



# Strata

Custom Climate Security Analytics

## GLOSSARY



# Glossary

## General Concepts

| Term                           | Definition   | Source   |
|--------------------------------|--|--|
| Climate                        | Long-term-average (classically 30 years) weather conditions, including the mean and the variability in rainfall, temperature, wind, etc.   | Based on World Meteorological Organisation (WMO)         |
| Climate Change                 | Long-term changes in climate (either the mean or variability), either past or future.  | Based on WMO   |
| Climate-related Security Risks | Risks that can simultaneously undermine the security of humans, communities, states, the international system, the environment, and ecology as a consequence of changing climate patterns, and their impacts on biophysical and socioeconomic systems.   | Stockholm International Peace Research Institute (SIPRI) |
| Climate Risk                   | Risk where the hazard is climate-related, thereby resulting from the interaction of climate hazard (or stressor), exposure and vulnerability (see "Risk" definition).  | Based on IPCC  |
| Climate Stressor               | A climate event or change that strains a system, including erratic, extreme and/or changed rainfall patterns, temperature increases, storms and shifting seasonal patterns (also referred to as a "climate hazard").   | Based on Climate Security Mechanism (CSM)                |
| Conflict                       | Armed conflict by any actors at any level, including intercommunal, civil war and state-level.   |  |
| Environment                    | Natural features and conditions in an area, including climate, land and soil, biodiversity, air, freshwater and oceans and coasts.   | Based on UNEP  |
| Environmental Change           | Changes to the environment (either natural or human-driven). Includes changes in climate (e.g., changing rainfall patterns), land and soil (e.g. desertification, soil degradation), biodiversity, air (e.g. air pollution), freshwater (e.g. changing river flows), and oceans and coasts (e.g. ocean acidification). | STRATA team  |

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| <b>Environmental Stressor</b>           | Environmental event or change that strains a system, such as an ecosystem or a community, including but not limited to climate events, e.g. flood, fire, earthquake, air/water pollution  | STRATA team                                   |
| <b>Environmental Stress Multipliers</b> | Environmental indicators that exacerbate other environmental or security stresses in a location, for example increasing the risk of conflict in an already conflict-sensitive area.   | STRATA team                                   |
| <b>Exposure</b>                         | The amount and locations of people and assets (including livelihoods, natural resources, infrastructure, or economic, social or cultural assets) that could be adversely affected by a natural or human-made hazard   | Based on UNDRR                                |
| <b>Hazard</b>                           | See “stress(or)”.   |   |
| <b>Hotspot</b>                          | A location (such as a pixel, district, or other defined area) where there is a convergence of stresses, which may include climate, environmental, peace and security stresses, as well as socioeconomic exposure and vulnerability. In particular, the location will have multiple stress-monitoring indicators that have crossed thresholds at the same time. A hotspot implies that further attention is required in that location, possibly with priority over non-hotspot areas. It does not mean that an event has occurred, nor does it imply any quantitative probability of anything occurring. | STRATA team                                   |
| <b>Human Security</b>                   | Human security captures the state of people’s welfare, including economic, food, health, environmental, personal (protection from violence including conflict), community and political security.   | Based on UNDP                                 |
| <b>Insecurity</b>                       | <p>Opposite of security, where there are negative impacts on human security (as it is defined above).</p> <p>Climate insecurity is when those impacts on human security (whether economic, food, health, environmental, personal, community, or political) are caused by changes in the climate.</p>  | STRATA team                                   |
| <b>Nature-based Solutions</b>           | Actions to protect, sustainably manage, and restore natural or modified ecosystems that address societal challenges (including conflict prevention and peacebuilding) effectively and adaptively,   | Based on International Union for Conservation |

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|               | simultaneously providing human well-being, biodiversity and climate mitigation benefits.  | of Nature (IUCN)                           |
| Risk          | The potential for consequences where something of value is at stake and where the outcome is uncertain, resulting from the interaction of stress (or hazard), exposure and vulnerability.   | Based on IPCC                              |
| Stress(or)    | A natural or human-induced event (slow-onset or rapid-onset), trend or physical impact that may cause adverse effects to human security or the environment or strain a system such as a local community or a state. (Also referred to as a “hazard”).   | Based on IPCC hazard definition            |
| Vulnerability | The propensity of exposed elements (people or assets) to be adversely affected by a hazard, as determined by physical, social, economic or environmental factors or processes. It can be mitigated by the ability of systems (e.g. individuals, communities, states) to manage the impacts without suffering a long-term, potentially irreversible, impact on their security. | Based in part on CSM and UNDRR definitions |

## Data-related terms

| Term       | Definition   | Source                             |
|------------|--|------------------------------------|
| Algorithm  | Calculation method to convert raw data layers into indicators and combine indicators together  | STRATA team                        |
| Basket     | A categorisation of indicators and/or indices according to sector, issue or other logical or theoretically defined grouping system. (Sometimes also referred to as a “bucket”, “domain” or “pocket”.) Strata categorises its indicators into three main baskets relevant to climate security: 1) Climate and environmental stresses; 2) Peace and security; and 3) Socioeconomic exposure and vulnerability. | STRATA team                        |
| Data Layer | Quantitative or qualitative geotagged information that either is an indicator or contributes to an indicator. Examples: A map of forest loss, a map of population density, a map of historic conflict events.  | STRATA team                        |
| Index      | An aggregation of multiple indicators, such that subtopics are aggregated into one overarching concept   | Based on composite indicators from |

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|           |  | JRC's Competence Centre on Composite Indicators and Scoreboards (JRC-COIN) |
| Indicator | A quantitative or qualitative (geotagged) dataset used to monitor a natural or socioeconomic characteristic. This is either a data layer itself, used directly, or is based on one or more data layers combined in some way to produce another measurement of the characteristic's status. For example, 'deforestation rate' is an indicator calculated using data layers of forest cover and forest change (loss/gain).                                 | STRATA team  |
| Proxy     | An indicator that is used to represent something indirectly.   |  |
| Threshold | The level of an indicator beyond which impacts are likely and/or action needs to be taken. Thresholds are generally set based on guidelines in scientific literature (e.g., heatwave is flagged when Maximum Apparent Temperature >41°C for at least 3 consecutive days). When no guidelines are available, they are calculated based on historical conditions. Details of how each threshold is calculated can be found in the technical documentation. | STRATA team  |

## Earth Blox's terms

| Term     | Definition   | Source      |
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| Block    | A visual representation of a discrete step in an analytical workflow that gives the user control over the nature and specifications of that step.                                      | STRATA team |
| Workflow | A series of analytical and/or processing steps that one or more datasets go through to be transformed into the desired information, intel, or output, such as hotspot maps and graphs. | STRATA team |

