DAFTAR PUSTAKA

[1] Eduardo Calvo Buendia Valérie Masson-Delmotte Hans-Otto Pörtner Debra C. Roberts Panmao Zhai Raphael Slade Sarah Connors Renée van Diemen Marion Ferrat Eamon Haughey Samantha Luz Suvadip Neogi Minal Pathak Jan Petzold Joana Portugal Pereira Purnamita Vyas Elizabeth Huntley Katherine Kissick Mohamed Belkacemi James Malley Priyadarshi R. Shukla, Jim Skea. Summary for policymakers. In *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems*. Intergovernmental Panel on Climate Change, 2019.

[2] Cheikh Mbow, Cynthia Rosenzweig, Luis G. Barioni, Tim G. Benton, Mario Herrero, Murukesan Krishnapillai, Emma Liwenga, Prajal Pradhan, Marta G. Rivera-Ferre, Tek Sapkota, Francesco N. Tubiello, and Yinlong Xu. Food security. In Priyadarshi R. Shukla, Jim Skea, Eduardo Calvo Buendia, Valérie Masson-Delmotte, Hans-Otto Pörtner, Debra C. Roberts, Panmao Zhai, Raphael Slade, Sarah Connors, Renée van Diemen, Marion Ferrat, Eamon Haughey, Samantha Luz, Suvadip Neogi, Minal Pathak, Jan Petzold, Joana Portugal Pereira, Purnamita Vyas, Elizabeth Huntley, Katherine Kissick, Mohamed Belkacemi, and James Malley, editors, *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems*. Intergovernmental Panel on Climate Change, 2019.

[3] NordForsk Committee: Per Hansson and Katrin Saar and Maarja Malm and Suvi Broholm and Suvi Ryynänen and Ægir Þór Þórsson and Laura Kostelnickiene and Simona Bieliauskaite and Nina Elisabeth Solheim and Jessica Ekström. Sustainable agriculture and climate change: Programme memorandum 2022–2025. `https://www.nordforsk.org`, 2022. Research Area: A Green Nordic Region – Agriculture. NordForsk.

[4] Marja Jalava. The nordic countries as a historical and historiographical region: Towards a critical writing of translocal history. *História da Historiografia: International Journal of Theory and History of Historiography*, (11), 2012. CC BY-NC-ND License.

[5] Sergei Gladkov. Challenges and opportunities of achieving zero carbon in the nordic countries, 2023. Consultant to the Maxwell Centre, University of Cambridge.

[6] Danish Agriculture & Food Council. Denmark – a food and farming country: Facts & figures, 2023. Available at: https://agricultureandfood.dk/statistics/annual-statistics/facts-and-figures-2023/.

[7] Nordic Working Group for Climate and Air (NKL). *Nordic Agriculture, Air and Climate: Baseline and System Analysis Report*, volume 2015:570 of *TemaNord*. Nordic Council of Ministers, Copenhagen, 2015. ISBN: 978-92-893-4319-0. Available at: https://www.norden.org/en/publication/nordic-agriculture-air-and-climate.

[8] Lotten Wiréhn. Nordic agriculture under climate change: A systematic review of challenges, opportunities and adaptation strategies for crop production. *Land Use Policy*, 77:63–74, 2018. DOI: 10.1016/j.landusepol.2018.04.059.

[9] Pete Smith, Johnson Nkem, Katherine Calvin, Diane Campbell, Francesco Cherubini, Giacomo Grassi, Viktor Korotkov, Anh Le Hoang, Shuaib Lwasa, Pamela McElwee, Ephraim Nkonya, Noriko Saigusa, Jean-François Soussana, and Miguel Ángel Taboada. Interlinkages between desertification, land degradation, food security and greenhouse gas fluxes: Synergies, trade-offs and integrated response options. In Priyadarshi R. Shukla, Jim Skea, Eduardo Calvo Buendia, Valérie Masson-Delmotte, Hans-Otto Pörtner, Debra C. Roberts, Panmao Zhai, Raphael Slade, Sarah Connors, Renée van Diemen, Marion Ferrat, Eamon Haughey, Samantha Luz, Suvadip Neogi, Minal Pathak, Jan Petzold, Joana Portugal Pereira, Purnamita Vyas, Elizabeth Huntley, Katherine Kissick, Mohamed Belkacemi, and James Malley, editors, *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems*. Intergovernmental Panel on Climate Change, 2019.

[10] Josafhat Salinas Ruíz, Osval Antonio Montesinos López, Gabriela Hernández Ramírez, and Jose Crossa Hiriart. *Generalized Linear Mixed Models with Applications in Agriculture and Biology*. Springer International Publishing, Switzerland, 2023. ISBN: 9783031328008, 9783031327995.

Available at: https://library.oapen.org/handle/20.500.12657/76233. Funded by the Bill and Melinda Gates Foundation.

[11] Qulmatova Sayyora, Karimov Botirjon, and Azimov Dilmurod. Data analysis and forecasting in agricultural enterprises. In *Proceedings of the 6th International Conference on Future Networks and Distributed Systems (ICFNDS '22)*, pages 536–541. ACM, 2023. Available at: https://doi.org/10.1145/3584202.3584282.

[12] Hemant Servia, Sajid Pareeth, Claire I. Michailovsky, Charlotte de Fraiture, and Poolad Karimi. Operational framework to predict field level crop biomass using remote sensing and data driven models. *International Journal of Applied Earth Observation and Geoinformation*, 108:102725, 2022. Available at: https://doi.org/10.1016/j.jag.2022.102725.

[13] Priti Prakash Jorvekar, Sharmila Kishor Wagh, and Jayashree Rajesh Prasad. Predictive modeling of crop yields: A comparative analysis of regression techniques for agricultural yield prediction. *AgricEngInt: CIGR Journal*, 26(2):125, 2024. Available at: http://www.cigrjournal.org.

[14] Food and Agriculture Organization of the United Nations. Food and agriculture data. https://www.fao.org/faostat/en/#home, 2025. Accessed: 2025-04-10. Licence: CC-BY-4.0.

[15] National Aeronautics and Space Administration (NASA). The power project. https://power.larc.nasa.gov/, 2025 (Version: v2.4.14). Accessed: 2025-04-10.

[16] Suleiman Usman, James O. Jayeoba, Muhammad Maikano Ari, and Sani Mathew Amana. Research methodology: An agricultural perception. *Eurasian Journal of Agricultural Research*, 8(1):33–55, 2024. Available at: https://dergipark.org.tr/en/pub/ejar/issue/85440/1506159.

[17] NordGen. Nordic Agriculture and Climate Change: Mitigation and Adaptation – Recommendations from leading researchers and private companies within the Nordic plant breeding, 2019. Compiled by NordGen staff. Layout: Sara Landqvist. Printed by Repro Alnarp, Sweden.

[18] Food and Agriculture Organization of the United Nations. FAOSTAT: Crops and Livestock Products. https://www.fao.org/faostat/en/

#data/QCL, 2025 (Last Update: February 27, 2025). Accessed: 2024-06-13. Licence: CC-BY-4.0.

[19] National Aeronautics and Space Administration (NASA). NASA Prediction Of Worldwide Energy Resources (POWER). https://power.larc.nasa.gov/data-access-viewer, 2025 (Version: V2.4.14). Accessed: 2024-06-13.

[20] Ali S. Hadi and Samprit Chatterjee. *Regression Analysis By Example Using R*. John Wiley & Sons, Hoboken, NJ, 6th edition, 2023. ISBN: 978-1-119-83089-4.

[21] William Mendenhall and Terry Sincich. *A Second Course in Statistics: Regression Analysis*. Pearson Education, Inc., Boston, MA, 7th edition, 2012. ISBN: 978-0-321-69169-9.

[22] Rob J Hyndman and George Athanasopoulos. *Forecasting: Principles and Practice*. OTexts, 2018. ISBN: 9780987507112, 0987507117. Available at: https://otexts.com/fpp2/accuracy.html.

[23] Jai Prakash Verma and Abdel-Salam Gomaa Abdel-Salam. *Testing Statistical Assumptions in Research*. John Wiley & Sons, 2019. ISBN: 9781119528418.

[24] Dirk Taeger and Sonja Kuhnt. *Statistical Hypothesis Testing with SAS and R*. John Wiley & Sons, 2014. ISBN: 978-1-119-95021-9.

[25] William H. Greene. *Econometric Analysis*. Prentice Hall, Upper Saddle River, NJ, 5th edition, 2003. ISBN: 9780130661890.

[26] Yadolah Dodge. *The Concise Encyclopedia of Statistics*. Springer Science+Business Media, LLC, New York, 2008. ISBN: 978-0-387-32833-1.

[27] Gun Mardiatmoko. Pentingnya Uji Asumsi Klasik pada Analisis Regresi Linier Berganda (Studi Kasus Penyusunan Persamaan Alometrik Kenari Muda [*Canarium indicum L.*]). *Barekeng, Jurnal Ilmu Matematika dan Terapan*, 2020.

[28] Muhammad Rizky Hutomo Saputra, Rizky Ramadhan Basuki, and Ichsandi Afrizul Muhtadin. Analisis regresi pada pelanggaran asumsi klasik pada regresi linear. *Madani, Jurnal Ilmiah Multidisiplin*, 2024.

[29] Kenneth P. Burnham and David R. Anderson. *Model Selection and Multimodel Inference: A Practical Information-Theoretic Approach*. Springer, New York, 2nd edition, 2002. ISBN: 0-387-95364-7.

[30] Sophia Rabe-Hesketh and Anders Skrondal. *Multilevel and Longitudinal Modeling Using Stata: Volume I: Continuous Responses*. Stata Press, 4th edition, 2021. ISBN: 978-1-59718-137-2.

[31] Tongxi Hu, Xuesong Zhang, Sami Khanal, Robyn Wilson, Guoyong Leng, Elizabeth M. Toman, Xuhui Wang, Yang Li, and Kaiguang Zhao. Climate change impacts on crop yields: A review of empirical findings, statistical crop models, and machine learning methods. *Environmental Modelling and Software*, 179:106119, 2024. DOI: 0.1016/j.envsoft.2024.106119.

[32] Doan Nainggolan, Abrha Teklay Abay, Jesper Heile Christensen, and Mette Termansen. The impact of climate change on crop mix shift in the nordic region. *Scientific Reports*, 13:2962, 2023. Available at: https://doi.org/10.1038/s41598-023-29249-w.

[33] Majed Alotaibi. Climate change, its impact on crop production, challenges, and possible solutions. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca*, 51(1):Article number 13020, 2023. DOI: 10.15835/nbha51113020. Available at: https://www.notulaebotanicae.ro/index.php/nbha/article/view/13020.

[34] Andrew Hultgren, Tamma Carleton, Michael Delgado, Diana R. Gergel, Michael Greenstone, Trevor Houser, Solomon Hsiang, Amir Jina, Robert E. Kopp, Steven B. Malevich, Kelly E. McCusker, Terin Mayer, Ishan Nath, James Rising, Ashwin Rode, and Jiacan Yuan. Impacts of climate change on global agriculture accounting for adaptation. *Nature*, 642:644–652, 2025. Available at: https://doi.org/10.1038/s41586-025-09085-w.

[35] Bureau International des Poids et Mesures. *The International System of Units (SI)*. Bureau International des Poids et Mesures, 9th edition, 2019. ISBN: 978-92-822-2272-0. Version 3.01, August 2024. Available at: https://www.bipm.org/en/publications/si-brochure.

[36] NASA POWER Project. Power data methodology. https://power.larc.nasa.gov/docs/methodology/, 2024. NASA Official: Paul Stackhouse, Jr., Ph.D. Version 1.0, Last Modified: 2024/12/17.

[37] Luky Prasetya Darman, Januhariadi, Munif Prawira Yudha, and Aslan. Assessment of NASA POWER reanalysis products as data resources alternative for weather monitoring in West Sumbawa, Indonesia. *E3S Web of Conferences*, 485:06006, 2024. The 7th Environmental Technology and Management Conference (ETMC 2023), Air Quality Monitoring and Modelling, Emission Inventory, and Control. Available at: https://doi.org/10.1051/e3sconf/202448506006.

[38] NASA Science Editorial Team. The raw truth on global temperature records. https://science.nasa.gov/earth/climate-change/the-raw-truth-on-global-temperature-records/, 2021. Last updated: Oct 23, 2024.

[39] Hungarian Central Statistical Office. We are introducing the hungarian central statistical office. https://www.ksh.hu/introduction, 2025.

[40] Hungarian Central Statistical Office. 19.1.3.6. apple production [thousand tonne]. https://www.ksh.hu/stadat_files/mez/en/mez0100.html, 2025. Source: FAO database.

[41] National Aeronautics and Space Administration (NASA). Data Access Viewer (DAV) – Quick Start. https://power.larc.nasa.gov/docs/tutorials/data-access-viewer/quick-start/, 2024. Last modified January 25, 2024.

[42] John Parr Snyder. *Map Projections–A Working Manual*. U.S. Geological Survey, Washington, DC, 1987. https://doi.org/10.3133/pp1395.

[43] Elizabeth G. Cima1, Miguel A. Uribe-Opazo, Jerry A. Johann, Weimar F. da Rocha Jr., and Gustavo H. Dalposso. Analysis of spatial autocorrelation of grain production and agricultural storage in paraná. *Engenharia Agrícola*, 38(3):395–402, 2018. Available at: https://doi.org/10.1590/1809-4430-Eng.Agric.v38n3p395-402/2018.

[44] Maria N. Fomina. Agrometeorological characteristics of spring oat varieties created in the conditions of the northern trans-urals. *BIO Web of Conferences*, 36:01018, 2021. Available at: https://doi.org/10.1051/bioconf/20213601018.

[45] Liga Dzedule, Gunta Kalvane, and Andis Kalvans. Temperature and precipitation regime impact on spring barley (hordeum vulgare) growth in

priekuļi case. *Environment. Technology. Resources. Proceedings of the International Scientific and Practical Conference*, 1:65–69, 2023. Available at: https://doi.org/10.17770/etr2023vol1.7288.

[46] Laila Ikase. Results of fruit breeding in baltic and nordic states. Presented at the 25th NJF Congress: Nordic View to Sustainable Rural Development, 2015.

[47] Hockey Club Wien and Hartmut Stutzel. *Cauliflower, Broccoli, Cabbage, and Brussels Sprouts*. CABI, Wallingford, UK, 2nd edition, 2020. Available at: https://doi.org/10.1079/9781786393777.0357.

[48] Emmanuel Geoffriau and Philipp W. Simon. *Carrots and Related Apiaceae Crops*. CABI, Wallingford, UK, 2nd edition, 2020. ISBN: 9781789240955.

[49] Zejia Wang, Wanchen Zhang, Yangyan Zhou, Qiyan Zhang, Krishnanand P. Kulkarni, Kalpalatha Melmaiee, Youwen Tian, Mei Dong, Zhaoxu Gao, Yanning Su, Hong Yu, Guohui Xu, Yadong Li, Hang He, Qikun Liu, and Haiyue Sun. Genetic and epigenetic signatures for improved breeding of cultivated blueberry. *Horticulture Research*, 11:138, 2024. Available at: https://doi.org/10.1093/hr/uhae138.

[50] Joakim Sjöstrand. Improving storability and quality of swedish apples. Introductory Paper 2021:2, Swedish University of Agricultural Sciences, Department of Plant Breeding, Uppsala, Sweden, 2021.

[51] Shirin Mohammadi, Knut Rydgren, Vegar Bakkestuen, and Mark A. K. Gillespie. Impacts of recent climate change on crop yield can depend on local conditions in climatically diverse regions of norway. *Scientific Reports*, 13(1):3633, 2023. Available at: https://doi.org/10.1038/s41598-023-30813-7.

[52] Kaija Hakala. Climate change and its effects on agricultural production in finland – research efforts during the past 50 years. *Agricultural and Food Science*, 29(2):98–109, 2020. Available at: https://doi.org/10.23986/afsci.82788.

[53] Geoff Sawyer, Marc de Vries, and Nikolay Khabarov. Sentinels Benefits Study (SeBS): A Case Study – Farm Management Support in Denmark, 2018. Commissioned by the European Space Agency.

[54] Changyong Feng, Hongyue Wang, Naiji Lu, Tian Chen, Hua He, Ying Lu, and Xin M. Tu. Log-transformation and its implications for data analysis. *Shanghai Archives of Psychiatry*, 26(2):105–109, 2014. DOI: 10.3969/j.issn.1002-0829.2014.02.009.

[55] Sotirios V. Archontoulis and Fernando E. Miguez. Nonlinear regression models and applications in agricultural research. *Agronomy Journal*, 107(2):786–798, 2015. Available at: `https://doi.org/10.2134/agronj2012.0506`.