

Nicholas Brozović

Director of Policy, Daugherty Water for Food Global Institute

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Education

- PhD, Agricultural and Resource Economics, University of California, Berkeley, 2002
- MS, Agricultural and Resource Economics, University of California, Berkeley, 2000
- MS, Geological Sciences, University of Southern California, 1996
- BA, Geology, University of Oxford, 1993

Professional Experience

- 2014-Present – Director of Policy, Daugherty Water for Food Global Institute at the University of Nebraska
- 2018-Present – Professor, Department of Agricultural Economics, University of Nebraska-Lincoln
- 2014-2018 – Associate Professor, Department of Agricultural Economics, University of Nebraska-Lincoln
- 2011-2014 – Associate Professor, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign
- 2003-2011 – Assistant Professor, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign
- 2002-2003 – Postdoctoral Researcher, Department of Agricultural and Resource Economics, University of California, Berkeley

Selected Outputs:

Publications and Multimedia

Journal articles, book chapters, reports

2024

- Balasubramanya, S., Garrick, D., **Brozović, N.**, Ringler, C., Zaveri, E., Rodella, A.-S., Buisson, M.-C., Schmitter, P., Durga, N., Kishore, A., Minh, T., Kafle, K., Stifel, D., Balasubramanya, S., Chandra, A., and Hope, L., 2024, “Risks from solar-powered groundwater irrigation.” *Science*, 383, 256-258, <https://doi.org/10.1126/science.adi9497>.
- Chandra, A., and **Brozović, N.**, 2024, “Shifting dynamics and environmental implications of the irrigation pump market in India.” *Frontiers in Environmental Science*, 12, 1398822, <https://www.frontiersin.org/journals/environmental-science/articles/10.3389/fenvs.2024.1398822/full>.
- Mieno, T., Foster, T., Kakimoto, S., and **Brozović, N.**, 2024. “Aquifer depletion exacerbates agricultural drought losses in the US High Plains.” *Nature Water* 2, 41–51, <https://doi.org/10.1038/s44221-023-00173-7>.

2023

- Akaliza, N., Bodnar, L., **Brozović, N.**, Mukarusagara, G., Turatsinze, F., and Urujeni, R., 2023. “Current state of irrigation-as-a-service for smallholder farmers in Rwanda.” Daugherty Water for Food Global Institute, https://waterforfood.nebraska.edu/-/media/projects/dwfi/our-work/researchpolicy/entrepreneurship/2023_02_07-irrigation-as-a-service-rwanda.pdf.
- Chandra, A., and **Brozović, N.**, 2023. “Entrepreneurial trends in the Indian agricultural water ecosystem.” Daugherty Water for Food Global Institute, 10p. <https://waterforfood.nebraska.edu/our-work/research-and-policy/entrepreneurship-sa/irrigation-agtech-1>.

- Chandra, A., and **Brozović, N.**, 2023. “Agtech startups and the business ecosystem for agricultural water use in India.” Daugherty Water for Food Global Institute, 12p. <https://waterforfood.nebraska.edu/our-work/research-and-policy/entrepreneurship-sa/irrigation-agtech-2>.
- Chandra, A., Heeren, D., Odhiambo, L., and **Brozović, N.**, 2023. “Water-energy-food linkages in community smallholder irrigation schemes: Center pivot irrigation in Rwanda.” *Agricultural Water Management*. 289, 108506. <https://doi.org/10.1016/j.agwat.2023.108506>.
- Garrick, D., Balasubramanya, S., Beresford, M., Wutich, A., Gilson, G.G., Jorgensen, I., **Brozović, N.**, Cox, M., Dai, X., Erfurth, S., Rimšaitė, R., Svensson, J., Jones, J.T., Unnikrishnan, H., Wight, C., Villamayor-Tomas, S., and Mendoza, K.V., 2023. “A systems perspective on water markets: barriers, bright spots, and building blocks for the next generation.” *Environmental Research Letters*, 18(3), <https://doi.org/10.1088/1748-9326/acb227>.
- Rimšaitė, R., and **Brozović, N.**, 2023. “Groundwater Transfers in Nebraska.” Daugherty Water for Food Global Institute, <https://waterforfood.nebraska.edu/-/media/projects/dwfi/resource-documents/reports-and-working-papers/groundwater-transfers-in-nebraska.pdf>, 30 p.
- Rimšaitė, R., and **Brozović, N.**, 2023. “Groundwater development paths in the U.S. High Plains.” *Oxford Encyclopedia of Water Resources Management and Planning*. Oxford University Press, <https://doi.org/10.1093/acrefore/9780199389414.013.832>.

2022

- Akaliza, N., Bodnar, L., **Brozović, N.**, Mukarusagara, G., Turatsinze, F., and Urujeni, R., 2022. “Mapping and analysis of the business ecosystem for smallholder irrigation in Rwanda.” Daugherty Water for Food Global Institute, 36 p., <https://waterforfood.nebraska.edu/-/media/projects/dwfi/resource-documents/reports-and-working-papers/mapping-and-analysis-of-the-business-ecosystem-for-smallholder-irrigation-in-rwanda.pdf>.
- Balasubramanya, S., **Brozović, N.**, Fishman, R. Lele, S., and Wang, J., 2022, “Managing irrigation under increasing water scarcity,” *Agricultural Economics*, 1574-0862; DOI: 10.1111/agec.12748.
- Rimšaitė, R., **Brozović, N.**, Munezero, S., and Hayes, F., September 2022. “Statewide groundwater management through local conservation districts” Case study 6: United States (Nebraska), World Wildlife Fund, Washington, DC, <https://www.worldwildlife.org/publications/sustainable-groundwater-management-for-agriculture>.
- Rouhi Rad, M., Mieno, T., and **Brozović, N.**, 2022, “The role of search frictions and trading ratios in tradable permit markets,” *Environmental and Resource Economics*, v.82(1), 101-132.

Briefs, infographics, blogs, newsletters

2024

- **Brozović, N.**, April 2024. “Gradually and then suddenly.” *Irrigation Today* feature article, <https://irrigationtoday.org/features/gradually-and-then-suddenly/>.

2023

- Barry, A., Keza, O., Williss, R., Rimšaitė, R., Jayasakera, H., **Brozović, N.**, 2023. “Private well water in Nebraska: Challenges and opportunities to reduce nitrate consumption and potential health complications.” Daugherty Water for Food Global Institute infographic, https://waterforfood.nebraska.edu/-/media/projects/dwfi/news/2023/reducing-nitrate-intake/2023-11-07_privatewellmanagersgraphic.pdf.
- **Brozović, N.**, and Rimšaitė, R., November 2023. “Sneak peek – groundwater policy research in progress.” Daugherty Water for Food Global Institute blog, <https://waterforfood.nebraska.edu/news-and-events/news/2023/11/sneak-peek---groundwater-policy-research-in-progress>.
- Urujeni, R., Akaliza, N., Mukarusagara, G., Bodnar, L., and **Brozović, N.**, 2023. “Agriworks Business Model Canvas.” Daugherty Water for Food Global Institute, <https://waterforfood.nebraska.edu/->

/media/projects/dwfi/our-work/researchpolicy/entrepreneurship/agriworks-business-model-canvas/2023_11_29-agriworks-bmc.pdf.

- Williss, R., Rimšaitė, R., Melkani, A., and **Brozović, N.**, 2023. “Agricultural Water Use.” Infographic series, Daugherty Water for Food Global Institute, <https://waterforfood.nebraska.edu/our-work/research-and-policy/agricultural-water-use>.

2022

- **Brozović, N.**, May 2022. “(Re)Thinking About Farmer-Led Irrigation.” Agrilinks blog, <https://agrilinks.org/post/rethinking-about-farmer-led-irrigation>.
- Rimšaitė, R., and **Brozović, N.**, September 2022. “Agricultural Groundwater Transfers in Nebraska: Decision Process for Buyers & Sellers.” Daugherty Water for Food Global Institute, <https://waterforfood.nebraska.edu/-/media/projects/dwfi/resource-documents/institute-resources/agricultural-groundwater-transfers-in-nebraska.pdf>.
- Rimsaite, R., Munezero, S., and **Brozović, N.**, 2021-2022. “Transferring groundwater in the High Plains.” Infographic series, Daugherty Water for Food Global Institute, <https://waterforfood.nebraska.edu/our-work/research-and-policy/transferring-groundwater-in-the-high-plains>.

Videos and podcasts

2024

- Featured researcher (with R. Ritzema and T. Gurung), “The Melting Cryosphere and Food & Water Security.” Daugherty Water for Food Podcast (A. Elnes host), January 2024, <https://dwffpodcast.libsyn.com/32-the-melting-cryosphere-and-food-water-security>.

2023

- Featured researcher (with A. Chandra), “Managing Water.” Agribusiness Matters podcast (V. Ramachandran host), May 2023, <https://www.agribizmatters.com/p/managing-water-nicholas-brozovic>.

Selected Presentations and Engagements

2024

- Panelist, “We the People as Water Stewards,” Missouri State University Public Affairs Conference, 25 September 2024, virtual.
- Panelist, “Water Use and Agriculture: Trends and Long-Term Focus,” Farmland Capital Alliance Member Meeting, 11 September 2024, Mead, Nebraska.
- Speaker, Nuffield Scholars program, “Water and Food Security in a Changing World”, 22 August 2024, Lincoln, Nebraska.
- Organizer (with A. Chandra), The/Nudge Institute workshop, “Growth Strategies & Impact Narratives for AgWater Tech,” 8 June 2024, Bangalore, India.
- Speaker and session moderator, “Groundwater Governance and Policy,” Session T1C4 (Effective governance approaches for agricultural water management), 10th World Water Forum, 23 May 2024, Bali, Indonesia.
- Session organizer & speaker (with R. Rimšaitė), “Agricultural water use, hydrology, and policy trends: Challenges and insights for action.” Nature Hub, 10th World Water Forum, 20 May 2024, Bali, Indonesia.
- Speaker, Nebraska & Czechia Irrigation Roundtable: Sharing Experience and Best Practices, organized by the Consulate General of the Czech Republic in Chicago, the Ministry of Agriculture of the Czech Republic, and the Nebraska Department of Economic Development, “Irrigation Policy,” 29 February 2024, virtual.

- Keynote speaker, 2024 Sustainable Operations Management Workshop, “Sustainable operations management and global food and water security,” 23 February 2024, Lincoln, Nebraska.

2023

- Organizer (with A. Chandra), The/Nudge Institute virtual workshop, “Water Accounting in Agriculture,” 15 December 2023, Lincoln, Nebraska.
- Speaker, 11th Rosenberg International Forum on Water Policy, “Irrigation-as-a-service for smallholder farmers,” 27 October 2023, Cape Town, South Africa.
- Speaker, Lindsay Corporation/IrrigationNZ, “Groundwater governance in Nebraska,” 11 September 2023, Lincoln, Nebraska.
- Panelist, Stockholm 2023 World Water Week, “Multi-stakeholder Collaboration in Agricultural Water Management: Solutions/Advance SDGs,” 22 August 2023, Stockholm, Sweden.
- Panelist, USAID Innovation Lab For Small Scale Irrigation Symposium, “Looking forward – Building a resilient future: Issues in farmer-centered, smallholder irrigation,” 1 March 2023, Washington, DC.
- Speaker, APEC Policy Partnership for Food Security Senior Officials’ Meeting, “A Three-Tiered Approach to Increasing Sustainable Water and Food Security in the APEC Region: Best Practices for On-Farm Investments in Agricultural Water Efficiency.” 16 February 2023, Palm Springs, California.

2022

- Panelist, AgTech NEXT conference, “Trade: Pursuing Equity and Efficiency.” 12 October 2022, Donald Danforth Plant Science Center, St. Louis, Missouri.
- Guest speaker, BKT Global Trends, “Episode 5: Water Use.” 15 March 2022. Produced by 20ACTION Entertainment, Milan, Italy. <https://www.bkt-network.com/water-use>.

Selected External Support:

- USAID Feed the Future Innovation Lab for Small-Scale Irrigation and Mechanization: Supplement, N. Lefore (lead), J. Cobbing, N. Brozović, C. Neale, and P. McCornick. *US Agency for International Development*, \$999,820, 2024-2025.
- USAID Feed the Future Innovation Lab for Small-Scale Irrigation and Mechanization, N. Lefore (lead), J. Cobbing, N. Brozović, C. Neale, and P. McCornick. *US Agency for International Development*, \$19,000,000, 2023-2028.
- Promoting Sustainability and Resilience of Smallholder Irrigation Impacts in Sub-Saharan Africa, N. Brozović, *International Fund for Agricultural Development*, \$1,000,000, 2020-2024.

Selected Professional Development, Awards, Media Coverage:

Professional Development, Mentoring, Board Engagement

- US Farmers and Ranchers in Action Science Advisory Council, Member, 2024.
- Honor the Harvest Forum Advisory Council, Member, 2024.
- The/Nudge Institute and DCM Shriram AgWater Challenge, Program mentor, 2023-2024.
- Big Ten Academic Alliance Academic Leadership Program, Fellow for the University of Nebraska-Lincoln, 2023-2024.
- Wells Fargo Innovation Incubator (IN²) External Advisory Board (Food, Energy, Water Nexus), Member, 2018-present.

Media Coverage

- “The High Plains Aquifer Is Approaching a Point of No Return,” *Ambrook Research*, 8 March 2024, <https://ambrook.com/research/sustainability/high-plains-aquifer-ogallala-kansas-irrigation>.

- “Studies offer insights into future water challenges, potential solutions in Nebraska,” *Irrigation Today*, 22 January 2024, <https://irrigationtoday.org/news/studies-offer-insights-into-future-water-challenges-potential-solutions-in-nebraska/>
- “A new look at an old aquifer debate,” *High Plains Journal*, 19 January 2024, <https://hpi.com/2024/01/19/a-new-look-at-an-old-aquifer-debate/>.
- “Crop Yields at Risk in Kansas, Nebraska and Texas, Scientists Warn,” *Newsweek*, 15 January 2024, <https://www.newsweek.com/crop-yields-risk-kansas-nebraska-texas-scientist-1860750>.
- “What if farmers were taxed on water? In California, some are,” *The New York Times*, 4 January 2024, <https://static01.nyt.com/images/2024/01/04/nytfpage/scan.pdf>.