




Participant workbook

Business Training on the
Value of Nature
Lisbon | 17 October 2019



**WE VALUE
NATURE**

This workbook was developed by  wbcspd on behalf of the We Value Nature Campaign.

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Supporting



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How to use this workbook

This workbook is intended to complement the training you will be receiving today. It includes copies of the key definitions and diagrams included in the slides, as well as some additional ones you may find useful. There is also space for you to write personal reflections and responses to activities and discussions, as well as key learnings for each section. You can refer back to these in the future as you progress on your natural capital journey.

Introduction to natural capital

What is natural capital

Natural Capital Protocol definition

Natural Capital is the stock of **renewable and non-renewable natural resources** that combine to yield a **flow of “services”** to people. In turn, these flows provide **value** to business and society.

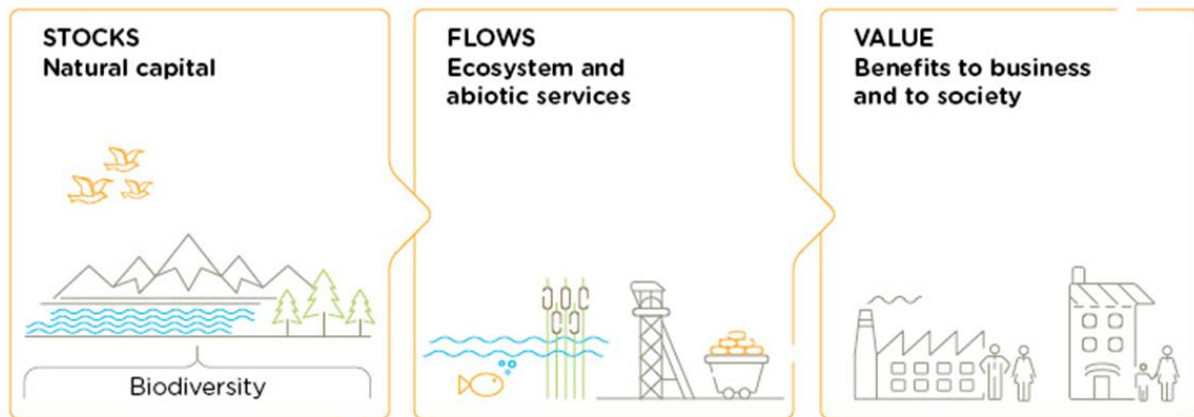
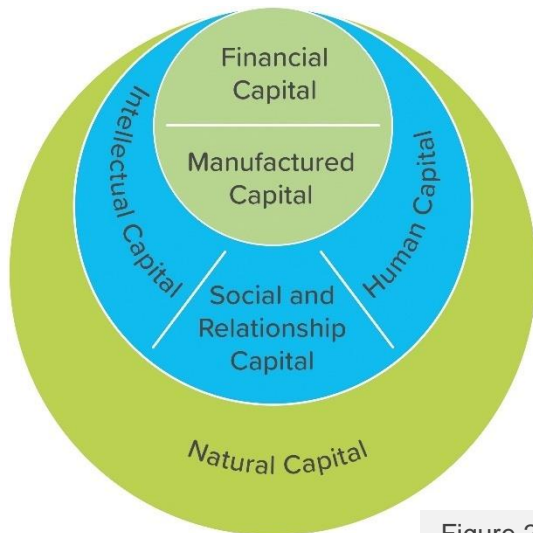


Figure 1: Natural Capital Protocol, p. 12



Natural Capital underpins all the other kinds of capital we also talk about. Without natural capital, human, social, and financial capital would not exist. Yet we also need to use other kinds of capital in order to realise some of the value of natural capital, for example extracting minerals.

Figure 2: IIRC Capitals Background Paper 2013, p.3

Dependencies and impacts

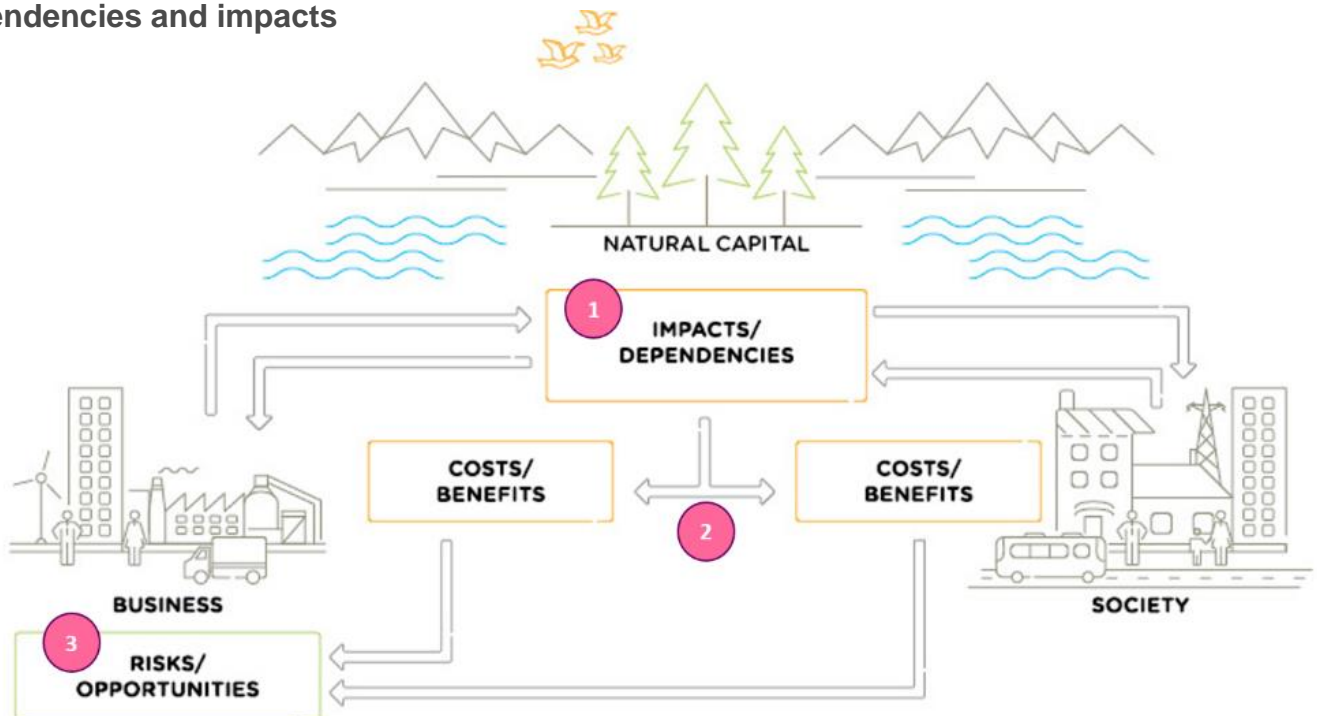


Figure 3: Natural Capital Protocol, p. 15













1. All businesses **impact** and **depend** upon natural capital.
2. This relationship delivers **costs and benefits** back to themselves and to society.
3. These in turn lead to **risks and opportunities** to the business

Reflection: impacts and dependencies

1. In what ways do you think your own company impacts and depends on nature?
2. Write down three risks & three opportunities you think your company could be facing in the next 10 years

Risks	Opportunities

Impact drivers

 Water use	 Terrestrial ecosystem use	 GHG emissions
 Water pollutants	 Fresh water ecosystem use	 Non-GHG air pollutants
 Soil pollutants	 Marine ecosystem use	 Disturbances
 Solid waste	 Other resource use	 Impact on Biodiversity

Dependencies












 Energy	 Regulation of physical environment	 Knowledge
 Materials	 Regulation of biological environment	 Well-being and spiritual/ethical values
 Nutrition	 Regulation of waste and emissions	 Dependency on biodiversity
 Water	 Experience	

Figure 4: Natural Capital Coalition

Table 3b.4: Application of prioritization criteria to ESG-related risks
(adapted from the COSO ERM Framework)

Criteria	Description	Relevance for ESG-related risks
Adaptability	The capacity of an entity to adapt and respond to risks	A risk may be significant and unpredictable; however, an organization can build in adaptability mechanisms to respond to or absorb the risk. For example, in the 1980s, Shell diversified its portfolio and used scenario planning to prepare and adapt to potential oil price fluctuations that were generally considered unforeseeable. ¹²
Complexity	The scope and nature of a risk to the entity's success	Many ESG-related risks are interrelated, global, industry-wide and constantly changing. For example, health care companies are aware of the complex relationship between climate change and health. Climate change impacts may lead to potential disruptions to operations, while also leading to health impacts on individuals (increasing the demand for health care services). CPA Australia, KPMG and GRI reported that companies that incorporated megatrend analysis into the risk processes tended to focus on one characteristic and did not deal with the "complex and systemic megaforce whose impacts are over the short, medium and long term." For example, companies with exposure to water scarcity are more likely to focus on immediate water efficiency than investigating the risks associated with future water scarcity. Similarly, companies looking at resource scarcity and deforestation are considering efficient consumption of energy, water and paper as well as recycling initiatives but are less likely to explore deeper issues of changing land use practices and systemic impacts on ecosystem design. ¹³
Velocity or speed of onset	The speed at which risk impacts an entity	ESG-related risks are often emerging and unforeseen until swift events result in extreme consequences. Climate change impacts often manifest in the form of more extreme or frequent occurrences of known events, such as droughts and floods, and are best understood by studying longer temporal horizons than are usually associated with typical risk management.
Persistence	How long a risk impacts an entity	Risk severity should consider the extent to which the impact will be an acute, onetime impact (e.g., cyclones, hurricanes or earthquakes) versus a chronic issue that will cause ongoing impacts (e.g., sustained higher temperatures or droughts).
Recovery	The capacity of an entity to return to tolerance	Consider how quickly the business would recover if a risk occurred today. For some ESG issues, impacts are irreversible. For example, in the food, beverage and agriculture sector, the impacts of climate change have the potential to alter growing conditions and seasons, increase pests and disease and decrease crop yield. ¹⁴ Recovery from these impacts requires enhancing capacity to manage and respond to the risk.

Figure 5: COSO & WBCSD, Enterprise Risk Management Guidance p.51



See p.18 in your Natural Capital Protocol for a more detailed list of risks and opportunities associated with natural capital.

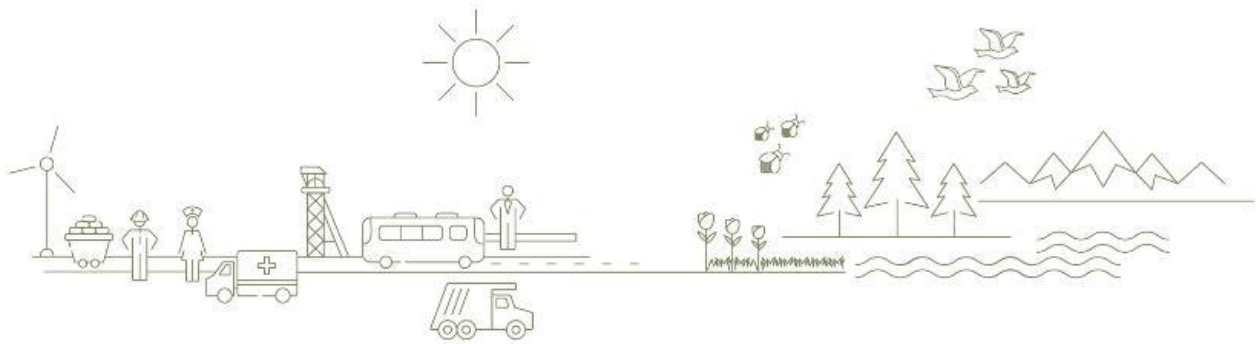


My key learning(s)

The business case for action

Many natural capital risks and opportunities are becoming increasingly visible, and business needs a way to understand and manage these.

- Understand **relationships with nature** in a structured way
- Challenge your **business model**
- Mitigate **risks**
- Increased **competitive advantage**
- Create **opportunities**
- **Inform decisions** that are really important to your business
- Access to **finance**



Global trends towards more **supply chain transparency** and **traceability**

Sustainability does not stop at fences of individual production units or extraction sites

Effective mitigation and adaption depend on **collective approaches**

Consumers, shareholders and other stakeholders expect companies to **understand, manage and disclose their environmental, social & governance (ESG) impacts**

Businesses and investors need **information to manage** their impacts & dependencies of nature, and to **demonstrate robust and improved performance**

Shared/mutual risks, e.g. water scarcity, land degradation, competition for natural resources and energy, or climate change

Natural Capital Approach

A natural capital approach integrates the concept of natural capital into **decision-making**.

It aims to **illuminate nature’s** (often hidden) **value**, whether it be economic, social, environmental, cultural or spiritual value, and whether this value is expressed in qualitative or quantitative (including economic) terms.

“It is not a requirement of the natural capital approach to apply all the features listed below. However it is good practice to consider their relevance, and all assessments must link to natural capital stocks. When natural capital assessments are used for compiling accounts and undertaking comparisons over time, these are referred to as natural capital accounting.” (Source: [Natural Capital Protocol](#))

	Features of natural capital approach	Other approaches
	Focuses on stocks of natural capital assets (quality and quantity) as well as flows of benefits	Ecosystem services approach, and indeed most economic analysis, focus on flows of benefits – as such they are inputs to a natural capital approach
	Incorporates both biotic and abiotic natural resources	Ecosystem services approach considers biotic resources only
	Assesses how both stocks and flows are likely to change in the future	Environment Social and Governance analysis and financial accounting mainly consider past performance
	Considers both dependencies of an economic activity on natural capital and its impacts on natural capital	Most environmental regulation is about controlling the impacts of activities (such as reducing emissions); the implications of the impacts are considered separately
	Uses valuation* of impacts and dependencies	Different approaches use different measures, mostly of impacts
	Makes the links between all of the above, to support systems-based thinking	Research & decision making tend to be developed separately for different sectors or issues (like agriculture, water, biodiversity) even when they depend on the same natural capital assets

*Valuation is the process of estimating the relative importance, worth, or usefulness of natural capital to people (or to a business), in a particular context. Valuation may involve qualitative, quantitative, or monetary approaches, or a combination of these.

Figure 6: [Natural Capital Coalition](#)

Risk Game

This game has been adapted from Resilience; a board game to accompany the guidance on [Applying Enterprise Risk Management to Environmental, Social and Governance-related risks](#).

Resilience
THE CORPORATE SURVIVAL GAME

Per table, work through the following scenario:

Context: You are part of the management team of “Pro P&P”, a pulp and paper company operating in South America. Recently, the issues of climate change and deforestation have increasingly been in the spotlight and one of your competitors has even been impacted by floods in one of its operational plants in Brazil.

Objective: In view of this context, your CEO has requested to re-assess the company’s environmental risks (bearing in mind its overall objective) and put into place appropriate risk mitigation measures.

Pro P&P’s overall objective is to be a recognized brand in the industry that takes into account customers’ increasing request for responsible brands and products.

After determining the risks and risks responses, the facilitator will spin a wheel of events that can either positively or negatively impact your final score as a team based on the risks responses you have put into place.

Each team starts off with a share price of \$10.



\$10

STEP 1

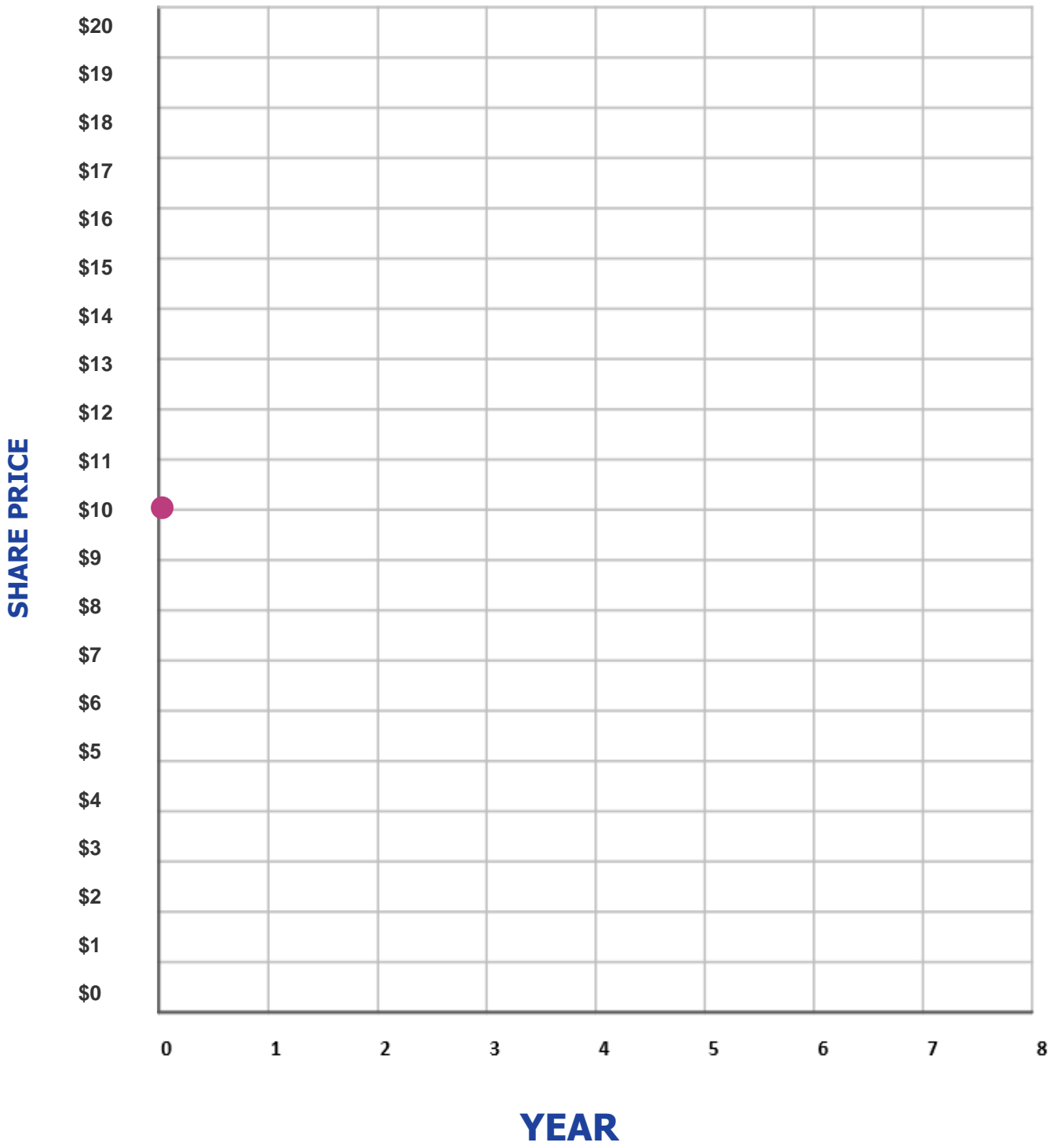
Keeping in mind your company's overall objective and the provided context, in the list below circle the top three risks you believe are the most material ones to your company.

1. New environmental regulation will lead to reduced forest or plantation availability and restrictions on the use of plastic packaging;
2. Customer preferences will shift towards products with less environmental impacts impacting sales, revenue and market leadership;
3. Association with environmental issues such as deforestation or plastics in the ocean will erode brand loyalty from customers;
4. Lack of ESG skills, knowledge or capability from staff through to the board constrain management of ESG risks and opportunities;
5. Megatrends such as e-commerce, online shopping and artificial intelligence will influence customer demands for paper and packaging and drive opportunities for efficiency;
6. Severe weather events (e.g., cyclones floods) will disrupt the supply chain;
7. Investors will begin to use information on how well a company manages its ESG risks as a key factor in making investment decisions.

STEP 2

Based on the identified key risks and the company's overall objective, in the list below circle the top three measures that you believe are the most appropriate.

- a. Conduct life cycle assessments and invest in R&D to develop paper and packaging products that minimize environmental impact;
- b. Develop a customer interaction tool to monitor customer engagement on sustainability and changing customer preferences
- c. Develop a sustainability strategy and implement a goal to improve efficiency in water use, waste in the production and safety performance;
- d. Appoint an ESG-specialist to the board to drive board awareness on ESG-related risks and opportunities;
- e. Conduct 5-, 10-, 20 -year scenario analysis to monitor the impact of climate change and develop potential adaptation strategies;
- f. Purchase insurance to cover losses in the event of severe weather or pests;
- g. Develop relationships with NGOs around deforestation in an industry coalition to improve practices and expectations;
- h. Focus on producing paper and plastic products that can be certified as 'sustainable' (e.g. FSC and recyclable PET); invest in blockchain technology to enhance supply chain traceability.




Final team score:



Debrief: Risk Game

- What did your team do well? What were some challenges?
- What did you learn from this activity about natural capital risk and how it can be managed more effectively?
- What are your key takeaways from the activity?
- How would you apply this in your company?

 **My key learning(s)**

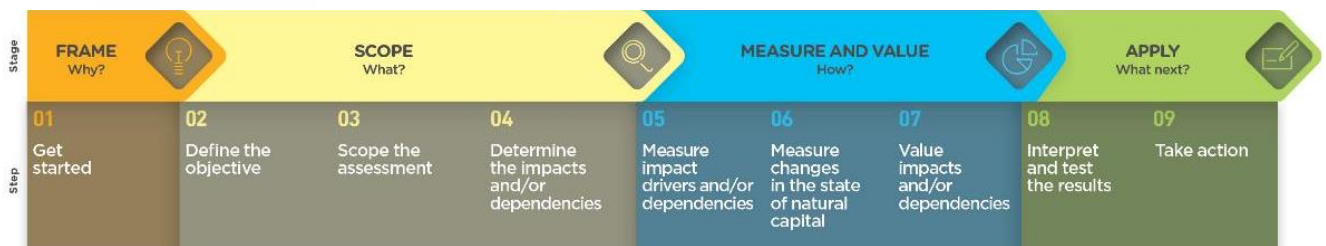
Tools and approaches



Natural Capital Protocol

The **Natural Capital Protocol** is a **standardized framework** for **business** to **identify, measure and value** its direct and indirect **impacts and dependencies** on **natural capital**.

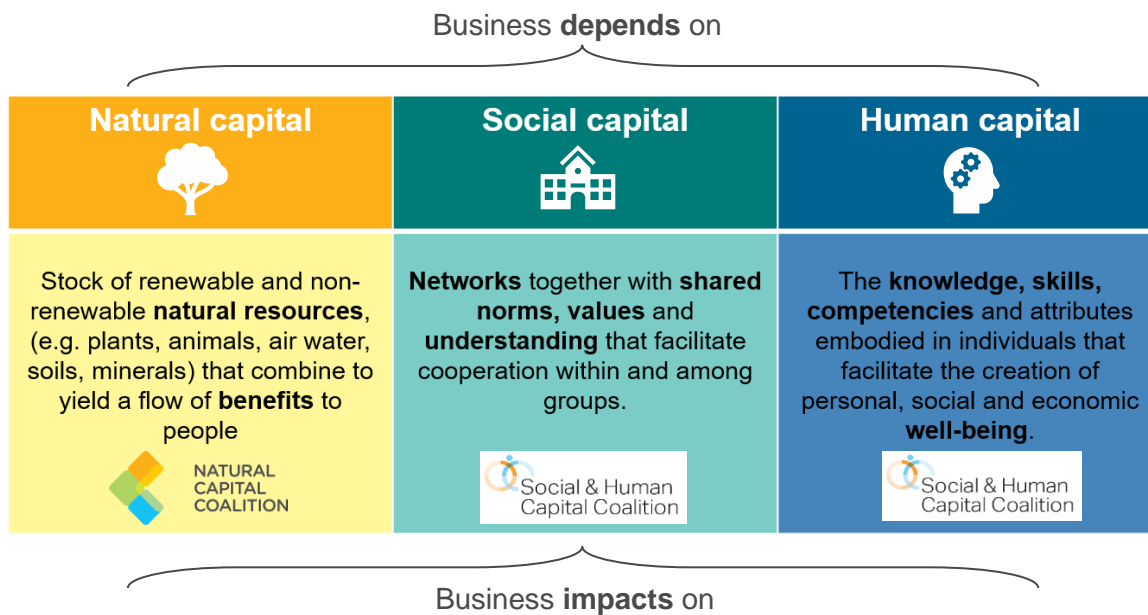
It has been developed by the Natural Capital Coalition as a generally accepted framework built on existing approaches.



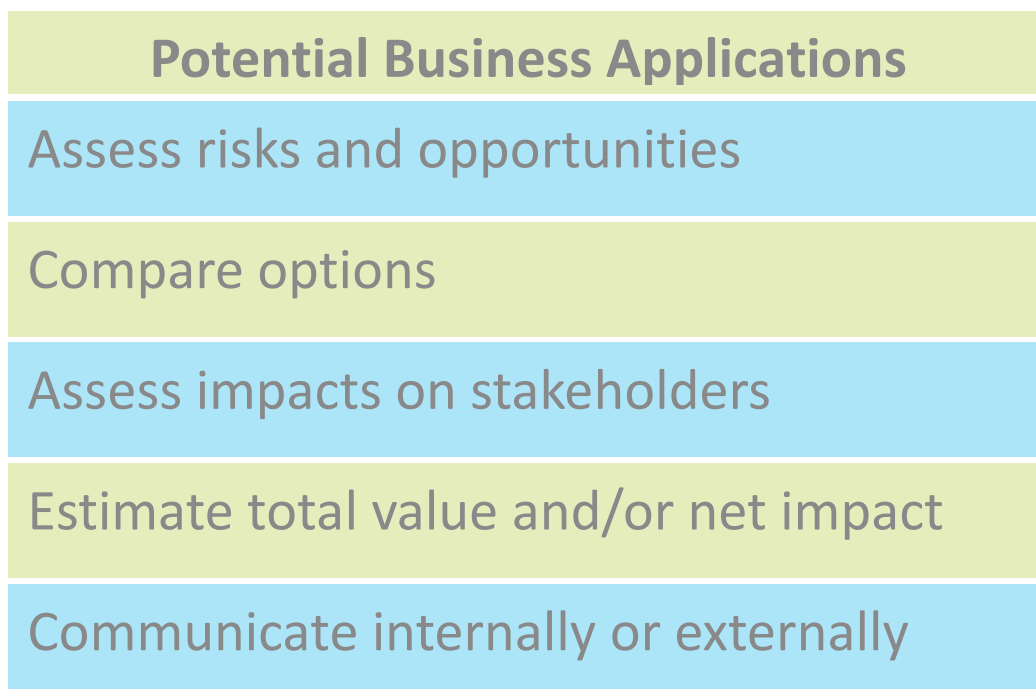
The Protocol...	The Protocol does not...
<ul style="list-style-type: none"> ✓ builds on existing tools, guides, methods and techniques to identify, measure and value natural capital 	<ul style="list-style-type: none"> ✗ seek to create new tools and methods
<ul style="list-style-type: none"> ✓ focuses on improving internal management decision making 	<ul style="list-style-type: none"> ✗ provide a framework for external financial reporting, although decisions can be reported
<ul style="list-style-type: none"> ✓ provides a standardized process that is also flexible in the choice of measurement and valuation approaches 	<ul style="list-style-type: none"> ✗ explicitly promote specific tools, methodologies or approaches
<ul style="list-style-type: none"> ✓ provides a process to internally standardize the approach that you take 	<ul style="list-style-type: none"> ✗ necessarily produce results that are comparable within or between different businesses or applications

Figure 8: [Natural Capital Coalition](#)

Linkages with social & human capital



Integrating natural capital into business decision-making



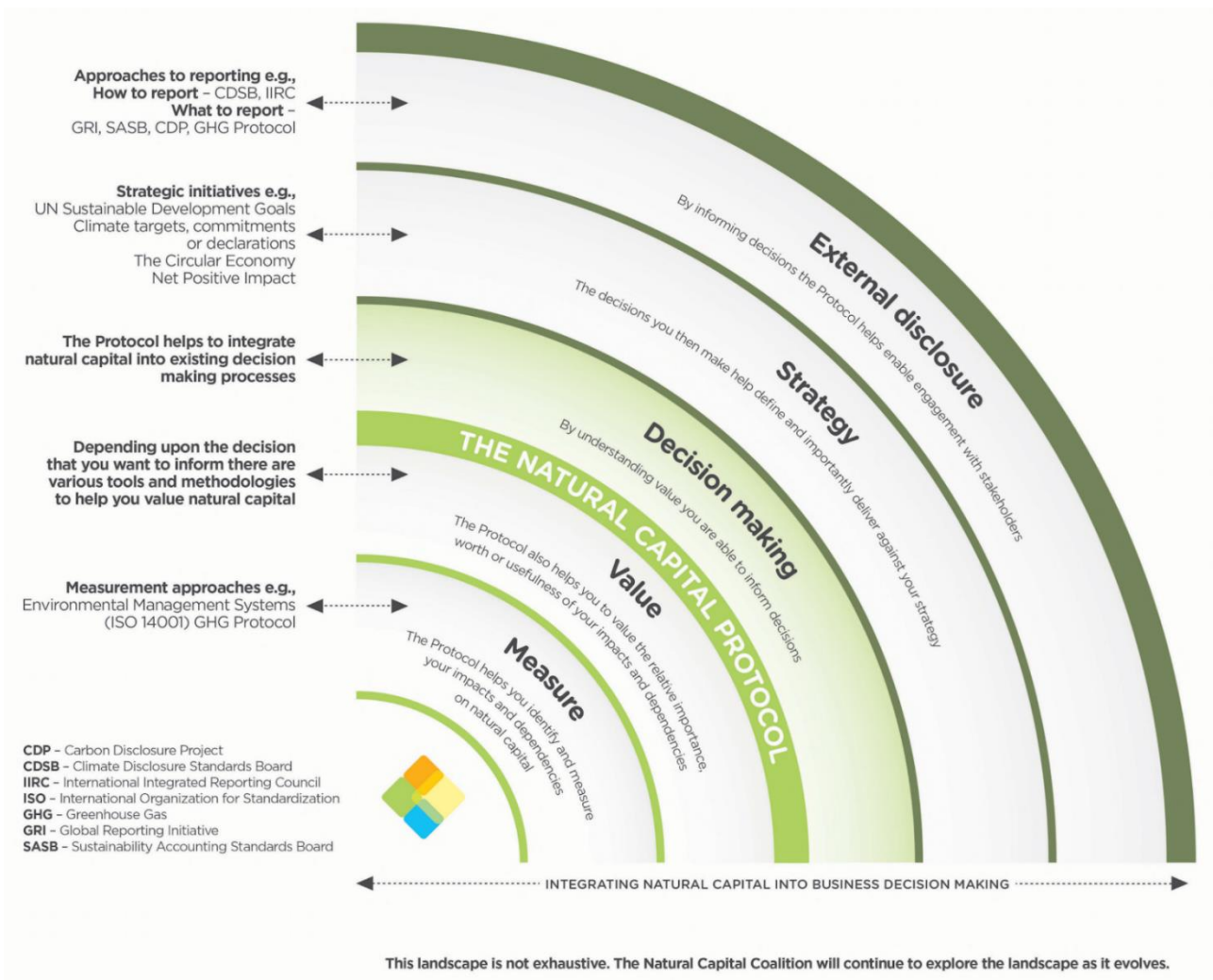


Figure 9: Natural Capital Coalition

★ My key learning(s)

Natural Capital Toolkit

You can find the Natural Capital Toolkit at <https://shift.tools/nct>



Debrief: exploring tools and resources

- What tools have you chosen?
- What are the advantages and disadvantages of the chosen tools?
- What kind of information did you look for when navigating on the Natural Capital Toolkit?
- What factors did you consider to help make the choice of tools?
- In what way(s) could the Natural Capital Toolkit and SHIFT be helpful to you?
- What did you learn from this activity?

Case studies

As you listen to the case studies, pay particular attention to the following points:

- The situation, the challenge
- Approach / tool(s) used
- Barriers / challenges + how these were overcome
- How natural capital supported decision-making
- Key stakeholders / enablers involved
- Commonalities between the three case studies
- Any other reflections or questions for the speakers

Grupo Argos



My key learning(s)

Sonae Arauco

EDP Produção

Natural capital put into practice

Measuring and Valuation

To measure ≠ to value

- To measure: determine the amounts, extent and condition in physical terms, e.g. m³, tons, number of injuries, number of jobs
- To value: estimate the relative importance, worth, or usefulness of natural / social / human capital to people (or to a business), in a particular context.

Assessments can be **qualitative, quantitative and monetary**

The NatCap Checker

Walking through the steps of the Natural Capital Protocol.

Debrief: NatCap Checker

- What would be your overall assessment in terms of the robustness of the assessment?
- What does this say in terms of confidence stakeholders can have in the overall process and results?
- What did you find challenging with this exercise?

No.	Protocol Stage	Headline question
1.	WHY?	Is there a clear understanding of why the assessment was undertaken?
2.	WHAT?	To what extent were individuals engaged internally and externally to provide expert input into the assessment?
3.	WHAT?	Was an appropriate and consistent scope applied throughout the assessment?
6.	HOW?	Did the assessment move from measurement to valuation?
7.	HOW?	Were valuation techniques chosen based upon consideration of the full range of relevant factors?
10.	What NEXT?	Were the assessment results applied to a decision in which they had a significant impact on the outcome?
11.	What NEXT?	Were key assumptions and the strengths and weaknesses of the assessment tested?

Valuing Nature

Debrief: valuing nature

- What were your assumptions (incl. sources of data, methods used)?
- What are the limitations to putting a monetary value on water?
- What are the benefits of having a monetary value?
- How else could water be valued?

Table 7.1
Summary of key features of different valuation techniques

Technique	Description	Data required	Indicative duration	Indicative budget	Skills required	Advantages	Disadvantages
Qualitative valuation							
Opinion surveys*	Surveys designed to represent views through a series of questions, (e.g. semi-structured interviews)	Stakeholder information to inform sampling frame	⬇️ ⬇️ ⬇️ Weeks - Months	\$\$\$	Questionnaire design, interviewing	– Open ended so can capture broad information	– Does not allow much quantification – Results may be subject to bias from respondents
Deliberative approaches	Facilitated group discussions or focus groups that can involve debate and learning such as brainstorming sessions/workshops/focus groups/in-depth discussions	Stakeholder information to inform sampling frame	⬇️ ⬇️ ⬇️ Weeks - months	\$\$\$	Questionnaire design, facilitation	– Open ended so can capture broad information	– Does not allow much quantification – Difficult to obtain representative sample of attendees – Results may be subject to bias from respondents and sample selection, and can be hypothetical in nature
Relative valuation	Use of high/medium/low values to determine relative value of benefits and/or costs, in categorical terms, using available data and expert judgment	Information on all parameters to be valued	⬇️ Days - weeks	\$	Analytical	– Can be very broad and include any parameters desired	– Can be subjective – Results may be subject to bias from respondents
Quantitative valuation							
Structured surveys*	Structured surveys or questionnaires can be used to elicit quantitative values: One-to-one surveys employing a consistent set of questions including "closed" response options (e.g., Y/N, scoring, numerical choices) that allow for statistical analysis	Stakeholder information to determine sampling frame	⬇️ ⬇️ ⬇️ Weeks - months	\$\$\$	Questionnaire design, interviewing, statistics	– Enables greater level of quantification	– Allows less opportunity to capture broader information – Results may be subject to bias from respondents
Indicators*	Various indicators can be used to quantify information, such as air emissions, yield or produce per hectare, the risk of species extinction, or visitor numbers	Information on all parameters to be valued—ideally quantified information	⬇️ ⬇️ Weeks	\$\$\$	Analytical, statistics	– Can be very broad and include any parameters desired	– May not capture all the relevant values
Multi-criteria analysis (MCA) using scoring and weighting**	Involves selecting a range of parameters and rating and ranking their value through scoring and weighting, using workshops, available data, and/or expert judgment. It is the scoring and weighting that is effectively the 'valuation' technique.	Information on all parameters to be valued—ideally quantified information	⬇️ ⬇️ ⬇️ Weeks - months	\$\$\$	Analytical, statistics	– Can be very broad and include any parameters desired – Can be kept simple	– Sensitive to ratings and rankings chosen – Can become overly complicated
Monetary valuation							
Market and financial prices**	This includes several related approaches, including: – Costs/prices paid for goods and services traded in markets (e.g. timber, carbon, value of water bill or pollution permit) – Other internal/financial information (e.g., estimated financial value of liabilities, assets, receivables) – Other interpretations of market data (e.g., derived demand functions, opportunity costs, mitigation costs/aversive behavior, cost of illness)	Market prices of ecosystem goods and/or services Costs involved to process and bring the product to market (e.g., crops)	⬇️ Days - weeks	\$	Economics—or econometrician	– A transparent and defensible method since based on market data – Reflects actual willingness to pay (WTP)	– Only applicable where a market exists for the good or service and price data are readily available – Market prices may be distorted by imperfect competition and/or policy failures, hence not a good measure of societal value
Production function (change in production)	Empirical modelling approach that relates change in the output of a marketed good or service to a measurable change in natural capital inputs (e.g., the quality or quantity of ecosystem services)	Data on changes in output of a product Data on cause and effect relationship (e.g., crop losses due to reduced water availability)	⬇️ Days - weeks	\$	Economics, (potentially agronomist, hydrologist and/or process engineer, etc)	– If all required data are available, the technique can be implemented fairly easily – Can link natural capital dependencies to financial accounts	– Necessary to recognize and understand the relationship between a change in natural capital, ecosystem services and/or abiotic services, and output of product – Can be difficult to obtain data on relevant changes in natural capital, the ecosystem service and effect on production

Figure 10: Natural Capital Protocol p. 84

Wrap-up

Reflection: next steps

- One concrete next step / activity you could take to move your company forward in its natural capital journey?

- Write the name and contact details of one person you've met today that you will stay in touch with to update on your progress. When will you check-in with each other?



Key takeaways

1. **Business impacts and depends on nature** – the NCP provides the framework to identify and assess impacts and dependencies,
2. Understanding, measuring and valuing natural capital (i.e. taking into account) will help business **make better decisions**,
3. **There are many existing approaches** to measure and value impacts and dependencies. The one you chose depends on the information you are aiming to get or the decision you are trying to inform,
4. **Assessments are like snowflakes - no two are alike**. The amount of resources, time and skills needed will depend on the scope of the assessment, what you're asking for and what data is already available,
5. **Companies can start to conduct an assessment themselves** by getting the project going, scoping the assessment and integrating natural capital considerations into internal processes,
6. For natural capital to become strategically important, **buy-in must extend beyond the sustainability team**.



My key learning(s)

Useful resources and further reading

General reading

- [Biodiversity & Business Risk: A Global Risks Network Briefing](#) (WEF & PwC)
- [Business for Nature](#) – a global coalition calling for action to reverse nature loss
- [Is natural capital a material issue?](#) (ACCA, Flora & Fauna International, KPMG)
- [IPBES report \(summary\)](#) - a 2019 report highlighting the extent of human impact on biodiversity, ecosystems and the natural world
- [Natural Capital Committee terminology](#)
- [WBCSD Business Examples](#)

Blogs:

- [Natural capital assessments: how far are you willing to stick your neck out and why](#) (WBCSD)
- [What does it take to carry out a natural capital assessment?](#) (WBCSD)
- [Why We Must Move From Measuring Only Impacts to Also Measuring Dependencies on the Natural World](#) (Natural Capital Coalition)

Reporting

- [Capitals Background Paper](#) (International Integrated Reporting Council)
- [Framework for reporting environmental information and natural capital](#) (Climate Disclosure Standards Board)
- [Environmental Profit & Loss Statement \(Kering\)](#) - this is just one example of an EP&L, but Kering provides a comprehensive explanation of how and why they did it.
- [GHG Protocol](#)
- [Global Reporting Initiative](#)

Assessing & measuring

Guidance:

- [Natural Capital Protocol](#)
- Natural Capital Protocol [Sector Guides & Supplements](#) (for [apparel](#), [food & beverage](#), and [forest products](#))
- [E.VALU.A.TE: The practical guide](#) (The Cambridge Natural Capital Leaders Platform)
- [Valuing Corporate Environmental Impacts](#) (PwC Methodology)
- [Demystifying Valuation](#) (Valuing Nature)

Tools:

- [ENCORE](#) (Exploring Natural Capital Opportunities, Risks and Exposure)
- [Integrated Biodiversity Assessment Tool](#)
- [Natural Capital Toolkit](#)
- [NatCap Checker](#) - A self-assessment tool to help evaluate how credible and fit for purpose your assessments are, therefore giving stakeholders a level of confidence they can place in the process, results and decisions taken based on the assessment.

Multimedia resources

There are many informative videos about natural capital out there. A few that we particularly recommend are;

[Pitch4Nature](#)

[Natural Capital Protocol training videos](#)

[ThinkNature Nature Based Solutions game](#)

Contact

Keep in touch! You can contact Katia at bonga@wbcsd.org for specific questions or further information on We Value Nature trainings.

For queries about the We Value Nature campaign, email info@wevaluenature.eu or sign-up to our mailing list on wevaluenature.eu to stay up to date.

Notes

Use this page for your own notes throughout the training



Supporting



**NATURAL
CAPITAL
COALITION**



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