

Annex 1

Climate and environmental impact assessment tools & databases

In October of 2023, members of FNET’s Climate and Human Rights Working Group reviewed six climate and environmental risk assessment tools to identify how to best use them to better understand climate and environmental impacts through a human rights lens, map these impacts over their supply chain and design targeted mitigating actions.

The tools were assessed based on the scope of the risks covered by each tool, in three groups: (1) tools measuring human rights and environment-related impacts; (2) tools measuring environment-related impacts; and (3) tools providing climate change-related scores. The assessments were based on guidance contained in the UN Guiding Principles on Business and Human Rights and the OECD Guidelines on

Multinational Enterprises, as updated in 2023, and took into account factors such as the capacity of tools to assess severity (scale, scope and remediability) and likelihood of risks to people, the risk time frame captured by the data set used in the tool, and the strength of the analysis of the interconnections between climate and environmental impacts and human rights.

The outcomes of this assessment, including the challenges and advantages identified by FNET members, have been captured in the following table. These results are not intended to reflect the views of FNET or Human Level. The table captures company-led assessment results that may include subjective views on the tools assessed.

Tools	Description	Advantages	Challenges and limitations	Examples of Risks Covered
1 Category 1 - Tools measuring human rights and environment-related impacts				
Fairtrade HRDD Risk Map Tool	<p>World-wide risk map that depicts the current understanding of the salient human rights and environmental issues per country and commodity supply chain in that country.</p> <p>Data/Scoring: The map integrates salient human rights issues and root cause analysis through Fairtrade’s engagement and collaboration with a range of stakeholders. Information can be searched by country and by commodity to see specific associated human rights issues.</p> <p>Scope: Ranks 129 countries and provides detail on each country’s operating environment (e.g., standard of living, workers’ rights, gender rights) are also available to view.</p> <p>Type of data: Quantitative and qualitative</p>	<ul style="list-style-type: none"> • Updated regularly. • Good education source on salient issues in global supply chains. • Includes helpful overview of risk mitigation approaches from Fairtrade. • Uses multi-factor third party reporting in is standard format, allowing deep dive comparisons. • Data-led and detailed assessment of risks relating to the country’s operating environment. • Includes both environmental and human rights impacts. • No previous training is required for use. • There are no restrictions for using the tool. • Data is easy to interpret as colour coded on a red- green gradient. 	<ul style="list-style-type: none"> • Highly manual interface and does not allow for data to be uploaded to receive an output of specific corresponding risk data. • Will need to be continuously updated to avoid third-party data becoming outdated and limited. • Data and categories are general and do not deal with sub-national variations and some specific commodities. • Overview of risk is based heavily on expert opinion that may not be sufficiently supported in third-party investigations or supplier conversations. • There is a significant reliance on expert judgement around the commodity risks and around how the commodity and country risks are combined to give the overall salient issues. • Does not use future-looking data points allowing for a longer-term perspective on risks. However, expert views taken into account for commodity risks may be partly forward looking. 	<p>Human Rights:</p> <ul style="list-style-type: none"> • Child Labour • Living wage • Living income • Labour rights and conditions • Gender rights • Forced labour • Freedom of association and collective bargaining • Self-determination • Non-discrimination • Privacy • Freedom of speech and public participation <p>Environment and Climate:</p> <ul style="list-style-type: none"> • Soil erosion and soil fertility • Deforestation and protected areas • Energy use • Emissions • Adaptation to climate change • Environmental awareness • Hazardous chemicals • Pest management • Fertilizer use • Buffer zones • Water use and management • GMOs • Biodiversity plan and agroforestry • Wild harvesting and sustainability of plant and animal species • Threatened and alien invasive species • Global Climate Risk • Forest Area Change • Land Degradation • Water Stress • Water Scarce Areas

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Tools	Description	Advantages	Challenges and limitations	Examples of Risks Covered
Category 1 - Tools measuring human rights and environment-related impacts				
<p>Sedex Radar</p>	<p>Risk assessment tool for labour rights and environmental risks covering countries, regions, supply chains and specific sites.</p> <p>Data/Scoring: Scores sites, sectors and countries across different ethical issues, from 0 to 10 - with 10 meaning an issue is highly likely to be present. Uses hundreds of data sources to produce scores, on a scale of 0–10 across 14 issue areas. The Pre-Screen dashboard gives country-level risk ratings for elements linked to environmental degradation (e.g. emissions and pollution), or climate change impacts (e.g. water stress). You can filter this by sector to look in more detail at sectors and see how these risks vary by country. Human rights risk scores (labour standards and H&S) are combined with environmental risk topics to give an ‘overall inherent risk’ score that consolidates both human rights and environmental risks.</p> <p>Scope: Global country and sector-specific human rights, environment and climate risk assessments. Regional data is available for certain countries.</p> <p>Core risk assessment tools: The core Radar tools include: 1) Risk assessment matrix: Country and sector risk-based assessments using supplier data that helps to identify high risks environments or vulnerable workers. 2) Site assessment - overview: Report that shows risks associated with single sites to track and measure local improvements. 3) Site assessment - Self assessment questionnaire: Gathers information from sites based on SAQs.</p> <p>Type of data: Quantitative and qualitative</p>	<ul style="list-style-type: none"> • Compares levels of risk across countries, sectors and sites. • Has the option and function to design action plans. • Provides information on workplace risks to workers. • Provides information on risks to the environment relating to biodiversity, water, energy and emissions, water pollution and deforestation. • Highlights countries and regions susceptible to drought, flooding and base water stress. • Highlights country and commodities linked to deforestation. • Combines human rights, environment and climate-related scores into an overall ‘inherent’ risk score for the Country/Region and sector. (However, there is no interaction between individual risk scores: a change in an environment risk does not influence the score of a human rights-specific risk. The exception is the H&S risk score, which looks at a country’s vulnerability to climate change.) • The Country/Region Comparison report can be used to view sub-national data for ‘base water stress’, drought or flooding risk. These issues are likely to be exacerbated with climate change. • The Country/Region Comparison report could be useful to see which geographic areas might be most vulnerable to future climate change impacts. 	<ul style="list-style-type: none"> • No indication of the scale, severity, or remediability of risks to people/human rights. You would need to use this data in combination with other data (e.g. supplier workforce data) to be able to get a better understanding of this. • Unable to show how much of an impact an environment risk score has on people (i.e. it does not look at the gravity, severity or remediability of that environmental risk on people). (However, companies can connect the two at a high level (i.e., how the waste and pollution risk score is going to have an impact on people’s wellbeing).) • The Country/Region Comparison report does not consider climate-related impacts due to heat stress, disease, sea-level rise, or climate-induced migration. • Geopolitical events are not accounted for. Will need to be updated if countries go through significant changes or events. • Future looking scenarios are not included. There is a reliance on publicly available information and Sedex scoring from ‘current’ data, which in some cases is dated 2018. • Does not provide guidance on meaningful actions to address risks. • Available only to Sedex members and requires training. 	<p>Human Rights:</p> <ul style="list-style-type: none"> • Forced labour • Freedom of association • Gender inequality • Wages • Working hours • Workplace risks to workers • Risks to workers’ health and safety <p>Environment and Climate:</p> <ul style="list-style-type: none"> • Biodiversity • Water use and stress • Energy and emissions • Waste and pollution

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Tools	Description	Advantages	Challenges and limitations	Examples of Risks Covered
Category 2 - Tools measuring environment-related impacts				
<p>WWF Risk Filter Tools</p>	<p>Contains 2 different tools:</p> <p>(1) WWF Biodiversity Risk Filter: Aims to assess the state of biodiversity-related issues and pressures that may impact them by using 33 different indicators, distributed along three types of biodiversity-related business risks:</p> <ul style="list-style-type: none"> a. Physical, including indicators such as water scarcity, soil condition, water condition, air condition, ecosystem condition, pollination, wildfire hazard, extreme heat, land usage and tree coverage. b. Regulatory, including indicators such as unstable, ineffective and poorly implemented regulatory environment; and restrictions and fines due to non-compliance with existing regulations. c. Reputational, including indicators such as presence of Indigenous Peoples and local communities, resource scarcity (food, water, air), labour/human rights and financial inequality. <p>The tool is divided into four modules:</p> <ul style="list-style-type: none"> • Inform: to explore industry sectors dependencies on ecosystems and biodiversity impacts by industry. • Explore: to view maps of high risk regions to identify priority areas for action. • Assess: to upload location specific company and supply chain data for tailored assessment. • Respond: to draw up a catalogue of response measures per site or across sites based on risk assessment module. <p>Type of data: Quantitative</p> <p>(2) WWF Water Risk Filter: assessment framework that aims to account for business dependencies and impacts on water through two approaches:</p> <ul style="list-style-type: none"> • By applying pre-selected industry weightings to calculate risk scores – see methodology documentation for more details • By assessing operational risks based on how individual sites depend upon and/or potentially impact water <p>Type of data: Quantitative</p>	<ul style="list-style-type: none"> • Provides geographical heat maps with a variety of key risk factors related to water and biodiversity that are likely to affect people and human rights. • Provides details by specific region or risk category, which you are able to personalise to your supply chain. • Provides large quantitative data set which can be useful in reports and very useful in identifying areas to prioritise. • Allows for individual and bulk upload of companies' operation sites and supply sites. • Quickly maps large datasets specific to your supply chain – down to region level. • Gives a simple risk score to a wide variety of environmental and social indicators. • Downloadable by site into excel to analyse each individual risk. • Integrates an operational assessment - SAQ. • Some future scenario analysis available in the water risk filter. • A vast majority of factors in the tools can be directly linked to impacts on humans. For example, extreme heat, access to sanitation and clean water, pollution, and political state. Looking at these scores can give a clear indication of the risks to human rights. • The biodiversity risk filter gives a specific risk scoring to presence and impacts on Indigenous Peoples and local communities. • The water risk filter gives a risk scoring to the cultural diversity factor, which indicates that there are more cultural groups there are in an area. • The water risk filter includes a future scenario analysis. This allows the user to visualize how risk will change by 2030 and 2050. Additionally, it shows these changes through three possible pathways: optimistic, current trend, and pessimistic. 	<ul style="list-style-type: none"> • Prioritisation based on assumed risks to business; not based on impacts on people or to the planet. • Not clear in helping companies separately prioritise risks to people and to the environment. • Provides all quantitative data and no recommendations for potential mitigation strategy. • Does not indicate the approximate number of people of people that could be affected by the environmental risks and how (in a number of cases). 	<p>Biodiversity:</p> <ul style="list-style-type: none"> • Soil, Air and Water Condition • Ecosystem condition • Pollination • Landslides • Wildfire Hazard • Extreme Heat • Water Use • Pollution • Indigenous Peoples and Local Communities Lands and Territories • Labour/Human Rights • Financial Inequality • Political Situation <p>Water:</p> <ul style="list-style-type: none"> • Aridity • Water Depletion • Baseline Water Stress & Availability • Droughts/ Flooding • Law and Policy Status on Water • Biodiversity richness • Policy, government, and corruption • Protected areas • Financial investment into water • Cultural Diversity

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Tools	Description	Advantages	Challenges and limitations	Examples of Risks Covered
Category 3 - Tools providing climate change-related scores				
Environmental Performance Index (EPI)	<p>Using 40 performance indicators across 11 issue categories, the EPI ranks 180 countries on their climate change performance, environmental health, and ecosystem vitality. The results allow companies to compare the countries on their environmental performance.</p> <p>Data/Scoring: Countries receive a score of 1-100 (worst to best) based on scores on 40 performance indicators grouped into 11 issue categories across 3 policy objectives: Health, Ecosystem Vitality, and Climate Change.</p> <p>Scope: 180 countries ranked best (1) to worst (180) against each other.</p> <p>Type of data: Quantitative</p>	<ul style="list-style-type: none"> Quantitative data on qualitative issues. Vast pool of very detailed data that is easy to use or share. Can give internal teams an overview of high risk countries where suppliers may need more support against climate risks. Compares country level performance overall and on specific environmental issues. Useful for sourcing and strategy. Search scores and ranks based on sector specific elements. Gives an overview of the key environmental risks in sourcing countries. 	<ul style="list-style-type: none"> No direct human rights impacts covered. However, it does cover risks like 'health', 'air pollution' and 'access to food'. Highlights environmental issues that will impact human rights but does not explicitly describe how human rights will be impacted. Only offers country-level data, even though impacts may vary across regions. Lack of personalization, since it does not allow companies to filter the categories that are relevant for their business. Lack of updated or future-looking data. The data is updated every couple of years. 	<ul style="list-style-type: none"> Climate Change Mitigation Air Quality Waste Management Water and Sanitation Heavy Metals Biodiversity and Habitat Ecosystem Services Fisheries (Status) Agriculture (Status) Acid Rain Water Resources
Agri Adapt	<p>Europe-focused monitoring and data sharing tool assessing the vulnerability of the main European agricultural products to climate change and propose sustainable adaptation plans allowing these systems to become more resilient. Focuses on in-depth stakeholder engagement and combines it with sectoral knowledge and technical data.</p> <p>Data/Scoring: Uses 23 layers of data points on climate and environmental risks that cover water, drought prediction, climate change index, temp change index but also transport / infrastructure.</p> <p>Scope: Global risk mapping, which is region-specific and commodity-specific for rice, cotton and coffee.</p> <p>Type of data: Quantitative and Qualitative</p>	<ul style="list-style-type: none"> Large spectrum of climate change data modelling. Clear source of data for each layer. Allows for visual overview on the world map of different risks. Excel data download is available. Sustainable adaptation measures described, when clicked on, provide a summary sheet of its overall sustainability though their possible impact on 9 climate components. Sustainable adaptation measures are specific to each of the climate zones assessed. The tool could be used, with appropriate training, to describe a profile of specific geographical locations in terms of climate change risks and vulnerabilities. There are a few indicators that provide future-looking trends, i.e., projected water stress or temperature increase. 	<ul style="list-style-type: none"> No specific human rights impacts are listed. The tool does not allow for managing large data sets. Requires manual data input which is time intensive. Does not accept GCS. Limited crop-specific data. Capacity building is needed around the reliability of the data, as well on how to use the tool to assess risk at farm level. It is difficult to draw specific conclusions beyond generic human rights impacts using the tool because it is not specific enough. 	<ul style="list-style-type: none"> Aqueduct baseline water stress Accessibility to cities Agricultural exposure to water stress Aqueduct drought risk Aqueduct seasonal variability Projected water stress (looks at 2040 2030 and 2020) Landscape susceptibility Vulnerability to climate change Projected change in annual average temperature (by 2080) Projected change in extreme precipitation days Projected change in annual average maximum temperature Flood hazard

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Category 3 - Tools providing climate change-related scores				
UNICEF Children's Climate Risk Index	<p>Tool ranking countries based on two scores:</p> <ul style="list-style-type: none"> • Exposure to environmental risk (Pillar 1): water scarcity, floods, tropical cyclones, vector borne disease, heatwaves, air pollution, and soil and water pollution. • Child vulnerability (Pillar 2): Health and nutrition, education, sanitation, and poverty levels. <p>Data/Scoring: Pillar 1 uses a range of sources from UNEP, WRI, CIESIN and various scientific papers. Pillar 2 scores child vulnerability to human right risks, but not specific to the agricultural industry.</p> <p>Scope: the tool is country-specific and covers 163 countries.</p> <p>Type of data: Quantitative</p>	<ul style="list-style-type: none"> • The tool combines two scores: (1) exposure to environmental risk and (2) child vulnerability which includes factors such as health and nutrition, education, sanitation, and poverty levels. • Can be easily integrated into risk assessments, as it provides country rankings. • Provides helpful understanding of the interconnection between human rights and climate risks, specifically, when it comes to children's rights. • Has independent scores for environment and for human rights, which can be assessed together or in an integrated score. • Easy to understand and use with no training. 	<ul style="list-style-type: none"> • Potential for data to be out of date (made in 2021, has some data from 2015). • Difficult to access background data to see how each factor is individually scored. • No ability to filter the weighting of each component. For instance, some of the extreme weather events are specific to certain parts of the world (e.g. tropical cyclones, vector borne diseases), giving those countries a higher weighting. • Only focuses on children risks and not on other relevant vulnerable groups (e.g. seasonal workers/women). • Does not include forward or future-looking risks or data. 	<ul style="list-style-type: none"> • Water scarcity • Riverine floods • Coastal floods • Tropical cyclones • Vector-borne diseases • Heatwaves • Air pollution • Soil and water pollution • Child health and nutrition • Education • Water, sanitation and hygiene • Poverty, communication assets and social protection