

Trends.Earth - General Information

version 2.3.0

Conservation International

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General information

▲TRENDS.EARTH was produced as part of the project “Enabling the use of global data sources to assess and monitor land degradation at multiple scales”, funded by the Global Environment Facility.

Contacting the team

Contact the [Trends.Earth](#) team with any comments or suggestions. If you have specific bugs to report or improvements to the tool that you would like to suggest, you can also submit them in the [issue tracker on Github](#) for ▲TRENDS.EARTH.

Authors

The Land Degradation Monitoring Project is a partnership of Conservation International, Lund University, and the National Aeronautics and Space Administration (NASA), and is funded by the Global Environment Facility (GEF).

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▲TRENDS.EARTH uses [Google Earth Engine](#) to compute indicators in the cloud.

Google Earth Engine

The [Tools4LDN](#) Project is a partnership of Conservation International, University of Bern, University of Colorado in partnership with USDA and USAID, University of California - Santa Barbara in partnership with University of North Carolina - Wilmington and Brown University and is funded by the Global Environment Facility (GEF).

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Trademark

▲TRENDS.EARTH has a service mark trademark registered June 9, 2020 (reg. No. 6,074,442 and Int. Cl.: 9,35,42) by the United States Patent and Trademark Office.

Publications

Peer-reviewed Publications

The below peer-reviewed publications either use or relate to **▲TRENDS.EARTH**.

- Alamanos, A. and Linnane, S., 2021. Estimating SDG Indicators in Data-Scarce Areas: The Transition to the Use of New Technologies and Multidisciplinary Studies. *Earth*, 2(3), pp.635-652.
- Cherif, I., Kolintziki, E. and Alexandridis, T.K., 2023. Monitoring of land degradation in Greece and Tunisia using trends. *Earth with a focus on cereal croplands. Remote Sensing*, 15(7), p.1766.
- Di Leginio, M., Agrillo, A., Congedo, L., Munafo, M., Riitano, N., Terribile, F. and Manna, P., 2024. Analysis of trends in productivity metrics in assessing land degradation: A case study in the Campania region of southern Italy. *Ecological Indicators*, 161, p.111962.
- Dong, J., Metternicht, G., Hostert, P., Fensholt, R., Chowdhury, R.R., 2019. Remote sensing and geospatial technologies in support of a normative land system science: status and prospects. *Curr. Opin. Environ. Sustain.* 38, 44–52. <https://doi.org/10.1016/j.cosust.2019.05.003>
- Easdale, M.H., Fariña, C., Hara, S., Pérez León, N., Umaña, F., Tittonell, P., Bruzzone, O., 2019. Trend-cycles of vegetation dynamics as a tool for land degradation assessment and monitoring. *Ecol. Indic.* 107, 105545. <https://doi.org/10.1016/j.ecolind.2019.105545>
- Ferroni, F., Micalizzi, K., Attorre, F., Sun, X. and Cioffi, F., 2025. Remote Sensing for SDG 15.3: Advancing Sustainable Cocoa Agriculture in Ghana Using Trends. *Earth. MDPI. International Conference on Advanced Remote Sensing (ICARS 2025) session Remote Sensing for Agriculture, Water and Food Security*

Citation

- Giuliani, G., Chatenoux, B., Benvenuti, A., Lacroix, P., Santoro, M., Mazzetti, P., 2020a. Monitoring land degradation at national level using satellite Earth Observation time-series data to support SDG15 – exploring the potential of data cube. *Big Earth Data* 4, 3–22. <https://doi.org/10.1080/20964471.2020.1711633>
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- Gonzalez-Roglich, M., Zvoleff, A., Noon, M., Liniger, H., Fleiner, R., Harari, N., Garcia, C., 2019. Synergizing global tools to monitor progress towards land degradation neutrality: Trends.Earth and the World Overview of Conservation Approaches and Technologies sustainable land management database. *Environ. Sci. Policy* 93, 34–42. <https://doi.org/10.1016/j.envsci.2018.12.019>
- Jalem, D.K., 2023. Spatio-Temporal Assessment of Land Degradation Neutrality (LDN) status in Chhattisgarh, India (2001–2022) Using Trends. *Earth. Educational Administration: Theory and Practice*, 30(1), pp.5887-5897.
- Janer, I.C. and Jimenez, F., 2022. Land-use changes by Old Colonies Mennonites in Mexico with Sentinel 2 and Trends Earth. *European Journal of Agriculture and Food Sciences*, 4(3), pp.17-23.
- Jiang, L., Bao, A., Jiapaer, G., Liu, R., Yuan, Y. and Yu, T., 2022. Monitoring land degradation and assessing its drivers to support sustainable development goal 15.3 in Central Asia. *Science of The Total Environment*, 807, p.150868. <https://doi.org/10.1016/j.scitotenv.2021.150868>
- Kadaverugu, A., Nageshwar Rao, C. and Viswanadh, G.K., 2021. Quantification of flood mitigation services by urban green spaces using InVEST model: a case study of Hyderabad city, India. *Modeling Earth Systems and Environment*, 7(1), pp.589-602. <https://doi.org/10.1007/s40808-020-00937-0>
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Academic dissertations

- Mahlaba, B., 2022. The assessment of degradation state in Ecological Infrastructure and prioritisation for rehabilitation and drought mitigation in the Tsitsa River Catchment (Masters dissertation, Rhodes University).
- Owuor, G.O., 2021. Monitoring Land Degradation Neutrality using Geospatial Techniques in Support of Sustainable Land Management: A Case Study of Narok County (Doctoral dissertation, University of Nairobi).
- Tran, T.D.C., 2020. Land degradation in Switzerland. An application of the Trends.Earth model. (Complementary Certificate in Geomatic, Faculté des Sciences de la Société, Université de Genève)

Other resources

Print documentation from the Trends.Earth project (including fact sheets, reports, and other materials) is listed below.

Reports

- [A Review of Publicly Available Geospatial Datasets and Indicators In Support of Land Degradation Monitoring](#)
- [A Review of Publicly Available Geospatial Datasets and Indicators in Support of Drought Monitoring](#)
- [A Review of Publicly Available Geospatial Datasets and Indicators in Support of UNCCD Strategic Objective \(SO\) 2: To Improve Living Conditions of Populations Affected by Desertification, Land Degradation, and Drought](#)
- [Trends in Population Exposure to Land Degradation - Methodological note](#)
- [Arnold S., Jun C., Olav E. 2019. Global and Complementary \(Non-authoritative\) Geospatial Data for SDGs: Role and Utilisation. Report produced jointly by the Task Team on Global Data and Task Team on Alternative Data Sources by the Working Group on Geospatial Information of the Inter-agency and Expert Group on Sustainable Development Goal Indicators \(IAEG-SDGs\).](#)
- [Using Spectral Vegetation Indices to Measure Gross Primary Productivity as an Indicator of Land Degradation](#)
- [Evaluation of approaches for incorporating higher-resolution data for disaggregation or targeted analysis](#)
- [Disentangling the effects of climate and land use on land degradation](#)
- [Monitoring and assessing land degradation to support sustainable development](#)
- [\(French\) Suivre et évaluer la dégradation des terres pour soutenir le développement durable](#)
- [Comments on the GEF STAR Allocation Algorithm and Suggestions for Alternatives](#)