



## The Impact of Climate Change on Sustainable Development: The Case of Vojvodina

A. Pavlović<sup>a\*</sup>, A. Frank<sup>b</sup>, A. Ivanišević<sup>a</sup>, I. Katić<sup>a</sup>

<sup>a</sup> University of Novi Sad, Department of Industrial Engineering and Engineering Management, Novi Sad, Serbia;

<sup>b</sup> University of Waterloo, School of Environment, Resources and Sustainability, Waterloo, Canada

### References

- [1] T. Marceda Bach, U. Tortato, and W. Vieira da Silva, "Cross Country Evidence on the Cointegration and Causality Relationships Between Economic Growth and CO<sub>2</sub> Emissions in OECD Countries", *Int. J. Ind. Eng. Manag.*, vol. 9, no. 1, pp. 31-42, 2018.
- [2] A-K. Briem, T. Betten, M. Held, D. Wehner, and M. Baumann, "Environmental Sustainability in the Context of Mass Personalisation - Quantification of the Carbon Footprint with Life Cycle Assessment," *Int. J. Ind. Eng. Manag.*, vol. 10, no. 2, pp. 171-180, June 2019, doi: 10.24867/IJEM-2019-2-237.
- [3] K. Halsnæs, P. Shukla, D. Ahuja, G. Akumu, R. Beale, J. Edmonds, C. Gollier, A. Grübler, M. Ha Duong, A. Markandya, M. McFarland, E. Nikitina, T. Sugiyama, A. Villavicencio, and J. Zou, "Framing issues," in *Climate Change 2007: Migration. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [B. Metz, O. R. Davidson, P. R. Bosch, R. Dave, L. A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2007, pp. 117-167.
- [4] K. Halsnæs, and J. Verhagen, "Development based climate change adaptation and mitigation - Conceptual issues and lessons learned in studies in developing countries," *Mitigation and Adaptation Strategies for Global Change*, vol. 12, no. 5, pp. 665-684, Jun 2007, doi: 10.1007/s11027-007-9093-6.
- [5] N. Beg, J.C. Morlot, O. Davidson, Y. Afrane-Okesse, L. Tyani, F. Denton, Y. Sokona, J.P. Thomas, E.L.L. Rovere, J.K. Parikh, K. Parikh, and A. Rahman, "Linkages between climate change and sustainable development," *Climate Policy*, vol. 2, no. 5, pp. 129-144, Jun 2011, doi: 10.3763/cpol.2002.0216.
- [6] U. Awan, R. Sroufe, and M. Shahbaz, "Industry 4.0 and the circular economy: A literature review and recommendations for future research," *Bus. Strateg. Environ.*, vol. 30, no. 4, pp. 2038-2060, 2021, doi: 10.1002/bse.2731.
- [7] U. Awan, S. Nauman, and R. Sroufe, "Exploring the effect of buyer engagement on green product innovation: Empirical evidence from manufacturers," *Bus. Strateg. Environ.*, vol. 30, no. 1, pp. 463-477, 2021, doi: 10.1002/bse.2631.
- [8] B. Metz, M.E. Berk, M.G.J. den Elzen, B. De Vries, and DP van Vuuren, "Towards an equitable global climate change regime: Compatibility with Article 2 of the Climate Change Convention and the link with sustainable development", *Climate Policy*, vol. 2, issue 2-3, pp. 211-230, September 2002, doi: 10.1016/S1469-3062(02)00037-2.
- [9] A. Najam, A.A. Rahman, S. Huq, and Y. Sokona, "Integrating sustainable development into the Fourth Assessment Report of the Intergovernmental Panel on Climate Change," *Climate Policy*, vol. 3, no. 1, pp. S9-S17, November 2003, doi: 10.1016/j.clipol.2003.10.003.
- [10] R. Swart, J.B. Robinson, S. Cohen, "Climate Change and Sustainable Development: Expanding the Options," *Climate Policy*, vol. 3, no. 1, pp. S19-S40, November 2003, doi: 10.1016/j.clipol.2003.10.010.
- [11] T.J. Wilbanks, "Integrating climate change and sustainable development in a place-based context," *Climate Policy*, vol. 3, no. sup1, pp. S147-S154, 2003, doi: 10.1016/j.clipol.2003.10.013.
- [12] D. Romero, J. Stahre, and M. Taisch, "The Operator 4.0: Towards socially sustainable factories of the future," *Comput. Ind. Eng.*, vol. 139, 2020. doi: 10.1016/j.cie.2019.106128.
- [13] A. Frank, *Trend change of climate and hydrological parameters in Vojvodina*. Chisina, Republic of Moldova: Lambert Academic Publishing, 2016, ISBN 978-3-659-85674-7
- [14] R. Heinberg, and J.H. Kunstler, *Peak Everything: Waking Up to the Century of Declines*. Gabriola Island, Canada: New Society Publishers, July 2010, ISBN: 9780865716452.
- [15] World Commission on Environment and Development, *Our Common Future*. Oxford, United Kingdom: Oxford University

Press, April 1987, ISBN: 9780192820808.

- [16] J. Sathaye, A. Najam, C. Cocklin, T. Heller, F. Lecocq, J. Llanes-Regueiro, J. Pan, G. Petschel-Held, S. Rayner, J. Robinson, R. Schaeffer, Y. Sokona, R. Swart, and H. Winkler, "Sustainable Development and Mitigation," in *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer, Eds. Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press, 2007, pp. 691-743.
- [17] United Nations Environment Programme, "Research Priorities on Vulnerability, Impacts and Adaptation: Responding to the Climate Change Challenge," PROVIA UNEP, Nairobi, Kenya, 2013, ISBN: 9789280733174.
- [18] R.J. Klein, S. Huq, F. Denton, T.E. Downing, R.G. Richels, J.B. Robinson, and F.L. Toth, "Interrelationships between adaptation and mitigation," in *Climate Change 2007: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden, C.E. Hanson, Eds. Cambridge, United Kingdom: Cambridge University Press, 2007, pp. 745-777.
- [19] M.B. Gavrilov, S. Marković, A. Jarad, and V. Korać, "The analysis temperature trends in Vojvodina (Serbia) from 1949 to 2006", *Thermal Science*, vol. 19, suppl. 2, pp. 339-350, May 2015, doi: 10.2298/TSCI150207062G.
- [20] D. Zimon, J. Tyan, and R. Sroufe, "Drivers of sustainable supply chain management: Practices to alignment with un sustainable development goals," *Int. J. Qual. Res.*, vol. 14, no. 1, pp. 219-236, 2020. doi: 10.24874/IJQR14.01-14.
- [21] M. Medojević, M. Medojević, N. Radaković, M. Lazarević, and N. Sremčev, "A Conceptual Solution of Low-Cost Temperature Data Logger With Relatively High Accuracy," *Int. J. Ind. Eng. Manag.*, vol. 9, no. 1, pp. 53-58, 2018.
- [22] M. Bratina, *Basic statistics 2*. Novi Sad, Serbia: Visoka škola za organizaciju rada - Novi Sad, 1975.
- [23] L. Lazić, and D. Pavić, *Climate in Banat*. Novi Sad, Serbia: Univerzitet u Novom Sadu, Prirodno-matematički fakultet, Departman za geografiju, turizam i hotelijerstvo, 2003.
- [24] T.B. McKee, N.J. Doesken, and J. Kleist, "The relationship of drought frequency and duration to time scales," in *Proceedings of the 8th Conference on Applied Climatology*, Anaheim, California, USA, January 1993, pp. 17-22.
- [25] D. Srebrenović, *Primijenjena hidrologija*. Zagreb, Croatia: Tehnička knjiga, 1986.
- [26] B. Ślusarczyk, "Industry 4.0 - Are we ready?," *Polish J. Manag. Stud.*, vol. 17, no. 1, pp. 232-248, 2018, doi: 10.17512/pjms.2018.17.1.19.
- [27] Gavrilović, M., Pjević, M., Borisov, M., Marinković, G., & Petrović, V. "Analysis of Climate Change in the Area of Vojvodina -Republic of Serbia and Possible Consequences," *Journal of Geographical Research*, vol. 2, no. 2, pp. 11-19, 2019, doi: 10.30564/jgr.v2i2.952
- [28] A. Malea, A. Tzotzis, A. Manavis, and P. Kyratsis, "Innovative and sustainable toothpaste packaging design," *J. Graph. Eng. Des.*, vol. 11, no. 2, pp. 19-29, 2020. doi: 10.24867/JGED-2020-2-019.
- [29] H. S. Kristensen and M. A. Mosgaard, "A review of micro level indicators for a circular economy - moving away from the three dimensions of sustainability?," *J. Clean. Prod.*, vol. 243, 2020. doi: 10.1016/j.jclepro.2019.118531
- [30] Food and Agriculture Organization of the United Nations, "The State of the World's Land and Water Resources for Food and Agriculture: Managing systems at risk," United Nation, New York, USA, 2011, ISBN: 978-1-84971-326-9.
- [31] B. Muhi, "Rural Tourism as a Part of Integral and Sustainable Development of Villages in Vojvodina," *Zbornik Matice srpske za drustvene nauke*, vol. 2013, no. 142, pp. 129-137, 2013, doi: 10.2298/zmsdn1342135m
- [32] European Commission, "Task 2 -Benefits for FYRoM and Other Countries of SEE of Compliance with the Environmental Acquis Final Report-Part II: Country-specific Report Serbia," European Commission, Brussels, Belgium, 2007.
- [33] K. Udovicki, N. Sormaz, D. Babic, A. Urosev, V. Colic, M. Pejic, J. Lazarevic, and P. Medic, "Serbia Sustainable Development Issues: A Baseline Review," Center of Advanced Economic Studies, Belgrade, Serbia, 2018.
- [34] M. Salvetti, D. Michaud, and S. Gabrić, "Water and Wastewater Services in the Danube Region: Serbia Country Note," World Bank, Washington, DC, USA, 2015.
- [35] K. van Dam, L. Simeone, D. Keskin, B. Baldassarre, M. Niero, and N. Morelli, "Circular Economy in Industrial Design Research: A Review," *Sustainability*, vol. 12, no. 24, 10279, 2020, doi: 10.3390/su122410279
- [36] S. Marinković, V. Radonjanin, M. Malešev, and I. Ignjatović, "Comparative Environmental Assessment of Natural and Recycled Aggregate Concrete," *Waste Management*, vol. 30, no. 11, pp. 2255-2264, Nov. 2010, doi: 10.1016/j.wasman.2010.04.012.