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Kort præsentation

Martin Brandt received his PhD from the University of Bayreuth, Germany in 2014. He works as Assistant Professor at the University of Copenhagen since 2015. His major fields are remote sensing and physical Geography and his work concentrates on the monitoring of vegetation dynamics, with a special focus on West Africa and Southern China. Martin Brandt's research is breaking new ground, with 15 manuscripts published in Nature/Science journals between 2018 ans 2021 (5 as first author). His recent work, published In Nature, was the first applying deep learning on hundreds of thousands of sub-metre satellite images to map billions of individual tree crowns in desert areas that were often assumed as free of any trees. In 2020, he received an ERC starting grant and an DFF Sapere Aude grant to study trees outside forests at global scale.

Ansættelse

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Publikationer

Even low levels of tree cover improve dietary quality in West Africa
den Braber, B., Hall, C., Brandt, Martin Stefan, Reiner, Florian, Mugabowindekwe, Maurice & Rasmussen, Laura Vang, 1 feb. 2024, I: PNAS Nexus. 3, 2, pgae067.

Central African biomass carbon losses and gains during 2010–2019
Zhao, Z., Ciais, P., Wigneron, J. P., Santoro, M., Brandt, Martin Stefan, Kleinschroth, F., Lewis, S. L., Chave, J., Fensholt, Rasmus, Laporte, N., Sonwa, D. J., Saatchi, S. S., Fan, L., Yang, H., Li, X., Wang, M., Zhu, L., Xu, Y., He, J. & Li, W., 2024, I: One Earth. 7, 3, s. 506-519 14 s.

Changes in vegetation-water response in the Sahel-Sudan during recent decades
Lu, Tingting, Zhang, Wenmin, Abel, Christin, Horion, Stéphanie, Brandt, Martin Stefan, Huang, Ke & Fensholt, Rasmus, 2024, I: Journal of Hydrology: Regional Studies. 52, 10 s., 101672.

High-resolution canopy height map in the Landes forest (France) based on GEDI, Sentinel-1, and Sentinel-2 data with a deep learning approach
Schwartz, M., Ciais, P., Ottlé, C., De Truchis, A., Vega, C., Fayad, I., Brandt, Martin Stefan, Fensholt, Rasmus, Baghdadi, N., Morneau, F., Morin, D., Guyon, D., Dayau, S. & Wigneron, J. P., 2024, I: International Journal of Applied Earth Observation and Geoinformation. 128, 18 s., 103711.

Satellite observed aboveground carbon dynamics in Africa during 2003–2021
Wang, M., Ciais, P., Fensholt, Rasmus, Brandt, Martin Stefan, Tao, S., Li, W., Fan, L., Frappart, F., Sun, R., Li, X., Liu, X. , Wang, H., Cui, T., Xing, Z., Zhao, Z. & Wigneron, J. P., 2024, I: Remote Sensing of Environment. 301, 19 s., 113927.

Scattered tree death contributes to substantial forest loss in California
Cheng, Yan, Oehmcke, Stefan, Brandt, Martin Stefan, Rosenthal, L., Das, A., Vrieling, A., Saatchi, S., Wagner, F., Mugabowindekwe, Maurice, Verbruggen, Wim, Beier, Claus & Horion, Stéphanie, 2024, I: Nature Communications. 15, 1, s. 1-13 641.

Trees on smallholder farms and forest restoration are critical for Rwanda to achieve net zero emissions
Mugabowindekwe, M., Brandt, M., Mukuralinda, A., Ciais, P., Reiner, F., Kariryaa, A., Igel, C., Chave, J., Mertz, O., Hiernaux, P., Tong, X., Rwanyiziri, G., Gominski, D., Li, S., Liu, S., Gasangwa, I., Hategekimana, Y., Ndoli, A., Nduwamungu, J., Saatchi, S. & 1 flere, Fensholt, Rasmus, 2024, I: Communications Earth & Environment. 5, 1, 10 s., 113.

Beyond tree cover: Characterizing southern China's forests using deep learning
Li, Q., Yue, Y., Liu, Siyu, Brandt, Martin Stefan, Chen, Z., Tong, Xiaowei, Wang, K., Chang, J. & Fensholt, Rasmus, 2023, I: Remote Sensing in Ecology and Conservation. 9, 1, s. 17-32

Deep learning enables image-based tree counting, crown segmentation and height prediction at national scale
Li, Sizhuo, Brandt, Martin Stefan, Fensholt, Rasmus, Kariryaa, Ankit, Igel, Christian, Gieseke, Fabian Cristian, Nord-Larsen, Thomas, Oehmcke, Stefan, Carlsen, Ask Holm, Junttila, S., Tong, Xiaoye, d'Aspremont, A. & Ciais, P., 2023, I: PNAS Nexus. 2, 4, 16 s., pgad076.

Deep learning for mapping water bodies in the Sahel
de FLEURY, M., Kergoat, L., Brandt, Martin Stefan, Fensholt, Rasmus, Kariryaa, Ankit, Kovács, Gyula Mate, Horion, Stéphanie & Grippa, M., 2023. 1 s.

FORMS: Forest Multiple Source height, wood volume, and biomass maps in France at 10 to 30 m resolution based on Sentinel-1, Sentinel-2, and Global Ecosystem Dynamics Investigation (GEDI) data with a deep learning approach
Schwartz, M., Ciais, P., De Truchis, A., Chave, J., Ottlé, C., Vega, C., Wigneron, J., Nicolas, M., Jouaber, S., Liu, Siyu, Brandt, Martin Stefan & Fayad, I., 2023, I: Earth System Science Data. 15, 11, s. 4927-4945 19 s.

Forest Plan - pilot project on mapping of forest resources
Nord-Larsen, Thomas, Tsatsakis, M., Li, Sizhuo, Avila, Linsey Marie, Brandt, Martin Stefan, Liu, Siyu, Morueta-Holme, Naia, Davison, Charles W. & Fensholt, Rasmus, 2023, Copenhagen: Department of Geosciences and Natural Resource Management, University of Copenhagen. 128 s. (IGN Report; Nr. March 2023).

Global increase in biomass carbon stock dominated by growth of northern young forests over past decade
Yang, H., Ciais, P., Frappart, F., Li, X., Brandt, Martin Stefan, Fensholt, Rasmus, Fan, L., Saatchi, S., Besnard, S., Deng, Z., Bowring, S. & Wigneron, J. P., 2023, I: Nature Geoscience. 16, 10, s. 886-892

Iterative integration of deep learning in hybrid Earth surface system modelling
Chen, M., Qian, Z., Boers, N., Jakeman, A. J., Kettner, A. J., Brandt, M., Kwan, M. P., Batty, M., Li, W., Zhu, R., Luo, W., Ames, D. P., Barton, C. M., Cuddy, S. M., Koirala, S., Zhang, F., Ratti, C., Liu, J., Zhong, T., Liu, J. & 12 flere, Wen, Y., Yue, S., Zhu, Z., Zhang, Z., Sun, Z., Lin, J., Ma, Z., He, Y., Xu, K., Zhang, C., Lin, H. & Lü, G., 2023, I: Nature Reviews Earth & Environment. 4, s. 568–581

MAPPING TREE MORTALITY IN CALIFORNIA FROM VERY HIGH RESOLUTION IMAGERY USING DEEP LEARNING
Cheng, Yan, Oehmcke, Stefan, Brandt, Martin Stefan, Das, A., Rosenthal, L., Saatchi, S., Wagner, F., Vrieling, A., Verbruggen, Wim, Beier, Claus & Horion, Stéphanie, 2023.

Mapping and characterising tree mortality in California at individual tree level using deep learning
Cheng, Yan, Oehmcke, Stefan, Brandt, Martin Stefan, Das, A., Rosenthal, L., Saatchi, S., Wagner, F., Verbruggen, Wim, Vrieling, A., Beier, Claus & Horion, Stéphanie, 2023. 1 s.

Mapping tree species diversity of temperate forests using multi-temporal Sentinel-1 and -2 imagery
Xi, Y., Zhang, Wenmin, Brandt, Martin Stefan, Tian, Q. & Fensholt, Rasmus, 2023, I: Science of Remote Sensing. 8, 13 s. , 100094.

Mapping tropical forest degradation with deep learning and Planet NICFI data
Dalagnol, R., Wagner, F. H., Galvão, L. S., Braga, D., Osborn, F., Sagang, L. B., da Conceição Bispo, P., Payne, M., Silva Junior, C., Favrichon, S., Silgueiro, V., Anderson, L. O., Aragão, L. E. O. E. C. D., Fensholt, Rasmus, Brandt, Martin Stefan, Ciais, P. & Saatchi, S., 2023, I: Remote Sensing of Environment. 298, 18 s., 113798.

More than one quarter of Africa's tree cover is found outside areas previously classified as forest
Reiner, F., Brandt, M., Tong, X., Skole, D., Kariryaa, A., Ciais, P., Davies, A., Hiernaux, P., Chave, J., Mugabowindekwe, M., Igel, C., Oehmcke, S., Gieseke, F., Li, S., Liu, S., Saatchi, S., Boucher, P., Singh, J., Taugourdeau, S., Dendoncker, M. & 4 flere, Song, X., Mertz, Ole, Tucker, C. J. & Fensholt, Rasmus, 2023, I: Nature Communications. 14, 10 s., 2258.

Nation-wide mapping of tree-level aboveground carbon stocks in Rwanda
Mugabowindekwe, M., Brandt, M., Chave, J., Reiner, F., Skole, D. L., Kariryaa, A., Igel, C., Hiernaux, P., Ciais, P., Mertz, O., Tong, X., Li, S., Rwanyiziri, G., Dushimiyimana, T., Ndoli, A., Uwizeyimana, V., Lillesø, J-P. B., Gieseke, F., Tucker, C. J., Saatchi, S. & 1 flere, Fensholt, Rasmus, 2023, I: Nature climate change. 13, s. 91-97

Projected Rainfall-Driven Expansion of Woody Cover in African Drylands
Zhang, Wenmin, Fensholt, Rasmus & Brandt, Martin Stefan, 2023, I: Geophysical Research Letters. 50, 15, 10 s., e2023GL103932.

Recent decrease of the impact of tropical temperature on the carbon cycle linked to increased precipitation
Zhang, Wenmin, Schurgers, Guy, Peñuelas, J., Fensholt, Rasmus, Yang, H., Tang, Jing, Tong, Xiaowei, Ciais, P. & Brandt, Martin Stefan, 2023, I: Nature Communications. 14, 1, 9 s., 965.

Reforestation policies around 2000 in southern China led to forest densification and expansion in the 2010s
Tong, Xiaowei, Brandt, Martin Stefan, Yue, Y., Zhang, Xiaoxin, Fensholt, Rasmus, Ciais, P., Wang, K., Liu, Siyu, Zhang, Wenmin, Mao, C. & Jepsen, Martin Rudbeck, 2023, I: Communications Earth and Environment. 4, 8 s., 260.

Reliability of using vegetation optical depth for estimating decadal and interannual carbon dynamics
Dou, Y., Tian, F., Wigneron, J. P., Tagesson, Håkan Torbern, Du, J., Brandt, Martin Stefan, Liu, Y., Zou, L., Kimball, J. S. & Fensholt, Rasmus, 2023, I: Remote Sensing of Environment. 285, 14 s., 113390.

Rural outmigration generates a carbon sink in South China karst
Chang, J., Yue, Y., Tong, Xiaowei, Brandt, Martin Stefan, Zhang, C., Zhang, Xuemei, Qi, X. & Wang, K., 2023, I: Progress in Physical Geography. 47, 5, s. 655-667

Siberian carbon sink reduced by forest disturbances
Fan, L., Wigneron, J. P., Ciais, P., Chave, J., Brandt, M., Sitch, S., Yue, C., Bastos, A., Li, X., Qin, Y., Yuan, W., Schepaschenko, D., Mukhortova, L., Li, X., Liu, X., Wang, M., Frappart, F., Xiao, X., Chen, J., Ma, M. & 5 flere, Wen, J., Chen, X., Yang, H., van Wees, D. & Fensholt, Rasmus, 2023, I: Nature Geoscience. 16, s. 56–62

Sub-continental-scale carbon stocks of individual trees in African drylands
Tucker, C., Brandt, M., Hiernaux, P., Kariryaa, A., Rasmussen, K., Small, J., Igel, C., Reiner, F., Melocik, K., Meyer, J., Sinno, S., Romero, E., Glennie, E., Fitts, Y., Morin, A., Pinzon, J., McClain, D., Morin, P., Porter, C., Loeffler, S. & 10 flere, Kergoat, L., Issoufou, B., Savadogo, P., Wigneron, J., Poulter, B., Ciais, P., Kaufmann, R., Myneni, R., Saatchi, S. & Fensholt, Rasmus, 2023, I: Nature. 615, 7950, s. 80-86

The overlooked contribution of trees outside forests to tree cover and woody biomass across Europe
Liu, Siyu, Brandt, Martin Stefan, Nord-Larsen, Thomas, Chave, J., Reiner, Florian, Lang, Nico, Tong, Xiaoye, Ciais, P., Igel, Christian, Pascual, A., Guerra-hernandez, J., Li, Sizhuo, Mugabowindekwe, Maurice, Saatchi, S., Yue, Y., Chen, Z. & Fensholt, Rasmus, 2023, I: Science Advances. 9, 37, 15 s., eadh4097.

Woody plant decline in the Sahel of western Niger (1996–2017):is it driven by climate or land use changes?
Hiernaux, P., Adamou Kalilou, A., Kergoat, L., Brandt, Martin Stefan, Mougin, E. & Fitts, Y., maj 2022, I: Journal of Arid Environments. 200, 12 s., 104719.

A global increase in tree cover extends the growing season length as observed from satellite records
Fang, Zhongxiang, Brandt, Martin Stefan, Wang, L. & Fensholt, Rasmus, 2022, I: Science of the Total Environment. 806, Part 3, 9 s., 151205.

A large but transient carbon sink from urbanization and rural depopulation in China
Zhang, Xiaoxin, Brandt, Martin Stefan, Tong, Xiaowei, Ciais, P., Yue, Y., Xiao, X., Zhang, Wenmin, Wang, K. & Fensholt, Rasmus, 2022, I: Nature Sustainability. 5, s. 321–328 8 s.

Global quantification of the bidirectional dependency between soil moisture and vegetation productivity
Zhang, Wenmin, Wei, F., Horion, Stéphanie, Fensholt, Rasmus, Forkel, M. & Brandt, Martin Stefan, 2022, I: Agricultural and Forest Meteorology. 313, 9 s., 108735.

Globally Increasing Atmospheric Aridity Over the 21st Century
Fang, Zhongxiang, Zhang, Wenmin, Brandt, Martin Stefan, Abdi, A. M. & Fensholt, Rasmus, 2022, I: Earth's Future. 10, 10 , 13 s., e2022EF003019.

Large loss and rapid recovery of vegetation cover and aboveground biomass over forest areas in Australia during 2019–2020
Qin, Y., Xiao, X., Wigneron, J., Ciais, P., Canadell, J. G., Brandt, Martin Stefan, Li, X., Fan, L., Wu, X., Tang, H., Dubayah, R., Doughty, R., Crowell, S., Zheng, B. & Moore, B., 2022, I: Remote Sensing of Environment. 278, 16 s., 113087.

Large scale rocky desertification reversal in South China karst
Yue, Y., Qi, X., Wang, K., Liao, C., Tong, Xiaowei, Brandt, Martin Stefan & Liu, B., 2022, I: Progress in Physical Geography. 46, 5, s. 661-675

Mapping global lake dynamics reveals the emerging roles of small lakes
Pi, X., Luo, Q., Feng, L., Xu, Yang, Tang, Jing, Liang, X., Ma, E., Cheng, R., Fensholt, Rasmus, Brandt, Martin Stefan, Cai, X., Gibson, L., Liu, J., Zheng, C., Li, W. & Bryan, B. A., 2022, I: Nature Communications. 13, 12 s., 5777.

Mapping the Abundance of Multipurpose Agroforestry *Faidherbia albida* Trees in Senegal
Lu, Tingting, Brandt, Martin Stefan, Tong, Xiaoye, Hiernaux, P., Leroux, L., Ndao, B. & Fensholt, Rasmus, 2022, I: Remote Sensing. 14, 3, 16 s., 662.

Quantifying understory vegetation density using multi-temporal Sentinel-2 and GEDI LiDAR data
Xi, Y., Tian, Q., Zhang, Wenmin, Zhang, Z., Tong, Xiaoye, Brandt, Martin Stefan & Fensholt, Rasmus, 2022, I: GIScience and Remote Sensing. 59, 1, s. 2068-2083 16 s.

The Carbon Sink Potential of Southern China After Two Decades of Afforestation
Zhang, X. M., Brandt, Martin Stefan, Yue, Y. M., Tong, Xiaowei, Wang, K. L. & Fensholt, Rasmus, 2022, I: Earth's Future. 10, 12, 13 s., e2022EF002674.

The carbon sink potential of southern China after two decades ofafforestation
Zhang, X., Brandt, Martin Stefan, Yue, Y., Tong, Xiaowei, Wang, K. & Fensholt, Rasmus, 2022, 21 s. (Earth's Future).

UNSUPERVISED SEGMENTATION OF SMALLHOLDER FIELDS IN MOZAMBIQUE USING PLANETSCOPE IMAGERY
Picoli, M. C. A., Radoux, J., Tong, Xiaoye, Bey, A., Rufin, P., Brandt, Martin Stefan, Fensholt, Rasmus & Meyfroidt, P., 2022, I: International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives. 43, B3-2022, s. 975-981 7 s.

Socio-economic and climatic changes lead to contrasting global urban vegetation trends
Zhang, Wenmin, Randall, Mark Taylor, Jensen, Marina Bergen, Brandt, Martin Stefan, Wang, Q. & Fensholt, Rasmus, nov. 2021, I: Global Environmental Change. 71, 9 s., 102385.

Climatic and non-climatic vegetation cover changes in the rangelands of Africa
D'Adamo, F., Ogutu, B., Brandt, Martin Stefan, Schurgers, Guy & Dash, J., jul. 2021, I: Global and Planetary Change. 202 , 13 s., 103516.

Mapping the dynamics of winter wheat in the north china plain from dense landsat time series (1999 to 2019)
Zhang, Wenmin, Brandt, Martin Stefan, Prishchepov, Alexander V., Li, Z., Lyu, C. & Fensholt, Rasmus, 2 mar. 2021, I: Remote Sensing. 13, 6, 1170.

The confounding effect of snow cover on assessing spring phenology from space: A new look at trends on the Tibetan Plateau
Huang, Ke, Zhang, Y., Tagesson, Håkan Torbern, Brandt, Martin Stefan, Wang, L., Chen, N., Zu, J., Jin, H., Cai, Z., Tong, Xiaowei, Cong, N. & Fensholt, Rasmus, 1 feb. 2021, I: Science of the Total Environment. 756, 15 s., 144011.

Global-scale assessment and inter-comparison of recently developed/reprocessed microwave satellite vegetation optical depth products
Li, X., Wigneron, J., Frappart, F., Fan, L., Ciais, P., Fensholt, Rasmus, Entekhabi, D., Brandt, Martin Stefan, Konings, A. G., Liu, X., Wang, M., Al-Yaari, A. & Moisy, C., feb. 2021, I: Remote Sensing of Environment. 253, 19 s., 112208.

Responses and feedbacks of African dryland ecosystems to environmental changes
Wei, F., Wang, S., Brandt, Martin Stefan, Fu, B., Meadows, M. E., Wang, L., Wang, L., Tong, Xiaowei & Fensholt, Rasmus, feb. 2021, I: Current Opinion in Environmental Sustainability. 48, s. 29-35 7 s.

Carbon loss from forest degradation exceeds that from deforestation in the Brazilian Amazon
Qin, Y., Xiao, X., Wigneron, J., Ciais, P., Brandt, Martin Stefan, Fan, L., Li, X., Crowell, S., Wu, X., Doughty, R., Zhang, Y., Liu, F., Sitch, S. & Moore, B., 2021, I: Nature climate change. 11, 5, s. 442-448 7 s.

Country-scale mapping of individual forest and non-forest trees and shrubs in Africa - the example of Rwanda
Mugabowindekwe, Maurice, Brandt, Martin Stefan & Fensholt, Rasmus, 2021. 1 s.

Eco-engineering controls vegetation trends in southwest China karst
Zhang, Xuemei, Yue, Y., Tong, Xiaowei, Wang, K., Qi, X., Deng, C. & Brandt, Martin Stefan, 2021, I: Science of the Total Environment. 770, 145160.

Response to concerns about the African fire trends controlled by precipitation over recent decades
Wei, F., Wang, S., Fu, B., Brandt, Martin Stefan, Pan, N., Wang, C. & Fensholt, Rasmus, 2021, I: Global Change Biology. s. e4-e6 3 s.

Trees outside of forests as natural climate solutions
Skole, D. L., Mbow, C., Mugabowindekwe, Maurice, Brandt, Martin Stefan & Samek, J. H., 2021, I: Nature climate change. 11, s. 1013-1016 4 s.

50 years of woody vegetation changes in the Ferlo (Senegal) assessed by high-resolution imagery and field surveys
Dendoncker, M., Brandt, Martin Stefan, Rasmussen, Kjeld, Taugourdeau, S., Fensholt, Rasmus, Tucker, C. J. & Vincke, C., 1 dec. 2020, I: Regional Environmental Change. 20, 4, 13 s., 137.

Accelerating land cover change in West Africa over four decades as population pressure increased
Herrmann, S. M., Brandt, Martin Stefan, Rasmussen, Kjeld & Fensholt, Rasmus, 1 dec. 2020, I: Communications Earth & Environment. 1, 1, 10 s.

Do afforestation projects increase core forests? Evidence from the Chinese Loess Plateau
Wang, Y., Brandt, Martin Stefan, Zhao, M., Xing, K., Wang, L., Tong, Xiaowei, Xue, F., Kang, M., Jiang, Y. & Fensholt, Rasmus, 1 okt. 2020, I: Ecological Indicators. 117, 11 s., 106558.

Vegetation Optical Depth Retrieval from AMSR-E/AMSR2 Observations Using L-MEB Inversion
Wang, M., Wigneron, J., Sun, R., Ciais, P., Brandt, Martin Stefan, Liu, Y., Frappart, F., Li, X., Liu, X., Fan, L. & Fensholt, Rasmus, 26 sep. 2020, s. 5003-5006. 4 s.

An unexpectedly large count of trees in the West African Sahara and Sahel
Brandt, M., Tucker, C. J., Kariryaa, A., Rasmussen, K., Abel, C., Small, J., Chave, J., Rasmussen, L. V., Hiernaux, P., Diouf, A. A., Kergoat, L., Mertz, O., Igel, C., Gieseke, F., Schöning, J., Li, S., Melocik, K., Meyer, J., Sinno, S., Romero, E. & 4 flere, Glennie, E., Montagu, A., Dendoncker, M. & Fensholt, Rasmus, 2020, I: Nature. 587, s. 78–82

Forest management in southern China generates short term extensive carbon sequestration
Tong, Xiaowei, Brandt, Martin Stefan, Yue, Y., Ciais, P., Jepsen, Martin Rudbeck, Penuelas, J., Wigneron, J. P., Xiao, X., Song, X. P., Horion, Stéphanie, Rasmussen, Kjeld, Saatchi, S., Fan, L., Wang, K., Zhang, B., Chen, Z., Wang, Y., Li, X. & Fensholt, Rasmus, 2020, I: Nature Communications. 11, 1, 10 s., 129.

Large scale reforestation of farmlands on sloping hills in South China karst
Yue, Y., Liao, C., Tong, Xiaowei, Wu, Z., Fensholt, Rasmus, Prishchepov, Alexander V., Jepsen, Martin Rudbeck, Wang, K. & Brandt, Martin Stefan, 2020, I: Landscape Ecology. 35, s. 1445–1458 14 s.

Nonlinear dynamics of fires in Africa over recent decades controlled by precipitation
Wei, F., Wang, S., Fu, B., Brandt, Martin Stefan, Pan, N., Wang, C. & Fensholt, Rasmus, 2020, I: Global Change Biology. 26, 8, s. 4495-4505 11 s.

Recent divergence in the contributions of tropical and boreal forests to the terrestrial carbon sink
Tagesson, Håkan Torbern, Schurgers, Guy, Horion, Stéphanie, Ciais, P., Tian, F., Brandt, Martin Stefan, Ahlström, A., Wigneron, J., Ardö, J., Olin, S., Fan, L., Wu, Z. & Fensholt, Rasmus, 2020, I: Nature Ecology & Evolution. 4, s. 202-209 8 s.

The forgotten land use class: Mapping of fallow fields across the Sahel using Sentinel-2
Tong, Xiaoye, Brandt, Martin Stefan, Hiernaux, P., Herrmann, S., Rasmussen, Laura Vang, Rasmussen, Kjeld, Tian, F., Tagesson, Håkan Torbern, Zhang, W. & Fensholt, Rasmus, 2020, I: Remote Sensing of Environment. 239, 111598.

Tropical forests did not recover from the strong 2015-2016 El Nino event
Wigneron, J., Fan, L., Ciais, P., Bastos, A., Brandt, Martin Stefan, Chave, J., Saatchi, S., Baccini, A. & Fensholt, Rasmus, 2020, I: Science Advances. 6, 6, 11 s., eaay4603.

Uncovering Dryland Woody Dynamics Using Optical, Microwave, and Field Data—Prolonged Above-Average Rainfall Paradoxically Contributes to Woody Plant Die-Off in the Western Sahel
Bernardino, P. N., Brandt, Martin Stefan, De Keersmaecker, W., Horion, Stéphanie, Fensholt, Rasmus, Storms, I., Wigneron, J., Verbesselt, J. & Somers, B., 2020, I: Remote Sensing. 12, 14, 21 s., 2332.

Changes in rainfall distribution promote woody foliage production in the Sahel
Brandt, Martin Stefan, Hiernaux, P., Rasmussen, Kjeld, Tucker, C. J., Wigneron, J., Diouf, A. A., Herrmann, S. M., Zhang, Wenmin, Kergoat, L., Mbow, C., Abel, Christin, Auda, Y. & Fensholt, Rasmus, 2019, I: Communications Biology. 2, 10 s., 133.

Detecting Hardly Visible Roads in Low-Resolution Satellite Time Series Data
Oehmcke, Stefan, Thrysøe, C., Borgstad, A., Vaz Salles, M. A., Brandt, Martin Stefan & Gieseke, Fabian Cristian, 2019, *Proceedings of the IEEE International Conference on Big Data, Big Data 2019: Special Session on Intelligent Data Mining.* IEEE, s. 2403-2412 9006251,

Ecological engineering projects increased vegetation cover, production, and biomass in semiarid and subhumid Northern China
Niu, Q., Xiao, X., Zhang, Y., Qin, Y., Dang, X., Wang, J., Zou, Z., Doughty, R. B., Brandt, Martin Stefan, Tong, Xiaowei, Horion, Stéphanie, Fensholt, Rasmus, Chen, C., Myneni, R. B., Xu, W., Di, G. & Zhou, X., 2019, I: Land Degradation & Development. 30, 13, s. 1620-1631 12 s.

Ecosystem structural changes controlled by altered rainfall climatology in tropical savannas
Zhang, Wenmin, Brandt, Martin Stefan, Penuelas, J., Guichard, F., Tong, Xiaoye, Tian, F. & Fensholt, Rasmus, 2019, I: Nature Communications. 10, 7 s., 671.

From woody cover to woody canopies: How Sentinel-1 and Sentinel-2 data advance the mapping of woody plants in savannas
Zhang, Wenmin, Brandt, Martin Stefan, Wang, Q., Prishchepov, Alexander V., Tucker, C. J., Li, Y., Lyu, H. & Fensholt, Rasmus, 2019, I: Remote Sensing of Environment. 234, 12 s., 111465.

Karst ecosystem observation and assessment at local and regional scales
Wang, K., Yue, Y., Brandt, Martin Stefan & Tong, Xiaowei, 2019, I: InterCarto, InterGIS. 25, s. 43-47 5 s.

Satellite-observed pantropical carbon dynamics
Fan, L., Wigneron, J. P., Ciais, P., Chave, J., Brandt, Martin Stefan, Fensholt, Rasmus, Saatchi, S. S., Bastos, A., Al-Yaari, A., Hufkens, K., Qin, Y., Xiao, X., Chen, C., Myneni, R. B., Fernandez-Moran, R., Mialon, A., Rodriguez-Fernandez, N. J., Kerr, Y., Tian, F. & Peñuelas, J., 2019, I: Nature Plants. 5, s. 944-951 8 s.

Towards improved remote sensing based monitoring of dryland ecosystem functioning using sequential linear regression slopes (SeRGS)
Abel, Christin, Horion, Stéphanie, Tagesson, Håkan Torbern, Brandt, Martin Stefan & Fensholt, Rasmus, 2019, I: Remote Sensing of Environment. 224, s. 317-332 16 s.

Trends of land surface phenology derived from passive microwave and optical remote sensing systems and associated drivers across the dry tropics 1992–2012
Tong, Xiaoye, Tian, F., Brandt, Martin Stefan, Liu, Y., Zhang, Wenmin & Fensholt, Rasmus, 2019, I: Remote Sensing of Environment. 232, 12 s., 111307.

Does grazing cause land degradation? Evidence from the sandy Ferlo in Northern Senegal
Rasmussen, Kjeld, Brandt, Martin Stefan, Tong, Xiaoye, Hiernaux, P., Diouf, A. A., Assouma, M. H., Tucker, C. J. & Fensholt, Rasmus, dec. 2018, I: Land Degradation and Development. 29, 12, s. 4337-4347 11 s.

An evaluation of SMOS L-band vegetation optical depth (L-VOD) data sets: high sensitivity of L-VOD to above-ground biomass in Africa
Rodríguez-Fernández, N. J., Mialon, A., Mermoz, S., Bouvet, A., Richaume, P., Al Bitar, A., Al-Yaari, A., Brandt, Martin Stefan, Kaminski, T., Le Toan, T., Kerr, Y. H. & Wigneron, J., 30 jul. 2018, I: Biogeosciences Discussions. 15, 14, s. 4627-4645 19 s.

Coupling of ecosystem-scale plant water storage and leaf phenology observed by satellite
Tian, F., Wigneron, J. P., Ciais, P., Chave, J., Ogée, J., Peñuelas, J., Ræbild, Anders, Domec, J. C., Tong, Xiaoye, Brandt, Martin Stefan, Mialon, A., Rodriguez-Fernandez, N., Tagesson, Håkan Torbern, Al-Yaari, A., Kerr, Y., Chen, C., Myneni, R. B., Zhang, Wenmin, Ardö, J. & Fensholt, Rasmus, 2018, I: Nature Ecology and Evolution. 2, 9, s. 1428-1435 8 s.

Ecological restoration enhances ecosystem health in the karst regions of southwest China
Liao, C., Yue, Y., Wang, K., Fensholt, Rasmus, Tong, Xiaowei & Brandt, Martin Stefan, 2018, I: Ecological Indicators. 90, s. 416-425 10 s.

Impacts of the seasonal distribution of rainfall on vegetation productivity across the Sahel
Zhang, Wenmin, Brandt, Martin Stefan, Tong, Xiaoye, Tian, Q. & Fensholt, Rasmus, 2018, I: Biogeosciences. 15, 1, s. 319-330 12 s.

Improved Characterization of Dryland Degradation Using Trends in Vegetation/ Rainfall Sequential Linear Regression (Sergs-Trend)
Abel, Christin, Brandt, Martin Stefan, Tagesson, Håkan Torbern & Fensholt, Rasmus, 2018, *IGARSS 2018 - 2018 IEEE International Geoscience and Remote Sensing Symposium.* IEEE, s. 2988-2991 4 s.

Increased vegetation growth and carbon stock in China karst via ecological engineering
Tong, X., Brandt, Martin Stefan, Yue, Y., Horion, Stéphanie, Wang, K., Keersmaecker, W. D., Tian, F., Schurgers, Guy, Xiao, X., Luo, Y., Chen, C., Myneni, R., Shi, Z., Chen, H. & Fensholt, Rasmus, 2018, I: Nature Sustainability. 1, 1, s. 44-50 7 s.

Land Degradation & Development: A new and bright future
Horne, G., Barrow, C., Brandt, Martin Stefan, Frouz, J., Kuzyakov, Y., Nyssen, J., Ojeda, G. & Wong, V., 2018, I: Land Degradation & Development. 29, 9, s. 2775-2777 3 s.

Major forest increase on the Loess Plateau, China (2001–2016)
Wang, Y., Brandt, Martin Stefan, Zhao, M., Tong, Xiaowei, Xing, K., Xue, F., Kang, M., Wang, L., Jiang, Y. & Fensholt, Rasmus, 2018, I: Land Degradation and Development. 29, 11, s. 4080-4091 12 s.

Reduction of tree cover in West African woodlands and promotion in semi-arid farmlands
Brandt, Martin Stefan, Rasmussen, Kjeld, Hiernaux, P., Herrmann, S., Tucker, C. J., Tong, Xiaoye, Tian, F., Mertz, Ole, Kergoat, L., Mbow, C., David, J. L., Melocik, K. A., Dendoncker, M., Vincke, C. & Fensholt, Rasmus, 2018, I: Nature Geoscience. 11, 5, s. 328-333 6 s.

SMOS-IC: Current Status and Overview of Soil Moisture and VOD Applications
Wigneron, J. -., Mialon, A., De lannoy, G., Fernandez-Moran, R., Al-Yaari, A., Ebrahimi, M., Rodriguez-Fernandez, N., Kerr, Y., Quets, J., Pellarin, T., Fan, L., Tian, F., Fensholt, Rasmus & Brandt, Martin Stefan, 2018, *IGARSS 2018 - 2018 IEEE International Geoscience and Remote Sensing Symposium.* IEEE, s. 1451-1454 5 s. (Igarss 2018 - 2018 IEEE International Geoscience and Remote Sensing Symposium).

SMOS-IC vegetation optical depth index in monitoring aboveground carbon changes in the tropical continents during 2010-2016
Fan, L., Wigneron, J. P., Mialon, A., Rodriguez-Fernandez, N. J., Al-Yaari, A., Kerr, Y., Brandt, Martin Stefan & Ciais, P., 2018, *2018 IEEE International Geoscience and Remote Sensing Symposium, IGARSS 2018 - Proceedings.* Institute of Electrical and Electronics Engineers Inc., s. 2825-2828 4 s. 8518750. (International Geoscience and Remote Sensing Symposium (IGARSS), Bind 2018-July).

Satellite passive microwaves reveal recent climate-induced carbon losses in African drylands
Brandt, M., Wigneron, J-P., Chave, J., Tagesson, H. T., Penuelas, J., Ciais, P., Rasmussen, K., Tian, F., Mbow, C., Al-Yaari, A., Rodriguez-Fernandez, N., Schurgers, G., Zhang, W., Chang, J., Kerr, Y., Verger, A., Tucker, C., Mialon, A., Rasmussen, L. V., Fan, L. & 1 flere, Fensholt, Rasmus, 2018, I: Nature Ecology & Evolution. 2, 5, s. 827-835 9 s.

Satellite-Observed Major Greening and Biomass Increase in South China Karst During Recent Decade
Brandt, Martin Stefan, Yue, Y., Wigneron, J. P., Tong, Xiaowei, Tian, F., Jepsen, Martin Rudbeck, Xiao, X., Verger, A., Mialon, A., Al-Yaari, A., Wang, K. & Fensholt, Rasmus, 2018, I: Earth's Future. 6, 7, s. 1017-1028 12 s.

Smos L-Band Vegetation Optical Depth is Highly Sensitive to Aboveground Biomass
Rodriguez-Fernandez, N. J., Mialon, A., Mermoz, S., Bouvet, A., Richaume, P., Al Bitar, A., Al-Yaari, A., Brandt, Martin Stefan, Kaminski, T., Toan, T. L., Kerr, Y. H. & Wigneron, J. -., 2018, *IGARSS 2018 - 2018 IEEE International Geoscience and Remote Sensing Symposium.* IEEE, s. 9038-9041 4 s. (Igarss 2018 - 2018 IEEE International Geoscience and Remote Sensing Symposium).

How conflict affects land use: agricultural activity in areas seized by the Islamic State
Eklund, L., Degerald, M., Brandt, Martin Stefan, Prishchepov, Alexander V. & Pilesjö, P., 2017, I: Environmental Research Letters. 12, 5, 10 s., 054004.

Human population growth offsets climate-driven increase in woody vegetation in sub-Saharan Africa
Brandt, Martin Stefan, Rasmussen, Kjeld, Peñuelas, J., Tian, F., Schurgers, Guy, Verger, A., Mertz, Ole, R. B. Palmer, J. & Fensholt, Rasmus, 2017, I: Nature Ecology & Evolution. 1, 6 s., 0081 .

Mapping gains and losses in woody vegetation across global tropical drylands
Tian, F., Brandt, Martin Stefan, Liu, Y. Y., Rasmussen, Kjeld & Fensholt, Rasmus, 2017, I: Global Change Biology. 23, 4, s. 1748-1760 13 s.

Quantifying the effectiveness of ecological restoration projects on long-term vegetation dynamics in the karst regions of Southwest China
Tong, X., Wang, K., Yue, Y., Brandt, Martin Stefan, Liu, B., Zhang, C., Liao, C. & Fensholt, Rasmus, 2017, I: International Journal of Applied Earth Observation and Geoinformation. 54, s. 105-113 9 s.

Revisiting the coupling between NDVI trends and cropland changes in the Sahel drylands: a case study in western Niger
Tong, X., Brandt, Martin Stefan, Hiernaux, P., Herrmann, S. M., Tian, F., Prishchepov, Alexander V. & Fensholt, Rasmus, 2017, I: Remote Sensing of Environment. 191, s. 286-296 11 s.

Using long-term daily satellite based rainfall data (1983-2015) to analyze spatio-temporal changes in the sahelian rainfall regime
Zhang, Wenmin, Brandt, Martin Stefan, Guichard, F., Tian, Q. & Fensholt, Rasmus, 2017, I: Journal of Hydrology. 550, s. 427-440 14 s.

Woody vegetation die off and regeneration in response to rainfall variability in the West African Sahel
Brandt, Martin Stefan, Tappan, G., Diouf, A., Beye, G., Mbow, C. & Fensholt, Rasmus, 2017, I: Remote Sensing. 9, 1, 21 s.

Remote sensing of vegetation dynamics in drylands: Evaluating vegetation optical depth (VOD) using AVHRR NDVI and *in situ* green biomass data over West African Sahel
Tian, F., Brandt, Martin Stefan, Liu, Y. Y., Verger, A., Tagesson, Håkan Torbern, Diouf, A. A., Rasmussen, Kjeld, Mbow, C., Wang, Y. & Fensholt, Rasmus, 1 maj 2016, I: Remote Sensing of Environment. 177, s. 265-276 12 s.

Adaptation as by-product: migration and environmental change in Nguith, Senegal
Romankiewicz, C., Doevenspeck, M., Brandt, Martin Stefan & Samimi, C., 2016, I: Die Erde – Journal of the Geographical Society of Berlin. 147, 2, s. 95-108 14 s.

Assessing future vegetation trends and restoration prospects in the Karst regions of Southwest China
Tong, X., Wang, K., Brandt, Martin Stefan, Yue, Y., Liao, C. & Fensholt, Rasmus, 2016, I: Remote Sensing. 8, 5, 17 s., 357.

Assessing woody vegetation trends in Sahelian drylands using MODIS based seasonal metrics
Brandt, Martin Stefan, Hiernaux, P., Rasmussen, Kjeld, Mbow, C., Kergoat, L., Tagesson, Håkan Torbern, Ibrahim, Y. Z., Wélé, A., Tucker, C. J. & Fensholt, Rasmus, 2016, I: Remote Sensing of Environment. 183, s. 215-225 11 s.

Data and methods in the environment-migration nexus: a scale perspective
Eklund, L., Romankiewicz, C., Brandt, Martin Stefan, Doevenspeck, M. & Samimi, C., 2016, I: Die Erde – Journal of the Geographical Society of Berlin. 147, 2, s. 139-152 14 s.

Do Red Edge and Texture Attributes from High-Resolution Satellite Data Improve Wood Volume Estimation in a Semi-Arid Mountainous Region?
Schumacher, P., Mislimshoeva, B., Brenning, A., Zandler, H., Brandt, Martin Stefan, Samimi, C. & Koellner, T., 2016, I: Remote Sensing. 8, 7, 19 s., 540.

Do agrometeorological data improve optical satellite-based estimations of the herbaceous yield in Sahelian semi-arid ecosystems?
Diouf, A. A., Hiernaux, P., Brandt, Martin Stefan, Faye, G., Djaby, B., Diop, M. B., Ndione, J. A. & Tychon, B., 2016, I: Remote Sensing. 8, 8, 668.

Woody plant cover estimation in drylands from Earth Observation based seasonal metrics
Brandt, Martin Stefan, Hiernaux, P., Tagesson, Håkan Torbern, Verger, A., Rasmussen, Kjeld, Diouf, A. A., Mbow, C., Mougin, E. & Fensholt, Rasmus, 2016, I: Remote Sensing of Environment. 172, s. 28-38

Ground-and satellite-based evidence of the biophysical mechanisms behind the greening Sahel
Brandt, Martin Stefan, Mbow, C., Diouf, A. A., Verger, A., Samimi, C. & Fensholt, Rasmus, 1 apr. 2015, I: Global Change Biology. 21, 4, s. 1610-1620 11 s.

What four decades of earth observation tell us about land degradation in the Sahel?
Mbow, C., Brandt, Martin Stefan, Ouedraogo, I., de Leeuw, J. & Marshall, M., 1 apr. 2015, I: Remote Sensing. 7, 4, s. 4048-4067 20 s.

Fodder Biomass Monitoring in Sahelian Rangelands Using Phenological Metrics from FAPAR Time Series
Diouf, A. A., Brandt, Martin Stefan, Verger, A., El Jarroudi, M., Djaby, B., Fensholt, Rasmus, Ndione, J. A. & Tychon, B., 2015, I: Remote Sensing. 7, 7, s. 9122-9148

Woody vegetation and land cover changes in the Sahel of Mali (1967-2011)
Spiekermann, R., Brandt, Martin Stefan & Samimi, C., 2015, I: International Journal of Applied Earth Observation and Geoinformation. 34, 1, s. 113-121 9 s.

Environmental change in time series - An interdisciplinary study in the Sahel of Mali and Senegal
Brandt, Martin Stefan, Romankiewicz, C., Spiekermann, R. & Samimi, C., 2014, I: Journal of Arid Environments. 105, s. 52-63 12 s.

Local vegetation trends in the sahel of mali and senegal using long time series FAPAR satellite products and field measurement (1982-2010)
Brandt, Martin Stefan, Verger, A., Diouf, A. A., Baret, F. & Samimi, C., 2014, I: Remote Sensing. 6, 3, s. 2408-2434 27 s.

Modeling soil and woody vegetation in the senegalese Sahel in the context of environmental change
Brandt, Martin Stefan, Grau, T., Mbow, C. & Samimi, C., 2014, I: Land. 3, 3, s. 770-792 23 s.

Vegetationsveränderungen in westafrika -spiegel von klimawandel und landnutzung
Brandt, Martin Stefan, Paeth, H. & Samimi, C., 2013, I: Geographische Rundschau. 65, 9, s. 36-42 7 s.

Agricultural suitability of dune system and limpopo basin soils near xai-xai, mozambique
Brandt, Martin Stefan, Bäumler, R. & Samimi, C., 1 jan. 2009, I: South African Journal of Plant and Soil. 26, 4, s. 206-212 7 s.