

## **Leif V. Brottem, Ph.D.**

Associate Professor of Global Development Studies | Grinnell College [USA]

Faculty Associate | University of Wisconsin-Madison

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*Twenty years of professional experience in human security, conflict, and development with a focus on research and analysis in West and Central Africa. Current activities engage with local dynamics in conflict-affected communities in Mali, Benin, Chad, and the Democratic Republic of Congo. Background includes over 3 years of field research and grassroots work in agrarian communities and over five years of professional experience in U.S.-based organizations. Language skills include fluency in French and proficiency in the Bambara language (Mali). Data skills include Tableau, R, ArcGIS Pro, IDRISI, ENVI, ERDAS, GeoDa, data management, remote sensing, and advanced spatial analysis.*

### **Education**

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Ph.D., Geography, June 2013, University of Wisconsin-Madison, Madison, WI

- Dissertation: “The place of the Fula: Intersections of political and environmental change in western Mali,” advisor: Matthew D. Turner

M.S., Environment and Resources, January 2008, Gaylord Nelson Institute for Environmental Studies, University of Wisconsin-Madison, Madison, WI

B.A., Political Science, Concentration: Environmental Policy, Cum Laude, June 1998, Carleton College, Northfield MN

### **Professional Experience**

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Expert adviser (consultancy), United Nations Development Programme (UNDP)  
February 2023-present

- Providing the Office of the UNDP Deputy Secretary General with expert input for policy recommendations on violent farmer-herder conflict in sub-Saharan Africa.

Technical Consultant on Climate Change, Social Cohesion, and Extremist Violence, World Bank  
April 2022-present

- Contributing ongoing technical expertise and program design input for Gulf of Guinea Northern Regions Social Cohesion Project in Benin, Togo, Ghana, and Ivory Coast.

Technical Consultant on Conservation, Security and Pastoralism in Central Africa, Tetra Tech International  
March 2023-July 2023

- Produced a high-level analysis and research synthesis on pastoral livestock-related threats to wildlife and conservation in Central Africa for the USAID Forest and Biodiversity Support Activity (FABS). Assisted FABS team in policy dialogue with implementing partners and national governments.

Research Lead, University of Wisconsin-Madison Reimagining Land, Conflict, and Identity in Nigeria Project  
October 2021-June 2022

- Coordinated fieldwork activities with Nigerian partners in Adamawa State to strengthen local conflict resolution mechanisms through the development of a mobile geospatial toolkit. Funding provided by the U.S. Embassy in Nigeria.

Technical Consultant on Climate Change-Human Rights, Amnesty International  
June 2021-November 2021

- Designed surveys, carried out data collection, and authored expert report on climate change-local governance-human rights linkages in West Africa.

Technical Consultant on Climate Change-Extremist Violence, World Bank Group  
July 2021-September 2021

- Designed surveys, carried out data collection, and authored expert report on extremist violence in Mali for program on climate change-violent conflict dynamics.

Lead Researcher on Local Conflict Mediation Dynamics, Search for Common Ground  
October 2019-June 2021

- Managed and executed a comprehensive literature review of farmer-herder conflict in West and Central Africa and produced content modules for U.S. State Department project to establish a region-wide conflict mediation toolkit.

Lead Research Consultant on Forest Access and Local Grievances, Fina [Mali] Forest Project  
April 2021-July 2021

- Designed surveys, managed data collection, and authored report analyzing resource use and security risks in the Boucle de Baoule Biosphere Reserve [Kayes, Mali].

Technical Consultant on Pastoralism, Mining, and Armed Conflict, Tetra Tech International Development Services  
November 2019-April 2020

- Contributing expert input to pilot research design and field data collection for phase two of the USAID-funded Artisanal Mining and Property Rights Project in the Central African Republic.

Contributing Analyst on Farmer-Herder Violence in Africa, African Center for Security Studies  
April 2021-July 2022

Associate Professor of Global Development Studies, Grinnell College  
August 2020-Present

- Program Chair of Global Development Studies, advisory board member of Institute for Global Engagement, course instruction.

Assistant Professor of Global Development Studies, Grinnell College  
January 2014-August 2020

- Responsible for instruction of five course per academic year, student advising, program management, faculty governance, and scholarly research activities.

Technical Consultant on Pastoralism and Land Governance, Tetra Tech International Development Services.  
October 2019-June 2020

- Provided regional and thematic expertise to knowledge product services and data collection tools for USAID-funded Integrated Land and Resource Governance (ILRG) Project.

Technical Consultant on Human Security and Rural Livelihoods, World Bank Independent Evaluation Group  
June 2019-September 2019

- Provided technical expertise to comprehensive assessment of Community Action Program (CAP) in the Republic of Niger.

Technical Consultant on Human Security and Rural Livelihoods, World Bank Independent Evaluation Group  
July 2017-June 2018

- Providing technical expertise to comprehensive assessment of Mali Rural Community Development Project (PACR) and Central African Republic Agriculture Recovery Project (PURCARA).

Guest Researcher, University of Paris-Descartes  
January 2018-July 2018

- Served as active member of the Population and Development Center (CEPED).

Technical advisor (voluntary), Rights and Resources Initiative  
March 2016-June 2016

- Contributed expert feedback for comprehensive assessment of national laws and women's forest resource rights.

Technical Consultant on Rural Livelihoods and Resource Governance, Tetra Tech International Development Services.  
September 2012-April 2014

- Designed field research methodology, provided technical support, and co-authored USAID climate change vulnerability assessment for Senegal, West Africa.

Technical Consultant on Human Security and Rural Livelihoods, World Bank Independent Evaluation Group  
September 2012-December 2012

- Contributed research and writing for West African portion of the comprehensive review of World Bank-financed forestry sector projects from 2001 to 2011.

Technical advisor (unpaid), Landesa  
January 2010-August 2010

- Provided expert input for various components of the Focus on Land in Africa Project.

Research Associate on Protected Areas and Rural Livelihoods, Conservation International  
October 2006-November 2007

- Developed an innovative methodology to measure the relative impacts of institutional reforms on forest management policy in Liberia. Project resulted in a peer-reviewed journal article.

Research Associate, Ecoagriculture Partners  
June 2006-August 2007

- Documented examples of sustainable agriculture in dryland West Africa. Participated in strategic development of a West Africa-based research program.

Natural Resource Conservation Agent, Peace Corps (Bénin, West Africa)  
September 2002-November 2004

- Designed and implemented a community-based agroforestry program. Responsibilities included: fundraising, budgetary management, and provision of technical support to 100+ participating farmers.

Globalization and Governance Program Officer, Nautilus Institute for Security and Sustainability  
September 2000-June 2002

- Researched and co-authored publications: *What Road Ahead? Scenarios for U.S.-China Relations* and *Beyond Good Deeds: Case Studies and a New Policy Agenda for Corporate Accountability*.

Natural Resource Policy Assistant, Office of the Governor of Alaska  
January 1999-September 1999, June 2000-September 2000

- Administered, coordinated, and monitored policy on issues ranging from forest and fisheries management to toxic waste cleanup.

## Select Technical Reports and Policy Briefs

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Pastoral livestock and biodiversity conservation in Central African forest landscapes: opportunities and obstacles to improved outcomes (2023), USAID Central Africa Forest and Biodiversity Support Activity (FABS)

Protected Areas and Pastoralists in West and Central Africa: Challenges and Opportunities in the 21<sup>st</sup> Century (2023), Protect Transhumance and Conservation at a Crossroads (TCC)

Benin's Approach to Fighting Jihadists is Fueling the Cycle of Violence (2023), World Politics Review

Jihad Takes Root in Northern Benin (2022), Armed Conflict Location & Event Data Project (ACLED)

The Growing Threat of Violent Extremism in Coastal West Africa (2022), African Center for Strategic Studies

The Growing Complexity of Farmer-Herder Conflict in West and Central Africa (2021), African Center for Strategic Studies

Climate change, pastoral resource access, and extremist group violence in the western Sahel: new data and insights from Mali, (2021), World Bank Group

Pastoralism and Conflict in the Sudano-Sahel: A Review of the Literature (2020), Search for Common Ground

## Scholarly Publications

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Brottem, L. (2021). Pastoral resource conflict in the context of Sudano-Sahelian security crises: a critical review of research. *African Security*. 13. 380-402. [February 2021]

Turner, M. D., T. Carney, L. Lawler, J. Reynolds, L. Kelly, M. S. Teague, and L. Brottem. (2021). Environmental rehabilitation and the vulnerability of the poor: The case of the Great Green Wall. *Land Use Policy* 11. 105750.

Brottem, L. (2019). Gendered livelihoods and land tenure: The case of artisanal gold miners in Mali, West Africa. *Geoforum*. 105. 54-62. [October 2019]

Brottem, L., Coulibaly, B. (2019). The Geography of the bottom billion: rural isolation and basic service access in the Republic of Mali. *European Journal of Development Studies*. 31, 1147-1170. [September 2019]

Brottem, L. (2018). Dig Your Own Well: a political ecology of rural institutions in western sub-Saharan Africa. *Annals of the American Association of Geographers*. 118, 1075-1095. [July 2018]

Brottem, L., B. Brooks. (2017). Crops and livestock under the sun: obstacles to rural livelihood adaptations to hotter 21st century temperatures in eastern Senegal. *Land Degradation and Development*. 29, 118-126. [January 2018]

Brottem, L. (2016). Environmental change and farmer-herder conflict in agro-pastoral West Africa. *Human Ecology*, 44, 547-563.

Brottem, L. (2014). Hosts, strangers and the tenure politics of livestock corridors in Mali. *Africa: Journal of the International African Institute*, 84, 638-657.

Brottem, L., B. Butt, M. D. Turner, and A. Singh. (2014). Biophysical variability and pastoral rights to resources: West African transhumance revisited. *Human Ecology*, 42, 351-365.

Turner, M. D., A. Ayantunde, L. Brottem, B. Butt, and B. Gerard. (2014). Variation in Vegetation Cover and Livestock Mobility Needs in Sahelian West Africa. *Journal of Land Use Science*, 11, 76-95.

Brottem, L. (2011). Rediscovering Terroir in West African Agroforestry Parklands. *Society and Natural Resources*, 23, 553-568.

Butt, B., M. D. Turner, A. Singh, and L. Brottem. (2011). Use of MODIS NDVI to evaluate changing latitudinal gradients of rangeland phenology in Sudano-Sahelian West Africa. *Remote Sensing of Environment*, 115, 3367-3376.

Brottem, L. and J. Unruh. (2009). Territorial Tensions: Rainforest Conservation, Postconflict Recovery, and Land Tenure in Liberia. *Annals of the Association of American Geographers*, 95, 995-1002.

## Fellowships and Awards

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Co-Principal Investigator of U.S. Fish & Wildlife Service International Division-funded research initiative October 2018-June 2020, grant total: \$139,000

- Project title: “Transhumance and conservation at a crossroads: comparative investigation across West and Central African landscapes of global biodiversity significance”.

Harris Memorial Research Fellowship, 2017-2018

- Project title: “Fortress Europe and the Malian Diaspora: changing migration networks and their impacts on climate change vulnerability in communities of origin”.

National Science Foundation Dissertation Improvement Grant, Fall 2011

- Project title: “Farmer-herder conflict, environmental change, and institutional response in Mali”.

University of Texas-Austin Climate Change and Conflict in Africa Pre-Doctoral Fellowship, 2011-2012 (declined)

University of Wisconsin-Madison Land Tenure Center Raymond Penn Scholarship, Spring 2011

Fulbright-IIE Fellowship, 2009-2010

West Africa Research Association Pre-dissertation Research Fellowship, Summer 2008

University of Wisconsin-Madison International Field Research Award, Summer 2008

University of Wisconsin-Madison Scott Kloeck-Jenson Fellowship, Summer 2008 (declined)

Doris Duke Conservation Fellowship, 2006-2007

## Teaching

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### **Instructor of Record:**

Global Development Studies/Political Science 395: Geographies of the Bottom Billion. Fall 2023, Grinnell College.

Global Development Studies/Environmental Studies 295: Nine Billion People: Inquiry into Impacts and Opportunities, Spring 2017-2019, Grinnell College

Social Studies 295: Applied Geographic Information Systems (GIS) Analysis, Spring 2015-2022, Grinnell College

GDS 395: Development in sub-Saharan Africa: Policies, Institutions, and Actors, Fall 2014, Fall 2016, Grinnell College

GDS/ENV 261: Climate Change and Development: the Challenge of Adaptation, Spring 2016, Grinnell College

GDS 111: Introduction to Global Development Studies, 2014-2023, Grinnell College

SST 125: Geographical Analysis and Cartography, 2014-2023, Grinnell College

GEO 379: Introduction to Geographic Information Systems (GIS), Spring 2012, Lecturer, University of Wisconsin-Madison

GEO 339: Environmental Conservation, Summer 2009, Lecturer, University of Wisconsin-Madison

IES 402: Walking the Talk: Grassroots Environmental Action, Spring 2007, Lecturer, University of Wisconsin-Madison

**Teaching Assistant:**

IS 101: Introduction to International Studies, Fall 2012, University of Wisconsin-Madison

IS 320: Cross-Cultural Encounters Abroad, Summer 2011, University of Wisconsin-Madison (online)

GEO 339: Environmental Conservation, Fall 2010, University of Wisconsin-Madison

GEO 101: Introduction to Human Geography, Fall 2008, University of Wisconsin-Madison

IES 112: Human Dimensions of Environmental Conservation, Spring 2007, University of Wisconsin-Madison

**Association Memberships**

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Association of American Geographers (since 2007)

African Studies Association (since 2009)

West Africa Research Association (since 2008)

**Languages**

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English (native), French (fluent), Bamanakan (conversational)

**Selected Presentations**

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“Insecurity in the Sahel: Political or Environmental Crisis or Both?” presented to the University of Wisconsin-Madison African Studies Program, November 2021.

“Resource competition and farmer-herder conflict in the Republic of Benin: The context for escalation and extremism” presented to the Tetra Tech ARD Land Tenure and Property Rights Learning Series, June 2019.

“Insecurity and climate change in dryland West Africa: Disentangling the dynamics in the countryside” presented at the Alison Des Forges Memorial Symposium (State University of New York at Buffalo), April 2019.

“Myths and realities of the migration-development nexus: the case of productive investment in Mali” presented at the 2018 annual meeting of the Association for Anthropology of Social Change and Development (APAD), Roskilde University, Denmark.

“Black flies and white gold: The spatial character of local institutions in rural Mali, West Africa” presented at the DIAL Research Group, University of Paris-Dauphine, May 2018.

“Vivre ensemble: public service access and rural isolation after democratic decentralization in Mali” presented at the 2016 Annual Meeting of the African Studies Association, Washington DC.

“Bringing the environment back in: the case of resource conflict in agro-pastoral West Africa” presented at the 2016 Annual Meeting of the American Association of Geographers, Chicago, IL.

“Doing GIS analysis in a data-poor region: results from field research in Mali, West Africa” presented at February 2016 meeting of the Grinnell College Data Seminar Series.

“Beyond participatory mapping: applying multi-scale geospatial analysis to land tenure planning” presented at the 2015 World Bank Land and Poverty Conference, Washington DC.

“Pre-colonial settlement, administrative boundaries, and access to basic services: the case of Mali” presented at the 2015 Annual Meeting of the African Studies Association, San Diego, CA.

“Farmer-herder conflict in Mali: social and environmental drivers, institutional solutions” presented at the March, 2014 U.S. State Department National Intelligence Agency Sahel Symposium, Washington DC.