UNDERSTANDING NATURAL CAPITAL

At the heart of a natural capital approach is the understanding that nature underpins human health, wealth, culture, identity and happiness. A natural capital approach works to illuminate this value, and helps decision-makers to understand the complex ways in which natural, social and economic systems interact, impact, and depend upon one another so to make better informed decisions.

Even if natural capital is a relatively new approach to you or your organization, you will find that it is closely linked to concepts you are already familiar with. Natural capital can be seen as an additional lens which allows you to uncover important issues for your organization's sustainability journey and connect the dots between various ongoing sustainability efforts. This overview puts forth a number of key concepts, goals, methodologies and standards, is

LINKAGES TO THE NATURAL CAPITAL PROTOCOL

The elements in this infographic can be linked to the four different stages of the Natural Capital Protocol. This overview indicates for each category of elements in which stage of a natural capital assessment they are most applicable - notwithstanding the fact most can be applied throughout all stages of the protocol.

FRAME – This stage is about defining why you should conduct a natural capital assessment. It helps you explore how better information on natural capital could be relevant to your company's decision-making processes and what the potential replicability of the assessment is.

SCOPE – This stage is about defining the objective, scoping the assessment, and determining impacts and/or dependencies that are material to your business. The scoping stage enables you to conduct a consistent and relevant assessment, and helps you confirm which natural impacts and/or dependencies are most relevant from the perspective of your business and stakeholders.

MEASURE AND VALUE – This stage is about measuring the impact drivers and/or dependencies and the changes in the state of natural capital, and subsequently valuing these impacts and/or dependencies. Rigor is particulary important in this stage, ensuring that your data and methods are technically correct, scientifically accurate and consistent with economic theory.

APPLY – This stage is about interpreting and testing the results and taking action. Documenting and recording the decisions, methods and assumptions helps you validate and verify your process and results. In this stage, you will investigate how to apply the results and integrate natural capital into existing business processes.

The campaign is being led by the Institute of Chartered Accountants in England and Wales alongside the World Business Council for Sustainable Development, IUCN and Oppla.

ICAEW wbcsd IUCN oppla WE VALUE NATURE

Developed by:

Nature^Squared

Supporting NATURAL CAPITAL COALITION

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 821303

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ENTRY POINTS TO NATURAL CAPITAL THINKING

ENVIRONMENTAL THEMES

WATER

SOIL & LAND

CLIMATE

BIODIVERSITY

POLLUTION

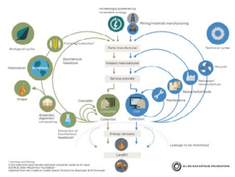
SUSTAINABILITY CONCEPTS

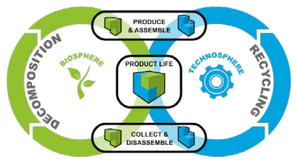
DOUGHNUT ECONOMICS[1]

NATURE-BASED SOLUTIONS[2]

PLANETARY BOUNDARIES[3]

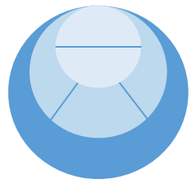
CIRCULAR ECONOMY[4] & CRADLE TO CRADLE[5]





ECOSYSTEM SERVICES[6]

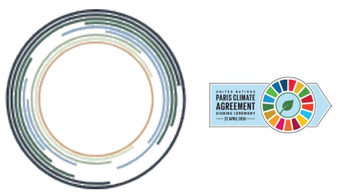
INTEGRATED CAPITALS THINKING[7]



GOALS & TARGETS

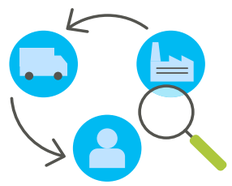
SUSTAINABLE DEVELOPMENT GOALS[8]

SCIENCE BASED TARGETS[9] & PARIS AGREEMENT[10]

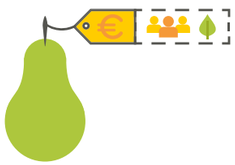


METHODOLOGIES

LIFE CYLE ASSESSMENT

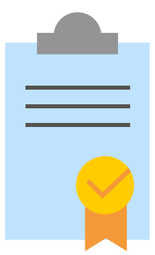


TRUE COST ACCOUNTING



FOOTPRINTING

CERTIFICATION SCHEMES[11,12,13,14,15]



ACCOUNTING & REPORTING STANDARDS[16,17,18,19,20,21]

ENTRY POINTS TO NATURAL CAPITAL THINKING

This overview puts forth a number of key concepts, goals, methodologies, and standards and describes how they are linked to natural capital.

It helps you understand what you are already doing on natural capital - even if you hadn't defined it as a sustainability theme yet - and how natural capital thinking can contribute to achieving a wide array of sustainability goals, as well as uncover blind spots within your existing sustainability strategy.

This product has been developed for the Food & Beverage sector but is also applicable to other sectors. It is a product by Nature^Squared as part of the We Value Nature campaign.

Developed by:

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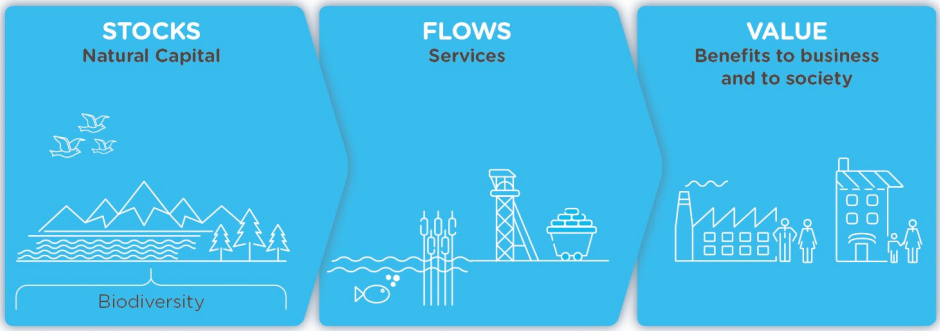
NATURAL CAPITAL



Natural capital is another term for the stock of renewable and non-renewable natural resources on earth (e.g., plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits or "services" to people (adapted from Atkinson and Pearce 1995; Jansson et al. 1994).

These flows can be ecosystem services or abiotic services, which provide value to business and to society. Ecosystem services are the benefits to people from ecosystems, such as timber, fiber, pollination, water regulation, climate regulation, recreation, mental health, and others. Abiotic services are benefits to people that do not depend on ecological processes but arise from fundamental geological processes and include the supply of minerals, metals, and oil and gas, as well as geothermal heat, wind, tides and the annual seasons.

Biodiversity is critical to the health and stability of natural capital as it provides resilience to shocks like floods and droughts, and as it supports fundamental processes such as the carbon and water cycles as well as soil formation. Therefore biodiversity is both a part of natural capital and also underpins ecosystem services.

A natural capital approach integrates the concept of natural capital into decision-making. Thinking in 'capital' terms enables comparison of many changes and decisions at the same time. The natural capital approach uses information from, and provides input to, many existing environmental management and analytical approaches.

ENVIRONMENTAL THEMES

Water, Soil & Land, Climate, Biodiversity and Pollution are sustainability themes that most Sustainability Managers within the Food & Beverage sector are more than familiar with.

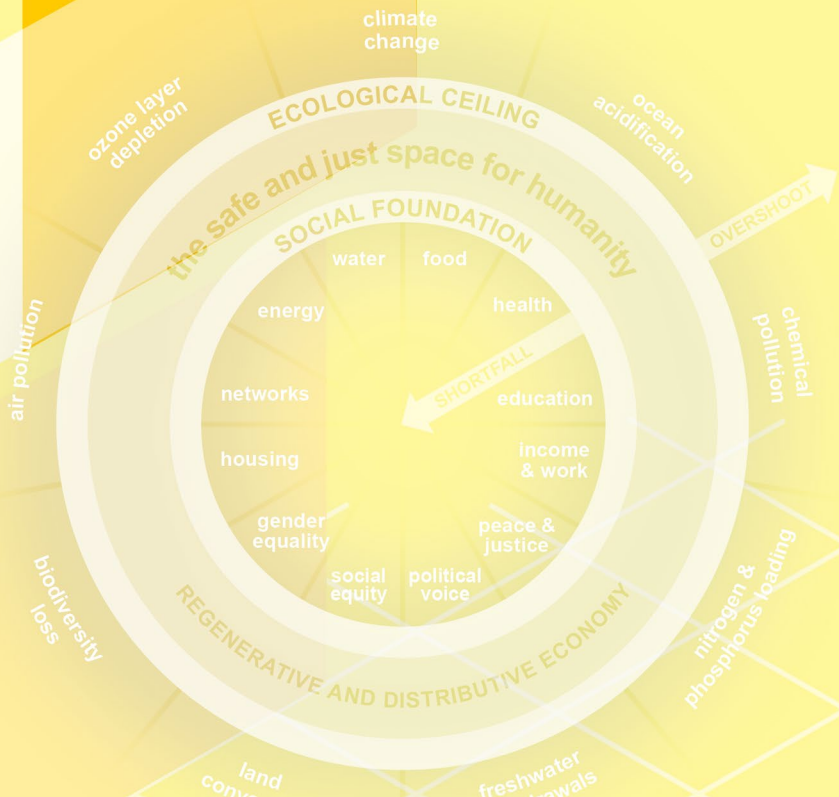
Environmental sustainability is about minimizing negative impacts and optimizing positive impacts across several themes including water (taking into account both quality and quantity), soil quality and land use, climate (change) and renewable energy, biodiversity, and pollution (such as air pollution or micro-plastics).

Every business can have an impact or dependencies on these themes, either through their own operations or through their supply chain. These environmental themes are closely interlinked. For instance, healthy soils store carbon and increase the infiltration of water, mitigating climate change and water scarcity.

These themes give substance to natural capital thinking and provide excellent entry points to start a conversation on natural capital. Clean freshwater and healthy soils are natural resources which provide benefits to the environment, to business and to society. The work you are already doing on these themes can provide valuable input for the scoping phase of a natural capital assessment. Furthermore, the assessment may help you prioritize environmental themes and identify specific actions in the apply phase.

SUSTAINABILITY CONCEPTS

DOUGHNUT ECONOMICS*



Doughnut Economics, as developed by Kate Raworth, combines the concept of planetary boundaries which must not be exceeded, with the concept of social boundaries (such as water, food, health care, education, equality, etc.) that need to be met at a minimum.

Natural capital assessments provide insight into how your company is performing against the ecological ceilings and social thresholds. If your company is using the Doughnut Economy as a sustainability concept, performing a natural capital assessment will help you track your progress. You may also already be working on achieving net positive impacts on natural capital.

SUSTAINABILITY CONCEPTS

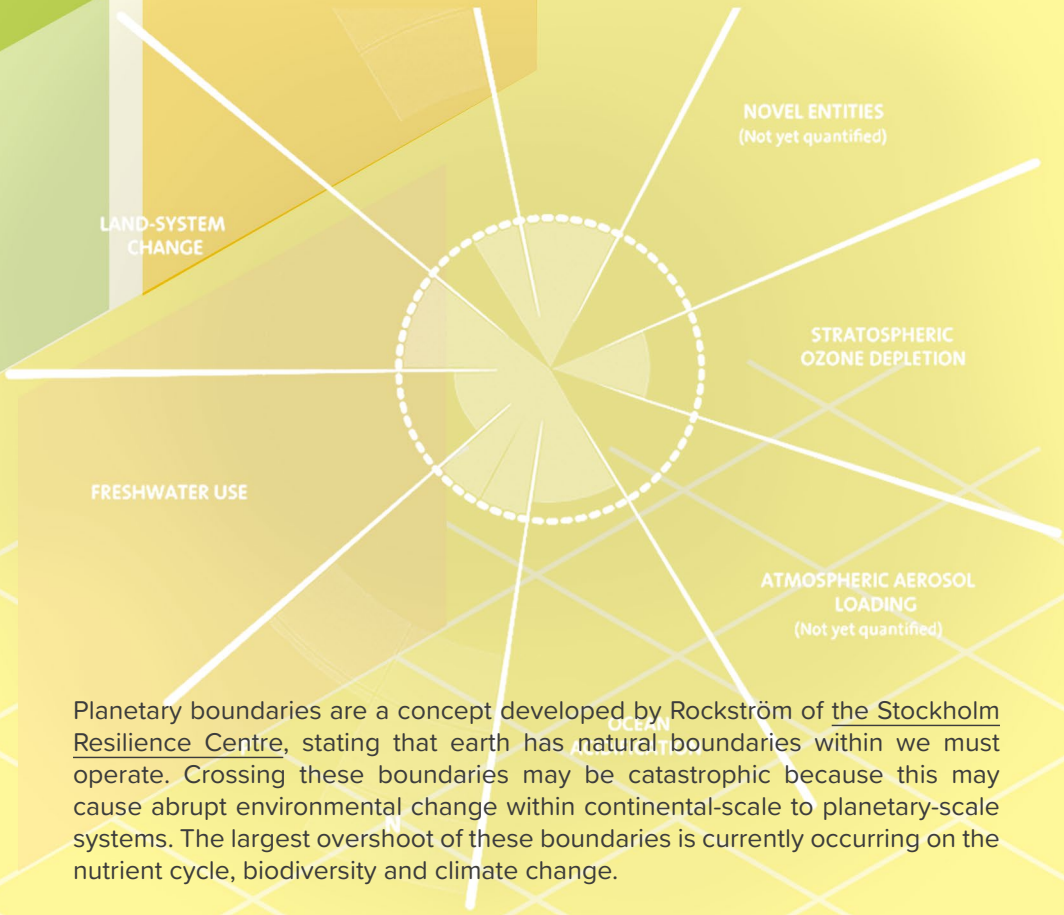
NATURE-BASED SOLUTIONS*

Nature-based solutions harness the power of nature to protect, sustainably manage and restore ecosystems. They are solutions which invest in the robustness of natural capital and strive to be win-win solutions that address society's challenges and provide human well-being and biodiversity benefits.

A natural capital approach supports nature-based solutions by identifying societal challenges and solutions and by highlighting values and benefits to business and society.

SUSTAINABILITY CONCEPTS

PLANETARY BOUNDARIES*

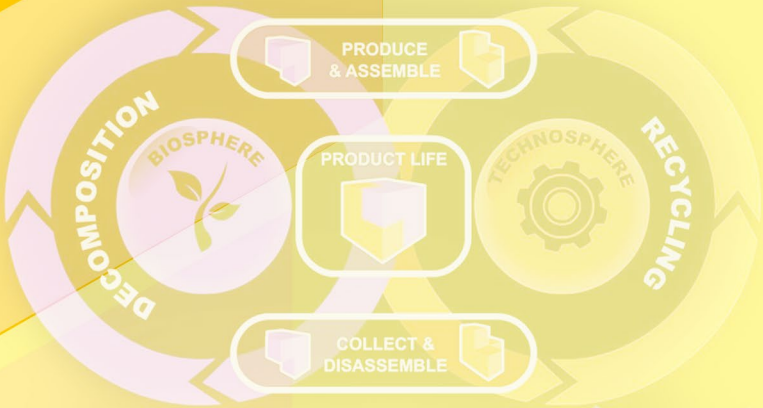


Planetary boundaries are a concept developed by Rockström of the Stockholm Resilience Centre, stating that earth has natural boundaries within we must operate. Crossing these boundaries may be catastrophic because this may cause abrupt environmental change within continental-scale to planetary-scale systems. The largest overshoot of these boundaries is currently occurring on the nutrient cycle, biodiversity and climate change.

Natural capital assessments provide insight into how your company is performing against these ecological ceilings. If you are already reporting against indicators for the planetary boundaries, you already have performed at least a partial natural capital assessment.

SUSTAINABILITY CONCEPTS

CIRCULAR ECONOMY* & CRADLE TO CRADLE*



A circular economy is an economic system of closed loops in which raw materials, and products lose as little of their value as possible, renewable energy is used and systems thinking is at the core. Both circular economy and natural capital take such a systems approach. A natural capital approach supports a circular economy strategy by identifying leakages and by uncovering blind spots and new possibilities for circularity.

Cradle to cradle is a biomimetic approach to product and system design that models human industry on natural processes, viewing materials as nutrients circulating in healthy, safe metabolisms. Both cradle-to-cradle and natural capital take nature as a starting point for development. Central to the cradle to cradle philosophy is that old product components can be converted into new products and are perceived as nutrients instead of waste. This allows the use of non-renewable materials and the pressure on natural capital to be reduced. A natural capital approach supports a cradle to cradle strategy by identifying leakages, uncovering blind spots and new possibilities for circularity.

SUSTAINABILITY CONCEPTS

ECOSYSTEM SERVICES*

Ecosystem services are the benefits that can be obtained from biodiversity and can be grouped in four categories: provisioning, regulating, supporting, and cultural services. TEEB is a global initiative focused on making nature's values visible, and also provides resources for business in general, and more specifically, guidelines for the AgriFood sector.

Viewing ecosystem services through a natural capital lens helps businesses to recognize unseen values that underpin all goods and services, providing a clear business case for protection of, and investment in, a healthy ecosystem. It allows an integrated approach to issues management that recognizes the links and synergies between climate, water, sustainable development, equity and biodiversity.

SUSTAINABILITY CONCEPTS

INTEGRATED CAPITALS THINKING*

Sustainability can be understood in terms of capitals. Any organization will use different types of capital to deliver its products and services. The International Integrated Reporting Council (IIRC) has identified six capitals: financial capital, manufactured capital, intellectual capital, human capital, social and relationship capital, and natural capital. Integrated Capitals Thinking is about understanding the linkages between the six different capitals and enhancing these stocks in an integrated manner.

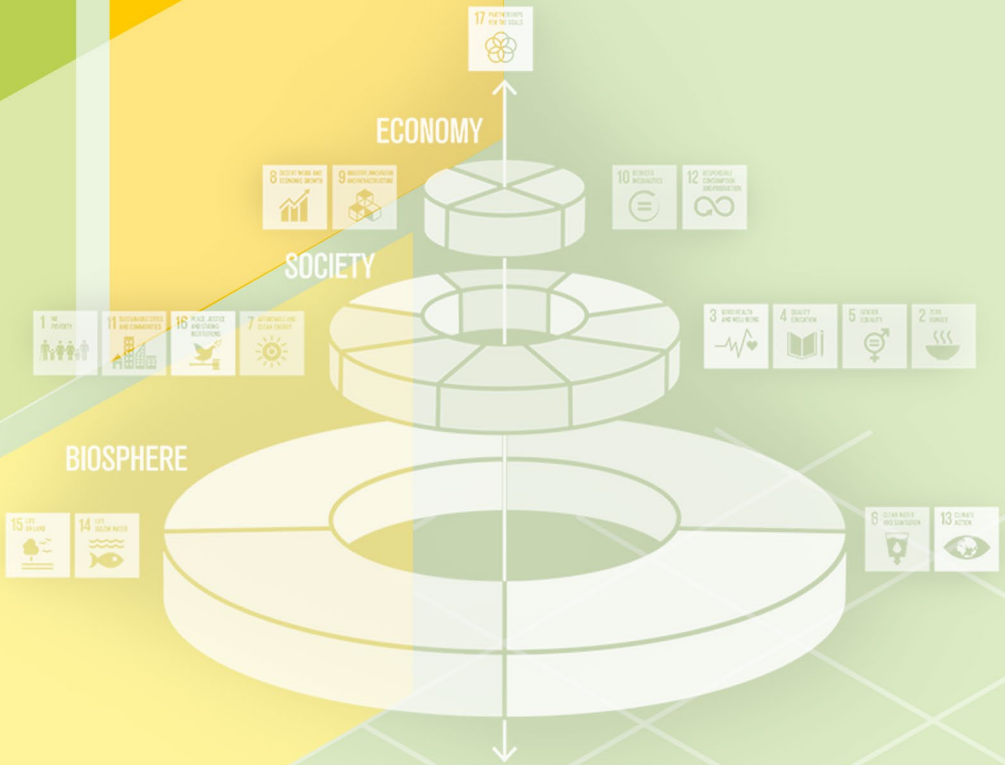
Integrated Capitals Thinking can be used for the scoping of your natural capital assessment and the interpretation of the results. It can help with the identification of a variety of benefits beyond the concept of natural capital only, for instance by assessing the societal effects of a healthy ecosystem.

ADDITIONAL GUIDANCE AND TOOLS

- **Natural Capital Protocol** – a decision-making framework that enables organizations to identify, measure, and value their impacts and dependences on natural capital.
- **Social & Human Capital Protocol** – a decision-making framework that enables organizations to identify, measure and value their impacts and dependencies on social and human capital.
- **Food & Beverage Sector Guide** – a supplement to the Natural Capital Protocol specifically developed for the Food & Beverage Industry.
- **TEEBAgriFood operational guidelines for business** – helps the Food & Beverage industry better understand their specific impacts & dependencies on natural capital as well as on social & human capital.
- **BSI 8632 Natural capital accounting for organizations** – a standard that is currently in development to support organizations with good practice for undertaking natural capital accounts.
- **IUCN Global Standard for Nature-based Solutions** – provides clear parameters for defining Nature-based Solutions and a common framework to help benchmark progress. The Global Standard includes a self-assessment tool.
- **CBD post-2020 Global Biodiversity Framework** – the Convention on Biological Diversity will adopt a post-2020 global biodiversity framework as a steppingstone towards the 2050 Vision of "Living in harmony with nature". The information note sets out ways and means to contribute to its development.
- **Principles of Integrated Capitals Assessments** – standardized natural capital accounting principles for businesses from the Natural Capital Protocol and Social & Human Capital Protocol (2020).

GOALS & TARGETS

SUSTAINABLE DEVELOPMENT GOALS*



The Wedding Cake Model orders the Sustainable Development Goals (SDGs) across three layers: the biosphere, the sociosphere and the economic sphere. This model indicates the conditionality and hierarchy between the goals. The bottom layer (biosphere), consisting of Clear Water (6), Climate Action (13), Life Below Water (14) and Life on Land (15), forms a foundation for the layers above.

If your company is already committed to the SDGs, securing goals 6, 13, 14 and 15 is essential to achieve the other goals. By working on natural capital, you are contributing to these goals and the SDGs as a whole.

GOALS & TARGETS

SCIENCE BASED TARGETS & PARIS AGREEMENT*

Science-based targets initially focused on climate change and shows companies how much and how quickly they need to reduce their greenhouse gas (GHG) emissions to prevent the worst effects of climate change. Science-based targets provide companies with a clearly-defined path to reduce emissions in line with the Paris Agreement goals.In addition, similar targets are being developed on Water, Biodiversity, Land on the Ocean.

Science based targets can help protect, manage and restore natural capital and underpin the objective and implementation of your natural capital assessment and wider sustainability efforts. Performing a natural capital assessment can help you understand if your organization is in fact contributing to the targets.

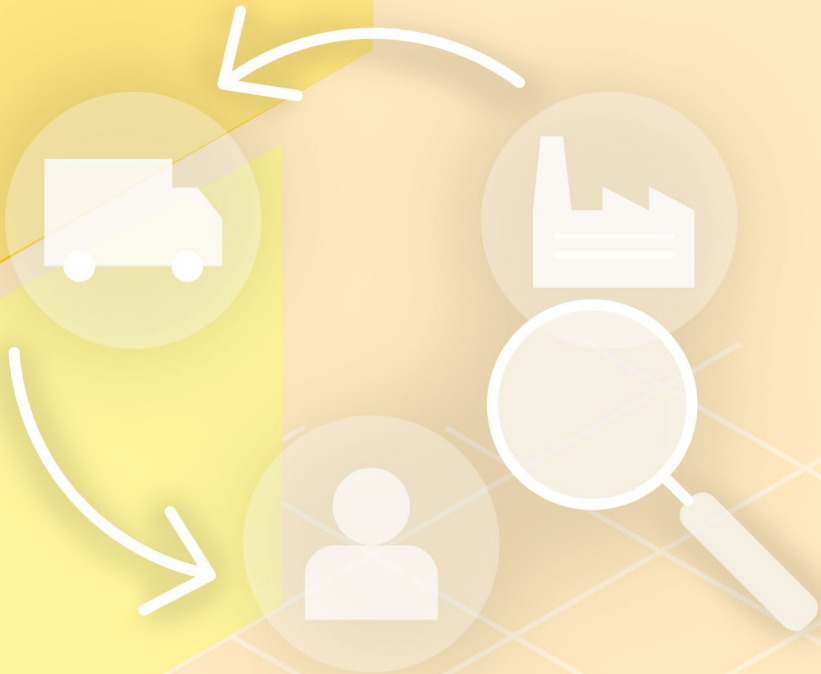
The Paris Agreement is a legally binding internationally treaty on climate change. It was adopted at COP 21 in Paris in December 2015. It sets out a framework to limit global warming to well below 2, preferably 1,5 degrees Celsius, compared to pre-industrial levels to achieve a climate neutral world by mid-century. It also aims to strenghten countries' ability to deal with the impacts of climate change. Supporting the Paris Agreement can underpin the objective and scope for your natural capital assessment and wider sustainability efforts. A natural capital assessment can help you understand how your organization is contributing to the targets as set by the Paris Agreement in order to meet limit global warming.

ADDITIONAL GUIDANCE AND TOOLS

- IUCN's **biodiversity guidelines for planning and monitoring corporate biodiversity performance** (including key biodiversity indicators).
- **Science Based Targets** – targets to reduce greenhouse gas emissions that are in line with science to meet the goals of the Paris Agreement (2020), with other targets underway through the Science Based Targets Network.

METHODOLOGIES

LIFE CYLE ASSESSMENT



Life Cycle Assessments (LCA) are used as a tool to assess the environmental impacts at all stages of the life cycle of a commercial product, process or service. From the extraction of raw materials to processing, transport, use and disposal. This analysis can provide insight into which phases of the cycle cause the greatest environmental impacts.

LCAs can be used as a method in natural capital assessments. A natural capital approach can shed a more integrated light on which aspects need to be considered when performing an LCA.

METHODOLOGIES

TRUE COST ACCOUNTING

True Cost Accounting (TCA) is a method used for calculating the impact of food and agricultural activities on natural, human and social capital - the so-called business “externalities”. TCA expresses the effects in monetary terms, making transparent that unsustainable practices have real costs for people and planet. Similar approaches are named “true value” or “true price”. More information can be found through the WBCSD True Value of Food program.

TCA can be used as a method for valuing impacts and dependencies in natural capital assessments.

METHODOLOGIES

FOOTPRINTING

A footprint shows the use of a resource (such as water, biodiversity, or carbon) in relation to consumption per unit (such as product, person, company or community). The water footprint is defined as the total volume of fresh water used to produce the goods and services consumed per unit. A carbon footprint is the total amount of greenhouse gas emissions (including carbon dioxide and methane) caused per unit, such as product, kilogram or company.

Footprinting can be used as a method to assess how your company is on several natural capital issues.

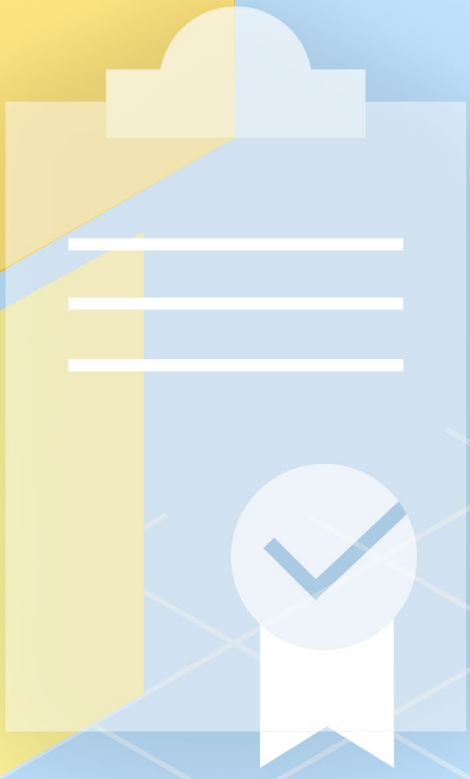
ADDITIONAL GUIDANCE AND TOOLS

- **Business for Nature - Steps to be Nature Positive** – high-level and accessible steps that help businesses to understand what they can do to help reverse nature loss.
- **Environmental Profit & Loss Statement** – an innovative tool developed by Kering to measure the environmental footprint across the company's own operations and the entire supply chain, and to calculate its monetary value.
- **ENCORE** – Encore (Exploring Natural Capital Opportunities, Risks and Exposure) is a very easy-to-use tool to identify the most material dependencies and impacts on natural capital.
- **NatCapChecker** – The Natural Capital Checker (NatCap Checker) provides practitioners with a self-assessment tool that enables them to assess, communicate, and improve the level of confidence in their natural capital assessments.
- **TESSA** - The Toolkit for Ecosystem Service Site-based Assessment (TESSA) is a rapid, low-cost, participatory valuation tool designed to be used by non-experts for assessing the benefits that people get from nature (ecosystem services).
- **InVEST** - InVEST (Integrated Valuation of Ecosystem Services and Tradeoffs) is a suite of models used to map and value the goods and services from nature.
- **Ecosystem Service Valuation Database (ESVD) –** A database on the economic benefits of ecosystems and biodiversity, and on the costs of their loss. Avaible across all biomes, services, and geographic regions.
- **Ecoinvent** – Lifecycle Inventory Database on the environmental impact for thousands of products.

ADDITIONAL GUIDANCE AND TOOLS

- **De Groot, et al. (2012). Global estimates of the value of ecosystems and their services in monetary units. Ecosystem services, 1(1), pp.50-61** – A scientific paper providing an overview of the value of ecosystem services of 10 main biomes expressed in monetary units.
- **EU KIP-INCA** – Integrated accounting system for ecosystems and their services in the EU, building up a shared platform of geo-referenced information on ecosystems and their services.
- **World Food LCA Database** – High-quality emissions factors and environmental footprint data (including carbon, water, and land) relevant for the agri-food value chain.
- **Water Footprint** – Informs about the water use throughout our consumption and production activities and indicates the pressure on our freshwater resources. It can be calculated for businesses, specific products, consumers, and countries.
- **Greenhouse Gas Protocol** – Provides useful tools to enable companies and cities to develop comprehensive and reliable inventories to track their GHG emissions. The Protocol includes cross-sector, country-specific, and sector-specific tools.
- **Environmental Prices Handbook EU28 version** –Environmental prices indicate the loss of economic welfare that occurs when one additional kilogram of pollutant (air, watet, soil) finds its way into the environment.
- **EMEP/EEA** – A guidebook for European atmospheric emissions inventory methodologies and emission factors to support (reporting on) the estimation of emissions.
- **The Marine Plastic Footprint** – Comprehensive framework and database to measure marine plastic leakage from a specific industry or country and to map potential leakage points throughout the supply chain.

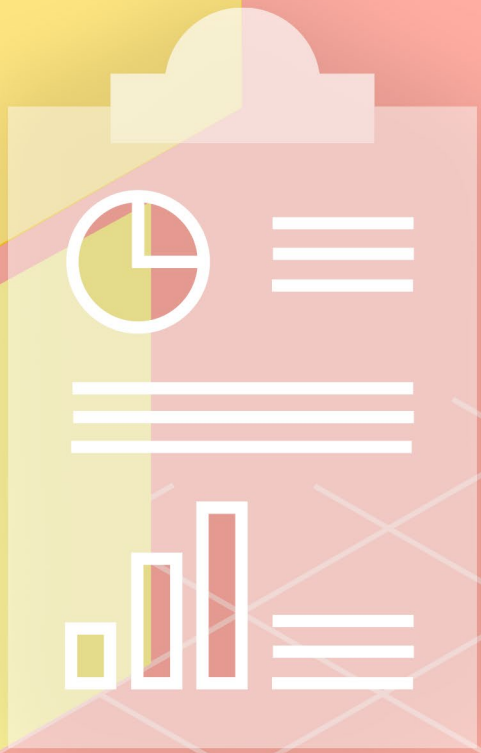
CERTIFICATION SCHEMES



Third party certification means that an independent organization has assessed the production process of a product and independently determined that the final product meets specific standards for safety, quality or performance. These certifications can focus on a particular sector and ingredients (RSPO, MSC, ASC), focus on specific objectives (Fairtrade, Organic, Rainforest Alliance, ISO 14046 (water), ISO 14067 (carbon)) or on managing sustainability within your organization (ISO 26000).

Certification schemes can include several standards on natural capital and provide assurance that a minimum performance against these standards is met. It is important to check what criteria are included within the adhered standards and how that relates to the most material risks and dependencies resulting from your natural capital assessment.

ACCOUNTING & REPORTING STANDARDS



There is a wide variety of accounting and reporting standards that focus on the disclosure of information beyond financial information only. These standards help improve transparency and accountability and help generate value creation within the organization. A great number of accounting and reporting standards have emerged over the years. Some of these frameworks include various capitals such as the Global Reporting Initiative (GRI) framework (indicators on natural capital include G4-EN1 - G4-EN34), but also Integrated Reporting (IR) and Sustainability Accounting Standards Board (SASB), which will be merged into the new Value Reporting Foundation in the foreseeable future. Other standards are focused specifically on measuring natural capital such as the CDP and Accounting for Nature, or reporting on natural capital such as the Climate Disclosure Standards Board (CDSB) which equates natural capital with financial capital.

ADDITIONAL GUIDANCE AND TOOLS

- **Unified reporting standards** - CDP, CDSB, GRI, SASB and IIRC have co-published a framework for comprehensive reporting (2020).
- **Integrated capitals** – standardized natural capital accounting principles for businesses from the Natural Capital Protocol and Social & Human Capital Protocol (2020).
- **Water guidance CDSB** – framework for water-related disclosures supported by the EU LIFE program (to launch in 2021).
- **Task Force on Nature-related Financial Disclosures** – banks, companies & governments have set up a Task Force on Nature-related Financial Disclosures (to launch 2021), in addition to the existing **Task Force on Climate-related Financial Disclosures**.
- **The GHG Protocol Corporate Accounting and Reporting Standard** – Provides requirements and guidance for companies and other organizations on preparing a corporate-level GHG emissions inventory to account and report on the seven GHG covered by the Kyoto Protocol.

ENTRY POINTS TO NATURAL CAPITAL THINKING

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The campaign is being led by the **Institute of Chartered Accountants in England and Wales** alongside the **World Business Council for Sustainable Development**, **IUCN** and **Oppla**.

ICAEW wbcsd IUCN oppla

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