Geneva Dialogue on Environment,
Climate, Conflict, and Peace:
Meeting 34

19 July, Zoom
Participants: 14 participants

Presentation on Strata and Nature-based Solutions Database:
- Speakers
  - Marie Schellens works as an Environmental Security Analyst at UNEP's Crisis Management Branch. She coordinates the development of Strata - the Earth Stress Monitor. Before joining UNEP, she was a Marie Curie PhD fellow at Stockholm University and the University of Iceland, researching the role of natural resources in conflict risk, with qualitative and quantitative tools from the field of complex systems. marie.schellens@un.org
  - Isabel Thomas is an intern with the Climate Change and Security branch at UNEP, supporting the development of Strata. She is currently studying towards a Master's degree in Environmental Sciences and GIS at the University of Geneva, specializing in climate change impacts. Isabel.nicholsonthomas@un.org
- Introduction to Strata
  - There is a demand for more and better assessments on data, how climate impacts peace & security issues
    - Capacity to do these assessments really seems to remain in the hands of a limited set of experts
  - Objectives of Strata
    - Users should be able to analyse earth's environmental and climate stress, in real time
    - Users should be able to integrate peace and security information
    - Users should be able to respond, building policy and programming based on data-driven insights
  - Strata's unique value
    - One of the only open-access data platforms on environment and climate security
    - The data and analysis is customizable for users
    - Near real-timed geospatial data streams at subnational and higher granularity allowing for more precision
    - Co-design as an entry-point for dialogue, capacity building, etc.
  - There are a number of specific indicators visible on a slide on this PDF here
  - How do we make sense?
    - Convergence of evidence approach
      - Was developed for the World Atlas on Desertification
      - Stressor flags
        - Geospatial layers are laid on top of one another
        - Each layer is given a threshold, and a level at which a "flag" is lit up
      - Exposure x Vulnerability score

- - What can you do with Strata?
      - Maps, tables, and diagrams
      - Analysis
      - Strengthen programming
      - Training and education
    - There is no future modeling, no risk probabilities of events
      - Instead it is a visualization of co-occurring risk factors
        - It is not an early warning system, though it could factor into an early warning system
      - No correlation, no cascading impacts
        - Should be paired with more qualitative assessments
    - Next steps
      - Working on regional expansions in 2023, and eventually going global
      - In the short term, working on integrating nature-based solutions and improving certain indicators
- Mini demo
  - Marie led attendees through a demo of the platform
    - It did not work ideally during the meeting, with apologies. According to UNEP's technicians, there seemed to be trouble with Google's Firebase (a backend problem). Feel free to explore at any other time and reach out with questions or suggestions to Marie or Isabel at the emails above.
  - Unep-dashboard.web.app
- Nature-based solutions
  - Nature-based solutions are actions for climate adaptation or mitigation, or environmental protection, that are working *with* ecosystems to produce benefits for the ecosystems as well as meeting the goals of mitigation/protection
    - Examples: Mangrove planting has benefits for livelihoods and forest/ecosystem health
  - Goal
    - To provide inspiration to Strata users on concrete solutions
      - End-user consultations for strata highlighted a need for solutions to be better integrated into the platform
  - Structure
    - Currently a database of 60 individual examples of nature-based solutions
    - Entries include…
      - Basic information (description, type of intervention, ecosystem type, year)
      - Spatial information (coordinate data, national/local scale of intervention)
      - Purpose (purpose, direct & indirect benefits, climate or environmental hazards targeted)
      - Implementation (actors, reported best practice and challenges)
    - Hoping to integrate an element of conflict sensitivity to NbS
      - Was there a prior assessment of peace & security before the implementation of this nature-based solution?
      - Does this NbS contribute to peacebuilding?

- ● Is it sustainable in regard to changing conflict cycles?
- ● Were local communities included through the process?
  - ○ Functionality
    - ■ Would like to be able to visualize and interrogate database across different regions
    - ■ Would like for certain solutions to be visual for certain stressors in Strata, providing suggestions or tailored recommendations
  - ○ Questions for development
    - ■ What other information would be useful for practitioners?
    - ■ How might we link examples which have not been explicitly evaluated for peace and security purposes?
    - ■ Which is more relevant, details on individual nature based solutions implemented or rather information on the whole project?
    - ■ How might we encourage user input to maximize peace & security content?

Discussion

How did you generate the 5 parameters of conflict sensitivity?
- ● They were largely based on UNEP's toolbox on addressing climate-related security risks, including conflict sensitivity, gender sensitivity, and inclusive programming. https://www.unep.org/resources/toolkits-manuals-and-guides/addressing-climate-related-security-risks?_ga=2.30933180.2048086482.1658147524-1429431024.1612346467
- ● They also seemed to be easy enough for users to be able to provide

Where do you get the data for the NbS database? I know other people who could help feed data into the system.
- ● The nature based solutions we've found so far are from an initial literature review.
- ● In fact, we'd really love more recommendations. Please reach out to us directly with ideas at EMAIL.
- ● In the future, we hope to develop a form.

We at CGIAR are developing a similar tool, the Climate Security Observatory. How do you ensure reliability for data sources on conflict incidence? How granular are the data overlays, and to what extent are they cross-border?
- ● Using ACLED as a source for conflict data - we do not gather data ourselves, but rather trust that the organizations gathering this data are much better at it than we would be.
  - ○ In the future, we'd either like to triangulate the data, or provide additional sources so that users can triangulate themselves. This would also allow us to provide a confidence interval on it.
- ● For the data units, we go to a 10 meter resolution. It, however, depends on the input data as they often are provided at different resolutions. All are mapped on top of each other to allow for granularity anywhere it is possible.
  - ○ We also provide time-historical information in a hexagonal layout of 20km each.
- ● We are developing regional versions of Strata in order to provide cross-border information.

- - Mapping vulnerability is not only temporally, but spatially diffused. There is still much work to be done to harmonize the quantitative with the qualitative, including migration.

In terms of generating more inputs by users, have you thought about partnering with research institutions to formally feed into this platform?
- We definitely need to do more stakeholder outreach in the regions where we are working to understand who is collecting what data, how, etc.
- The scientific partners should be local, and the approach of Strata is very grounded in user tests.

Do you have an ecosystemic approach to the solutions? How do you connect the ecosystems to the other events happening, especially when the logic of an ecosystem does not align with the logic of institutions or of conflict patterns?
- Yes, exactly, the database will include information on ecosystems and even ecoregions and their types. The IUCN's literature has been helpful on this.