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CLIMATE IMPACT RESEARCH

# The Climate-Security-Migration Nexus:

## Cascading socio-economic impacts on vulnerable populations

Student visit @ PIK  
23.04.2024

Stefanie Wesch

# Who is this woman?

- Current position at PIK
- Recent projects
- Previous educational background
- Previous work experience





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# Who are you???

# Case study: Sahelian Burkina Faso

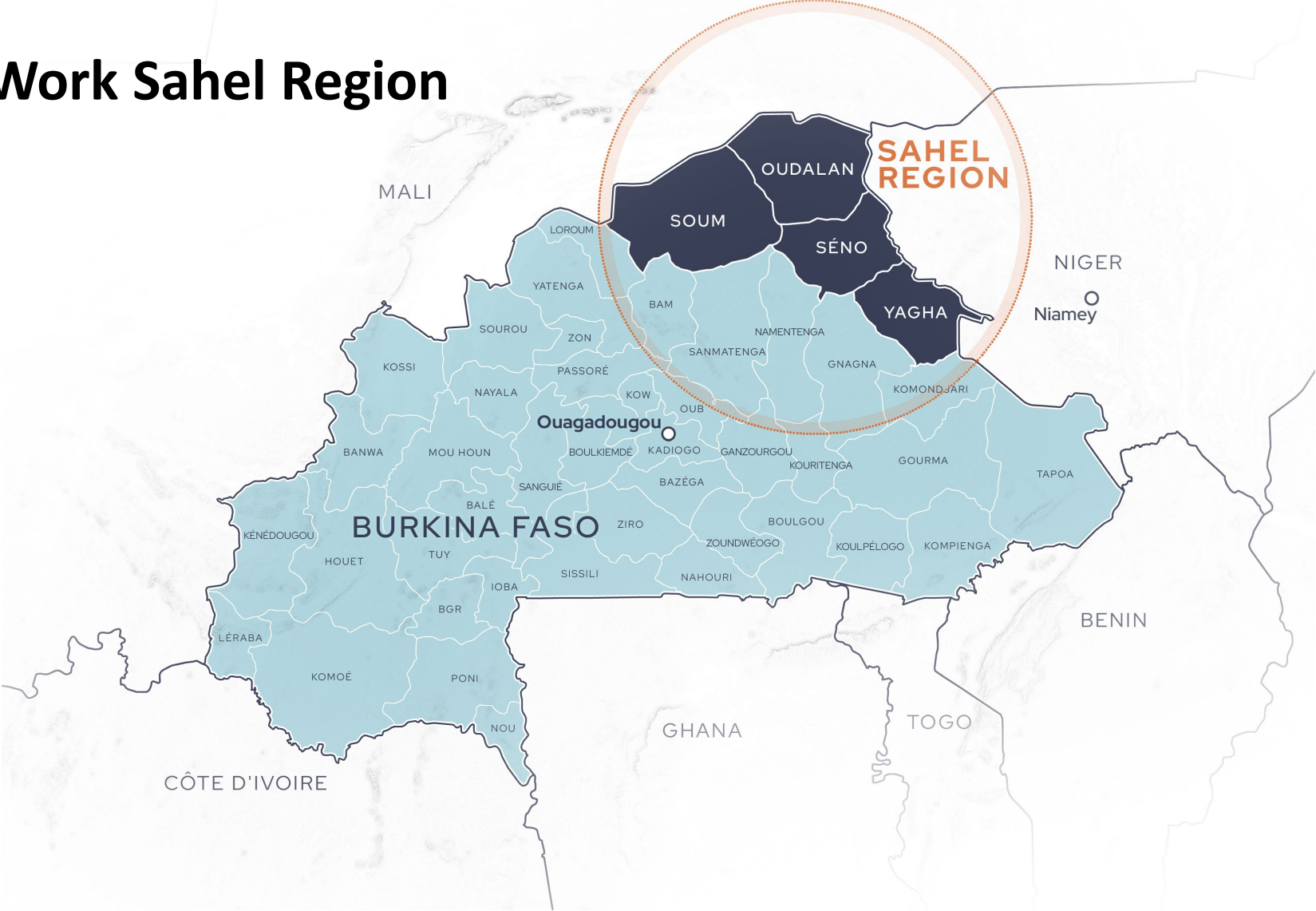


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*Leibniz*  
Leibniz  
Association



# Burkina Faso Field Work Sahel Region

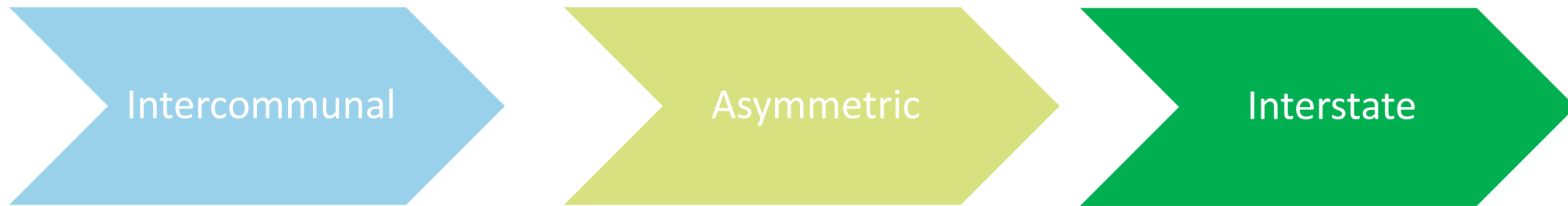


# Background on Conflict in Burkina Faso

- 2012 Instability in Neighboring Mali
- 2013/14 President Compaoré's ousted by mass protests after 27 years of rule
- Jihadist groups aligned with al-Qaida and Islamic State active in the North among them the more prominent Ansarul
- Emergence of “self-defense” groups
- Government forces long accused of rights abuses have increased their operations, often with deadly consequences
- several military coups since

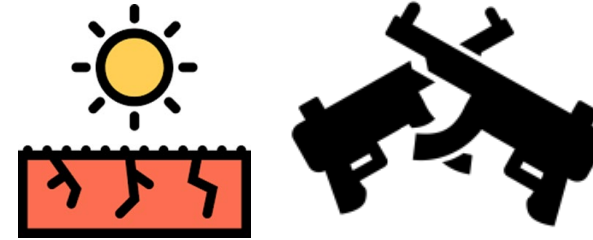
Human Development Index (HDI) 2018	ND-GAIN Vulnerability Index 2017	GINI Coefficient 2014	Real GDP per capita 2018	Poverty headcount ratio 2014	Prevalence of undernourishment 2016-18
0.434 183 out of 189 (0 = low, 1 = high)	35.2 161 out of 181 (0 = low, 100 = high)	35.3 (0-100; 100 = perfect inequality)	709 USD (constant 2010 GDP)	43.7 % (at 1.9 USD per day, 2011 PPP)	20.0 % (of total population)

# Potential Pathways to Conflict under Climate Change in Burkina Faso



# Does Burkina Faso Fit the Mold of Climate Change and Conflict Patterns?

- Agricultural dependence
  - Ethnic fractionalization
  - Governance
  - High vulnerability to climate impacts
- Implications for adaptive capacities





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# Fulani identity in crisis

Climate and social pressures on pastoralists' livelihoods and their implications for armed conflict in Burkina Faso

Stefanie Wesch

# What role did climate change play in the conflict escalation and extremist recruitment in Burkina Faso according to Fulani from the conflict-ridden Sahel?

- Methodology: Qualitative Approach
- Data gathering:
  - Semi-structured interviews
  - Focus-group discussions
- Target group:
  - Internally displaced pastoralists from Sahel region
  - Key informants
- Data Analysis:
  - Grounded theory through two people/ two step coding process



## Why focus on Fulani Pastoralists?

- Pastoralists are particularly vulnerable to climate change impacts:
- Largely dependent on precipitation
- Established routes may no longer be feasible due to changes
- Loss of established relationships with sedentary farmers along the way
- Need to establish new relationships
- Farmers are increasingly diversifying by engaging in agro-pastoralism
- HRW and ICG reports have illustrated vulnerability of young Fulani men to be recruited into armed extremist groups







Stefanie Wesch RD2 Adaptation in Agricultural Systems



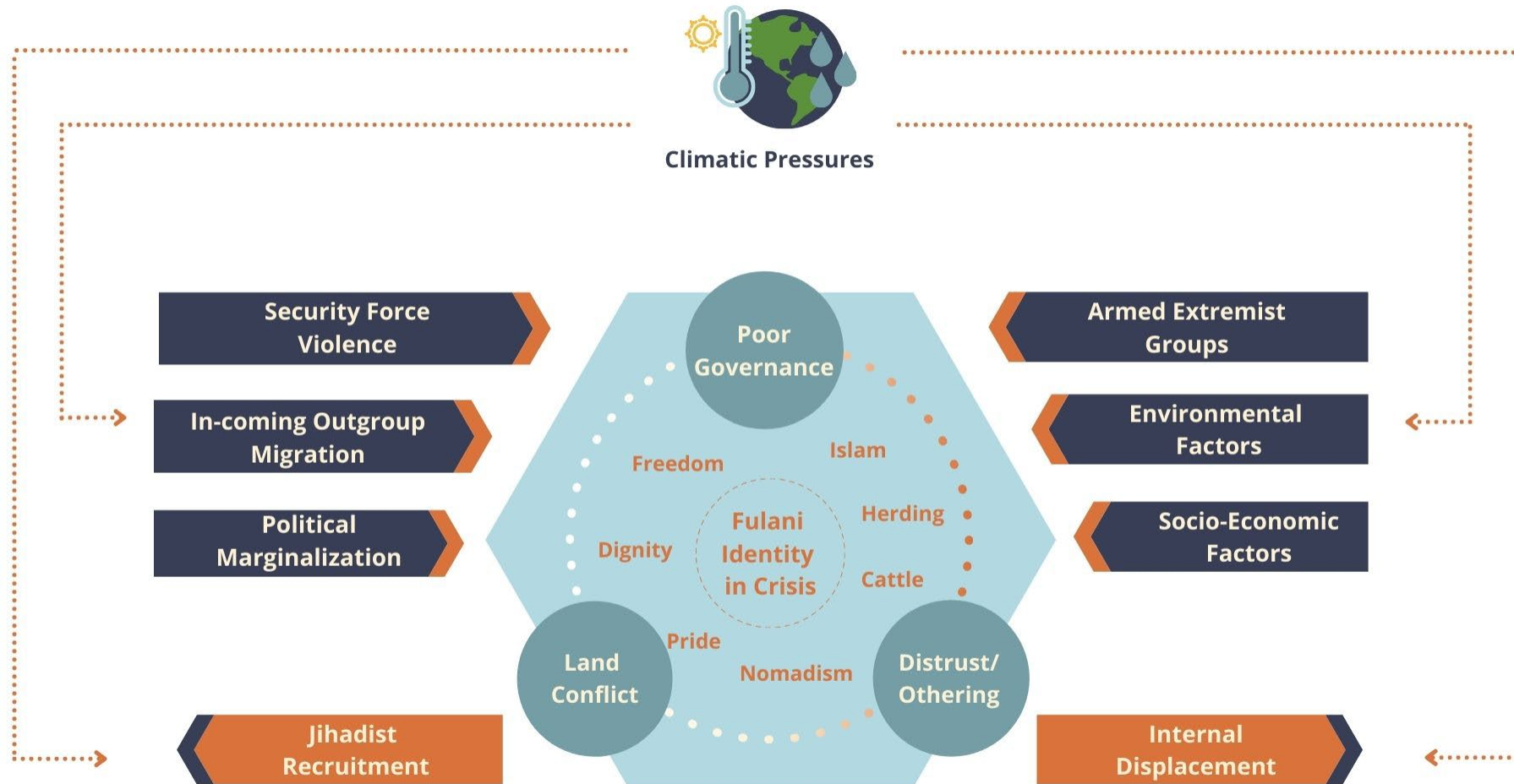
## Fulani Voices



**Environmental:** Male focus group: *“There are very big reserves for the herders, but because of the drought and the dry season, sometimes we cannot get enough grass for the cattle. After a few months, after the rainy season we could stay there for two or three months. No more. The land is changing.”*

**Extremist Armed Groups:** Director of Islamic Institute: *“The terrorism didn’t start in Burkina Faso, but what I know about it is that it started as religion. Something to spread the religion in the area. But as there were many underlying issues, like injustice, they (the extremists) pretended to solve some problems. So, they convinced many youth who followed them.”*

# Conceptual Approach



# Hypotheses Emerging from Data

- **H1:** Through the erosion of traditional agricultural practices, climate change impacts undermine the identity of nomadic pastoralists.
- **H2:** Fragmented traditional identities lead to feelings of loss of dignity, humiliation, distrust and anger, contributing to ethnic polarization and making terrorist recruitment more salient among Fulani pastoralists.
- **H3:** While climatic pressures did play a role in conflict emergence in Burkina Faso, other themes emerged as more prominent in Fulani's perception of the current conflict genesis



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# Adaptation Potentials in the Context of Intersectional Vulnerabilities and State-based violence in the Pamir Mountains (Tajikistan)

Compounding effects of gender and ethnicity in a changing climate within the context of widespread gendered seasonal migration in Tajikistan

Stefanie Wesch

# Gender in a changing climate

- Gender can play a major role in people's ability to prepare for, and respond to, climate-related threats (Tandon, 2011)
- Culture might limit women's capacity to better adapt to changing environment, because it restricts women's rights to e.g. land ownership (UNDP, 2015)
- Importance of not solely portraying women as victims due to their vulnerabilities, but seeing them as actors of change possessing knowledge and skills critical in finding solutions to environmental challenges (UNDP, 2015)

# Influence of migration on gender in Tajikistan

- Tajikistan is world's most migrant remittance-dependent country (Abdulloev et al., 2014)
- 93.5% (2014) of the people who emigrate from Tajikistan are males (Abdulloev et al., 2014)
  - Gender influences who will go to a new location and who will stay behind (Rochaeva & Varshaver, 2017)
- 20-25% of Tajik men engage in seasonal or permanent mobility
- Migration of men to available employment in other countries has changed the lives, duties, and responsibilities for the wives left behind (IOM Dushanbe, 2009)
  - Wife also becomes responsible for household maintenance and budget, family fields and animals (IOM Dushanbe, 2009)
- Migration of Tajik men has also feminized many sectors of societies, especially agriculture (IOM Dushanbe, 2009)









## Research Questions

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- What is the perceived influence of early climate impacts on households in the Pamirs?
- What climate adaptation measures are instituted by households?
- Which are the main socio-political-economic factors that intersect with anthropogenic climate change?
- What kind of feedback loops can be perceived between the climate crisis and other factors/ crises?





## On-the-ground fieldwork

- First suitability check and preliminary fieldwork
- Remotely learned some basic Хурбнуни (one Pamiri) for three months prior to fieldwork
- Main fieldwork and data collection took place in 2023
- Methods: semi-structured interviews and focus groups
- Target group: households engaging in agricultural activities around Khorugh



# 03 | Qualitative Data Analysis







## Selection of different themes

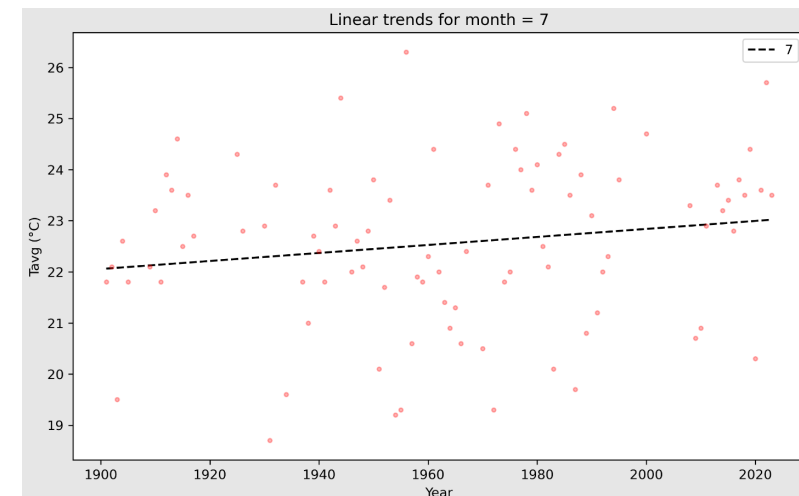
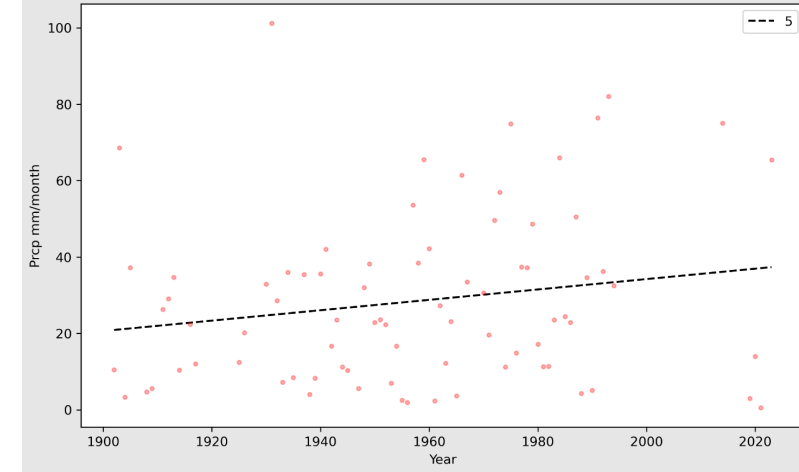
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- Agriculture practices/ main staple crops/ animals
- Irrigation technique and governance
- Weather observations
- Additional income sources (e.g. remittances, value added products)
- Migration (and its non-/gendered aspects)
- Distribution of household responsibilities between genders
- Etc.

## Preliminary findings which stand out

What is the perceived influence of early climate impacts on households in the Pamirs? What climate adaptation measures are instituted by households?

- Trends in precipitation perceived in accordance with data - generally wetter conditions (although for some months decreases were observed)
  - However, due to temperature trends, increased precipitation does not necessarily translate to increased water availability (effects in evapo-transpiration)
  - trends in temperature perceived wrong – average temperature increasing
- > Potential consequences could be lack of adequate adaptation/ even maladaptation
- Perceived increase in natural hazards: avalanches, mudslides, GLOB









## Preliminary findings continued...

Which are the main socio-political-economic factors that intersect with anthropogenic climate change?

- Many changes/ developments taking place in background, which form a very particular context
- Self-reported household food insecurity increased
- Employment opportunities for young people increasingly limited
- Increase in permanent migration, not only labor migration (mostly destination Russia)
- Gendered migration potentially not the case for Pamir region -> exceptional case within Tajikistan/ Central Asia

## Preliminary findings continued...

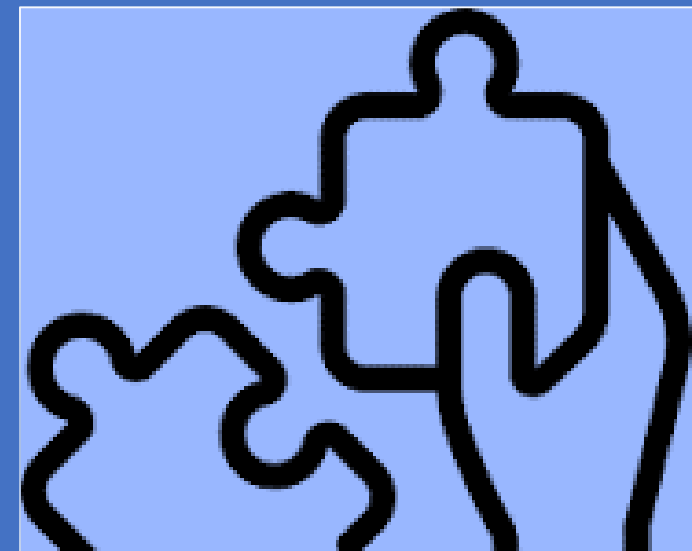
What kind of feedback loops can be perceived between the climate crisis and other factors/ crises?

- Context of multiple crises:
  - climate change
  - relatively recent independence from Soviet Union/ civil war
  - generational changes with regards to caring for elderly
  - perceived increase in out-migration
  - political turmoil and state-based violence
  - changes in remittance flows due to sanctions on Russia (for Russian war of aggression against Ukraine)
  - potentially Covid-related changes (although not in data)

Data analysis to be continued in order to set up hypothesis for testing



# Integrating Climate Sensitivity into Peacebuilding: An Exploration of Organizational Strategies and Practices



# Puzzle



- In recent years, increasingly Peacebuilding organizations pivot toward climate topics
  - Noticable link to conflict, particularly in rural communities, reliant on subsistence-farming
  - Funder mobilization towards climate-related topics
- Challenge: Peacebuilding specialists, mostly with no background in climate
  - Which resources/ tools with respect to knowledge around climate are employed to form organizational strategies?
  - How is this knowledge transferred into daily operations in the field?
  - What part does climate-science, hydrological/ agricultural projections, locally proven adaptive measure play, if any?

OUR PROJECTS

## Climate-focused mediation and peacebuilding in Iraq



A DRY RIVER | PHOTO © SHUTTERSTOCK.COM / PIYASET

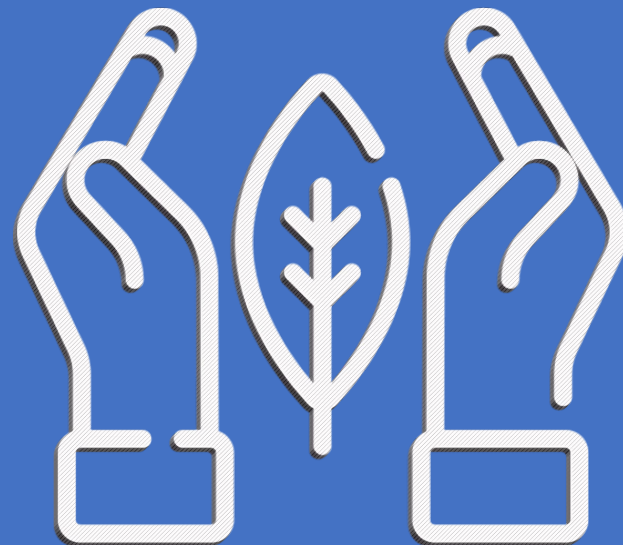
This project focuses on climate-focused mediation and peacebuilding in different districts throughout Iraq.

Timeframe: June 2022 - March 2025

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According to UNEP, Iraq is the fifth most vulnerable country to climate change worldwide. Iraq's vulnerability is mainly shaped by its high exposure to floods, droughts and dust storms (increasingly linked to temperature and precipitation variability), its natural resource dependency, and its low

# Relevant Literature





# Environmental Peacebuilding

- Covers a wide range of aspects on the **relationship between environment, conflict, and peace** (Dresse et al., 2019)
- Shared environmental **challenges as a source of potential cooperation** (Ide & Scheffran, 2012; Conca & Dabelko, 2002), deviating from neo-malthusian theory
  - Provides opportunity to move **from trans-boundary rivalry to partnership** (Conca & Dabelko, 2002)
- Assumes integration of **natural resource management (NRM) in conflict prevention, mitigation, resolution, and recovery** (EnPAX, 2020)
- Aims to reduce pressure on resources, and stresses that **institutional capacities** to respond to ecological challenges **must be strengthened** (Dresse et al., 2019)
- Urges for the **emancipatory participation of local and marginalized populations/ enable bottom-up processes** (Nadiruzzaman, 2022)



# Environmental Peacebuilding & Climate Change

- **Climate-sensitive intercommunal peacebuilding supports traditional livelihoods** that are interwoven with group identity
- Moving **from more limited forms of technical cooperation** based on mutual interests, **toward dialogue around shared values**, and finally collective action for common-pool resource management (Conca & Dabelko, 2002)
- Supports capacity building for **alternative forms of income** where possible
- **Adaptation: inclusive through mediated, participatory** processes for implementation of more technical adaptive measures
  - Highly context-specific measures such as water harvesting, drip irrigation, improved crop storage, weather-index-insurance, expansion of irrigation techniques, agroforestry, improved infrastructure etc.



# Organizational Change/ Innovation Management

## Wolfs & Zharkinbayeva (2024): Organizational change management: Interdisciplinary solutions

- Organizational change management has to account for managing human and material assets
- **Need for an interdisciplinary approach** (organizational management, **innovation management**, project management, socio-psychological management etc.)
- Importance of development of emotional intelligence among the team members
- Ensuring similar thinking of project participants and knowledge sharing

# 03 | Methodology

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## Underlying Research Question

How do peacebuilding organizations operationalize and implement the climate-sensitivity lens within their conflict transformation work?

- A Conceptual Approach
- Identification of hurdles and blindspots







# Organizational Statements or Published Strategies

Example: *Search for Common Ground* Capacity Statement

- Transform Land- and Water-Related Conflict
- Ensure Inclusion of Marginalized Groups in Environmental Decision Making
- Popularize Legal Resolution to Land Rights Conflict
- Promote Sustainable Business Practices
- Conflict-Sensitive Climate Change Programing



## CAPACITY STATEMENT: Climate, Environment, and Conflict

### Organizational Profile

Since 1982, [Search for Common Ground](#) (Search) has transformed the way the world deals with conflict: away from adversarial approaches and toward cooperative solutions. Our long-term programming in 34 countries and network of over 1,200 partners around the world enables Search to reach over 700,000 direct participants and 50 million people through media programs in many of the world's most fragile settings. With 93% of our 1,000 global staff being from the countries in which they work, we adapt and contextualize our approaches according to the needs of local communities.

Over the past 20 years, Search has successfully brought together local communities, policy actors, informal leaders, women, youth, marginalized groups, and private sector stakeholders to peacefully address conflicts and build community resilience to climate change, environmental degradation, and resource scarcity in Africa, Asia, and the Middle East. Our goal is to transform natural resource-related conflict and leverage climate and environment-related tensions to bring together people across ethnic, political, religious, socio-economic, and other divides. We do this through community dialogue, capacity building, radio programming, awareness raising, knowledge sharing, policy advocacy, and inclusive approaches that center women, youth, refugees/IDPs, and other marginalized groups. We empower communities by involving them in natural resources management and create the premises for better governance.

### What We Do

#### Transform Land- and Water-Related Conflict

Climate change, environmental degradation, and overexploitation intensify the scarcity of natural resources such as fertile land or water, minerals, and oil in the Global South. In already fragile contexts, this often leads to

Source: [https://documents.sfcg.org/wp-content/uploads/2022/11/Capacity-Statement\\_Climate-Environment-and-Conflict.pdf](https://documents.sfcg.org/wp-content/uploads/2022/11/Capacity-Statement_Climate-Environment-and-Conflict.pdf)

# Expert Sollizitation

- Methodological inspiration: Mach et al 2019
- By bringing together practitioners: identify common approaches as well as outlier/ more creative approaches
- Informal conversations held with peacebuilders to inform interview guide
- Address the normative side of climate-sensitive peacebuilding as well as current practice
- Identify blindspots in the field of practice

# ANALYSIS

<https://doi.org/10.1038/s41586-019-1300-6>

## Climate as a risk factor for armed conflict

Katharine J. Mach<sup>1\*</sup>, Caroline M. Kraan<sup>2</sup>, W. Neil Adger<sup>3</sup>, Halvard Buhaug<sup>4,5</sup>, Marshall Burke<sup>1,6</sup>, James D. Fearon<sup>7</sup>, Christopher B. Field<sup>2</sup>, Cullen S. Hendrix<sup>8,9</sup>, Jean-Francois Maystadt<sup>10,11</sup>, John O'Loughlin<sup>12</sup>, Philip Roessler<sup>13</sup>, Jürgen Scheffran<sup>14</sup>, Kenneth A. Schultz<sup>7</sup> & Nina von Uexkull<sup>4,15</sup>

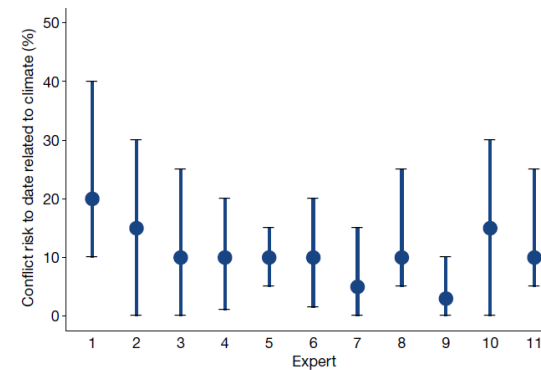


Fig. 1 | The estimated relationship between climate and conflict risk to date. Each expert provided subjective probabilistic judgments of the percentage of total conflict risk related to climate across experiences over the past century. The estimated 1st, 50th and 99th percentiles are shown for each expert.

well-quantified risks, but also more uncertain outcomes that may carry large consequences; (2) thoroughly exploring how these judgments are underpinned by present-day knowledge; and (3) rigorously combining individual and collective deliberations to minimize biases.

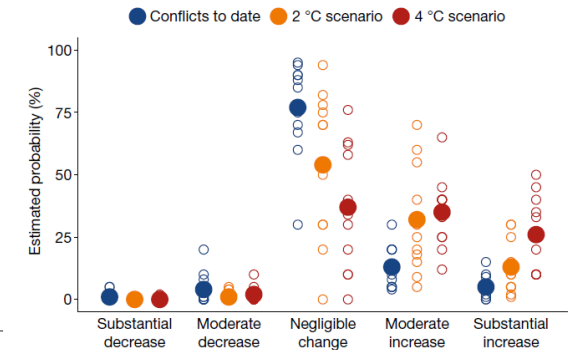


Fig. 2 | Estimated changes in the relationship between climate and conflict risk under increasing climate change. For three scenarios, each expert estimated the likelihood that climate leads to negligible, moderate or substantial changes in conflict risk. For violent conflicts to date (blue), probability estimates indicate how frequently climate variability and change have led to the specified changes in conflict risk. For the approximately 2 °C (orange) and approximately 4 °C (red) warming scenarios, probability estimates indicate potential changes in conflict risk compared to the current climate. For these hypothetical 2 °C and 4 °C scenarios, each expert considered associated effects of climate change for current societies, assuming current levels of (for example) socioeconomic development, population and government capacity. Open circles, individual estimates; filled circles, mean across experts.



## Preliminary Results and Hypotheses

- Lack of unified/streamlined/ structured approach between organization, plus leaves room for flexibility within local context
- No clear concepts within organizations: trial and error
- Little to no consulting of climate projections: reactionary approaches in aftermath, implications for sustainability of peace
- Organization may cater to funders, as climate-lens is pushed
- Funders may neglect more traditional conflict-drivers by over-focusing on climate while peacebuilding organizations feel financial pressure to deliver on climate topic
- Could lead to neglect of more established conflict drivers such as governance, inequality and socio-economic and political grievances

# Thank you!



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