Anticipating Risk Hotspots in the Sahel

Sahel Predictive Analytics Project in support of UNISS

Second technical workshop on nowcasting in international organizations
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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
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)
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

Source: PIK, Climate Hazard Centre at University of Santa Barbara

2. Food Security

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

Forecasting Acute Food Insecurity (IPC Phases)

Source: PIK, Climate Hazard Centre at University of Santa Barbara
Four key areas

3. Conflict

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

Source: ViEWS
Four key areas

4. Migration and displacement

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)

Source: City University New York
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)

**Climate (long-term)**
- Increase in very hot days
- Increase in heat-related mortality
- Increase in GDP exposure to heatwaves
- More rainfall (high uncertainty)
- Increase in days with heavy precipitation
- Doubling of drought exposure (high uncertainty)
- Increase in surface runoff

**Agriculture (long-term)**
- Decline in crop yields, but some crops benefit from higher CO₂ concentrations
- Governance & state-citizen relations
- Agricultural productivity & technologies

**Food insecurity (short-term)**
- "Crisis" to "Emergency" levels of food insecurity in some regions
- Investments in adaptation, capacity-building
- Trade & access to markets
- Economic structure & opportunities

**Conflict & violence (short-term)**
- GDP per capita to rise more slowly when corrected for negative impacts of armed conflict
- Emergence of protests & riots to remain stable
- Increase in number of security-related incidents

**Conflict drivers**
- Conflicts over scarce resources
- Group marginalisation & lack of social cohesion
- Ineffective climate adaptation
- Challenges to livelihoods & food security
- High youth unemployment
- Terrorism & organised crime
- Demographic pressures

**Conflict & displacement**
- (short-term) Increase in forced displacements
- (long-term) Increase in internal climate migration
- Social relations
- Resource & conflict management

**Moderating factors**
- Peaceful coexistence
- Peaceful coexistence

**Water resources (long-term)**
- Decline in water availability per capita when accounting for population change

**Demographics (long-term)**
- Increase in total population

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Thank you!