

An aerial photograph of a vast, arid Sahelian landscape. In the foreground and middle ground, a large, densely packed settlement is visible, characterized by numerous small, rectangular structures arranged in a grid-like pattern. The surrounding terrain is dry and brownish, with sparse vegetation. In the background, a range of low mountains or hills stretches across the horizon under a hazy sky. The overall scene conveys a sense of a challenging environment.

# Anticipating Risk Hotspots in the Sahel

Sahel Predictive Analytics Project in support of UNISS

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Second technical workshop on nowcasting in international organizations

Jana Birner

Office of UNHCR's Special Advisor on Climate Action



# Predictive Analytics Pilot

## Promote anticipatory planning and preparedness

- Deepen understanding of interconnectedness of risks in Sahel → Triple-nexus
- Assess the likelihood of future outcomes based on historical data

## Enhance collaboration around data

- Aligned with the SG's Data Strategy
- Facilitate access, integration & sharing data
- Support data standardization





# Problem Statement

## Consultation

- Digital surveys and 50+ in-depth interviews
- 22 UN entities consulted (HQs, regional, field)
- Academia (20+ institutions)

## Formulation of issues & solutions

- Identify climate impacts/mega trends, identify risk hotspots
- Request for improved data sharing
- Align with UNISS (locally owned)



unicef



UNHCR  
The UN Refugee Agency



UNODC



UNOWAS



UNFPA



FAO  
FIAT PANIS



GLOBAL PULSE



United Nations  
Convention to Combat  
Desertification



OCHA



DPPA  
Preventing Conflict. Sustaining Peace



UNITED NATIONS  
HUMAN RIGHTS  
OFFICE OF THE HIGH COMMISSIONER



UNFCCC



WFP



Humanitarian  
Data Exchange



IOM  
UN MIGRATION



UNDP



THE WORLD BANK



unitar  
United Nations Institute  
for Training and Research



UNEP



WMO



UN DESA



UN DESA



UN HABITAT



# Multi-stakeholder collaboration



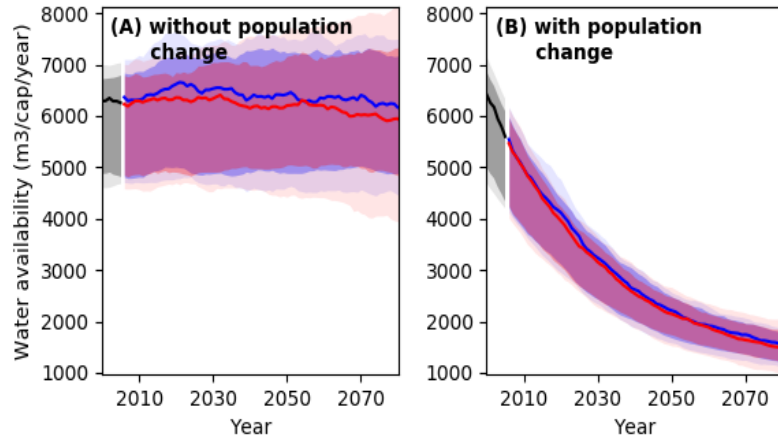
## 20 Partners in the expert consortium on PA for the Sahel in support of the UNISS

- Unite best practices for modelling and strategic foresight across the triple nexus
- Allow for cross-fertilization and integration
- Establish linkages to data owners
- Enhance local capacity building



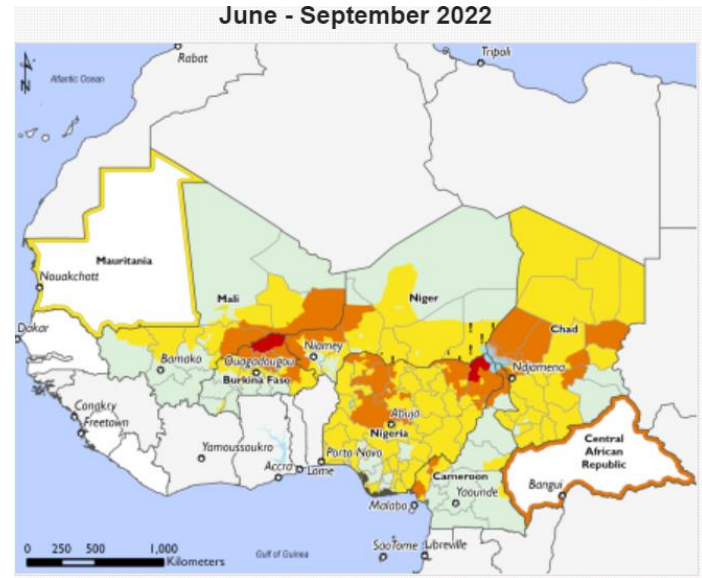
# Four key areas

## 1. Climate Change



Projections of water availability from precipitation per capita and year with (A) national population held constant and (B) changing population

## 2. Food Security



Forecasting Acute Food Insecurity (IPC Phases)

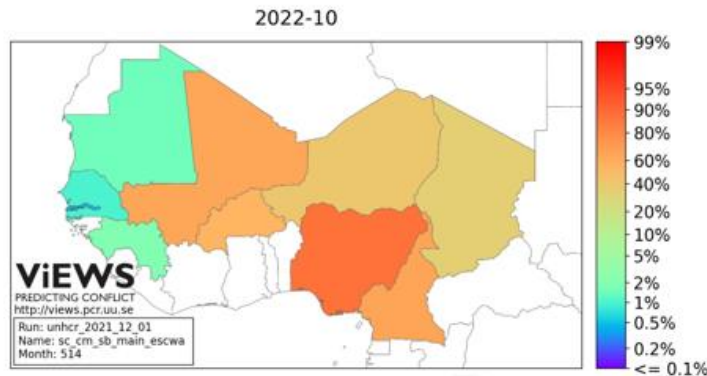


# Four key areas

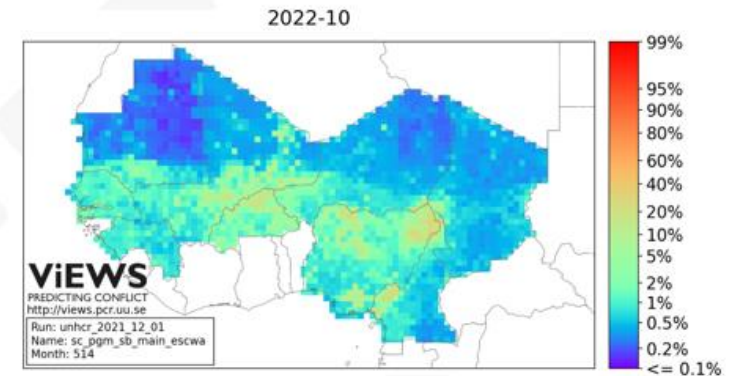
## 3. Conflict

Predicted probability of political violence in October 2022, projected in December 2021

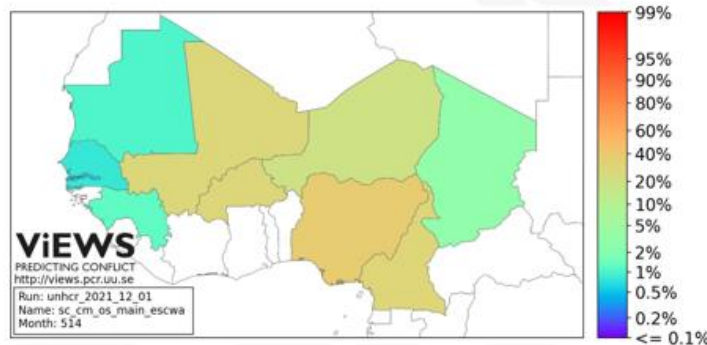
Source: ViEWS



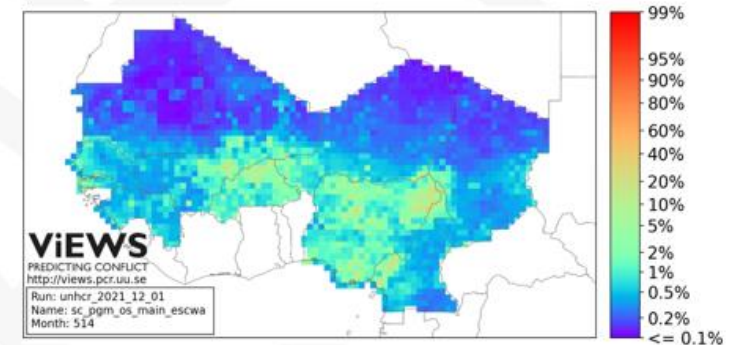
(a) State-based violence (sb), cm level



(b) State-based violence (sb), pgm level



(c) One-sided violence (os), cm level

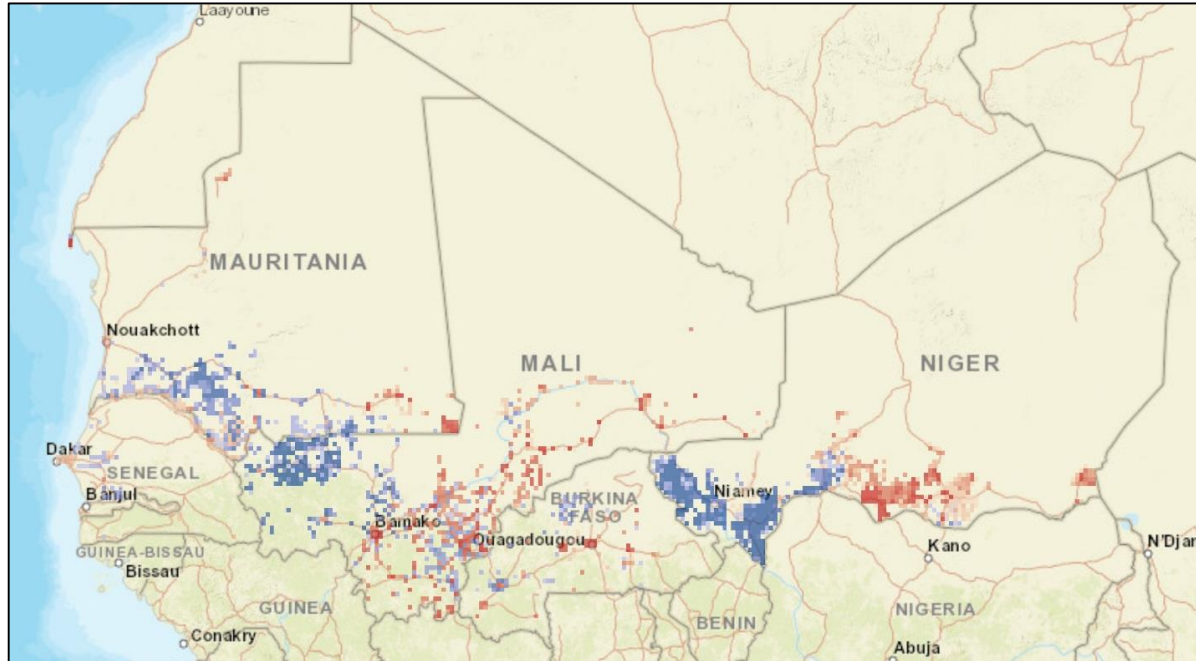


(d) One-sided violence (os), pgm level



# Four key areas

## 4. Migration and displacement



### In-Migration

- High certainty in high levels of climate in-migration
- Moderate certainty in high levels of climate in-migration
- Low certainty in high levels of climate in-migration

### Out-Migration

- High certainty in high levels of climate out-migration
- Moderate certainty in high levels of climate out-migration
- Low certainty in high levels of climate out-migration

★ National capital

projecting permanent internal migration patterns related to slow-onset climate change impacts under different warming scenarios over 5-to-10-year intervals out to 2050 (the INCLUDE model)



# Key findings

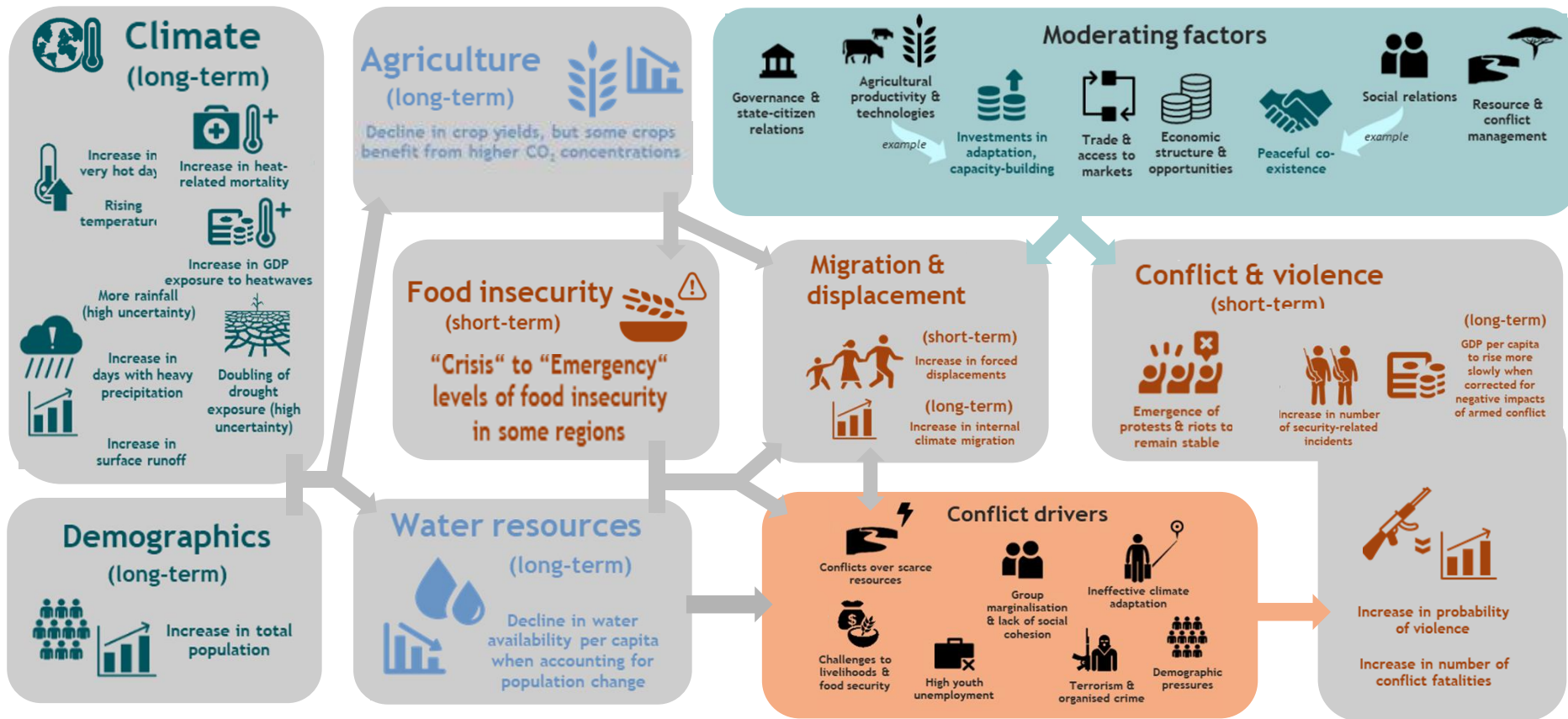
- High variability of risks (spatial and temporal)
- Climate change as a risk multiplier
- Data availability as key limitation
- PA key to support the implementation of the UNISS, in particular to promote long-term resilience and strengthen livelihoods
- Promotion of climate adaptation and good governance







# Key findings (inter-linkage)



**Thank you!**

