

# Environmental and Climate Stress Index Communications Package for GEO

**A collaborative project by:**

United Nations Environment Programme ([www.unep.org](http://www.unep.org))

University of Edinburgh (<https://www.ed.ac.uk/geosciences>)

Earth Blox ([www.blox.earth](http://www.blox.earth))

## United Nations Environment Programme

**David Jensen, Head of Environmental Peacebuilding**



**“The world has entered a new age for digital innovation, and we must harness novel frontier technologies to improve global environmental stewardship. To this end, UNEP is thrilled to join forces with the University of Edinburgh and Earth Blox to develop the ECSI.”**

David Jensen is the Head of the Environmental Peacebuilding Programme at UN Environment. Since 2009, David has been a leader in a global effort to establish a new multidisciplinary field of environmental peacebuilding. This field aims to promote environmental and natural resource management to prevent, mitigate, resolve, and recover from conflict. David is also developing and advocating for a governance framework that supports a digital ecosystem of environmental data as digital public good.

**Marie Schellens, Environmental and Climate Security Analyst**



**“We are excited to collaborate with the University of Edinburgh, Earth Blox, and Google to provide easy-to-use tools for environmental and climate hotspot mapping. This unlocks the possibility to move from static problem assessments to user-relevant, actionable solutions.”**

Marie Schellens works as an environment and climate security analyst at UNEP, where she leads the theoretical and methodological development of the project. Marie Schellens received a MSc in Geography jointly from KU Leuven and Free University Brussels (Belgium, 2015). From 2016 to 2020, 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.

**Albert Martinez, Climate Change Security Analyst**



**“This stimulating initiative to build a digital platform will substantially help the UN to reduce climate risks in the field. By mapping environmental stresses, the ECSI will be crucial to promote sustainable livelihoods through more informed decision-making at the policy and programme levels.”**

Albert Martinez is a climate change security analyst at UNEP, he supports the coordination of a project that converts climate change and security theory into practice and policy. Albert’s mission is to improve the livelihoods of people embedded in conflict situations that are affected by climate change. Albert holds a BSc in Environmental Sciences for University of Barcelona (2016), a MSc in Political Research from University Pompeu Fabra (2018), and a MA in International Administration and Conflict Management from University of Konstanz (2019).



Earth Blox

Website: [www.blox.earth](http://www.blox.earth)

**Dr. Genevieve Patenaude, CEO**



**“Earth Blox makes Planetary-Scale Earth-Observation code-free and effortless. We are delighted to offer UNEP our customisable solution, simplifying the task of identifying the convergence of environmental and climate stresses globally.”**

Genevieve is a geospatial entrepreneur and associate professor at the University of Edinburgh, with an interest in bringing planetary-scale satellite insights to address global challenges (deforestation, disaster, poverty). Her mission as CEO and co-founder of Earth Blox is to democratise the power of satellite data and Earth Observation.

**Sam Fleming, Director**



**“I am delighted that Earth Blox will be working with UNEP and global stakeholders to assess climate and environmental stresses. Addressing global challenges is core to Earth Blox’s mission.”**

Sam is Director and Co-founder of Earth Blox. He has 10 years of experience within the EO commercial sector. He will be supporting project development and management as well as linking requirements with technical development.



## University of Edinburgh

Iain Woodhouse, Professor of Applied Earth Observation



**“The University of Edinburgh is excited to contribute to this endeavour: it directly links to Edinburgh’s ambition to be the Data Capital of Europe, with particular skills in using satellite data for improving livelihoods worldwide”**

Iain is Professor of Applied Earth Observation at the University of Edinburgh, with a specialisation in active remote sensing. He is particularly passionate about expanding access to Earth Observation and geospatial data, and demonstrates that through his continued efforts in capacity building and on-line learning.

Kristina Tamane, Space Business Development Executive



**“This project is an essential first step in uniting ambitions and collaboratively making a positive change in our world. University of Edinburgh’s School of GeoSciences are the largest and most successful interdisciplinary grouping of geoscientists and geographers in the UK and are very excited to contribute this expertise and knowledge to such an impactful project.”**

Kristina is a Space Business Development Executive at the University of Edinburgh and an Innovation Adviser for the UK national [SPRINT Programme](#).

Kristina’s primary role is the creation of collaborative opportunities between the industry and the University within the space sector and establishing long term mutually beneficial relationships. Kristina brings with her experience and skills from both the private and public sectors, a commercial mindset, an understanding of the value of multidisciplinary work and a relentless enthusiasm for the space sector and its potential impact on our environment.

## UNEP Institutional Quotes

“Through the ECSI, UNEP solidifies its commitment to identify and emerging environmental threats to security, and to supporting partners in the United Nations system who are working to address those threats at both the political and programmatic level.”

“The United Nations system needs a rapid and accurate way to determine where environmental and climate stresses are converging and contributing to increased risk of maladaptation, fragility, migration, and conflict. Advanced geospatial analytics of Earth Observation data at the global and national level are needed over time and space to help identify and prioritize hotspots as well as programme risk reduction and resilience-building interventions.”

“Environmental challenges cannot be tackled without data and analytics, and effective solutions cannot be deployed. Through this collaboration, Google Earth Engine will help UNEP to monitor the environmental indicators of the SDGs, facilitating environmental stewardship and human wellbeing.”

“UNEP will advance the systematic analysis of the state of and trends in environmental parameters, including the geospatial data and statistics needed to achieve the Sustainable Development Goals of the Agenda 2030.”

“The ECSI will be used in the field to integrate environmental and climate stressors into horizon-scanning and early-warning mechanisms, as well as conflict prevention, risk reduction, and resilience-building measures.”