., Ma, Y., & 6 others Wesche, K., Graf, H-F., Leuschner, C., Kuzyakov, Y., Miehe, G. & Foken, T., 2014, In: Biogeosciences. 11, 23, p. 6633-6656

Turbulent flux observations and modelling over a shallow lake and a wet grassland in the Nam Co basin, Tibetan Plateau  
Biermann, T., Babel, W., Ma, W., Chen, X., Thiem, E., Ma, Y. & Foken, T., 2014, In: Theoretical and Applied Climatology. 116, 1-2, p. 301-316

A modelling investigation into lake-breeze development and convection triggering in the Nam Co Lake basin, Tibetan Plateau

Gerken, T., Biermann, T., Babel, W., Herzog, M., Ma, Y., Foken, T. & Graf, H. F., 2013 Aug 25, In: Theoretical and Applied Climatology. 117, 1, p. 149-167 19 p.

Coupling processes and exchange of energy and reactive and non-reactive trace gases at a forest site - Results of the EGER experiment

Foken, T., Meixner, F. X., Falge, E., Zetzsch, C., Serafimovich, A., Bargsten, A., Behrendt, T., Biermann, T., Breuninger, C., Dix, S., Gerken, T., Hunner, M., Lehmann-Pape, L., Hens, K., Jocher, G., Kesselmeier, J., Lüers, J., Moravek, A., Plake, D., Riederer, M., & 10 others Rütz, F., Scheibe, M., Siebicke, L., Sörgel, M., Staudt, K., Trebs, I., Tsokankunku, A., Welling, M., Wolff, V. & Zhu, Z., 2012, In: Atmospheric Chemistry and Physics. 12, 4, p. 1923-1950 28 p.

Turbulent flux modelling with a simple 2-layer soil model and extrapolated surface temperature applied at Nam Co Lake basin on the Tibetan Plateau

Gerken, T., Babel, W., Hoffmann, A., Biermann, T., Herzog, M., Friend, A. D., Li, M., Ma, Y., Foken, T. & Graf, H. F., 2012, In: Hydrology and Earth System Sciences. 16, 4, p. 1095-1110 16 p.

## Projects

### **Optimization of carbon uptake in south Sweden's spruce forests**

Lindroth, A., Vestin, P., Ström, L., Biermann, T. & Edvardsson, J.  
2024/01/01 → 2026/12/31

### **Resilient Ecosystems of Sweden: Promoting Sustainability through Continuous Cover Forestry and Wetland Rewetting**

Tagesson, T., Biermann, T., Jamali, S. & Horion, S.  
FORMAS, The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning  
2024/01/01 → 2026/12/31

### **Towards more sustainable forest management - Climate mitigation potential of Fennoscandian forests under different forest management regimes**

Vestin, P., Mölder, M., Biermann, T. & Launiainen, S.  
2022/04/01 → 2025/03/31