

## Daftar Pustaka

- abc.net.au. (n.d.). *Solar farm trial shows improved fleece on merino sheep grazed under panels* - ABC News. Retrieved January 19, 2023, from <https://www.abc.net.au/news/rural/2022-05-30/solar-farm-grazing-sheep-agriculture-renewable-energy-review/101097364>
- Abdillah, N., Setiawan, A. A., & . S. (2015). Redesigning Solar Water Pumping System at Giricahyo, Gunungkidul Regency, Yogyakarta: HOMER Analysis Approach. *KnE Energy*, 2(2), 132–140. <https://doi.org/10.18502/KEN.V2I2.368>
- Abidin, M. A. Z., Mahyuddin, M. N., & Zainuri, M. A. A. M. (2021). Solar Photovoltaic Architecture and Agronomic Management in Agrivoltaic System: A Review. *Sustainability* 2021, Vol. 13, Page 7846, 13(14), 7846. <https://doi.org/10.3390/SU13147846>
- Achbab, E., Rhinane, H., Maanan, M., & Saifaoui, D. (2020a). Developing and applying a GIS-Fuzzy AHP assisted approach to locating a hybrid renewable energy system with high potential: Case of Dakhla region-Morocco-. *Proceedings - 2020 IEEE International Conference of Moroccan Geomatics, MORGEO 2020*. <https://doi.org/10.1109/Morgeo49228.2020.9121891>
- Achbab, E., Rhinane, H., Maanan, M., & Saifaoui, D. (2020b). Developing and applying a GIS-Fuzzy AHP assisted approach to locating a hybrid renewable energy system with high potential: Case of Dakhla region-Morocco-. *Proceedings - 2020 IEEE International Conference of Moroccan Geomatics, MORGEO 2020*. <https://doi.org/10.1109/Morgeo49228.2020.9121891>
- Adeh, E. H., Selker, J. S., & Higgins, C. W. (2018). Remarkable agrivoltaic influence on soil moisture, micrometeorology and water-use efficiency. *PLOS ONE*, 13(11), e0203256. <https://doi.org/10.1371/JOURNAL.PONE.0203256>
- Ahmetovic, H., Nukic, E., Hivziefendic, J., Saric, M., & Ponjavic, M. (2022). PV system site selection using PVGIS and Fuzzy AHP. *2022 21st International Symposium INFOTEH-JAHORINA, INFOTEH 2022 - Proceedings, March*, 16–18. <https://doi.org/10.1109/INFOTEH53737.2022.9751261>
- Al Garni, H. Z., & Awasthi, A. (2017a). A Fuzzy AHP and GIS-based approach to prioritize utility-scale solar PV sites in Saudi Arabia. *2017 IEEE International Conference on Systems, Man, and Cybernetics, SMC 2017, 2017-Janua*, 1244–1249. <https://doi.org/10.1109/SMC.2017.8122783>
- Al Garni, H. Z., & Awasthi, A. (2017b). Solar PV power plant site selection using a GIS-AHP based approach with application in Saudi Arabia. *Applied Energy*, 206(September), 1225–1240. <https://doi.org/10.1016/j.apenergy.2017.10.024>
- Alonso, J. A., & Lamata, M. T. (2011). CONSISTENCY IN THE ANALYTIC HIERARCHY PROCESS: A NEW APPROACH. *Https://Doi.Org/10.1142/S0218488506004114*, 14(4), 445–459. <https://doi.org/10.1142/S0218488506004114>

- Amaducci, S., Yin, X., & Colauzzi, M. (2018). Agrivoltaic systems to optimise land use for electric energy production. *Applied Energy*, 220, 545–561. <https://doi.org/10.1016/J.APENERGY.2018.03.081>
- Arán Carrión, J., Espín Estrella, A., Aznar Dols, F., Zamorano Toro, M., Rodríguez, M., & Ramos Ridaio, A. (2008). Environmental decision-support systems for evaluating the carrying capacity of land areas: Optimal site selection for grid-connected photovoltaic power plants. *Renewable and Sustainable Energy Reviews*, 12(9), 2358–2380. <https://doi.org/10.1016/J.RSER.2007.06.011>
- Asakereh, A., Soleymani, M., & Sheikhdavoodi, M. J. (2017). A GIS-based Fuzzy-AHP method for the evaluation of solar farms locations: Case study in Khuzestan province, Iran. *Solar Energy*, 155, 342–353. <https://doi.org/10.1016/j.solener.2017.05.075>
- Ashraf, M., Abidin, Z., Nasiruddin Mahyuddin, M., Ammirul, M., & Zainuri, A. M. (2021). *sustainability Solar Photovoltaic Architecture and Agronomic Management in Agrivoltaic System: A Review*. <https://doi.org/10.3390/su13147846>
- Ayadi, O., Shadid, R., Bani-Abdullah, A., Alrbai, M., Abu-Mualla, M., & Balah, N. A. (2022). Experimental comparison between Monocrystalline, Polycrystalline, and Thin-film solar systems under sunny climatic conditions. *Energy Reports*, 8, 218–230. <https://doi.org/10.1016/J.EGYR.2022.06.121>
- BAPPEDA Gunungkidul. (2020). *Informasi Pembangunan Daerah 2020*.
- Becker, C., Sontheimer, T., Steffens, S., Scherf, S., & Rech, B. (2011). Polycrystalline silicon thin films by high-rate electronbeam evaporation for photovoltaic applications – Influence of substrate texture and temperature. *Energy Procedia*, 10, 61–65. <https://doi.org/10.1016/J.EGYPRO.2011.10.153>
- Bellini, E. (2020, September 3). *Giant agrivoltaic project in China*. PV Magazine. <https://www.pv-magazine.com/2020/09/03/giant-agrivoltaic-project-in-china/>
- Bellini, E. (2021, April 30). *Agrivoltaics increases land productivity, improves animal welfare*. PV Magazine. <https://www.pv-magazine.com/2021/04/30/agrivoltaics-increases-land-productivity-improves-animal-welfare/>
- Boutahir, M. K., Farhaoui, Y., Azrour, M., Zeroual, I., & El Allaoui, A. (2022). Effect of Feature Selection on the Prediction of Direct Normal Irradiance. *Big Data Mining and Analytics*, 5(4), 309–317. <https://doi.org/10.26599/BDMA.2022.9020003>
- Budiarto, R., Dumairy, Novitasari, D., & Prabowo, I. E. (2022). Utilization of Solar Photovoltaic to Support Community-Based Business in Gunungkidul: A review on Techno-economic-environment Nexus. *2022 International Conference on Technology and Policy in Energy and Electric Power (ICT-PEP)*, 317–321. <https://doi.org/10.1109/ICT-PEP57242.2022.9988832>
- Chander, S., Purohit, A., Sharma, A., Nehra, S. P., & Dhaka, M. S. (2015). Impact of temperature on performance of series and parallel connected mono-crystalline silicon solar cells. *Energy Reports*, 1, 175–180. <https://doi.org/10.1016/J.EGYR.2015.09.001>

- Chang, K.-T. (2017). Geographic Information System. *International Encyclopedia of Geography: People, the Earth, Environment and Technology*, 1–9. <https://doi.org/10.1002/9781118786352.WBIEG0152>
- Chen, J., Ding, T., Li, M., & Wang, H. (2020). Multi-objective optimization of a regional water–energy–food system considering environmental constraints: A case study of inner Mongolia, China. *International Journal of Environmental Research and Public Health*, 17(18), 1–22. <https://doi.org/10.3390/ijerph17186834>
- Chu, T. L., & Chu, S. S. (1993). Recent progress in thin-film cadmium telluride solar cells. *Progress in Photovoltaics: Research and Applications*, 1(1), 31–42. <https://doi.org/10.1002/PIP.4670010105>
- Daher, B. T., & Mohtar, R. H. (2015). Water–energy–food (WEF) Nexus Tool 2.0: guiding integrative resource planning and decision-making. *Https://Doi.Org/10.1080/02508060.2015.1074148*, 40(5–6), 748–771. <https://doi.org/10.1080/02508060.2015.1074148>
- Dargin, J., Daher, B., & Mohtar, R. H. (2019). Complexity versus simplicity in water energy food nexus (WEF) assessment tools. *Science of the Total Environment*, 650, 1566–1575. <https://doi.org/10.1016/j.scitotenv.2018.09.080>
- De Bruijn, S. L., & Bork, E. W. (2006). Biological control of Canada thistle in temperate pastures using high density rotational cattle grazing. *Biological Control*, 36(3), 305–315. <https://doi.org/10.1016/J.BIOCONTROL.2005.10.007>
- Dian, & Arik. (2022, February 8). *UGM dan BI Luncurkan Program Serikat Surya Handayani (SSH)*. Radio Edukasi. <https://radioedukasi.kemdikbud.go.id/read/3246/ugm-dan-bi-luncurkan-program-serikat-surya-handayani-ssh.html>
- Diantari, R. A., & Pujotomo, I. (2017). Calculation of electrical energy with solar power plant design. *Proceeding - 2016 International Seminar on Intelligent Technology and Its Application, ISITIA 2016: Recent Trends in Intelligent Computational Technologies for Sustainable Energy*, 443–446. <https://doi.org/10.1109/ISITIA.2016.7828701>
- Dincer, I., & Bicer, Y. (2018). 3.17 Photonic Energy Production. *Comprehensive Energy Systems*, 3–5, 707–754. <https://doi.org/10.1016/B978-0-12-809597-3.00336-9>
- Dinesh, H., & Pearce, J. M. (2016). The potential of agrivoltaic systems. *Renewable and Sustainable Energy Reviews*, 54, 299–308. <https://doi.org/10.1016/J.RSER.2015.10.024>
- Ebaid, M. S. Y., Qandil, H., & Hammad, M. (2013). A unified approach for designing a photovoltaic solar system for the underground water pumping well-34 at Disi aquifer. *Energy Conversion and Management*, 75, 780–795. <https://doi.org/10.1016/J.ENCONMAN.2013.07.083>
- eia.gov. (n.d.). *Where solar is found - U.S. Energy Information Administration (EIA)*. Retrieved January 8, 2023, from <https://www.eia.gov/energyexplained/solar/where-solar-is-found.php>

energymonitor.ai. (n.d.). *Agrivoltaic farming: can it solve the food and energy crisis?* Retrieved January 19, 2023, from <https://www.energymonitor.ai/tech/renewables/food-vs-energy-can-agrivoltaic-farming-solve-both-crises/>

Frate, C. A., & Brannstrom, C. (2017). Stakeholder subjectivities regarding barriers and drivers to the introduction of utility-scale solar photovoltaic power in Brazil. *Energy Policy*, 111, 346–352. <https://doi.org/10.1016/J.ENPOL.2017.09.048>

gaia-mbh.de. (n.d.). *GAIA mbH - renewable energy - GAIA mbH*. Retrieved January 20, 2023, from <https://www.gaia-mbh.de/en/>

Goetzberger, A., & Zastrow, A. (1982). On the Coexistence of Solar-Energy Conversion and Plant Cultivation. *International Journal of Solar Energy*, 1(1), 55–69. <https://doi.org/10.1080/01425918208909875>

Gorjian, S., Bousi, E., Özdemir, Ö. E., Trommsdorff, M., Kumar, N. M., Anand, A., Kant, K., & Chopra, S. S. (2022). Progress and challenges of crop production and electricity generation in agrivoltaic systems using semi-transparent photovoltaic technology. *Renewable and Sustainable Energy Reviews*, 158, 112126. <https://doi.org/10.1016/J.RSER.2022.112126>

Green, M. A. (2002). Photovoltaic principles. *Physica E: Low-Dimensional Systems and Nanostructures*, 14(1–2), 11–17. [https://doi.org/10.1016/S1386-9477\(02\)00354-5](https://doi.org/10.1016/S1386-9477(02)00354-5)

Guangul, F. M., & Chala, G. T. (2019). Solar energy as renewable energy source: SWOT analysis. *2019 4th MEC International Conference on Big Data and Smart City, ICBDS 2019*. <https://doi.org/10.1109/ICBDSC.2019.8645580>

Guerin, T. (2017). A case study identifying and mitigating the environmental and community impacts from construction of a utility-scale solar photovoltaic power plant in eastern Australia. *Solar Energy*, 146, 94–104. <https://doi.org/10.1016/J.SOLENER.2017.02.020>

Guerin, T. F. (2019). Impacts and opportunities from large-scale solar photovoltaic (PV) electricity generation on agricultural production. *Environmental Quality Management*, 28(4), 7–14. <https://doi.org/10.1002/TQEM.21629>

Günen, M. A. (2021). A comprehensive framework based on GIS-AHP for the installation of solar PV farms in Kahramanmaraş, Turkey. *Renewable Energy*, 178, 212–225. <https://doi.org/10.1016/j.renene.2021.06.078>

Halder, B., Banik, P., Almohamad, H., Al Dughairi, A. A., Al-Mutiry, M., Al Shahrani, H. F., & Abdo, H. G. (2022). Land Suitability Investigation for Solar Power Plant Using GIS, AHP and Multi-Criteria Decision Approach: A Case of Megacity Kolkata, West Bengal, India. *Sustainability (Switzerland)*, 14(18). <https://doi.org/10.3390/su141811276>

Handler, R., & Pearce, J. M. (2022). Greener sheep: Life cycle analysis of integrated sheep agrivoltaic systems. *Cleaner Energy Systems*, 3, 100036. <https://doi.org/10.1016/J.CLES.2022.100036>

- Hassanien, R. H. E., Li, M., & Dong Lin, W. (2016). Advanced applications of solar energy in agricultural greenhouses. *Renewable and Sustainable Energy Reviews*, 54, 989–1001. <https://doi.org/10.1016/J.RSER.2015.10.095>
- Hermann, S., Howells, M., Welsch, M., Rogner, H. H., Steduto, P., Gielen, D., Roehrl, A., & Bazilian, M. (2011). *Sustainable Energy for All - What does it mean for Water and Food Security : Seeking sustainable development CLEWS: Climate-change, Land-use, Energy and Water (CLEW) Strategies*. <http://urn.kb.se/resolve?urn=urn:nbn:se:kth:diva-89156>
- Hishikawa, Y., Doi, T., Higa, M., Yamagoe, K., Ohshima, H., Takenouchi, T., & Yoshita, M. (2018). Voltage-dependent temperature coefficient of the I-V curves of crystalline silicon photovoltaic modules. *IEEE Journal of Photovoltaics*, 8(1), 48–53. <https://doi.org/10.1109/JPHOTOV.2017.2766529>
- Howells, M., Hermann, S., Welsch, M., Bazilian, M., Segerström, R., Alfstad, T., Gielen, D., Rogner, H., Fischer, G., Van Velthuizen, H., Wiberg, D., Young, C., Alexander Roehrl, R., Mueller, A., Steduto, P., & Ramma, I. (2013). Integrated analysis of climate change, land-use, energy and water strategies. In *Nature Climate Change* (Vol. 3, Issue 7, pp. 621–626). <https://doi.org/10.1038/nclimate1789>
- IAEA. (2020). *Integrated Assessment of Climate, Land, Energy and Water*. [https://www-pub.iaea.org/MTCD/publications/PDF/PUB1910\\_web.pdf](https://www-pub.iaea.org/MTCD/publications/PDF/PUB1910_web.pdf)
- IEA. (2022). *Enhancing Indonesia's Power System Pathways to meet the renewables targets in 2025 and beyond*. [www.iea.org/t&c/](http://www.iea.org/t&c/)
- IESR. (2021). *Beyond 207 Gigawatts: Unleashing Indonesia's Solar Potential*. <https://iesr.or.id/pustaka/beyond-207-gigawatts-unleashing-indonesias-solar-potential>
- IESR. (2022). *Imprint Indonesia Energy Transition Outlook 2023 Tracking Progress of Energy Transition in Indonesia: Pursuing Energy Security in the Time of Transition*.
- IRENA. (n.d.-a). *Global Trends*. Retrieved January 10, 2023, from <https://www.irena.org/Data/View-data-by-topic/Costs/Global-Trends>
- IRENA. (n.d.-b). *Regional Trends*. Retrieved January 10, 2023, from <https://www.irena.org/Data/View-data-by-topic/Capacity-and-Generation/Regional-Trends>
- IRENA. (n.d.-c). *Solar costs*. Retrieved January 9, 2023, from <https://www.irena.org/Data/View-data-by-topic/Costs/Solar-costs>
- IRENA. (n.d.-d). *Statistics Time Series*. Retrieved January 9, 2023, from <https://www.irena.org/Data/View-data-by-topic/Capacity-and-Generation/Statistics-Time-Series>
- Islam, M. F., Yatim, N. M., & Hashim@Ismail, M. A. (2021). A Review of CZTS Thin Film Solar Cell Technology. *Journal of Advanced Research in Fluid Mechanics and Thermal Sciences*, 81(1), 73–87. <https://doi.org/10.37934/ARFMTS.81.1.7387>



- Jain, P., Raina, G., Sinha, S., Malik, P., & Mathur, S. (2021). Agrovoltatics: Step towards sustainable energy-food combination. *Bioresource Technology Reports*, 15, 100766. <https://doi.org/10.1016/J.BITEB.2021.100766>
- Jogja Dataku. (n.d.). *Data Vertikal BPS*. Retrieved October 5, 2023, from [https://bappeda.jogjapro.go.id/dataku/data\\_dasar/index/701-penduduk](https://bappeda.jogjapro.go.id/dataku/data_dasar/index/701-penduduk)
- Perda Kab. Gunungkidul No. 6 Tahun 2011, (2011). <https://yogyakarta.bpk.go.id/perda-kabupaten-gunungkidul-no-6-tahun-2011-tentang-rencana-tata-ruang-wilayah-kabupaten-gunungkidul-tahun-2010-2030/>
- Kaddoura, S., & El Khatib, S. (2017). Review of water-energy-food Nexus tools to improve the Nexus modelling approach for integrated policy making. *Environmental Science and Policy*, 77, 114–121. <https://doi.org/10.1016/j.envsci.2017.07.007>
- Kemen ESDM. (2021). *Kementerian ESDM RI - Publikasi - Infografis*. <https://www.esdm.go.id/id/publikasi/infografis?Filter%5Btitle%5D=>
- Khemiri, W., Yaagoubi, R., & Miky, Y. (2018). Optimal placement of solar photovoltaic farms using analytical hierarchical process and geographic information system in Mekkah, Saudi Arabia. *AIP Conference Proceedings*, 2056. <https://doi.org/10.1063/1.5084998>
- Konadu, D. D., Mourão, Z. S., Allwood, J. M., Richards, K. S., Kopec, G., McMahon, R., & Fenner, R. (2015). Land use implications of future energy system trajectories—The case of the UK 2050 Carbon Plan. *Energy Policy*, 86, 328–337. <https://doi.org/10.1016/J.ENPOL.2015.07.008>
- Kraucunas, I., Clarke, L., Dirks, J., Hathaway, J., Hejazi, M., Hibbard, K., Huang, M., Jin, C., Kintner-Meyer, M., van Dam, K. K., Leung, R., Li, H. Y., Moss, R., Peterson, M., Rice, J., Scott, M., Thomson, A., Voisin, N., & West, T. (2015). Investigating the nexus of climate, energy, water, and land at decision-relevant scales: the Platform for Regional Integrated Modeling and Analysis (PRIMA). *Climatic Change*, 129(3–4), 573–588. <https://doi.org/10.1007/S10584-014-1064-9/FIGURES/4>
- Maia, A. S. C., Culhari, E. de A., Fonsêca, V. de F. C., Milan, H. F. M., & Gebremedhin, K. G. (2020). Photovoltaic panels as shading resources for livestock. *Journal of Cleaner Production*, 258, 120551. <https://doi.org/10.1016/J.JCLEPRO.2020.120551>
- Mamun, M. A. Al, Dargusch, P., Wadley, D., Zulkarnain, N. A., & Aziz, A. A. (2022). A review of research on agrivoltaic systems. *Renewable and Sustainable Energy Reviews*, 161, 112351. <https://doi.org/10.1016/J.RSER.2022.112351>
- Mansouri, N., Lashab, A., Sera, D., Guerrero, J. M., & Cherif, A. (2019). Large Photovoltaic Power Plants Integration: A Review of Challenges and Solutions. *Energies* 2019, Vol. 12, Page 3798, 12(19), 3798. <https://doi.org/10.3390/EN12193798>

- Marrou, H., Dufour, L., & Wery, J. (2013). How does a shelter of solar panels influence water flows in a soil–crop system? *European Journal of Agronomy*, 50, 38–51. <https://doi.org/10.1016/J.EJA.2013.05.004>
- Metsolar. (n.d.). *What is agrivoltaics? How can solar energy and agriculture work together?* Retrieved January 18, 2023, from <https://metsolar.eu/blog/what-is-agrivoltaics-how-can-solar-energy-and-agriculture-work-together/#!>
- Noorollahi, E., Fadaei, D., Shirazi, M. A., & Ghodsipour, S. H. (2016). Land suitability analysis for solar farms exploitation using GIS and fuzzy analytic hierarchy process (FAHP) - A case study of Iran. *Energies*, 9(8), 1–24. <https://doi.org/10.3390/en9080643>
- Noorollahi, Y., Ghenaatpisheh Senani, A., Fadaei, A., Simaee, M., & Moltames, R. (2022). A framework for GIS-based site selection and technical potential evaluation of PV solar farm using Fuzzy-Boolean logic and AHP multi-criteria decision-making approach. *Renewable Energy*, 186, 89–104. <https://doi.org/10.1016/j.renene.2021.12.124>
- Novitasari, D., Sarjiya, & Budiarto, R. (2020). Integration Challenges of Climate-Energy-Water-Food Nexus in Indonesia's Power Generation Sector. *Proceeding - 1st FORTEI-International Conference on Electrical Engineering, FORTEI-ICEE 2020*, 35–40. <https://doi.org/10.1109/FORTEI-ICEE50915.2020.9249906>
- Novitasari, D., Sarjiya, Hadi, S. P., & Budiarto, R. (2021). Generation Expansion Planning by Considering Climate-Land Use-Energy-Water (CLEW) Nexus. *ICT-PEP 2021 - International Conference on Technology and Policy in Energy and Electric Power: Emerging Energy Sustainability, Smart Grid, and Microgrid Technologies for Future Power System, Proceedings*, 424–429. <https://doi.org/10.1109/ICT-PEP53949.2021.9600910>
- Pascaris, A. S., Schelly, C., & Pearce, J. M. (2020). A First Investigation of Agriculture Sector Perspectives on the Opportunities and Barriers for Agrivoltaics. *Agronomy 2020*, Vol. 10, Page 1885, 10(12), 1885. <https://doi.org/10.3390/AGRONOMY10121885>
- Peraturan Presiden No. 22 tahun 2017 Tentang Rencana Umum Energi Nasional, (2017).
- RUPTL 2021-2030, Pub. L. No. No. 188.K/HK.02/MEM.L/2021, Rencana Usaha Penyediaan Tenaga Listrik 2021-2030 2019 (2021). [https://gatrik.esdm.go.id/assets/uploads/download\\_index/files/38622-ruptl-pln-2021-2030.pdf](https://gatrik.esdm.go.id/assets/uploads/download_index/files/38622-ruptl-pln-2021-2030.pdf)
- Portal Gunungkidul. (n.d.). *Profil Gunungkidul*. Retrieved December 18, 2022, from <https://gunungkidulkab.go.id/D-74db63a914e6fb0f4445120c6fa44e6a-NR-100-0.html>
- prozparity.com. (n.d.). *A Market Review on Concentrated Solar Power (CSP)*. Retrieved January 8, 2023, from <https://prozparity.com/news-media/a-market-review-on-concentrated-solar-power-csp/>

- pv-magazine.com. (n.d.). *Austrian agrivoltaic project includes sheep farming – pv magazine International*. Retrieved January 19, 2023, from <https://www.pv-magazine.com/2020/10/07/austrian-agrivoltaic-project-includes-sheep-farming/>
- pv-magazine-india.com. (n.d.). *Jodhpur agrivoltaic pilot project replicated – pv magazine India*. Retrieved January 19, 2023, from <https://www.pv-magazine-india.com/2019/09/30/jodhpur-agrivoltaic-pilot-project-replicated/>
- qgis.org. (n.d.). *Welcome to the QGIS project!* Retrieved January 20, 2023, from <https://www.qgis.org/en/site/>
- Rech, B., & Wagner, H. (1999). Potential of amorphous silicon for solar cells. *Applied Physics A: Materials Science and Processing*, 69(2), 155–167. <https://doi.org/10.1007/S003390050986>
- Roy, S., Baruah, M. S., Sahu, S., & Nayak, B. B. (2021). Computational analysis on the thermal and mechanical properties of thin film solar cells. *Materials Today: Proceedings*, 44, 1207–1213. <https://doi.org/10.1016/J.MATPR.2020.11.241>
- RPJMD Kab. Gunungkidul 2021-2026.
- Ruiz, H. S., Sunarso, A., Ibrahim-Bathis, K., Murti, S. A., & Budiarto, I. (2020). GIS-AHP Multi Criteria Decision Analysis for the optimal location of solar energy plants at Indonesia. *Energy Reports*, 6, 3249–3263. <https://doi.org/10.1016/j.egyr.2020.11.198>
- Russo, R. D. F. S. M., & Camanho, R. (2015). Criteria in AHP: A Systematic Review of Literature. *Procedia Computer Science*, 55, 1123–1132. <https://doi.org/10.1016/J.PROCS.2015.07.081>
- Saaty, T. L. (2008). Decision making with the analytic hierarchy process. In *Int. J. Services Sciences* (Vol. 1, Issue 1).
- Saaty, T. L., & Tran, L. T. (2007). On the invalidity of fuzzifying numerical judgments in the Analytic Hierarchy Process. *Mathematical and Computer Modelling*, 46(7–8), 962–975. <https://doi.org/10.1016/J.MCM.2007.03.022>
- Salkuti, R., Chalgynbayeva, A., Gabnai, Z., Lengyel, P., Pestisha, A., & Bai, A. (2023). Worldwide Research Trends in Agrivoltaic Systems—A Bibliometric Review. *Energies* 2023, Vol. 16, Page 611, 16(2), 611. <https://doi.org/10.3390/EN16020611>
- Santra, P., Pande, P. C., Kumar, S., Mishra, D., & Singh, R. K. (2017). Agri-voltaics or solar farming: The concept of integrating solar PV based electricity generation and crop production in a single land use system. *International Journal of Renewable Energy Research*, 7(2), 694–699. <https://doi.org/10.20508/IJRER.V7I2.5582.G7049>
- Schindele, S., Trommsdorff, M., Schlaak, A., Obergfell, T., Bopp, G., Reise, C., Braun, C., Weselek, A., Bauerle, A., Högy, P., Goetzberger, A., & Weber, E. (2020). Implementation of agrophotovoltaics: Techno-economic analysis of the price-performance ratio and its policy implications. *Applied Energy*, 265, 114737. <https://doi.org/10.1016/J.APENERGY.2020.114737>



- Serrano, D., Margalida, A., Pérez-García, J. M., Juste, J., Traba, J., Valera, F., Carrete, M., Aihartza, J., Real, J., Mañosa, S., Flaquer, C., Garin, I., Morales, M. B., Alcalde, J. T., Arroyo, B., Sánchez-Zapata, J. A., Blanco, G., Negro, J. J., Tella, J. L., ... Donázar, J. A. (2020). Renewables in Spain threaten biodiversity. *Science*, 370(6522), 1182–1183. <https://doi.org/10.1126/SCIENCE.ABF6509/ASSET/B6BC07B7-2440-4EA9-9199-8890303C8562/ASSETS/SCIENCE.ABF6509.FP.PNG>
- Setiawan, A. A., Purwanto, D. H., Pamuji, D. S., & Huda, N. (2014). Development of a Solar Water Pumping System in Karsts Rural Area Tepus, Gunungkidul through Student Community Services. *Energy Procedia*, 47, 7–14. <https://doi.org/10.1016/J.EGYPRO.2014.01.190>
- Setiawan, A. A., Ramadhan, S. A., Wahyuni, N. S., Hidayah, A. N., Arifin, M. L. N. R., & Suyatna, H. (2015). Economic Analysis Comparison between Solar Photovoltaic and Diesel Generator for Water Pumping System in an Indonesia Rural Karsts Area. *KnE Energy*, 2(2), 8–15. <https://doi.org/10.18502/KEN.V2I2.351>
- Settou, B., Settou, N., Gouareh, A., Negrou, B., Mokhtara, C., & Messaoudi, D. (2021). A high-resolution geographic information system-analytical hierarchy process-based method for solar PV power plant site selection: a case study Algeria. *Clean Technologies and Environmental Policy*, 23(1), 219–234. <https://doi.org/10.1007/s10098-020-01971-3>
- Solar Reviews. (2021). *What are thin film solar panels, how do they work and why aren't they used for residential solar systems?* . <https://www.solarreviews.com/blog/thin-film-solar-panels>
- Solar Reviews. (2023). *Types of solar panels: which one is the best choice?* 18/01/2023 <https://www.solarreviews.com/blog/pros-and-cons-of-monocrystalline-vs-polycrystalline-solar-panels>
- Solargis.com*. (n.d.). Retrieved December 23, 2022, from <https://apps.solargis.com/prospect/map?s=-7.993038,110.557931&c=-7.993277,110.584554,10&m=solargis-ghi&l=true>
- superdecisions.com. (n.d.). *Super Decisions | About*. Retrieved December 30, 2022, from <https://superdecisions.com/about/>
- Tercan, E., Eymen, A., Urfalı, T., & Saracoglu, B. O. (2021). A sustainable framework for spatial planning of photovoltaic solar farms using GIS and multi-criteria assessment approach in Central Anatolia, Turkey. *Land Use Policy*, 102(January). <https://doi.org/10.1016/j.landusepol.2020.105272>
- theagilityeffect.com. (n.d.). *Agrivoltaics – a new place for renewable energies Agrivoltaics: where agriculture meets photovoltaics*. Retrieved January 19, 2023, from <https://www.theagilityeffect.com/en/article/agrivoltaics-a-new-place-for-renewable-energies/>
- theconversation.com. (n.d.). *Why solar energy can help Indonesia attain 100% green electricity by 2050*. Retrieved January 8, 2023, from

<https://theconversation.com/why-solar-energy-can-help-indonesia-attain-100-green-electricity-by-2050-134807>

- Tidwell, V. C., & Pebbles, V. (2015). The Water-Energy-Environment Nexus in the Great Lakes Region: The Case for Integrated Resource Planning. *Energy and Environment Research*, 5(2), 1. <https://doi.org/10.5539/eer.v5n2p1>
- Tiwari, G. N., Tiwari, A., & Shyam. (2016). *Handbook of Solar Energy*. <https://doi.org/10.1007/978-981-10-0807-8>
- Toledo, C., Scognamiglio, A., Toledo, C., & Scognamiglio, A. (2021). Agrivoltaic Systems Design and Assessment: A Critical Review, and a Descriptive Model towards a Sustainable Landscape Vision (Three-Dimensional Agrivoltaic Patterns). *Sustainability* 2021, Vol. 13, Page: 6871, 13(12), 6871. <https://doi.org/10.3390/SU13126871>
- Uyan, M. (2013). GIS-based solar farms site selection using analytic hierarchy process (AHP) in Karapinar region Konya/Turkey. *Renewable and Sustainable Energy Reviews*, 28, 11–17. <https://doi.org/10.1016/j.rser.2013.07.042>
- Vaidya, O. S., & Kumar, S. (2006). Analytic hierarchy process: An overview of applications. *European Journal of Operational Research*, 169(1), 1–29. <https://doi.org/10.1016/J.EJOR.2004.04.028>
- Vakili, S., Schönborn, A., & Ölçer, A. I. (2022). Techno-economic feasibility of photovoltaic, wind and hybrid electrification systems for stand-alone and grid-connected shipyard electrification in Italy. *Journal of Cleaner Production*, 366, 132945. <https://doi.org/10.1016/J.JCLEPRO.2022.132945>
- Valle, B., Simonneau, T., Sourd, F., Pechier, P., Hamard, P., Frisson, T., Ryckewaert, M., & Christophe, A. (2017). Increasing the total productivity of a land by combining mobile photovoltaic panels and food crops. *Applied Energy*, 206, 1495–1507. <https://doi.org/10.1016/J.APENERGY.2017.09.113>
- Vunnam, S., VanithaSri, M., & RamaKoteswaraRao, A. (2021). Performance analysis of mono crystalline, poly crystalline and thin film material based 6 × 6 T-C-T PV array under different partial shading situations. *Optik*, 248, 168055. <https://doi.org/10.1016/J.IJLEO.2021.168055>
- Wahyuni, N. S., Wulandari, S., Wulandari, E., & Pamuji, D. S. (2015). Integrated Communities for the Sustainability of Renewable Energy Application: Solar Water Pumping System in Banyumeneng Village, Indonesia. *Energy Procedia*, 79, 1027–1032. <https://doi.org/10.1016/J.EGYPRO.2015.11.604>
- Walston, L. J., Mishra, S. K., Hartmann, H. M., Hlohowskyj, I., McCall, J., & Macknick, J. (2018). Examining the Potential for Agricultural Benefits from Pollinator Habitat at Solar Facilities in the United States. *Environmental Science and Technology*, 52(13), 7566–7576. [https://doi.org/10.1021/ACS.EST.8B00020/ASSET/IMAGES/LARGE/ES-2018-00020Z\\_0006.JPEG](https://doi.org/10.1021/ACS.EST.8B00020/ASSET/IMAGES/LARGE/ES-2018-00020Z_0006.JPEG)

- Welsch, M., Deane, P., Howells, M., O Gallachóir, B., Rogan, F., Bazilian, M., & Rogner, H. H. (2014). Incorporating flexibility requirements into long-term energy system models – A case study on high levels of renewable electricity penetration in Ireland. *Applied Energy*, 135, 600–615. <https://doi.org/10.1016/J.APENERGY.2014.08.072>
- Weselek, A., Ehmann, A., Zikeli, S., Lewandowski, I., Schindele, S., & Högy, P. (2019). Agrophotovoltaic systems: applications, challenges, and opportunities. A review. *Agronomy for Sustainable Development*, 39(4), 1–20. <https://doi.org/10.1007/S13593-019-0581-3/TABLES/2>
- Wigati, S. S., Sopha, B. M., Sri Asih, A. M., & Sutanta, H. (2019). Bibliometric Analysis for Site Selection Problems Using Geographic Information Systems, Multi-Criteria Decision Analysis and Fuzzy Method. *Journal of Physics: Conference Series*, 1351(1). <https://doi.org/10.1088/1742-6596/1351/1/012051>
- Zadeh, L. A. (1988). Fuzzy Logic. *Computer*, 21(4), 83–93. <https://doi.org/10.1109/2.53>
- Zhang, X., & Vesselinov, V. V. (2017). Integrated modeling approach for optimal management of water, energy and food security nexus. *Advances in Water Resources*, 101, 1–10. <https://doi.org/10.1016/J.ADVWATRES.2016.12.017>
- Zoghi, M., Houshang Ehsani, A., Sadat, M., javad Amiri, M., & Karimi, S. (2017). Optimization solar site selection by fuzzy logic model and weighted linear combination method in arid and semi-arid region: A case study Isfahan-IRAN. *Renewable and Sustainable Energy Reviews*, 68, 986–996. <https://doi.org/10.1016/j.rser.2015.07.014>