Speaking notes:

Module 2 training
Food & Beverage sector
Scoping a natural capital assessment

Developed by:

Nature^Squared

Slide 1

Image source: https://www.pexels.com/nl-nl/foto/akkerland-azie-boer-bouwland-235731/

Slide 2

Before kicking-off the training, introduce that this training is being given as part of the We Value Nature Campaign and explain what it is, its purpose, objectives and partners involved:

The We Value Nature Campaign is a €2 million EU-funded campaign supporting businesses and the natural capital community across Europe with the aim of making valuing nature the new normal for business. As we will have a chance to explore during today's training, by valuing nature, businesses can make smarter decisions that benefit themselves, society and the planet as a whole.

The campaign is coordinated by the Institute of Chartered Accountants in England and Wales (ICAEW), World Business Council for Sustainable Development (WBCSD), The International Union for Conservation of Nature (IUCN) and Oppla. And it is supporting the Natural Capital Coalition, which has recently merged with the Social & Human Capital Coalition to become now the 'Capitals Coalition'.

The campaign will aim to increase the uptake of the natural capital approach (including: natural capital assessment, natural capital accounting, nature-based solutions and green infrastructure) by identifying barriers and opportunities, providing practical support to business through activities (such as webinars, helpdesk calls, etc.) and training such as this one, as well as by inspiring businesses to adopt the NCP.

Take this opportunity to also thank the different stakeholders that supported the training (if relevant).

Slide 3

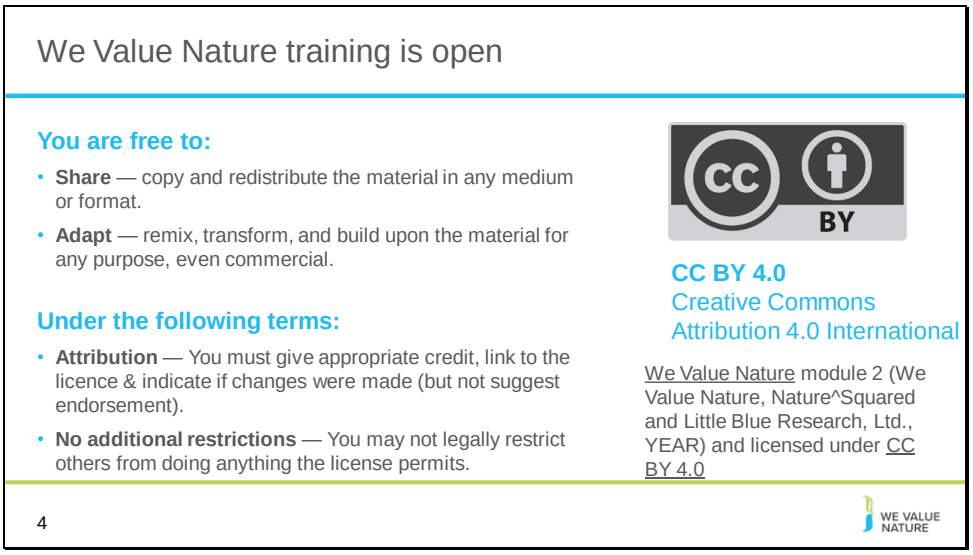
Natural Capital Protocol: https://capitalscoalition.org/capitals-approach/natural-capital-protocol/?fwp_filter_tabs=training_material

Business Ecosystems Training (BET) training material: https://www.wbcsd.org/Programs/Redefining-Value/Business-Decision-Making/Assess-and-Manage-Performance/BET/Business-Ecosystems-Training

Nature^Squared: https://www.nature-squared.org/

Little Blue Research Ltd.: https://www.littleblueresearch.com/

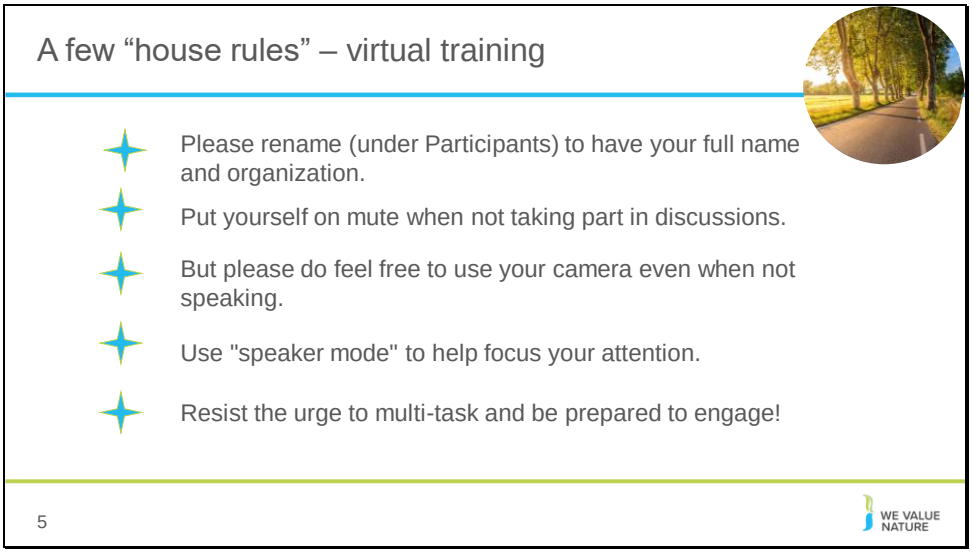
Slide 4



We Value Nature: https://wevaluenature.eu/

Creative Commons: https://creativecommons.org/licenses/by/4.0/

Slide 5

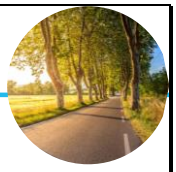


Explain that for now are all muted but will unmute when open floor for Qs & discussion – will be flexible with time
Encourage to participate – the more discussions, the more beneficial the VO
Make sure to explain that will be able to write down their Qs directly in the google document

NOT FORGET to mention that we will then share with them the live document, as well as recording

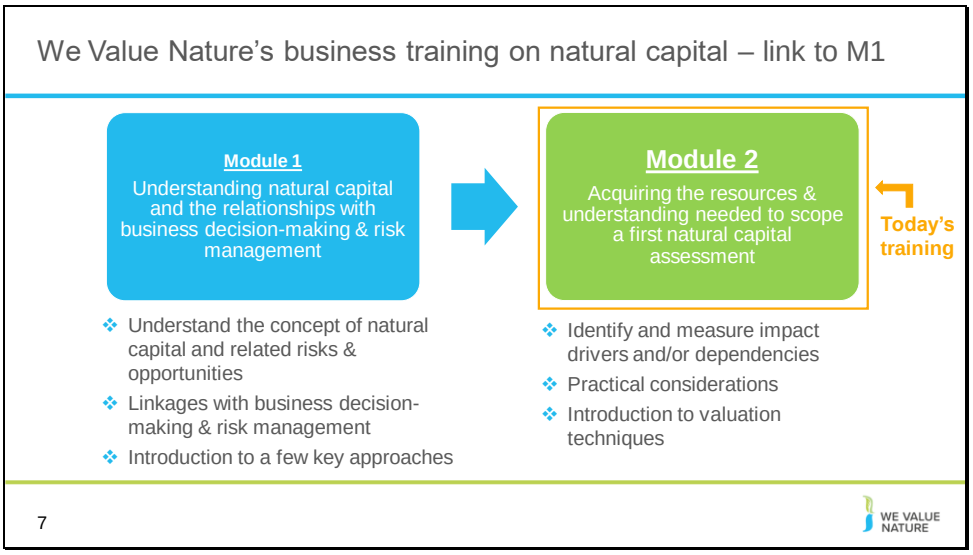
Slide 6

A few “house rules” – in person training



- Taking part in discussions but respect people’s views and session timings.
- Chatham house rules will apply.
- We will be using some quizzes during the session.
- Please ask any questions during the presentations and exercises.
- Contribute and share your experiences – we can all learn from one another!

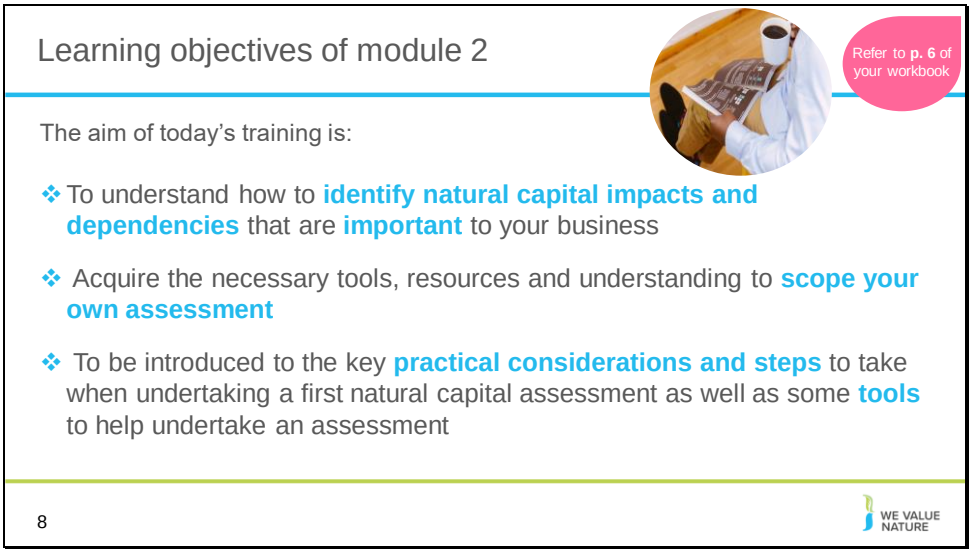
Slide 7



Module 1 focused on understanding natural capital and the relations with decision-making & risk management.

Module 2 will focus on acquiring the resources & understanding needed to scope a first natural capital assessment. An introduction to valuation techniques is also included in this training.

Slide 8



The objectives for today are…

Mention that due to limited time, won't go through materiality and valuation but that these are normally included in full version of training.

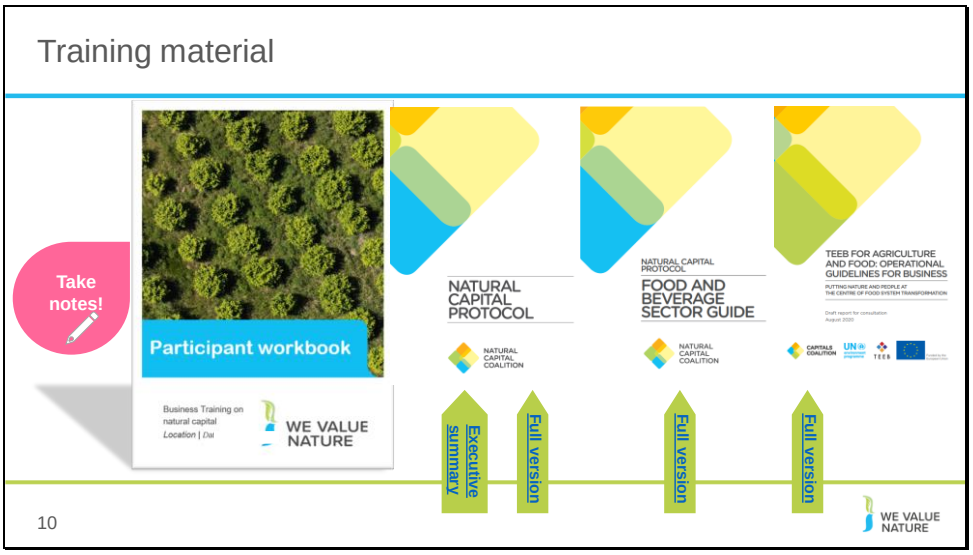
Slide 9

Agenda – 2 hour training

TO ADAPT

Time (xxx)	Session
15	**Welcome** – Agenda, objectives, material & introductions
10	**Setting the scene and a brief re-cap on natural capital**
5	**Engaging the supply chain on natural capital**
5	**Identifying natural capital impacts & dependencies**
30	**Group exercise**
10	*Coffee Break*
20	**Scoping an assessment** – Key steps to take
15	**Practical considerations** – Planning an assessment
20	**Optional: Case study presentation**
10	**Wrap-up –** Key take-aways, wrapping-up

Slide 10



Mention that they should all have a ‘Participant workbook’ and explain that its purpose is to use it throughout the training. We have included in there some of the slides from the training but also additional information. There is space for them to regularly take notes as well as write down their key learnings through each chapter. The aim is that at the end of the training they have a useful resource to look back to when wanting to get started on the natural capital journey.

Slide 11

Slide 12

Who is your support team for today?

Name

[*insert logo of organization*]

Name

[*insert logo of organization*]

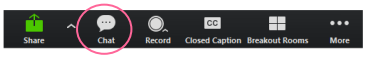
Name

[*insert logo of organization*]

Slide 13

Introductions – who are you?

- **Please tell us more by sharing :**
  - Role
  - Any specific expectation(s) for today?

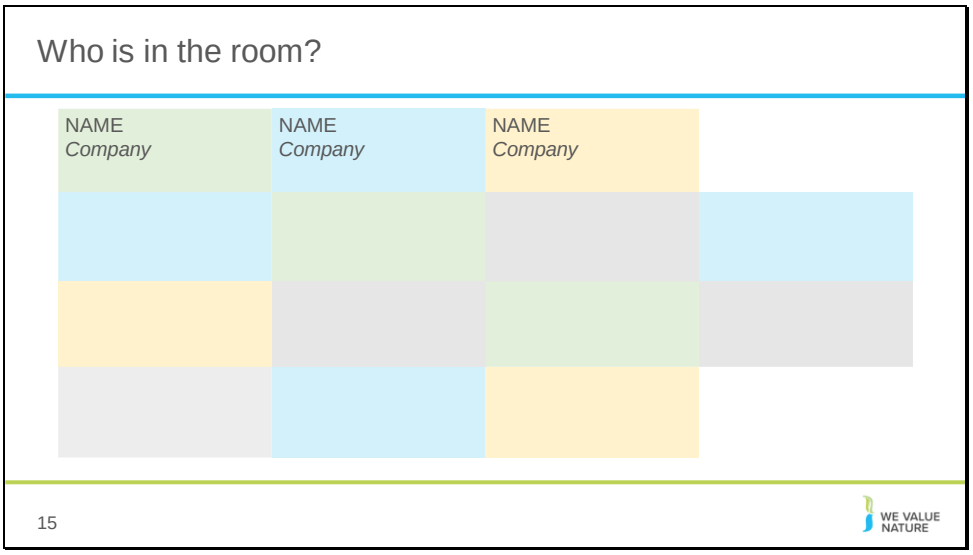


Slide 14

Introductions – who are you?

- **Please tell us more about you by sharing your:**
  - Role in the supply chain

Slide 15


Who is in the room?
NAME
Company
NAME
Company
NAME
Company
15
WE VALUE NATURE

Slide 16

Introductions

- **Ice breaker**
  - Please introduce yourselves by sharing your name, company, role and why you are interested in scoping a natural capital assessment

Slide 17

Agenda – 2 hour training

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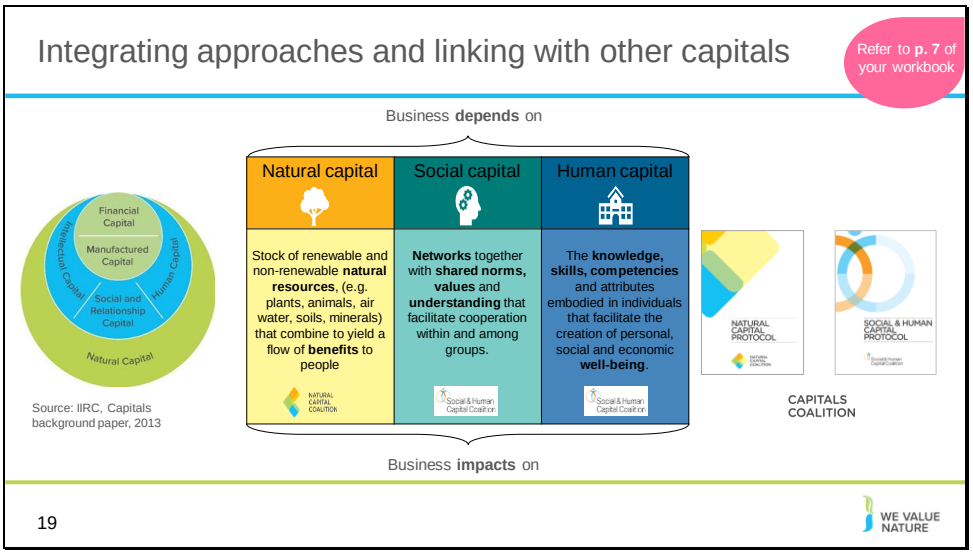
Slide 18

WE VALUE NATURE

Setting the scene and a brief re-cap on natural capital

Slide 19



Presenter to explain that natural capital should not be approached in isolation and that it is closely interlinked with other capitals (incl. social and human capital).

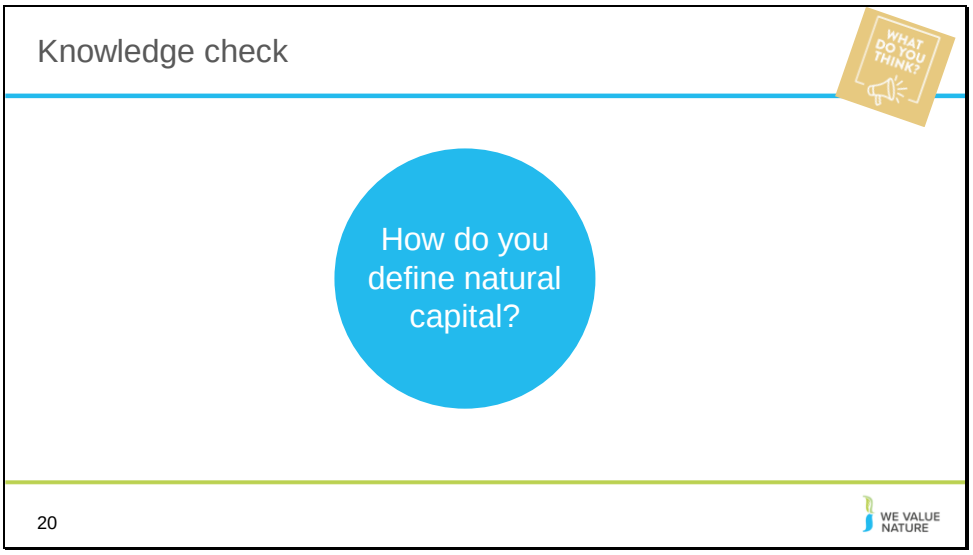
The **International Integrated Reporting Council's (IIRC)** categorization of **six capitals**. https://integratedreporting.org/wp-content/uploads/2013/03/IR-Background-Paper-Capitals.pdf

Sustainable development is composed of different ''spheres'' including the **natural environment, society and economy**. The Stockholm Resilience Institute (2016) **represents nature – and natural capital – as the basis of the other development goals. Without a strong natural base, we will not be able to contribute to a resilient economy and just society.**
https://www.stockholmresilience.org/research/research-news/2016-06-14-how-food-connects-all-the-sdgs.html

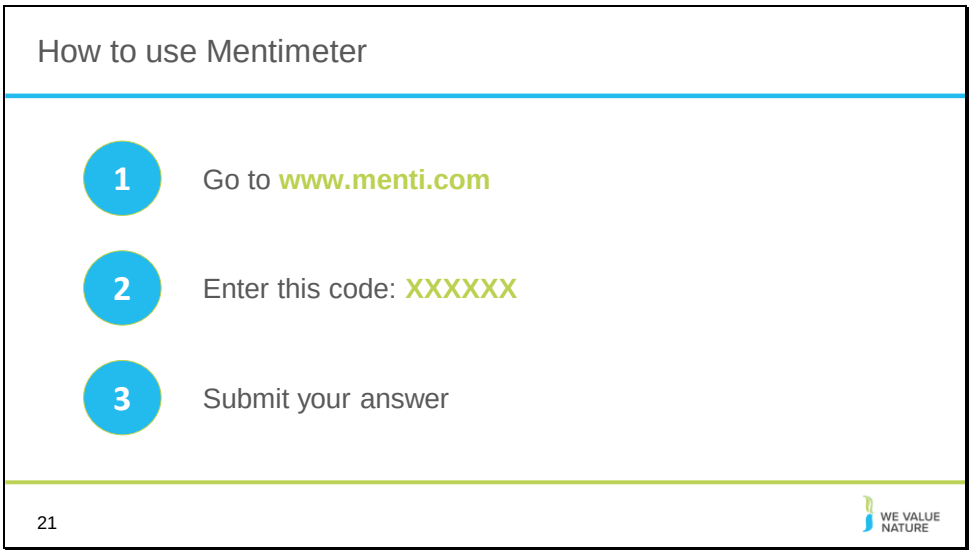
The Natural Capital and Social & Human Capitals Coalition recognized the important linkages between social, human and natural capital, and united their efforts under the **Capitals Coalition (2020).** The Capitals Coalition works towards transforming the way decisions are made by including the value provided by nature, people & society.

Natural Capital Protocol: https://capitalscoalition.org/capitals-approach/natural-capital-protocol/?fwp_filter_tabs=training_material
Social & Human Capital Protocol: https://capitalscoalition.org/capitals-approach/social-human-capital-protocol/

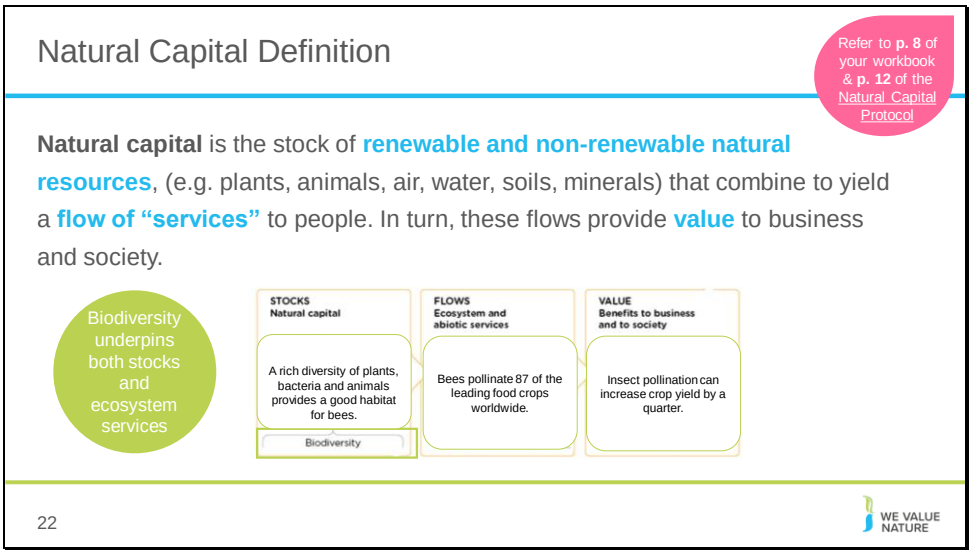
Slide 20


Knowledge check
WHAT DO YOU THINK?
How do you define natural capital?
20
WE VALUE NATURE

Slide 21


How to use Mentimeter
1
Go to www.menti.com
2
Enter this code: XXXXXX
3
Submit your answer
21
WE VALUE NATURE

Slide 22



Biodiversity: the variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable.

We have started thinking about natural resources an agricultural producer relies and impacts on but what do we mean when we talk about natural capital?
Well in fact, everything you have discussed through the previous example is natural capital is some form or another. Whether it is the assets/resources it represents (such as water and soil you have identified as needed for the farm) or the services it brings.
From climate adaptation to ecosystem services, the environmental jargon is everywhere. What is important, is not to remember all the terminology used, but rather that these are all connected to the value of nature and that people have different entry points and priorities and will use one or another terminology based on that. But fundamentally, we are all speaking about the same things, just in different ways.
This is the definition according to the Natural Capital Protocol. Refer to p. 12 of Natural Capital Protocol.

The **stocks** refer to the natural resources available to us (**biodiversity, plants, animals, water, soils and minerals**) while the **flows** refer to the different benefits people receive from ecosystems such as:

- **Pollination**
- **Water regulation & purification**
- **Pest control**
- **Climate regulation**
- **Erosion regulation**
- **Nutrient retention**
- **Ecotourism**

Abiotic services are benefits to people that do not depend on ecological processes but arise from fundamental geological processes e.g. – supply of minerals, metals and oil and gas, as well as geothermal heat, wind, tides, etc.

In the Protocol biodiversity (part of stocks) is considered to be critical to the health and also the stability of natural capital in so much that it provides resilience to shocks like:

- Floods
- Droughts

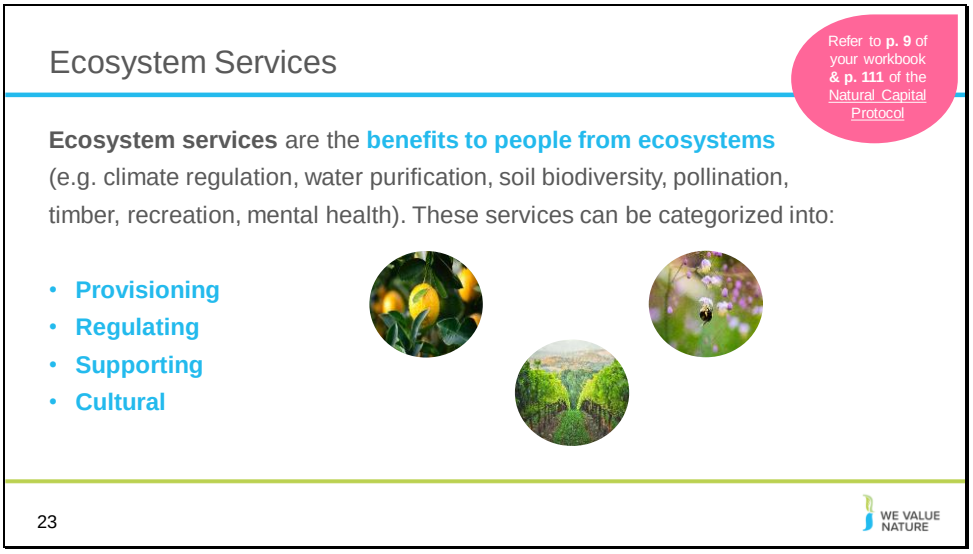
As well as supports fundamental processes such as:

- carbon and water cycles
- soil formation

Examples of **values** are **fresh water and agriculture (food).**

Bee example:
Bees pollinate 87 of the leading food crops worldwide. Insect pollination can increase crop yield by a quarter. (FAO, 2018)
http://www.fao.org/3/i9527en/i9527en.pdf

Slide 23



Presenter to explain ecosystem services using the notes below and referring to p. 12 /111 of the Natural Capital Protocol:
Provide examples of ecosystem services that are relevant to F&B sector (water purification, soil biodiversity, pollination). Provide examples for provisioning, regulating, supporting, and cultural services.

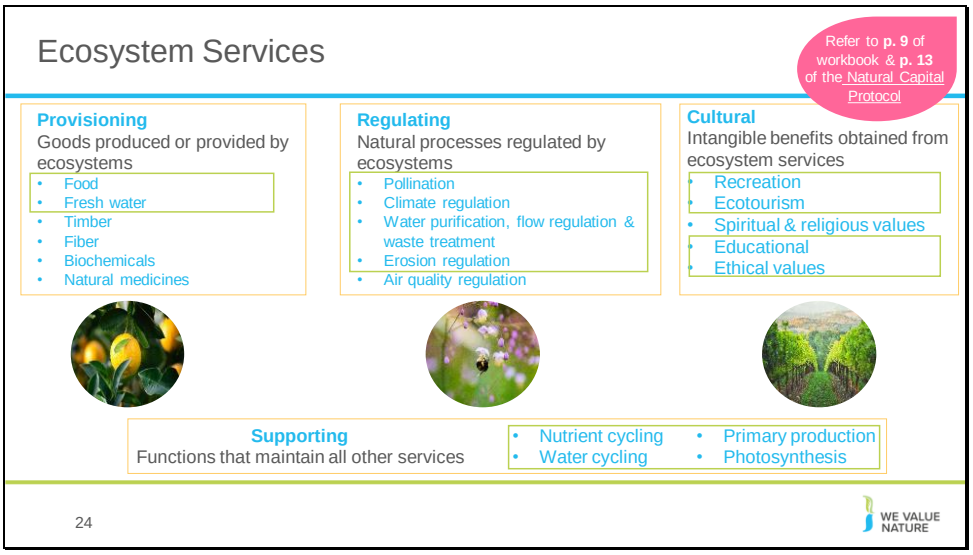
- Ecosystems services are the benefits to people from ecosystems, where an ecosystem is defined as the interaction between complex plants, animals and microorganisms and their non-living environment
- Examples of ecosystem services **include pollination, water regulation & purification, soil biodiversity, pest control, climate regulation, erosion regulation, nutrient retention**
- Ecosystem services can be classified into provisioning, regulating, cultural and supporting services
    - Provisioning: material outputs from nature (**e.g. fresh water, food)** – the F&B sector is highly dependent on water and food to produce their final products.
    - Regulating: indirect benefits from nature generated through regulation of ecosystem processes (**e.g. Erosion prevention and maintenance of soil fertility, pollination, biological control)** – processes such as pollination and prevention of erosion improve soil fertility and can positively impact crop quality and yield.
    - Cultural: non-material benefits from nature (e.g. **recreational, ecotourism, educational,** spiritual, **ethical**) – while the benefits of cultural ecosystem services may not always be directly visible, they are part of the larger system around food & beverage production. While these benefits are strongly interlinked, we have provided a dotted line for the services that are most discussed in the F&B sector.

- Supporting: fundamental ecosystem processes that support the delivery of other ecosystem services (e.g. **nutrient cycling, water cycling**) – without these services, the F&B sector would not benefit from the other services provided by the ecosystem such as pollination and fresh water.

Ecosystem services – key distinction between:
Supporting services: fundamental ecological processes that support the delivery of our ecosystem services
Regulating services: indirect benefits from nature generated through regulation of ecosystem processes e.g. – mitigation of climate change through carbon sequestration, water filtration by wetlands, erosion control and protection from storms

There are many classification schemes for ecosystem services including the CICES and the FEGS-CS which measure ecosystem outputs that are directly consumed or used by beneficiaries

Slide 24



This slide describes the four categories of ecosystem services and provides examples for each of the categories. The green line highlights the ecosystem services that are particularly relevant for the F&B sector.

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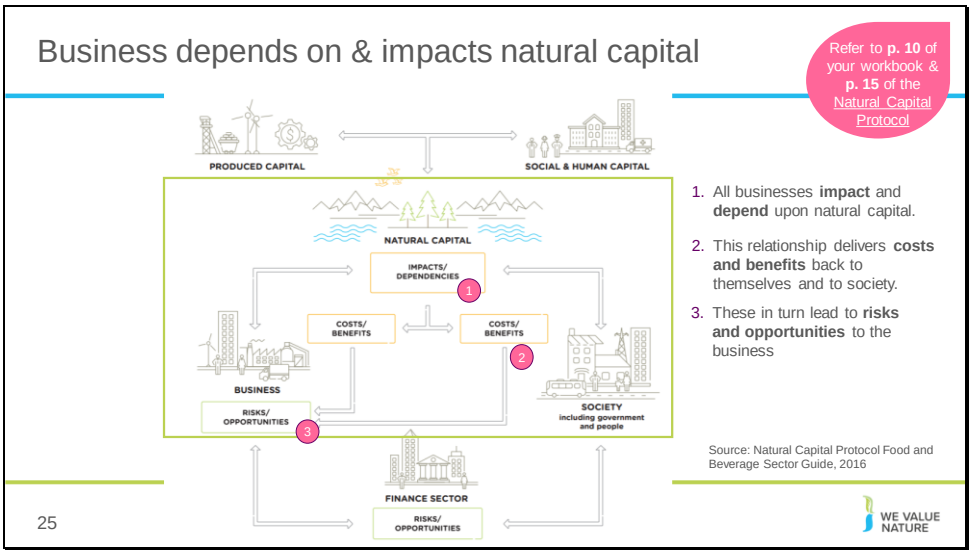
Slide 25



Natural Capital Protocol Food and Beverage Sector Guide, 2016
https://capitalscoalition.org/natural-capital-protocol-food-and-beverage-sector-guide/

- All businesses **impact and depend** upon natural capital

Example impacts: harmful substances used in packaging (waste, greenhouse gas emissions, discharges to soil and water, water extraction)
Example dependencies: health of workers (energy, climate regulation, pollination, materials, erosion and soil regulation, water)

2. This relationship delivers **costs and benefits** back to themselves and to society.
Example costs: consumers get ill
Examples benefits: increased productivity due to a program of health checks

3. These in turn lead to **risks and opportunities** to the business
Example risks: operational, reputational and financial risk (Increased raw material or resource costs, New regulations or license fees, Changing customer values)
Example opportunities: operational opportunity (Reduce the costs of resource inputs (e.g. through efficiency gains or switching suppliers), Reduce environmental fees and charges, Growing demand for credibly certified products)

What the examples show (rice example below) is that natural, social and economic issues are fundamentally interconnected and cannot be separated from one another. It also illustrates how natural capital underpins all the other capitals and without it we would not have social and human or financial capital.

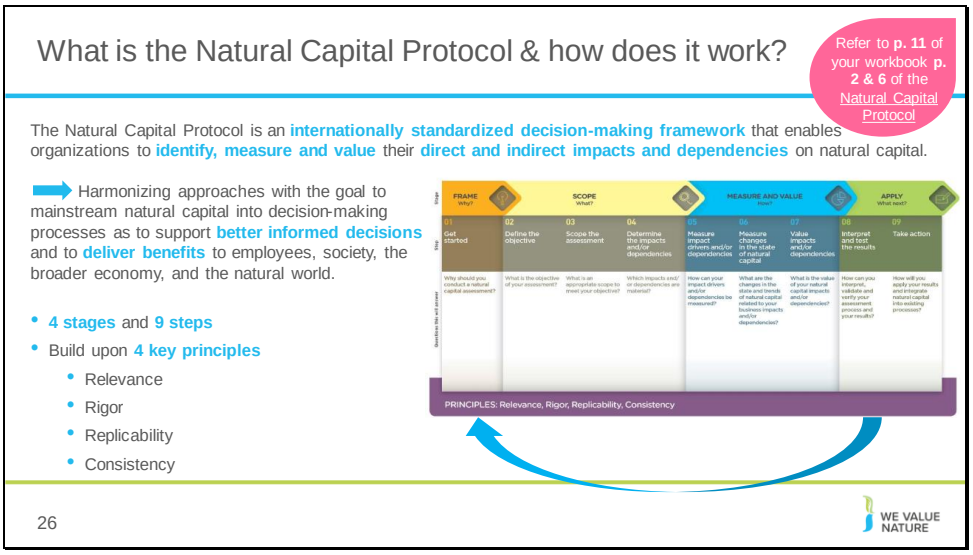
Example: rice

1. All businesses **impact and depend** upon natural capital
Example impacts: water pollutants
Example dependencies: water to flood the rice fields

2. This relationship delivers **costs and benefits** back to themselves and to society.
Example costs: poor water quality can affect the quality of the rice produced / poor water quality can impact the health of downstream water users
Example benefits: higher quality rice/less absence of employees due to an improved wastewater treatment system

3. These in turn lead **to risks and opportunities** to the business
Example risks: This may pose operational risks if social conflict over polluted water adds to security costs
Example opportunities: This may also pose societal opportunities if businesses use managed water catchments to improve water quality for local communities

Slide 26



The **Natural Capital Coalition** is a collaborative space to harmonize approaches to natural capital.
The network represents over 300 organizations across all parts of society and around the world.
Purpose: **To mainstream** the inclusion of natural capital in decision making, **harmonizing approaches and getting them to scale, quickly.**

The Natural Capital Protocol: https://naturalcapitalcoalition.org/natural-capital-protocol/

The **Protocol** aims to **support better decisions** by taking into account how business interacts with natural capital in decision making. Until now, natural capital has for the most part and still is, being excluded from decisions.
So it is to be understood as a Framework that was really designed to help **generate trusted, credible and actionable information** that business managers need to inform decisions by identifying, measuring and valuing impacts and dependencies on natural capital.

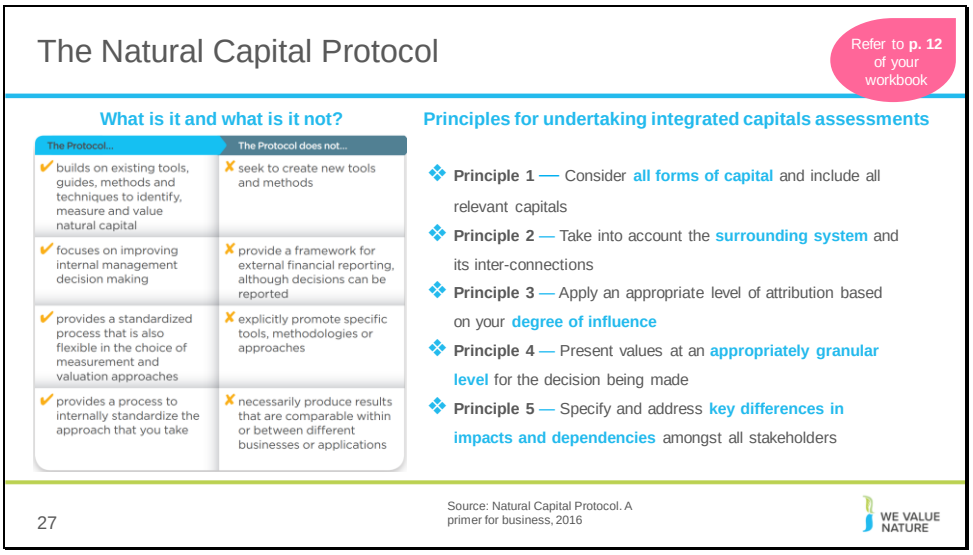
The Protocol **builds upon many approaches** already used within business.
It acts as an **overarching globally accepted framework** to build and expand this information into robust natural capital assessments.

STRUCTURE of the Protocol:
4 overarching stages of frame (why), scope (what), measure and value (how) and apply (so what) and **9 logical steps**. It should be easy to follow and should be suitable for any business across any sector or geography.
The stages and steps are **iterative** so expect that you may need to revisit a previous step.

4 principles:

Relevance: Ensure that you consider the most relevant issues throughout your natural capital assessment including the impacts and/or dependencies that are most material for the business and its stakeholders (adapted from CDSB 2015 and WRI and WBCSD 2004).
Rigor: Use technically robust (from a scientific and economic perspective) information, data, and methods that are also fit for purpose.
Replicability: Ensure that all assumptions, data, caveats, and methods used are transparent, traceable, fully documented, and repeatable. This allows for eventual verification or audit, as required (adapted from GRI 2013).
Consistency: Ensure the data and methods used for an assessment are compatible with each other and with the scope of analysis, which depends on the overall objective and expected application (adapted from WRI and WBCSD 2004 and IIRC 2013).

Slide 27



Important to note that the NCP as an overarching framework won't give you actual results. You therefore need to use the Nat Cap toolkit to get tools.

https://naturalcapitalcoalition.org/wp-content/uploads/2016/07/NCC_Primer_WEB_2016-07-08.pdf

Highlight that the aim of the training will focus on the second and third stage of the Protocol: going into measurement and valuation technical details.

❖ **Principle 1** — Consider **all forms of capital** and include all relevant capitals
You should take into account all potentially relevant capitals, based on your organization's business model, and where any are deemed not relevant, you should state that they are not relevant, and why. This evaluation of relevance should be achieved through undertaking some form of *materiality assessment* that considers the significance of an issue to your organization and its stakeholders.

❖ **Principle 2** — Take into account the **surrounding system** and its inter-connections
To be recognized as an integrated capitals assessment, adopting a systems-based approach is essential. The relevant system(s) should be considered, in particular the material *inter-connections within, and between, the different capitals*. This exercise should be initiated in *the Frame and Scope Stages of a capitals assessment*. Systems in this context include for example landscapes, river basin catchments, the broader working conditions within countries of operation, the networks and stakeholders that may be able to help devise or deliver a solution and the inter-connections between nature, people and organizations within these boundaries.

Principle 3 — Apply an appropriate level of attribution based on your **degree of influence**

Identifying what you are *fully or partially responsible for and the correct level of attribution* is challenging but extremely important. There will be some impacts and dependencies that you are clearly responsible for and others where you may only have a limited degree of influence**.** To understand the extent to which your organization has actually contributed to a particular impact you should consider *what would have happened anyway in the absence of your activity (i.e. a counterfactual scenario).*

Levels of attribution: direct, partial direct, indirect, enabling

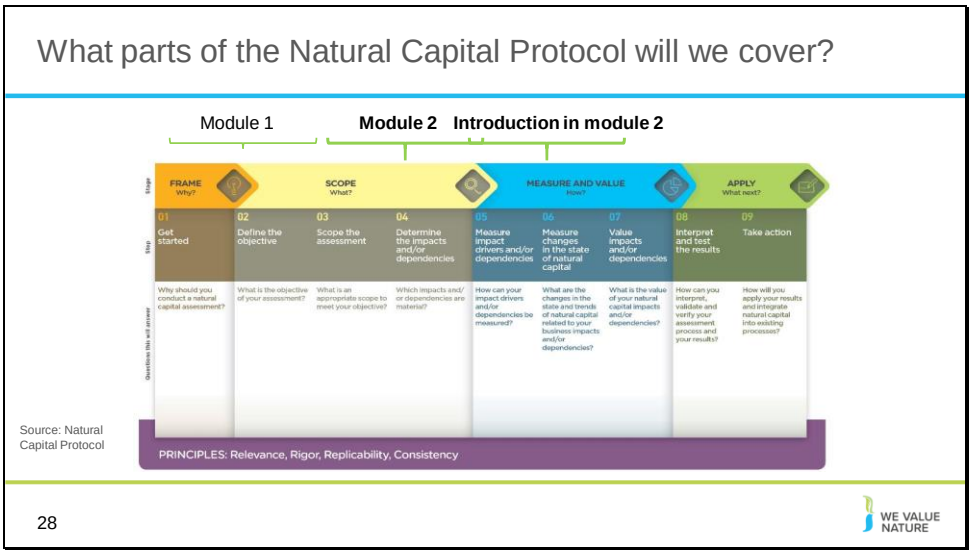
Principle 4 — Present values at an **appropriately granular level** for the decision being made

The aim of this principle is to ensure that information provided through an assessment is *presented at the right level of detail to be useful* in decision making. This means showing positive and negative values both for each capital, and within each capital, at a suitably granular level.

Principle 5 — Specify and address **key differences in impacts and dependencies** amongst all stakeholders

When deciding alternative courses of action, there will inevitably be some form of *trade-off between and within the different capitals*. The extent of relevant stakeholder groups becomes broader when more than one capital is part of an assessment, so a *more comprehensive stakeholder mapping* across all capitals is needed.

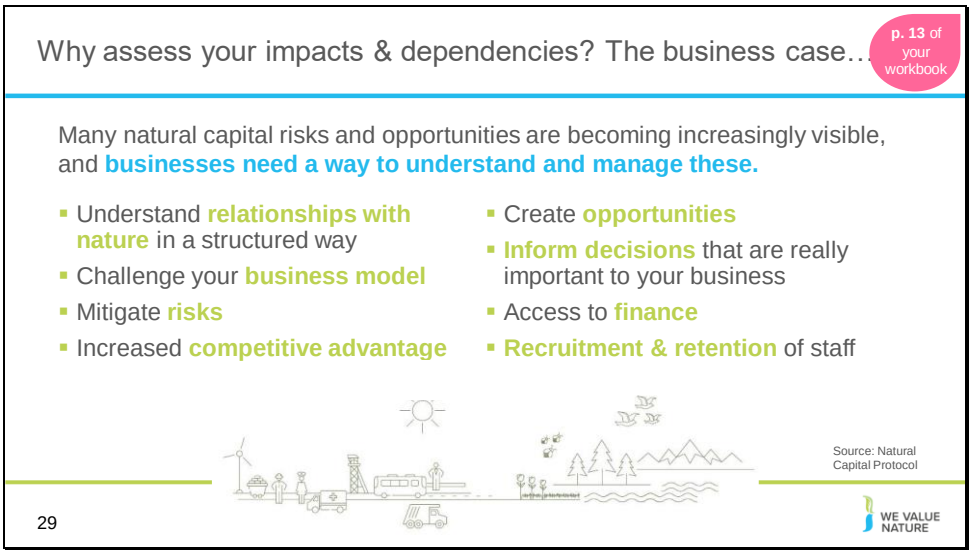
Slide 28



Highlight that the aim of the training will focus on the second (**scope)** and third stage (**measure and value)** of the Protocol: going into measurement and valuation technical details.

The Natural Capital Protocol: https://naturalcapitalcoalition.org/natural-capital-protocol/

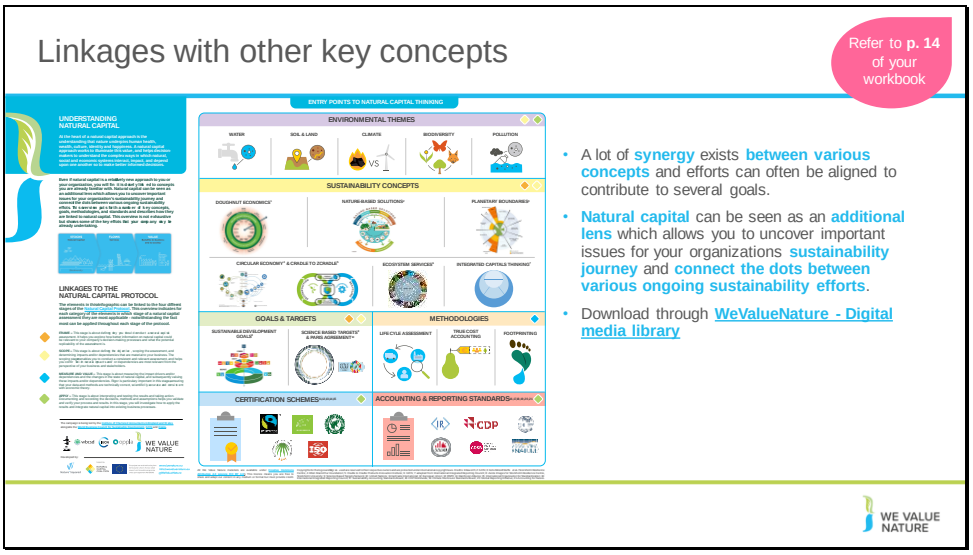
Slide 29



There are evidently a lot of pertinent risks around nature and the environment facing businesses today. Where does natural capital come into this - how can it help you manage these risks?

To assess natural capital is to assess your company's impacts and dependencies on nature.
It provides information that will help you to understand your relationship with nature. By focusing on impacts and dependencies, natural capital provides structure to this understanding.
Once you have a better understanding of your relationship with nature, you can use this to challenge your business model, mitigate risks and create opportunities. Natural capital can also be a valuable tool for broadening the conversation to include all parts of your business, including the finance team.

Slide 30

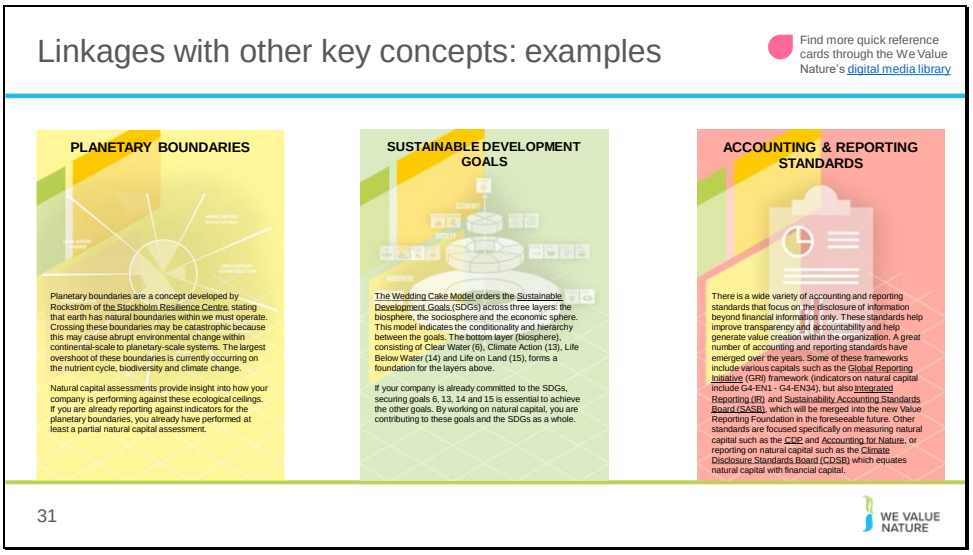


UNDERSTANDING NATURAL CAPITAL
A lot is happening on sustainability and that can be overwhelming. Luckily, a lot of synergy exists between various concepts and efforts can often be aligned to contribute to several goals. In this infographic we aim to illustrate how natural capital is linked to many sustainability concepts that your company may already be working on.

Even if natural capital is a relative new concept to you or your organizations, you will find it is closely linked to other things you are already familiar with. Natural capital can be seen as an additional lens which allows you to uncover important issues for your organizations sustainability journey and connect the dots between various ongoing sustainability efforts. This infographic explains for each concept, goal, methodology, scheme or framework what it is and how it is linked to natural capital.

The infographic can be downloaded on the We Value Nature – Digital meSlide library: https://wevaluenature.eu/meSlide-item/305

Slide 31



These are three examples of concepts. All key concepts can be found via this link: https://wevaluenature.eu/meSlide-item/305

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.
https://www.stockholmresilience.org/research/planetary-boundaries.html

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.
https://www.stockholmresilience.org/research/research-news/2016-06-14-how-food-connects-all-the-sdgs.html

Integrated Reporting / SASB: Integrated Reporting is a reporting standard that considers several (financial, manufactured, human, intellectual, natural and social) capitals, and aims to

provide an integrated overview of how companies create value. The SASB reporting standard connects businesses and investors on the financial impacts of sustainability. These frameworks will be merged into the new Value Reporting Foundation in the foreseeable future. Within this framework, Natural Capital is one of the key capitals to report on. Performing a natural capital assessment is a way to implement this framework on the element of natural capital.
https://integratedreporting.org/news/iirc-and-sasb-announce-intent-to-merge-in-major-step-towards-simplifying-the-corporate-reporting-system/

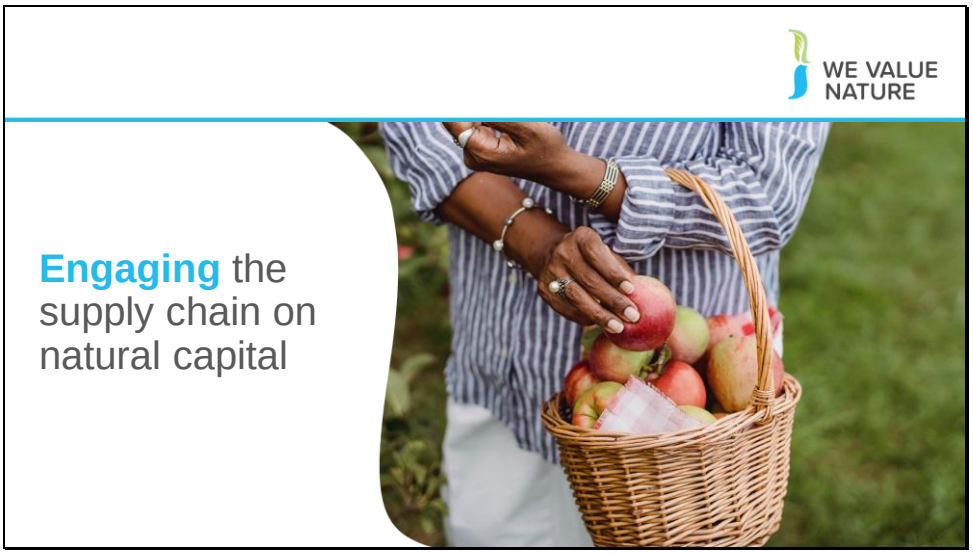
Slide 32

Agenda – 2 hour training

TO ADAPT

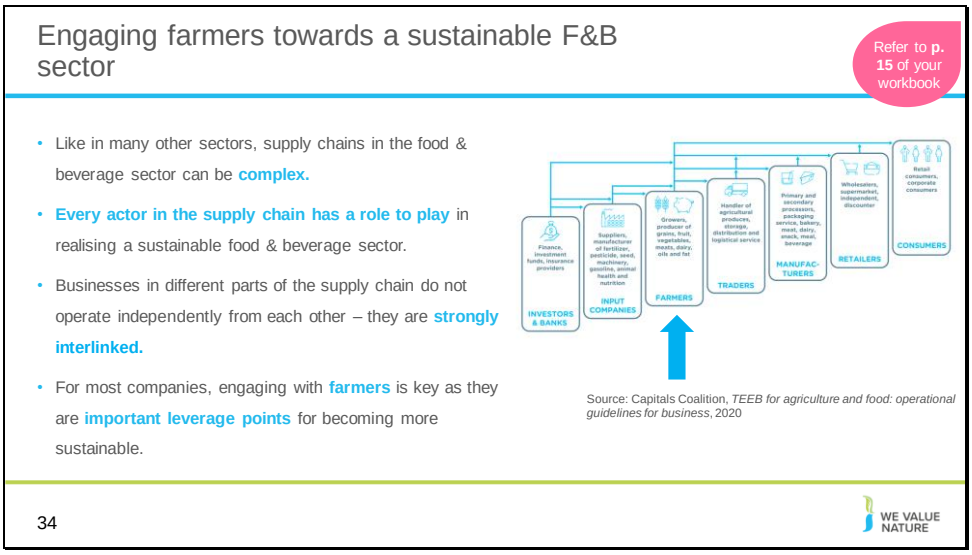
Time (xxx)	Session
15	**Welcome** – Agenda, objectives, material & introductions
10	**Setting the scene and a brief re-cap on natural capital**
5	**Engaging the supply chain on natural capital**
5	**Identifying natural capital impacts & dependencies**
30	**Group exercise**
10	*Coffee Break*
20	**Scoping an assessment** – Key steps to take
15	**Practical considerations** – Planning an assessment
20	**Optional: Case study presentation**
10	**Wrap-up –** Key take-aways, wrapping-up

Slide 33



https://www.pexels.com/photo/crop-ethnic-woman-with-basket-of-apples-5529527/

Slide 34



Like in many other sectors, supply chains in the food & beverage sector can be **complex.**

- Most supply chains are composed of a variety of actors, including input companies, farmers, traders, manufacturers, retailers and consumers.

Every actor in the supply chain has a role to play in realising a sustainable food & beverage sector.

- E.g. farmers produce the raw materials which are consequently transformed into final products. On the end of the chain – downstream – are the consumers who buy the final products.

Businesses in different parts of the supply chain do not operate independently from each other – they are **strongly interlinked.**

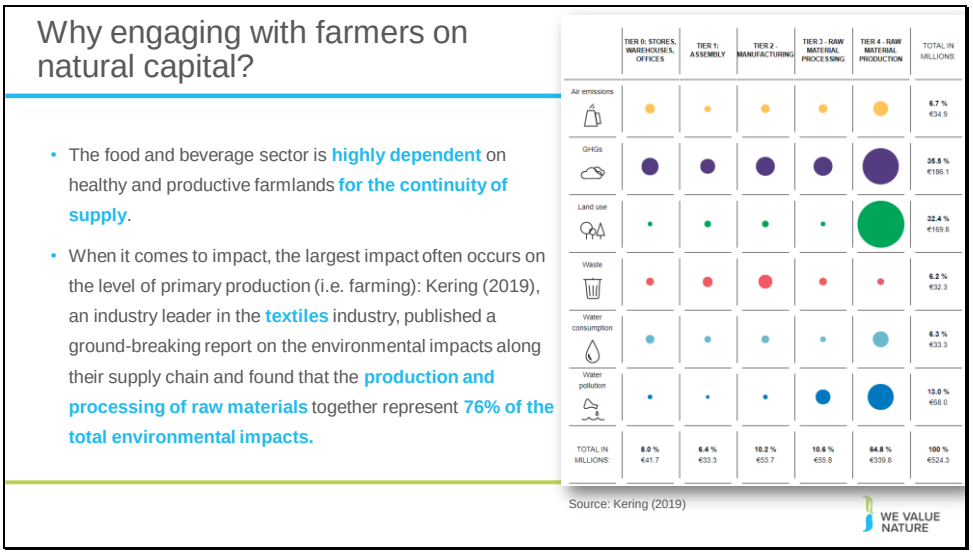
- Most supply chains are highly efficient: different actors along the supply chain work closely together, moving the product down through the chain up to the consumer.

For most companies, engaging with **farmers and consumers** is key as they are **important leverage points** for becoming more sustainable.

- Mouse click to make the blue arrows appear.

Source: Capitals Coalition, *TEEB for agriculture and food: operational guidelines for business*, 2020:
https://capitalscoalition.org/teebagrifood-operational-guidelines-for-business-launch/

Slide 35



The food and beverage sector is **highly dependent** on healthy and productive farmlands **for the continuity of supply**.
- McKinsey & Company, 2016: https://www.mckinsey.com/business-functions/sustainability/our-insights/starting-at-the-source-sustainability-in-supply-chains
GrainCorp, a large Australian agriculture business, reported that a drought cut its grain deliveries by 23%, leading to a 64% drop in 2014 profits. Unilever estimates that it loses some €300 million per year as worsening water scarcity and declining agricultural productivity lead to higher food costs.

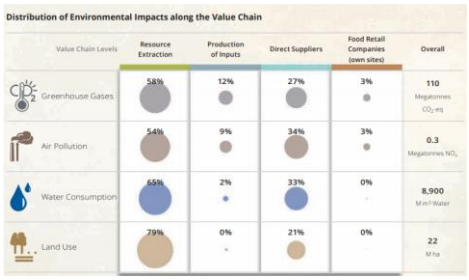
- Kering report 2019: https://kering-group.opendatasoft.com/pages/report-2019/
The figure shows how the Group's environmental impacts across the supply chain are distributed. We see that the Group's most significant impacts are generated in the supply chain (92%), and in particular from the production and processing of raw materials that together represent 76% of the total environmental impacts. Kering's own operations represent only 8% of the impacts.

Slide 36

Why engaging with farmers on natural capital?

Refer to **p. 16** of your workbook

- Similar to the textiles sector, within the F&B sector the main impacts are also at the level of farmers.
  - E.g. looking at greenhouse gasses, there is a **high concentration at farm level.**
- Hence, there lies a **huge opportunity for sustainable change** at the level of **agricultural production**.



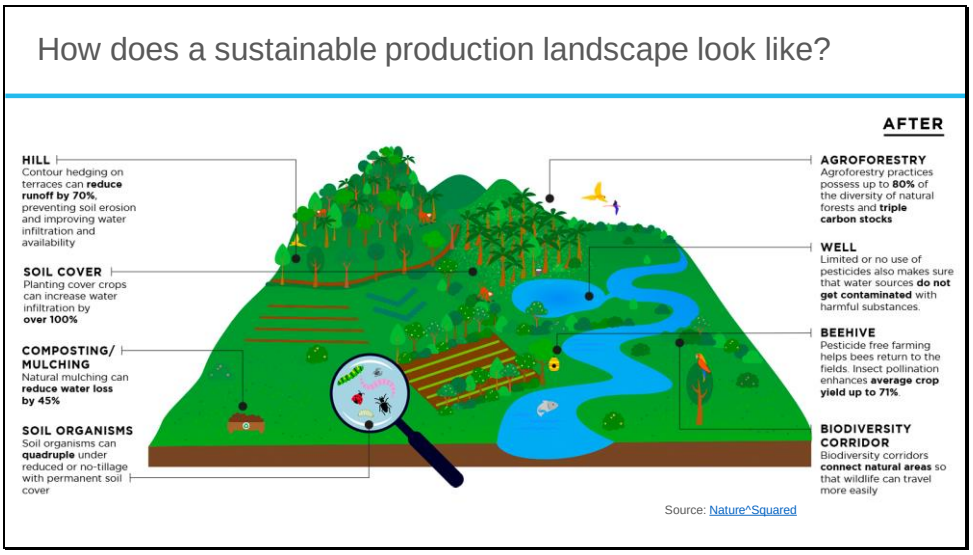
Source: Systain & Adelphi, *Atlas on Environmental Impacts Supply Chains*, 2017

The story is not very different for the Food & Beverage sector. Environmental impacts are unequally distributed along the food chain with a high concentration at the level of agricultural production. This is the case for almost all food products (e.g. Beef, rice, coffee).

Source: Systain & Adelphi, *Atlas on Environmental Impacts Supply Chains,* 2017: https://www.adelphi.de/en/publication/atlas-environmental-impacts-supply-chains

Ourworldindata, 2020: https://ourworldindata.org/environmental-impacts-of-food

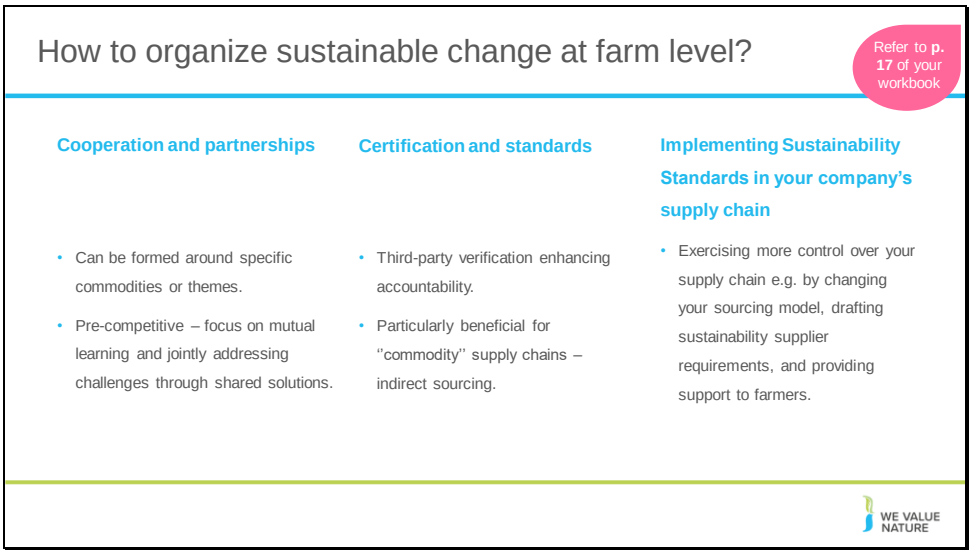
Slide 37



An infographic that shows how a sustainable production landscape may look like, by visualizing practices that have a positive impact on i.e. soil, water, biodiversity, air and climate.

Source: http://www.nature-squared.org/

Slide 38



Categorization based on SAI report (2015) *Sustainable Sourcing of Agricultural Raw Materials: a Practitioner's guide*: "https://saiplatform.org/wp-content/uploads/2019/04/sai-sustainable-sourcing-guide-_june-2015.pdf

The report is produced in collaboration with IMD, CSL, International Trade Centre, IDH the Sustainable Initiative with support from BSR, Sedex and the Sustainable Food Laboratory.

Strategies can also be combined.

Slide 39

How to engage with farmers on the topic of natural capital?

Refer to **p. 17** of your workbook

- When discussing natural capital, it is key to **bring farmers into the discussion**. *"Bring in the supply side companies to talk about challenges and solutions at farm level"* (Ruth Thomas, director Global Agribusiness Alliance (GAA)). Also leverage their **local knowledge** of the area when addressing issues such as biodiversity, water, etc.
- **Natural capital may not be the best entry point** for a conversation. Rather, focus on **the day-to-day realities farmers face** – what specific issues are they confronting? What is urgent to them? *"Be specific. Talk about soil or water for example. Do not use jargon"* (Jane Duncan, SAI Platform).
- In a conversation, be clear about what natural capital is e.g. **an integrated approach that includes so many areas** that farmers are already working on. *"You want to avoid is creating confusion by bringing in too many concepts"* (Jane Duncan, SAI Platform). **Start with practical on the ground issues** that relate to other capital themes (e.g. biodiversity, air, climate).

Slide 40

How to engage with farmers on the topic of natural capital?

- **On We Value Nature's website**, you can find action cards describing **useful actions** for a **farmer** & **ways to engage others** in the company on natural capital.

All action cards can be retreived through: https://wevaluenature.eu/meSlide-item/307

Slide 41

First ask respondents about the top 2 risks that they see for their company at farm level? The next question revolves around how they organize sustainable change at farm level, using the categories as explained in the previous slides:

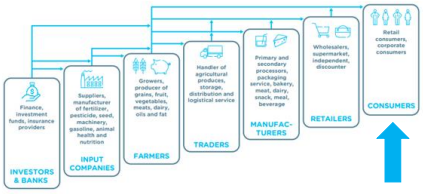
- Industry wide cooperation & partnerships
- Standards and certification
- Implementing sustainability requirements in company's supply chain
- Other

Slide 42

Moving to the other end of the supply chain: the consumer

Refer to **p. 19** of your workbook

- **Moving downstream** the supply chain, businesses engage with consumers who buy their food & beverage products.
- Here is where the **marketing** of your sustainability efforts take place and where consumers reward your efforts by **buying** your products.



Source: Capitals Coalition, *TEEB for agriculture and food: operational guidelines for business*, 2020

42

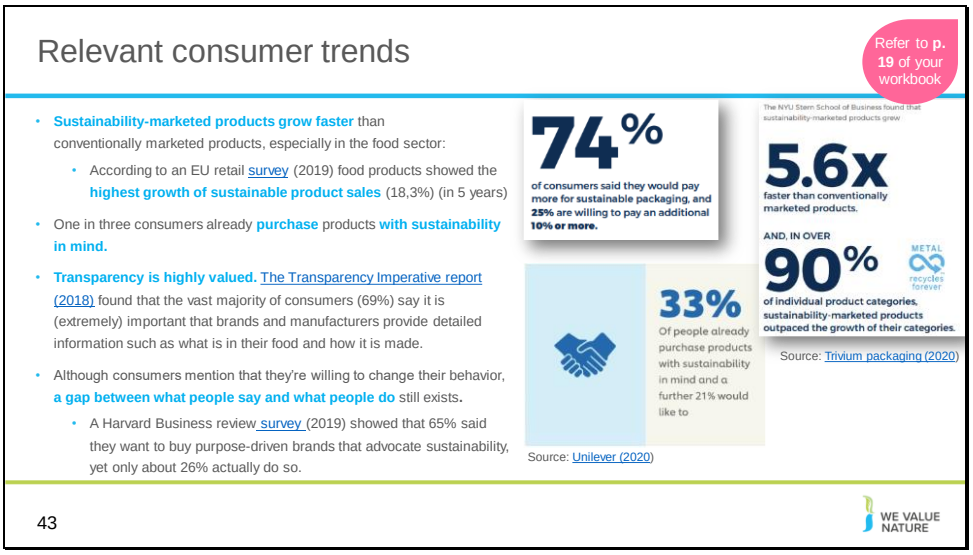
Presenter to explain why businesses should engage with consumers on the topic of natural capital.

- Consumers are the actors in the supply chain who eventually buy the F&B products.

Finding a market for sustainably produced products is important for your business. It is therefore key to engage consumers on the topic of natural capital.

TEEB FOR AGRICULTURE AND FOOD: OPERATIONAL GUIDELINES FOR BUSINESS, 2020:
https://capitalscoalition.org/teebagrifood-operational-guidelines-for-business-launch/

Slide 43



Presenter to explain that there are positive consumer trends on natural capital. Consumers find it increasingly important to buy products that are produced sustainably. The market for sustainable products is now growing faster than the market for conventional products.

However, we still see a mismatch in what people say and how they act (in the supermarket).

Harvard Business review 2019 survey
https://hbr.org/2019/07/the-elusive-green-consumer#:~:text=In%20one%20rec

The European Union market for sustainable products (2019)
https://www.intracen.org/publication/The-European-Union-market-for-sustainable-products/

FMI-Label Insight (2018):
https://www.fmi.org/blog/view/fmi-blog/2018/09/21/transparency-can-impact-the-bottom-line

Unillever (2020) – Consumers and sustainability
https://www.unilever.com/sustainable-living/our-strategy/consumers-and-sustainability/ent%20survey%2065,about%2026%25%20actually%20do%20so.&text=We%20have%20been%20studying%20how,marketing%2C%20economics%2C%20and%20psychology.

2020 Global Buying Green Report
https://triviumpackaging.com/sustainability/2020BuyingGreenReport.pdf

Slide 44

How to engage consumers on natural capital?

Refer to **p. 20** of your workbook

Useful resource: WBCSD: Food & Agriculture Roadmap – Chapter on policy recommendations from a consumer perspective

Third–Party Certification

- Useful mechanism to communicate **wider sustainability efforts.**
- Helps **build credibility** towards consumers as the sustainability performance has been verified by an **external party**.
- **Labelling** is an effective instrument to guide consumer choices if done in a clear manner.

Storytelling

- Strong in communicating a narrative that helps to **emotionally connect** consumers to your product.
- Particularly helpful to communicate about **specific sustainability activities, above industry standards.**
- Often **not externally verified.**

Blockchain technology

- Providing **far-reaching transparency** on the product's supply chain.
- Effective in communicating information on **pricing and quality.**
- Its strong **traceability** helps create **trust** among consumers.

True Cost Accounting

- Strong in informing people about a **wide range of sustainability aspects** related to a product.
- **Putting a price** on social and environmental issues to influence consumer choices.

Slide 45

First ask respondents about the top 2 risks that they face in marketing their sustainability efforts.
The next question revolves around how they engage with consumers, using the categories as explained in the previous slides:

- Third party certification
- Storytelling
- Blockchain technology
- True cost accounting
- Other

Slide 46

Agenda – 2 hour training

TO ADAPT

Time (xxx)	Session
15	**Welcome** – Agenda, objectives, material & introductions
10	**Setting the scene and a brief re-cap on natural capital**
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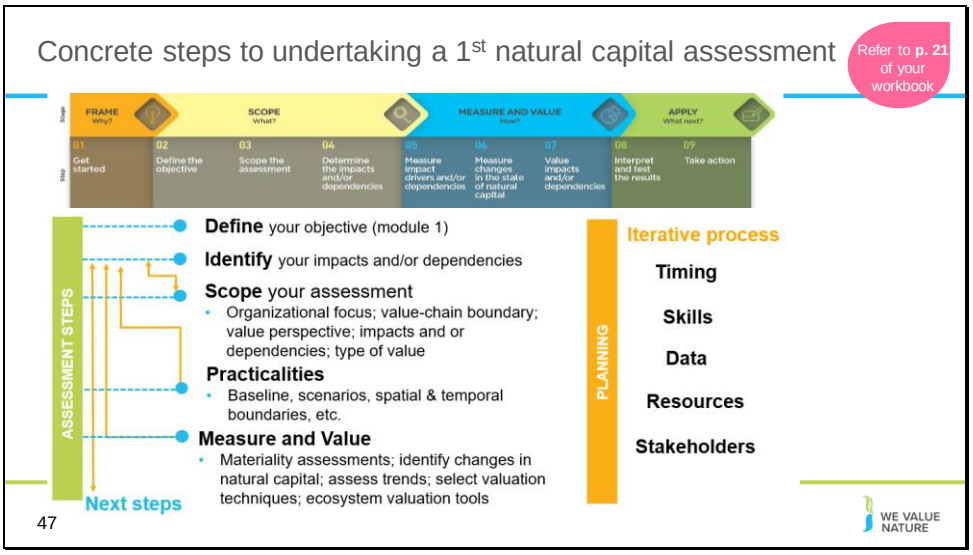
20	**Scoping an assessment** – Key steps to take
15	**Practical considerations** – Planning an assessment
20	**Optional: Case study presentation**
10	**Wrap-up –** Key take-aways, wrapping-up

Slide 47



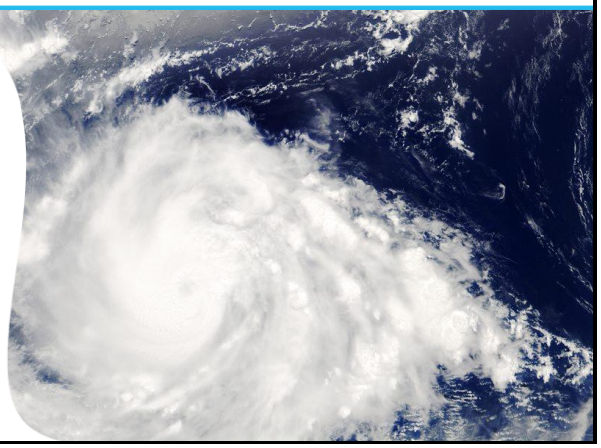
Presenter to explain the steps to undertaking a 1st natural capital assessment using the Slidegram on the slide.

Slide 48

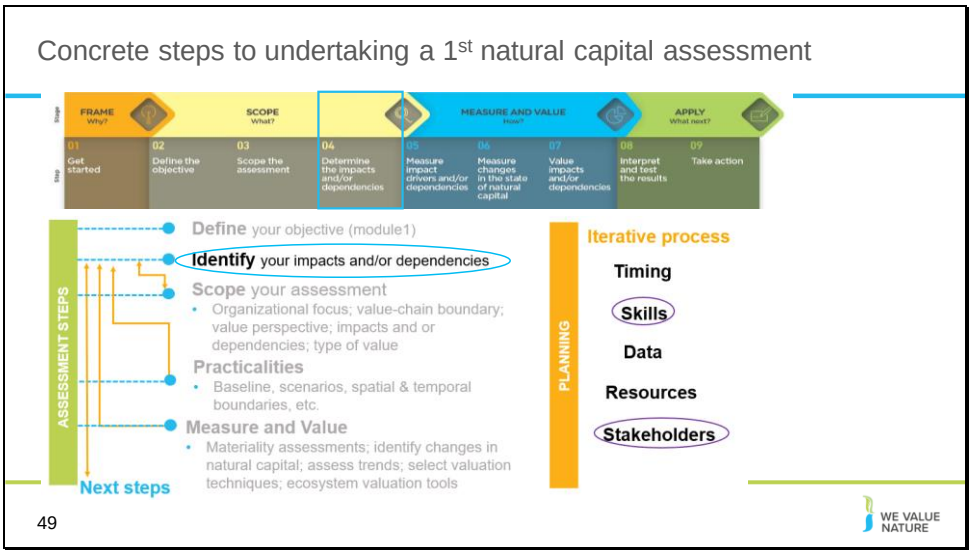
WE VALUE NATURE

Identifying your natural capital impacts & dependencies

Impact drivers and dependency pathways



Slide 49



Presenter to explain the steps to undertaking a 1st natural capital assessment using the Slidegram on the slide. Presenter to explain that defining the objective has been explained in module 1. The next step is identifying your impacts and/or dependencies.

Collecting this information may involve:
• Seeking expert opinion and/or analysis, or leveraging existing information (e.g., results of an environmental impact assessment) and local knowledge of key issues;
• Consulting stakeholders (internal and/or external) (e.g., interviews, workshops, questionnaire surveys);
• Compiling publicly available information on specific issues (e.g., case studies from relevant locations, land-use maps, species threat assessments);
• Conducting a rapid assessment of value (e.g., what proportion of total sales revenue depends upon a specific ecosystem and/or abiotic service? What is the financial value of the production asset involved?); and, where available,
• Referring to dedicated sector guidance (e.g., sector guides accompanying the Natural Capital Protocol).

It is recommended to establish a panel of relevant people with a broad range of skills to complete the materiality assessment, and to ensure the panel is consistent throughout the assessment.

Slide 50

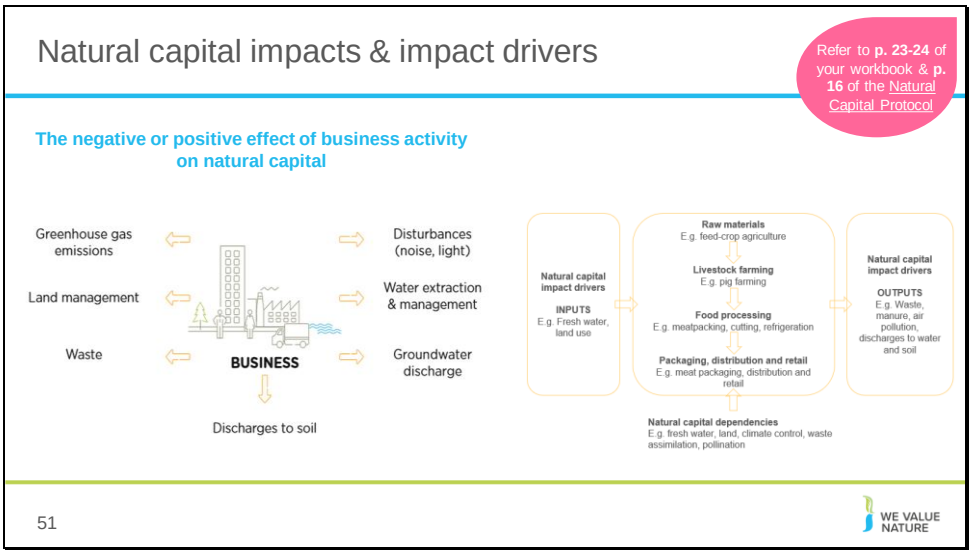
Optional video – practical example of impacts/dependencies

Source: example from Haagen-Dazs on their honeybees pollinator habitat project
https://www.youtube.com/watch?v=qtgm-3EQOU4

50

Source: example from Haagen-Dazs on their honeybees pollinator habitat project
https://www.youtube.com/watch?v=qtgm-3EQOU4

Slide 51



Presenter to provide detail on natural capital impacts using the notes below and referring to p. 16 of the Natural Capital Protocol:

The Protocol defines a natural capital impact as: The negative or positive effect of business activity on natural capital. They can arise directly from business operations or indirectly from the use of products and services. As a result of your impact on natural capital you can generate impacts on your business as well as impacts on society.

Presenter to link natural capital impacts with the risks and opportunities material covered in M1, using the notes below. Presenter to elaborate on the business impact Slidegram, using some examples:

- Thinking back to some of the content in M1, we can see how natural capital impacts can pose different risks and opportunities for businesses.

- **GHG emissions e.g. transportation, primary production**
    - This may pose societal risks for businesses due to the health risks arising from the effect of air pollution on respiratory disease
    - On the other hand, this could pose a reputational and marketing opportunity due to new revenue streams offered in areas like carbon offsetting

- **Land management e.g. forest management**
    - This may pose an operational risk by increasing natural hazard costs through degradation of natural ecosystems

    - This may also pose an operational opportunity if businesses invest in sustainable and green land management, reducing costs by protecting against natural hazards and contributing to tackling the loss of biodiversity

- **Waste e.g. post-consumer waste**
    - This may pose legal and regulatory risks if new laws or license fees are established, charging more for waste disposal
    - This may also pose an operational opportunity for businesses if they minimise or add value to waste and recapture valuable materials otherwise discarded

- **Discharges to soil e.g. fertilizers & pesticides**
    - This may pose a financial risk if the business' sales fall due to negative publicity about the business' impacts on natural capital

- **Groundwater discharge e.g. wastewater**
    - This may pose operational risks if social conflict over polluted water adds to security costs
    - This may also pose societal opportunities if businesses use managed water catchments to improve water quality for local communities

- **Water extraction and management e.g. factory equipment cleaning**
    - This may pose a financial opportunity if businesses alter the way in which they go about water extraction, thus attaining "green funds" or investor interest in sustainability

- **Disturbances e.g. heavy machinery operation**
    - This may pose societal issues again as wider society is impacted negatively from heightened noise and light

Links to risk – read one example from module 1
Reputation risk – increased public & consumer awareness of environmental and social damages + consumers are increasingly demanding assurance that the products they buy are produced in way that protect our environment (link to pollution)

Legal risk – California looks set to regulate groundwater for the first time
Source: https://www.theguarSliden.com/sustainable-business/2014/sep/03/california-drought-water-groundwater-regulation-bill-law-farm

Financial risk – Underlying all of these risks & opportunities are financial ones! As we have seen, these risks imply important financial costs. Oatly, the plant-based brand, is facing consumer backlash following a recent investment round led by Blackstone – a name muddied by alleged ties with deforestation in the Amazon.
Source: Food Navigator (2020) https://www.foodnavigator.com/Article/2020/09/04/Oatly-cancelled-Fans-pledge-boycott-over-contentious-shareholder-Blackstone?utm_source=copyright&utm_medium=OnSite&utm_campaign=copyright

Campaigners defeat Coca-Cola plant in South InSlide because it would worsen the already existing water shortages in the area and bring more pollution into the area.

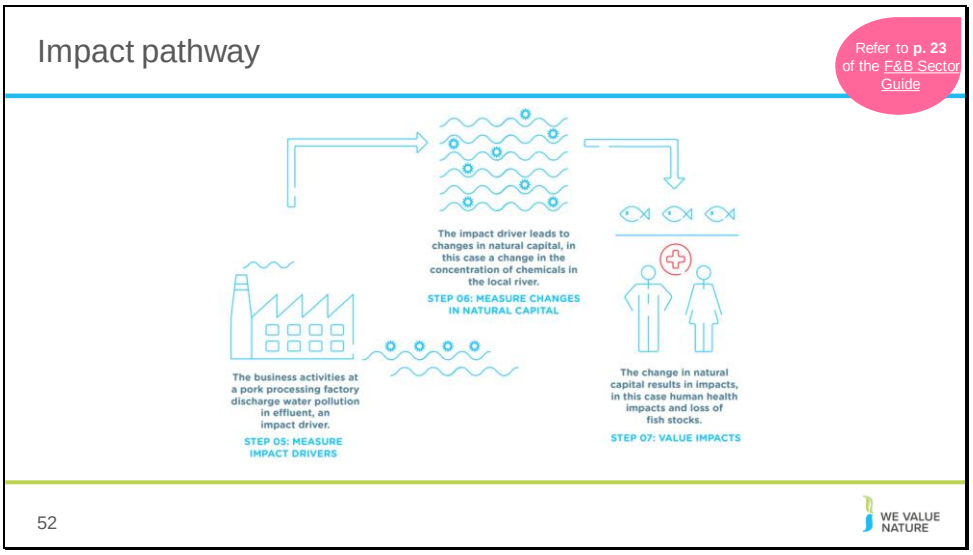
Source: The Ecologist (2015) https://theecologist.org/2015/apr/21/campaigners-defeat-coca-cola-plant-south-inSlide

Links to opportunity

Operational opportunity – Adnams, a beer producing company in the UK, implemented rainwater harvesting and grey water recycling systems. The company uses around three pints of water for every pint of beer produced: that's almost half the industry average.
Source: https://www.theguarSliden.com/sustainable-business/localism-water-security-food-drink-industry (2012)

Reputation opportunity – Heineken's goal is to be fully circular by 2030, with breweries that are completely climate neutral.
Source: https://www.foodbev.com/news/heineken-beer-in-the-netherlands-brewed-with-green-energy/ (2020)

Slide 52



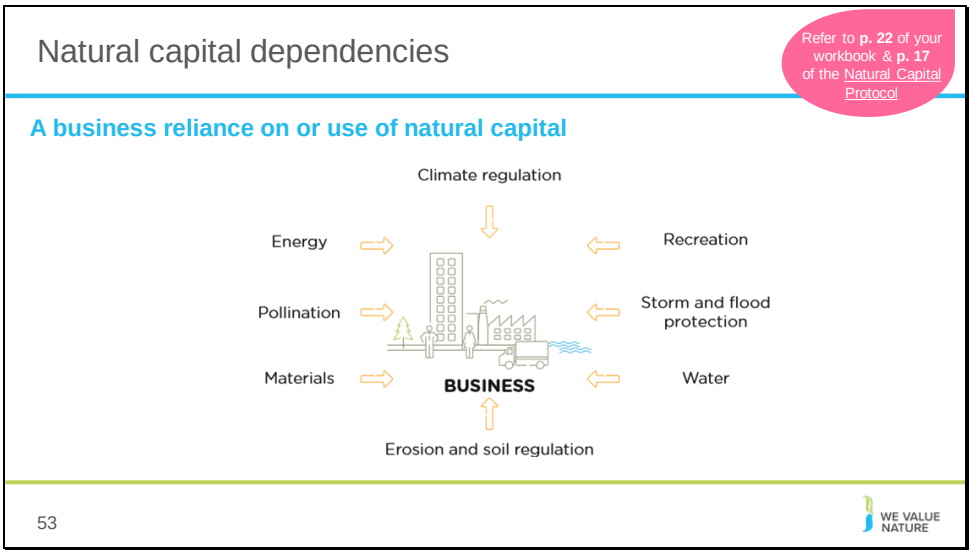
Presenter to then walk through the sugarcane example using the notes below and referring to p. 24 of the F&B sector guide:
https://capitalscoalition.org/natural-capital-protocol-food-and-beverage-sector-guide/

- Business activities at a sugarcane plantation have a dependency on water to irrigate the crops.
- Changes in natural capital cause the availability of water to decline due to:
- Sugarcane farming itself, for example over-abstraction of water
- Natural changes such as drought
- Human-induced changes including other local farms and businesses abstracting water for their own purposes

The company may be paying more for the water now, but at some point it may no longer have access to water in the area, no matter how much it costs - and this puts the company at risk, not just the cost of doing business.

Changes in natural capital affect business dependency (by paying more for water to out-compete other users), so water availability is important.

Slide 53



Presenter to provide detail on natural capital dependencies using the notes below and referring to p. 34 of the Natural Capital Protocol:

The protocol defines natural capital dependency as: A business reliance on or use of natural capital. This can occur in your direct operations or somewhere else in your value chain.

Presenter to link natural capital dependencies with the risks and opportunities material covered in M1, using the notes below. Presenter to elaborate on the business impact Slidegram, using some examples:

- Again, thinking back to some of the content in M1, we can see how natural capital dependencies can pose different risks and opportunities for businesses. This is useful in establishing the value of natural capital dependencies in relation to other inputs and services that you rely on.

- **Energy e.g. energy as a critical production input in a factory**
    - A reliance on energy may pose financial risks due to volatilities in the energy market which could impose higher costs on the business
    - This could also open up financial opportunities if “green funds” become available for more renewable energy sources

- **Pollination e.g. regulating service critical in agriculture**
    - This may pose an operational risk for agricultural sectors if pollination services start to vary

- **Materials e.g. reliance on food crops**

    - This may pose a societal risk if local communities start to experience reduced access to woodland or related ecosystem services as a result of business activities
    - This may pose a societal opportunity if local communities start to benefit from agriculture

- **Erosion and soil regulation e.g. essential for beverage companies**
    - This may post legal and regulatory risk if businesses are faced with fines, penalties, compensation or legal cost from regulation efforts

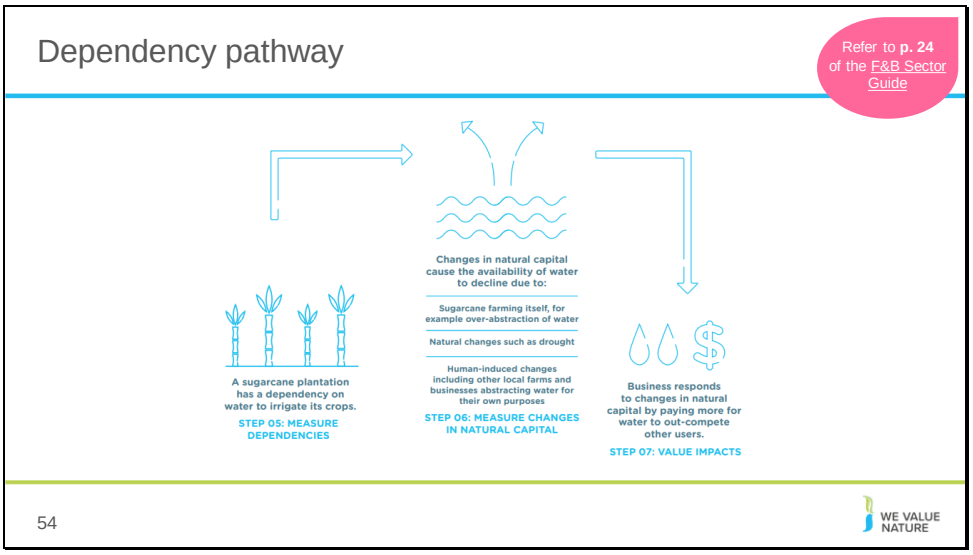
- **Water e.g. reliance on water to produce beer**
    - This may pose reputational and marketing risk if loyalty of key suppliers of business services in the water industry falls

- **Storm and flood protection e.g. local flood barriers**
    - Reliance on flood barriers could pose increasing risk as climate change makes flooding more likely in certain regions
    - Investing in natural flood measures could provide wider benefits to local communities and thus benefit the business through reputation

- **Recreation e.g. for tourist attraction**
    - If businesses rely on recreation such as tourist attractions to raise employee morale, they may be at risk of attracting and attaining their employees due to the volatility of the tourism industry – this could lead to higher recruitment and retention costs

- **Climate regulation e.g. natural filtration of water**
    - This may provide an operational opportunity if businesses invest in green infrastructure like water filtration services, thus reducing overall costs

Slide 54



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The company may be paying more for the water now, but at some point it may no longer have access to water in the area, no matter how much it costs - and this puts the company at risk, not just the cost of doing business.

Changes in natural capital affect business dependency (by paying more for water to out-compete other users), so water availability is important.

Slide 55

Agenda – 2 hour training

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Slide 56

Business example – Los Fiordos

Refer to **p. 25** of your workbook

- Los Fiordos is a **salmon farming company based in Southern Chile,** specializing in the production of Coho and Atlantic salmon and producing a variety of goods as well as portions and filets.
- Los Fiordos is a **vertically integrated company:** they supply their own fodder, eggs and juvenile fishes, own the largest salmon processing plant in Chile, and manage the fright of the produced goods.
- Most of the company's feedlot centers are located in Melinka and Puerto Cisnes, **two high value conversation zones.**

Source: An Ecosystem Services Review on Salmon Aquaculture in Chile – Los Fiordos (2016)

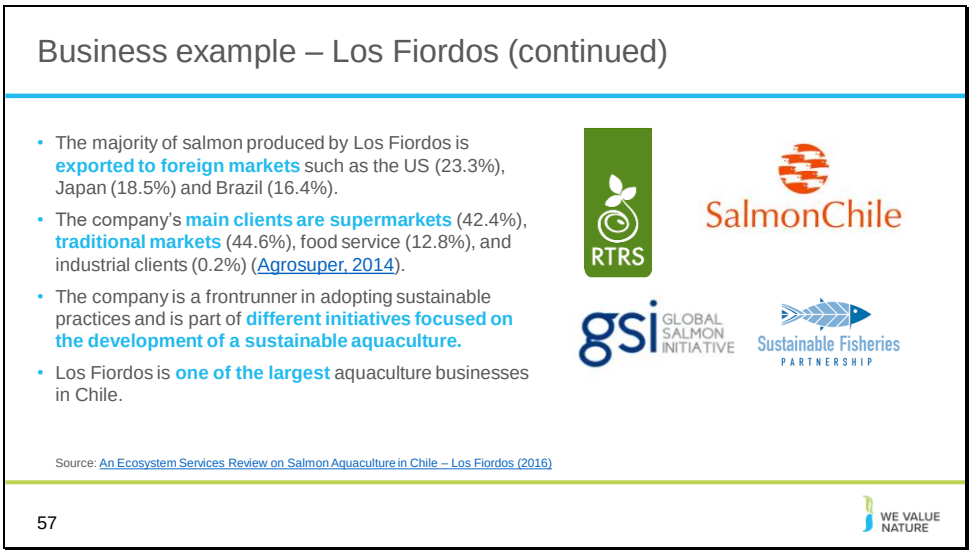
56

WE VALUE NATURE

Image source: https://www.pexels.com/photo/photo-of-person-holding-knife-3296280/

An Ecosystem Services Review on Salmon Aquaculture in Chile – Los Fiordos (2016): http://www.wolfscompany.com/wp-content/uploads/2016/04/Business-dependence-on-ecosystem-services-Salmon-industry-Chile-Final....pdf

Slide 57



Agrosuper, 2014
https://issuu.com/agrosuperinternacional/docs/reporte_integrado_-_agrosuper_2014

An Ecosystem Services Review on Salmon Aquaculture in Chile – Los Fiordos (2016):
http://www.wolfscompany.com/wp-content/uploads/2016/04/Business-dependence-on-ecosystem-services-Salmon-industry-Chile-Final....pdf

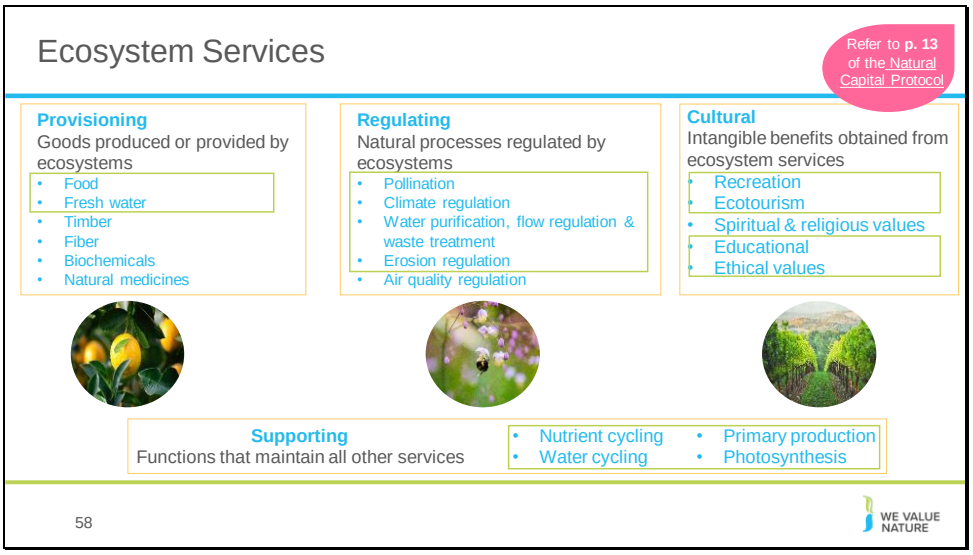
Round Table on Responsible Soy (RTRS):
https://responsiblesoy.org/

Salmon Chile:
https://www.salmonchile.cl/en/home/

GSI Global Salmon Initiative:
https://globalsalmoninitiative.org/en/

Sustainable Fisheries Partnership:
https://www.sustainablefish.org/

Slide 58



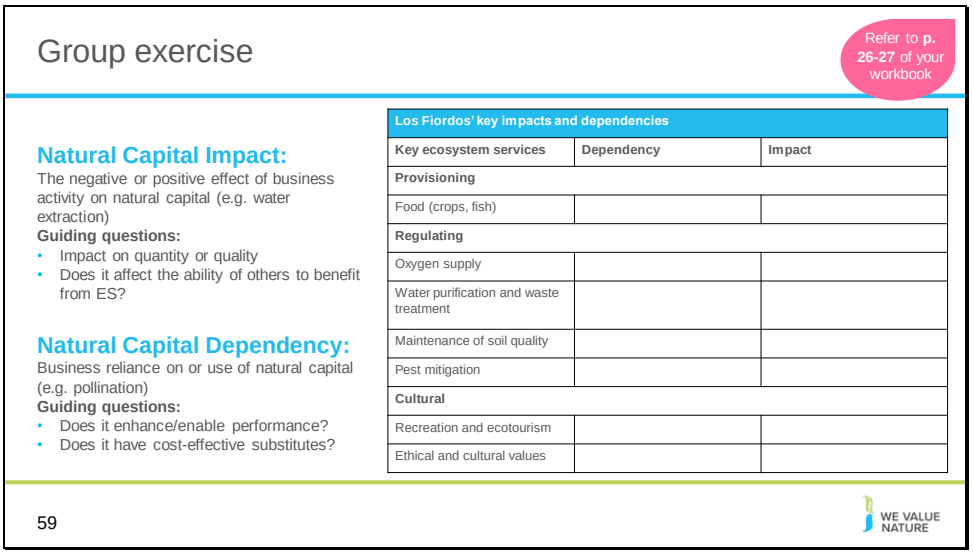
Quick recap of the different ecosystem services.
This slide describes the four categories of ecosystem services and provides examples for each of the categories. The green line highlights the ecosystem services that are particularly relevant for the F&B sector.

- Ecosystems services are the benefits to people from ecosystems, where an ecosystem is defined as the interaction between complex plants, animals and microorganisms and their non-living environment
- Examples of ecosystem services **include pollination, water regulation & purification, soil biodiversity, pest control, climate regulation, erosion regulation, nutrient retention**
- Ecosystem services can be classified into provisioning, regulating, cultural and supporting services
    - Provisioning: material outputs from nature (**e.g. fresh water, food)** – the F&B sector is highly dependent on water and food to produce their final products.
    - Regulating: indirect benefits from nature generated through regulation of ecosystem processes (**e.g. Erosion prevention and maintenance of soil fertility, pollination, biological control)** – processes such as pollination and prevention of erosion improve soil fertility and can positively impact crop quality and yield.
    - Cultural: non-material benefits from nature (e.g. **recreational, ecotourism, educational,** spiritual, **ethical**) – while the benefits of cultural ecosystem services may not always be directly visible, they are part of the larger system around food & beverage production. While these benefits are strongly interlinked, we have provided a dotted line for the services that are most discussed in the F&B sector.

- Supporting: fundamental ecosystem processes that support the delivery of other ecosystem services (e.g. **nutrient cycling, water cycling**) – without these services, the F&B sector would not benefit from the other services provided by the ecosystem such as pollination and fresh water.

- There are many classification schemes for ecosystem services including the CICES and the FEGS-CS which measure ecosystem outputs that are directly consumed or used by beneficiaries

Slide 59



Provisioning

Goods produced or provided by ecosystems

- Food (crops, fish): crops and fish (anchovies and sardines) needed to feed the salmon

Regulating

Natural processes regulated by ecosystems

- Oxygen supply: the supply of oxygen in the water
- Water purification and waste treatment: purification of the water and the decomposition of organic matter
- Maintenance of soil quality: soil quality is important for primary production
- Pest mitigation: In a healthy and biodiverse ecosystem, pests are controlled through other species in the trophic chain.

Cultural

Intangible benefits obtained from ecosystem services

- Recreation and ecotourism: recreational pleasure people derive from natural or cultivated ecosystems
- Ethical and cultural values: conservation of certain species (which are important for the nation)

Slide 60

Group exercise in breakout rooms

Refer to **p. 26-27** of your workbook

- We will now split into **breakout rooms**
  - Approx. 3 groups of 4 persons
- You will work through a table of **impacts & dependencies for Los Fiordos' operations in Chile**
- You will have **20 minutes** to discuss in your group
- You will be notified when you have **5 minutes** left
- Each group will have one of the **support team members to take notes**
- One member per group will be asked to provide **feedback in plenary** on the main points & reflections that came out of the discussion

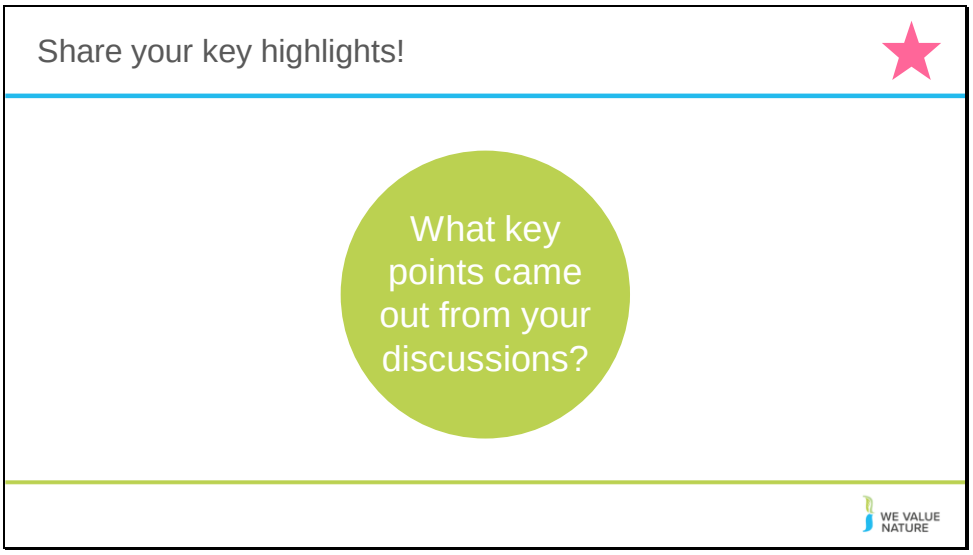
Slide 61

Group exercise at tables

Refer to **p. 26-27** of your workbook

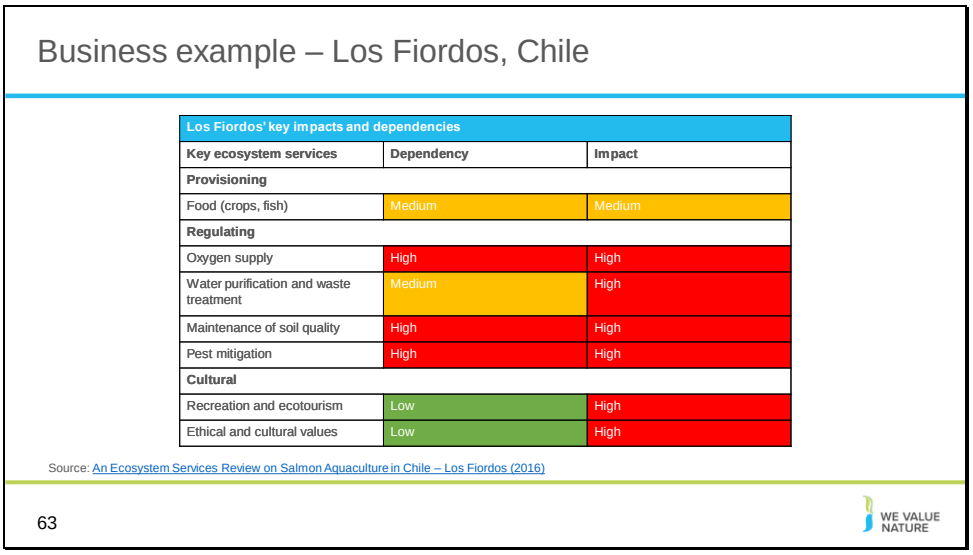
- Form groups of 3-4 at your tables
- You will work through a table of **impacts & dependencies for Los Fiordos' operations in Chile**
- You will have **20 minutes** to discuss in your group
- You will be notified when you have **5 minutes** left
- Each group will have one of the **support team members to take notes**
- One member per group will be asked to **feedback in plenary** on the main points & reflections that came out of the discussion

Slide 62



Each group give key points and highlights from their group
Throw to speakers for last thoughts

Slide 63



Business example – Los Fiordos, Chile

Los Fiordos' key impacts and dependencies		
Key ecosystem services	**Dependency**	**Impact**
Provisioning		
Food (crops, fish)	Medium	Medium
Regulating		
Oxygen supply	High	High
Water purification and waste treatment	Medium	High
Maintenance of soil quality	High	High
Pest mitigation	High	High
Cultural		
Recreation and ecotourism	Low	High
Ethical and cultural values	Low	High

Source: An Ecosystem Services Review on Salmon Aquaculture in Chile – Los Fiordos (2016)

63

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Priority ecosystem services are essential for the company's performance (**dependencies**) or the company has a rather significant, real or perceived, negative **impact** on the availability of ecosystem services used by others.

Questions to help determine dependency:
Does it enhance/enable performance?
Does it have cost-effective substitutes?

Questions to determine impact:
Impact on quantity or quality
Does it affect the ability of others to benefit from ES?

Provisioning:
Crops and industrial fisheries (Medium impact and dependency: The company has a medium dependence on crops and industrial fisheries, as they constitute the main source of protein in the fodder. Crops have gained an increasingly important role in fish feed. There are cost-effective substitutes to feed-fish such as soybean.)
Artisinal fisheries (Low dependency: Los Fiordos has a low dependency on this priority ecosystem service, since artisanal fisheries do not enhance Los Fiordos' performance. However, it is possible that some of Los Fiordos' practices contribute to the degradation of ecosystems on which other stakeholders depend. High impact: Through potentially enhancing eutrophication and increasing hypoxia, Los Fiordos may have an impact on the quantity of the benthic species and thereby the quality of the ecosystem service)

Regulating:
Oxygen supply (High dependency: the oxygen level in the water is essential for salmon production. Artificial oxygen supply does not represent a cost-effective solution as it requires

high investments. High impact: The large quantity of salmon being grown in the area requires large amounts of oxygen and may limit the oxygen availability to other salmon farms and other organisms living near the concessions)
Water purification, waste treatment, and maintenance of soil quality (High impact and medium dependency: a number of organism in the marine ecosystem support the decomposition of organic matter generated by aquaculture. However, when the level of hypoxia6 reaches a certain threshold, the ability to treat waste degrades -> soil quality degradation which could lead to a loss in productivity)
Pest mitigation (High dependency: A healthy and biodiversity ecosystem control pests, decreasing the risk of virus outbreaks that negatively impacting salmon production. No effective vaccine has been found. Furthermore, use of antibiotics and vaccines may lead to a resistance of fish outside net pens against diseases. There is no cost-effective substitute to this ecosystem service. High impact: pests can spread more easily since aquacultures mainly produce one specific species.)

Cultural:

- **Ethical and cultural values** (Low dependency: Los Fiordos' business operations are not directly affected by ethical or cultural values. High impact: one important ethical issue identified is the importance of the conservation of cetaceans. Whales and dolphins in particular, are national and pride symbols for the two locations. However, according to stakeholder representatives the number of cetaceans-sightings close to the shore has decreased since aquaculture operators started their business in the area. This could negatively affect the image of Los Fiordos as well as the willingness of communities to collaborate with the company)
- **Recreation and tourism (**Low dependency: Recreation and ecotourism is not a part of Los Fiordos' value-chain. High impact: stakeholder representatives criticize the visual contamination net pens generate, arguing that they obstruct tourism activities in the area. Hence, the activities of Los Fiordos and other aquaculture companies have a high negative impact on this cultural ecosystem service)

Source: An Ecosystem Services Review on Salmon Aquaculture in Chile – Los Fiordos (2016):
http://www.wolfscompany.com/wp-content/uploads/2016/04/Business-dependence-on-ecosystem-services-Salmon-industry-Chile-Final....pdf

Slide 64

Los Fiordos' Value Added Statement

- The **Ecosystem Services Review was the first step** to create awareness of and to demonstrate the interdependence between a healthy aquaculture business and healthy ecosystems.
- They assess **ecosystem services** based on their importance to the company's performance and their availability and value to other stakeholders.
- The analysis includes information from **Los Fiordos' production operations** on the feedlot and pisciculture centers, located in the areas Melika and Puerto Cisnes.

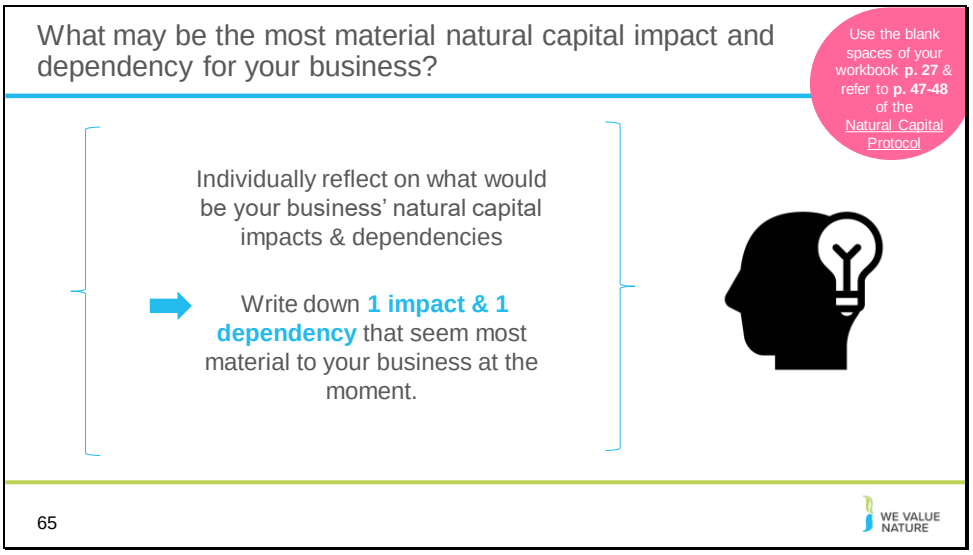
Source: An Ecosystem Services Review on Salmon Aquaculture in Chile – Los Fiordos (2016)

64

Image source: https://www.pexels.com/photo/black-and-gray-sea-turtle-on-brown-sand-3866697/

Source: An Ecosystem Services Review on Salmon Aquaculture in Chile – Los Fiordos (2016): http://www.wolfscompany.com/wp-content/uploads/2016/04/Business-dependence-on-ecosystem-services-Salmon-industry-Chile-Final....pdf

Slide 65

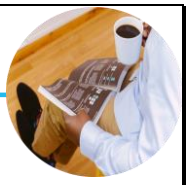


Give participants 5' to reflect individually on both questions (again, depending on the time you have, you may want to spend more time on this).

Business impacts and dependencies are closely linked. For example, a company may depend on water, while the quality of its water management practices will affect the scale of impacts generated through its use of water.

Slide 66

Where are we in the learning objectives



The aim of today's training is:

- ✓ To understand how to **identify natural capital impacts and dependencies** that are **important** to your business
  - ❖ Acquire the necessary tools, resources and understanding to **scope your own assessment**
  - ❖ To be introduced to the key **practical considerations and steps** to take when undertaking a first natural capital assessment as well as some **tools** to help undertake an assessment

66

The objectives for today are…

Slide 67

Slide 68

Agenda – 2 hour training

TO ADAPT

Time (xxx)	Session
15	**Welcome** – Agenda, objectives, material & introductions
10	**Setting the scene and a brief re-cap on natural capital**
5	**Engaging the supply chain on natural capital**
5	**Identifying natural capital impacts & dependencies**
30	**Group exercise**
10	*Coffee Break*
20	**Scoping an assessment** – Key steps to take
15	**Practical considerations** – Planning an assessment
20	**Optional: Case study presentation**
10	**Wrap-up –** Key take-aways, wrapping-up

Slide 69

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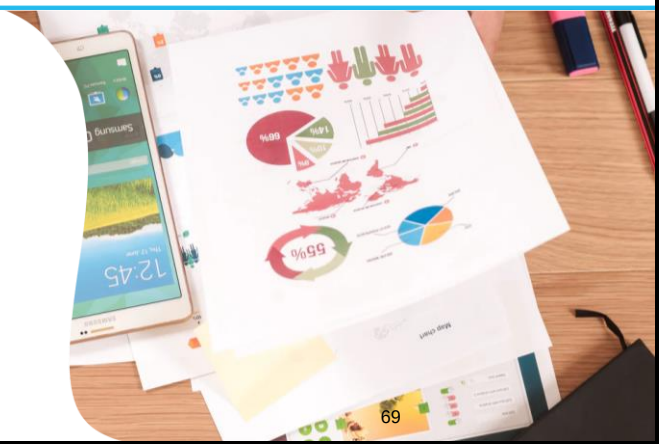
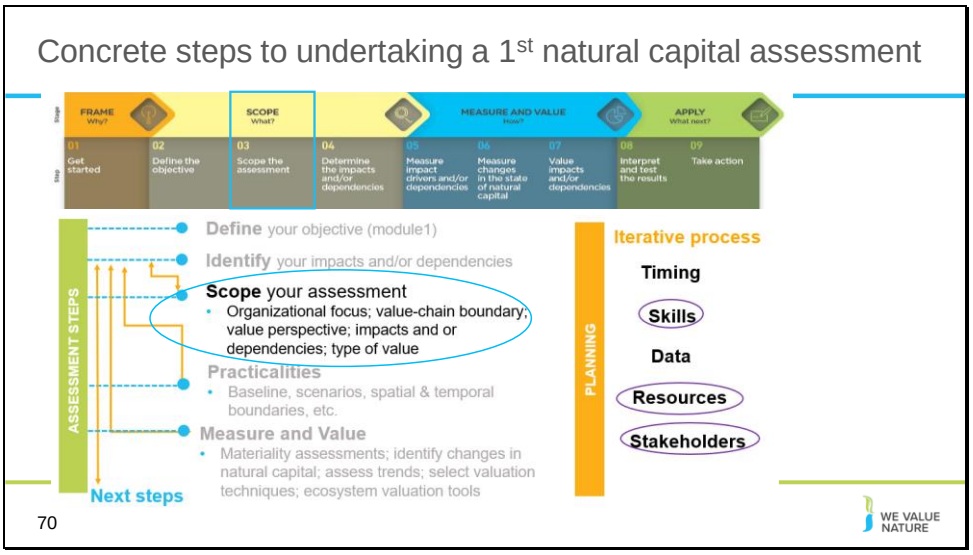
Scoping an assessment



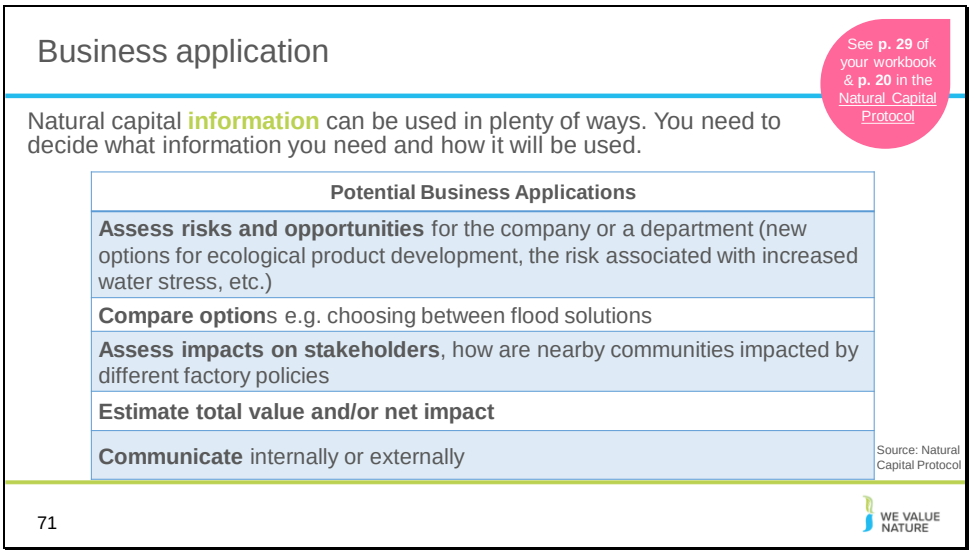
Slide 70



The following step is scoping an assessment. Based upon the business application you have chosen, you may decide to have a broad and shallow approach (i.e., assessing multiple impacts across the entire company or value chain) or you may choose a narrow and deep approach (i.e., fewer issues and a tighter scope with more detailed analysis).

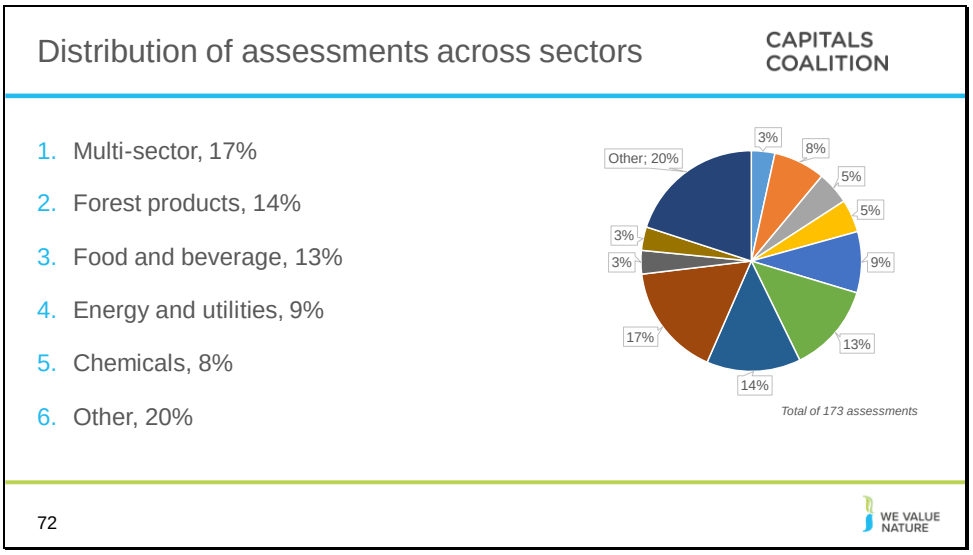
The resources and skills required, and the degree of stakeholder involvement depend on the scope of your assessment.

Slide 71



A natural capital assessment provides information. Whilst this can be valuable in its own right, this means there are also numerous ways to use this information for further purposes. The NCP focuses on using natural capital for decision-making, measurement and valuation, but it can also be used for disclosure and communication, or to help formulate strategy. The best way for your company to use natural capital information is highly individual – think back to the challenges and risks you identified earlier in the training and consider how exactly how more information could help you meet these challenges.

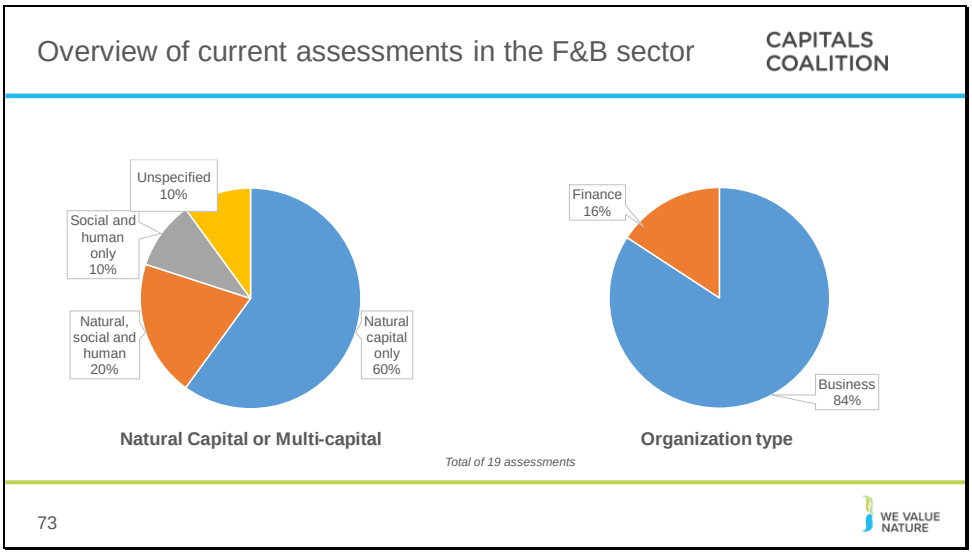
Slide 72



Data from the Natural Capital Coalition Case Study Database

Presenter to give an overview of the pie chart presented on the slide. Presenter to explain that natural capital assessments have been undertaking in a variety of sectors, including forest products, food & beverage, energy and utilities, and chemicals. Next to Forest products, the Food & Beverage sector is the largest sector in terms of assessments.

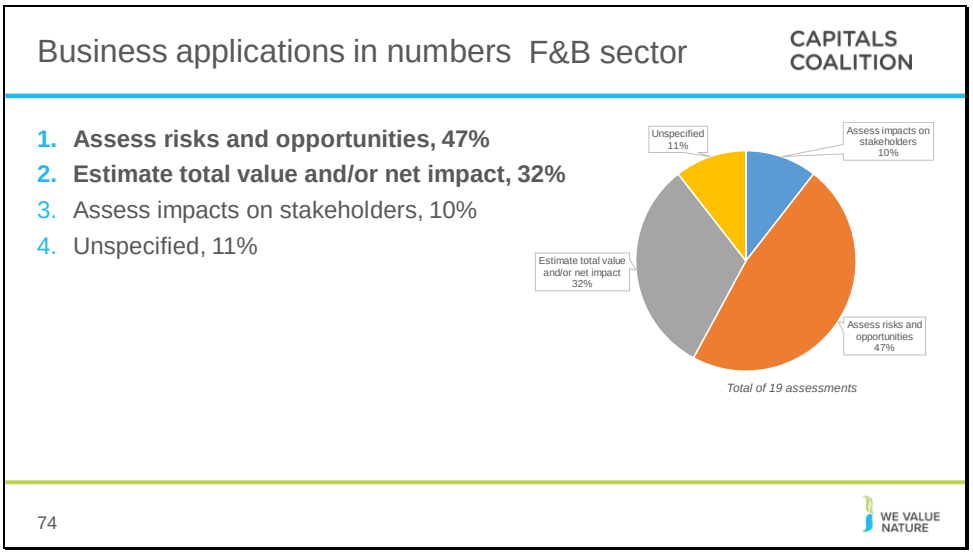
Slide 73



Data from the Natural Capital Coalition Case Study Database

Presenter to give an overview of the pie charts presented on the slide. Presenter to explain that the majority of assessments carried out include only natural capital, and that very few assessments measure social and human capital without also measuring natural capital. Presenter to explain that the majority of companies carrying out assessments are businesses, with governments carrying out ¼ of all assessments and finance carrying out the fewest.

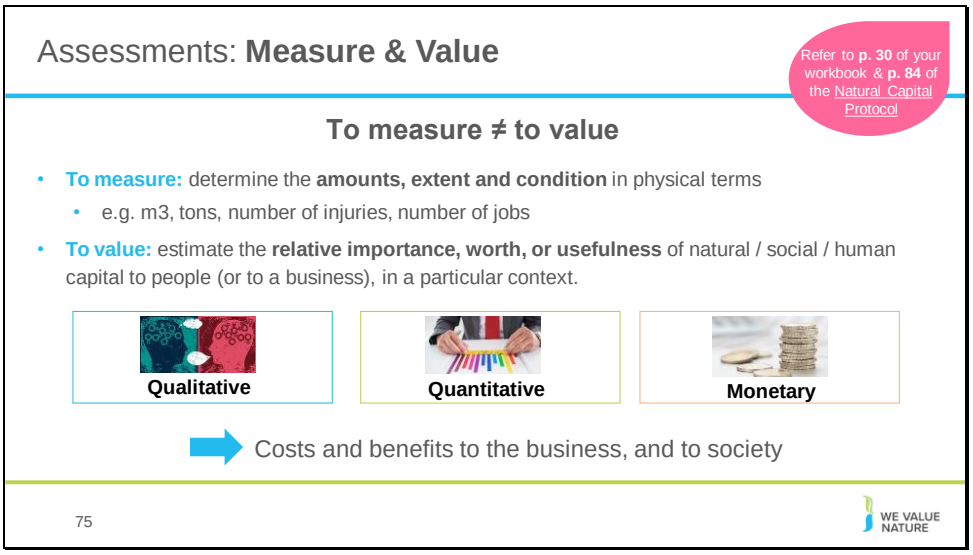
Slide 74



Data from the Natural Capital Coalition Case Study Database

Presenter to give an overview of the pie chart presented on the slide. Presenter to explain that the main purpose for carrying out assessments are to estimate total value/or net impact of/on natural, or social and human, capital. The next greatest application is to assess risks and opportunities for the companies carrying out the assessment, and the third biggest reason is to assess company impacts on stakeholders.

Slide 75



There are different ways of valuing – could be qualitative, quantitative and monetary

Important to note that monetary values without any context (i.e. accompanying quantification) are less meaningful!

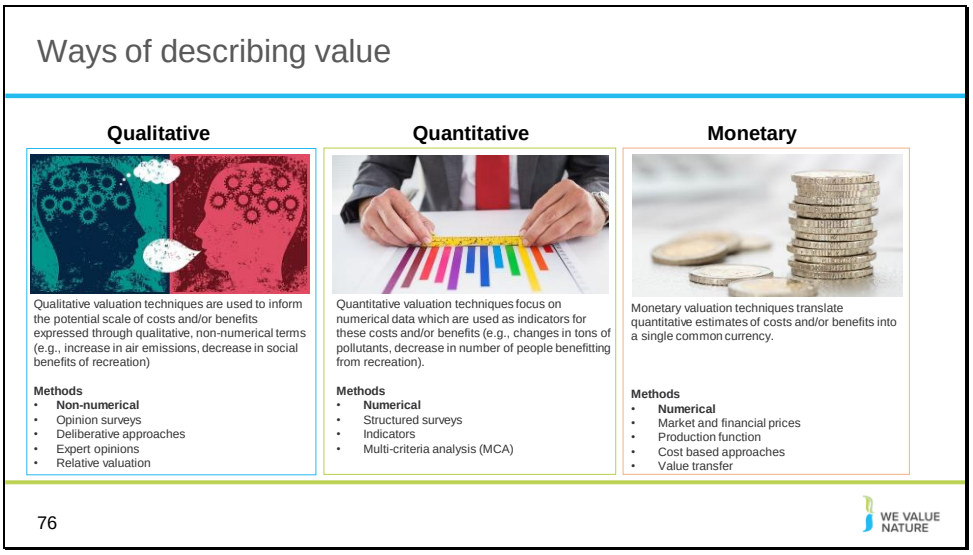
The method you chose depends on which natural capital impact drivers or dependencies you wish to assess, the chosen value perspective (e.g. business, societal, or both), the ultimate objective of your assessment, and the time and resources available.

Monetary valuation: some find it difficult to accept or interpret monetary valuation of certain benefits (e.g. spiritual values). In such situations, special efforts may be required to explain the advantages and also to acknowledge the limitations of monetary valuation.

Advocates of natural capital are sometimes accused of 'putting a price on nature' or 'pricing the priceless', but in fact our core assertion is that prices have failed to reflect the **true value** of the natural world, and that the economic systems that we are using are broken.

We use the common definitions of price and value: Where price is 'the quantity of one thing that is exchanged or demanded in barter or sale for another/the amount of money given or set as consideration for the sale of a specified thing' and value as 'The regard that something is held to deserve; the importance, worth, or usefulness of something i.e. "your support is of great value". If something is not for sale, we do not describe it as having a 'price', but we may nevertheless recognise the value that it holds, and make decisions on this basis.

Slide 76



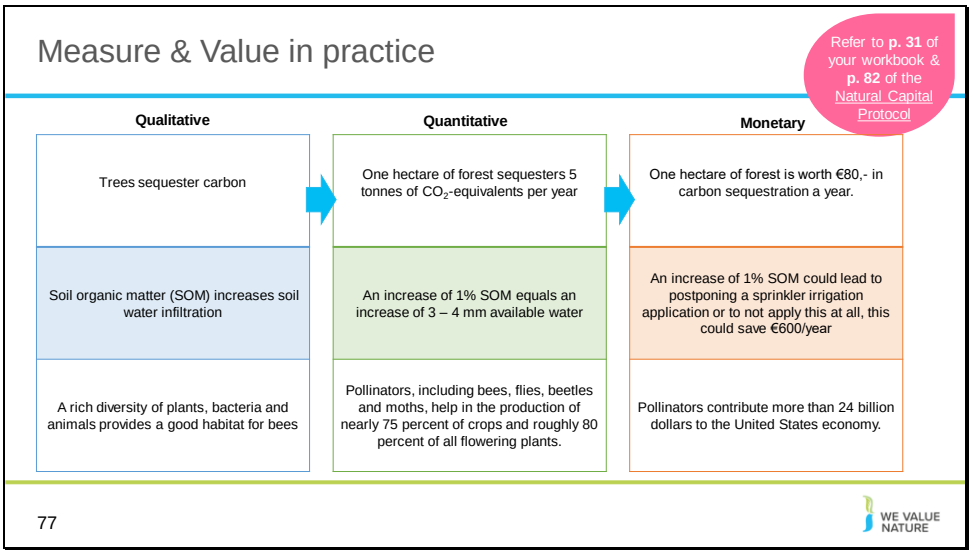
There are different ways of valuing – could be qualitative, quantitative and monetary

Important to note that quantitative data and how it is calculated is similar to what companies are used to in sustainability reporting.

Important to note that monetary values without any context (i.e. accompanying quantification) are less meaningful!

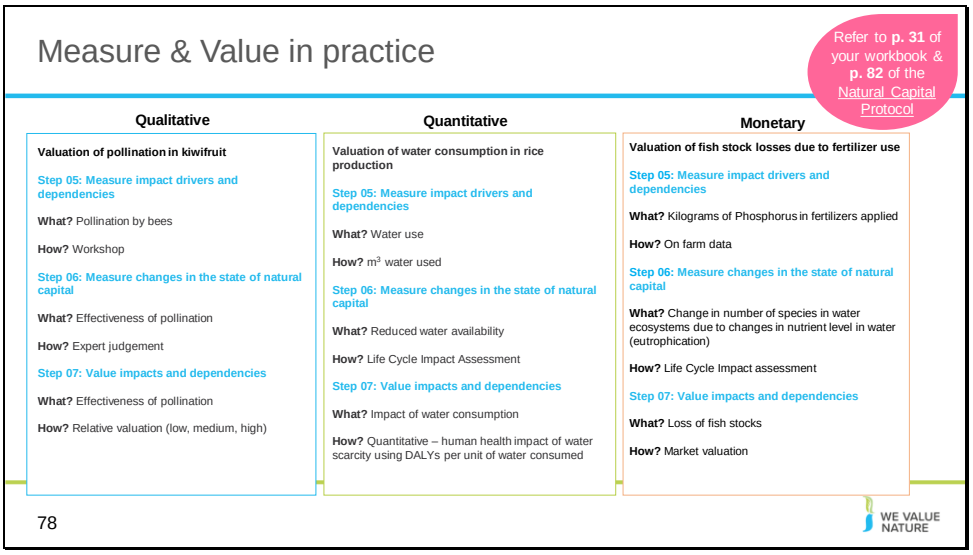
The method you choose depends on which natural capital impact drivers or dependencies you wish to assess, the chosen value perspective (e.g. business, societal, or both), the ultimate objective of your assessment, and the time and resources available.

Slide 77



Three examples of qualitative, quantitative and monetary valuation

Slide 78



• **Qualitative valuation techniques**

Step 05: Measure impact drivers and dependencies

What? Pollination by bees

How? Workshop

Step 06: Measure changes in the state of natural capital

What? Effectiveness of pollination

How? Expert judgement

Step 07: Value impacts and dependencies

What? Effectiveness of pollination

How? Relative valuation (low, medium, high)

• **Quantitative valuation techniques**

Valuation of water consumption in rice production

Step 05: Measure impact drivers

What? Water use

How? m^3 water used

Step 06: Measure change in capital

What? Reduced water availability

How? Life Cycle Impact Assessment

Step 07: Value impacts

What? Impact of water consumption

How? Quantitative – human health impact of water scarcity using DALYs per unit of water consumed

• **Monetary valuation techniques**
Valuation of fish stock losses due to fertilizer use

Step 05: Measure impact drivers

What? Kilograms of Phosphorus in fertilizers applied

How? On farm data

Step 06: Measure changes in capitals

What? Change in number of species in water ecosystems due to changes in nutrient level in water (eutrophication)

How? Life Cycle Impact assessment (characterization factors)

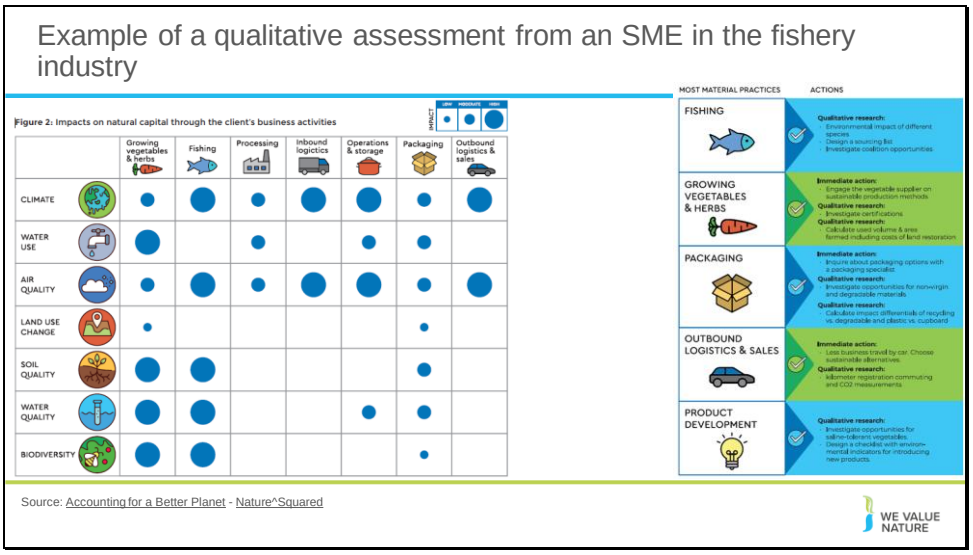
Step 07: Value impacts

What? Loss of fish stocks

How? Market valuation

Note: If the monetary valuation is used, it should be clear whether the value used was market price only, as this can make a difference.

Slide 79



This is an example of how you can conduct a qualitative assessment of your natural capital impacts and dependencies and how this can already translate into concrete. This slide only displays the impacts, but the same exercise was undertaken for dependencies too.
To complete the work, they discussed relative importance with different stakeholders and simply provided relative orders of magnitude, based on resources but also on influence on the issue.
From this, they were able to identify most material elements of their practices and then prioritise which actions to take.

One of the surprising insights for this company, a seafood producer, producing soups and burgers, was that they had a blind spot on the sourcing of vegetables, although they used a higher share of vegetables than actual seafood in many of their products.

This exercise can be repeated in consultation with your own employees and stakeholders. You don't necessarily need to measure and value your impacts. This type of assessment can already be very informative without taking up a lot of time, expertise or budget. Again, it depends on what the objective is.

Case study Accounting for a Better Planet: http://www.nature-squared.org/wp-content/uploads/2020/04/case-study-accounting-for-a-better-planet.pdf

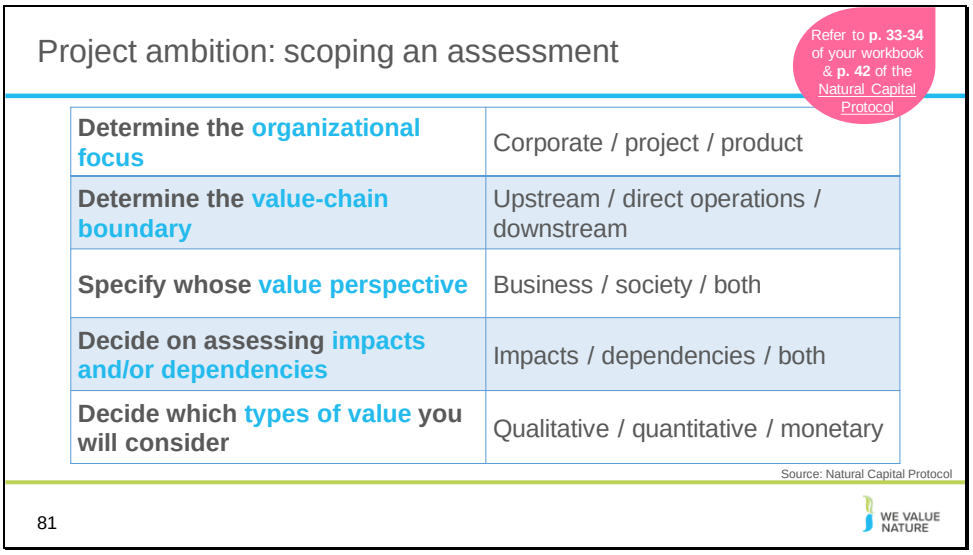
Slide 80

Why is monetary valuation useful and/or contentious?

Refer to **p. 32** of your workbook & **p. 37-38** of the Natural Capital Protocol

Useful	Contentious
• **Common unit** of measure • Can measure **social preferences** • Used to determine **overall value for money of a project** (i.e. whether it should go ahead or not; do the benefits exceed the costs) • Can be used to **measure risks** and **mitigate them** before these are quantified by others • Can be used as a **communication tool** (internal and external)	• **Not everything can be quantified in monetary terms** (e.g. biodiversity) • Can be **time consuming/ expensive** depending on technique or approach used • Need to avoid **double counting** • Potential **reputational impacts**

Slide 81



The table shows the different components within the step 'scoping an assessment'.

Organizational focus: the part or parts of the business to be assessed (e.g., the company as a whole, a business unit, or a product, project, process, site, or incident). For simplicity, these are grouped under three general levels as below:

- Corporate: assessment of a corporation or group, including all subsiSlideries, business units, divisions, different geographies or markets, etc.
- Project: assessment of a planned undertaking or initiative for a specific purpose, and including all related sites, activities, processes, and incidents.
- Product: assessment of particular goods and/or services, including the materials and services used in their production.

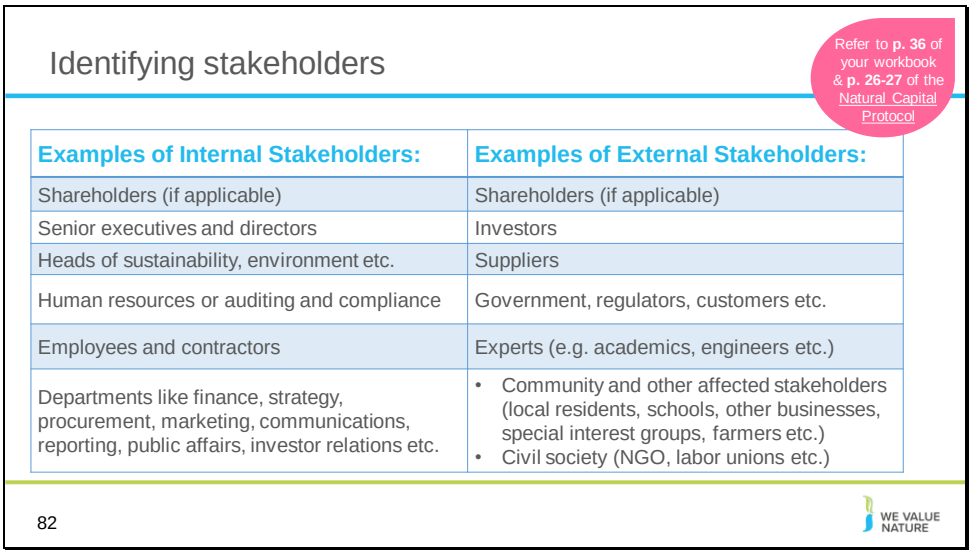
Value-chain boundary: The part or parts of the business value chain to be included in a natural capital assessment. An assessment of the full lifecycle of a product would encompass all three parts.

- Upstream (cradle-to-gate): covers the activities of suppliers, including purchased energy.
- Direct operations (gate-to-gate): covers activities over which the business has direct operational control, including majority owned subsiSlideries.
- Downstream (gate-to-grave): covers activities linked to the purchase, use, re-use, recovery, recycling, and final disposal of the business' products and services.

Value perspectives: the perspective or point of view from which value is assessed; this determines which costs or benefits are included in an assessment.

- Business value: The costs and benefits to the business, also referred to as internal, private, financial, or shareholder value.
- Societal values: The costs and benefits to wider society, also referred to as external, public, or stakeholder value (or externalities).

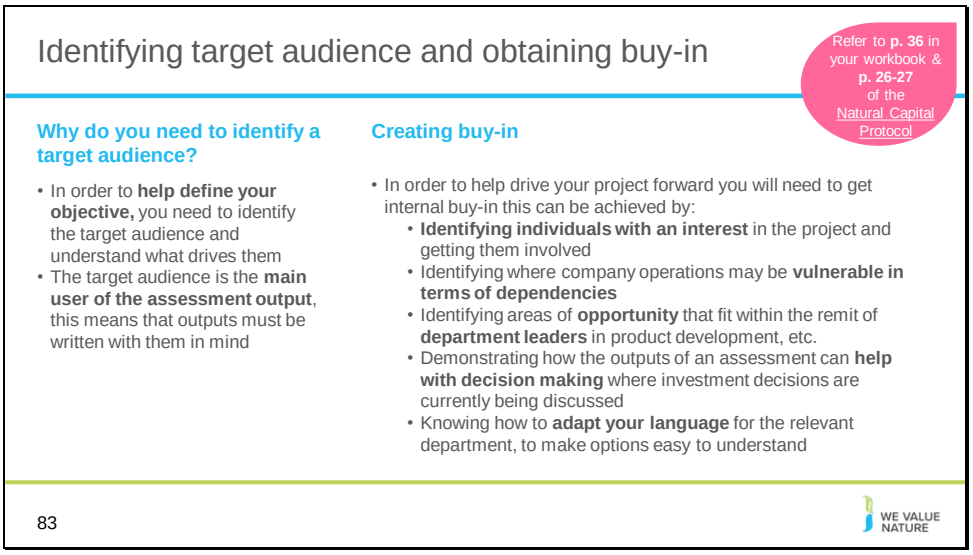
Slide 82



Various stakeholders may contribute significant insights into the assessment and its results.

Internal stakeholders may be able to provide useful insights. E.g. colleagues from procurement have great knowledge of the supply chain.
External stakeholder input can provide greater robustness and credibility to the results.
Engaging with external stakeholders is certainly to be encouraged, bearing in mind that you may have to give some background on the basic concepts of a natural capital assessment.

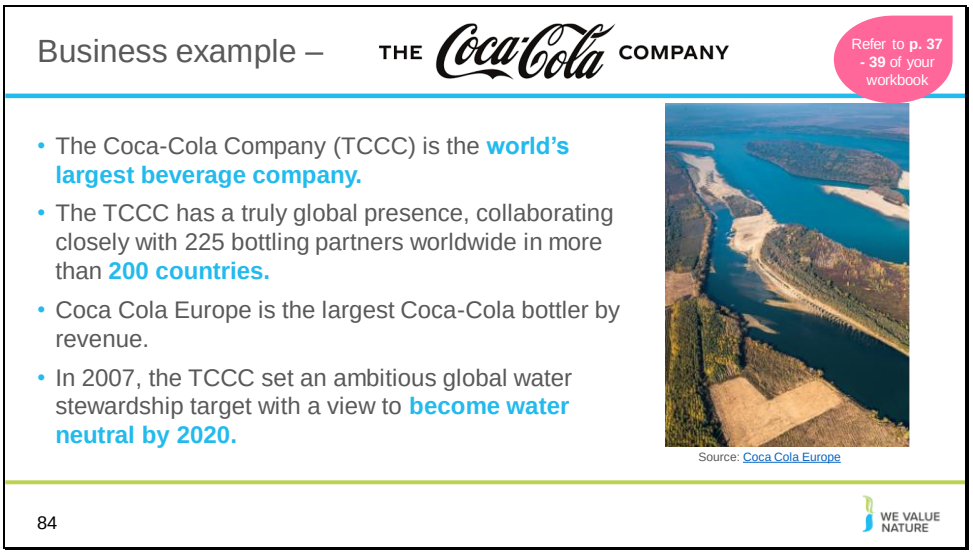
Slide 83



Identifying the target audience and understanding what drives them is key in defining your objective as it will influence **the way the assessment is conducted, the type of outputs to be delivered, and the desired outcomes**.

Support from key external stakeholders can also help to strengthen internal buy-in and improve the quality of the assessment.

Slide 84



The Coca-Cola Company: The Coca-Cola Company (TCCC) quantified ecosystem services related to freshwater sources to better capture and communicate impacts of water community projects beyond replenishment.
Having invested a lot in water replenishment projects, TCCC was driven to understand the variety of benefits that these projects provide to people and society beyond water volumes only. A natural capital assessment was initiated to monetize the ecosystem services in order to identify opportunities and maximize impact. Together with their partners, they developed and piloted a methodology in seven of their European projects. While monetizing impacts was not always easy, the results were clear: water restoration projects can enhance a range of other ecosystem services. If done right, these benefits outweigh the original project investment in a limited period of time. The assessment helped TCCC progress on their natural journey.

https://naturalcapitalcoalition.org/wp-content/uploads/2016/07/Denkstatt_Natural_Capital_Accounting.pdf
Natural Capital Story of The Coca-Cola Company: https://wevaluenature.eu/node/304

Image source:
https://www.coca-cola.eu/news/supporting-environment/creating-natural-capital-through-nature-based-solutions

Slide 85

Business example – THE Coca-Cola COMPANY

Refer to **p. 37 - 39** of your workbook

- Started undertaking a natural capital assessment in 2019 to **quantify ecosystem services** from their freshwater programs.
- The objective of the assessment is to **increase the potential of Coca Cola's replenishment programs by quantifying the ecosystem service benefits that arise from these programs.** This may further enhance the impact of the renewed water strategy.

Source: Coca Cola Europe

85

https://naturalcapitalcoalition.org/wp-content/uploads/2016/07/Denkstatt_Natural_Capital_Accounting.pdf
Natural Capital Story of The Coca-Cola Company: https://wevaluenature.eu/node/304

Slide 86

So what could the scope of work look like for The Coca-Cola Company based on the information we have?

Refer to **p. 39** of your workbook

Determine the organizational focus	Project (water projects)
Determine the value-chain boundary	Direct operations (bottling partners)
Specify whose value perspective	Society
Decide on assessing impacts and/or dependencies	Impacts
Decide which types of value you will consider	Quantitative and monetary (creating a better overview of the diversity of impacts)

Slide 87

Business example – The Coca-Cola Company

Refer to **p. 38** of your workbook

Target Audience:	Stakeholders:

Target Audience = main user of the assessment output (i.e. those people that will read and use the output to make decisions)

Stakeholder = any individual, organization, sector or community with an interest or stake in the outcome of a decision or process

Natural Capital Impact:
The negative or positive effect of business activity on natural capital (e.g. water extraction)

Natural Capital Dependency:
Business reliance on or use of natural capital (e.g. pollination)

Slide 88

Who could the stakeholders and target audience be for The Coca-Cola Company ?

Refer to **p. 38** of your workbook

Target Audience:	Stakeholders:
The Coca-Cola Company senior management	NGO implementation partners (WWF)
Shareholders committee	Local communities
Sustainability team	Bottling partners

Slide 89

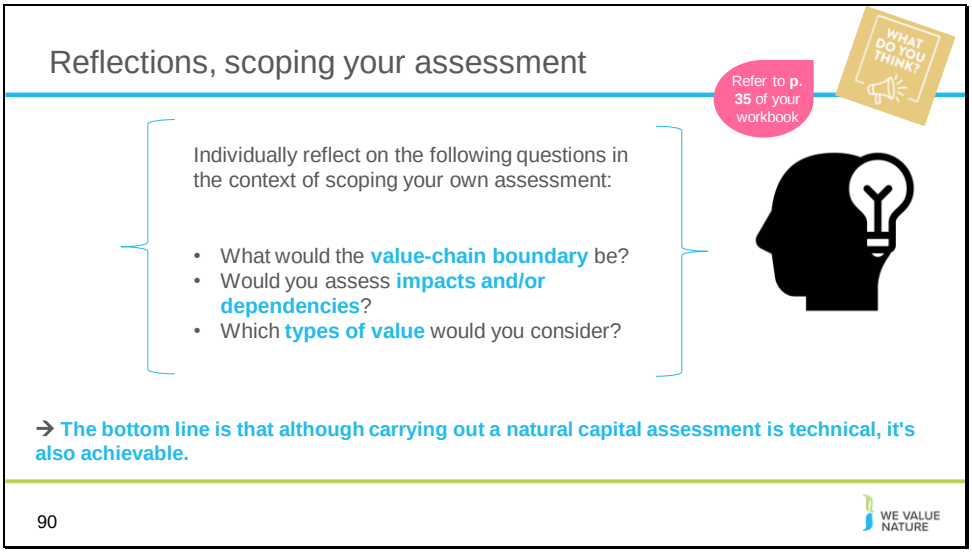
The Coca-Cola Company' Natural Capital assessment

- The natural capital assessments allowed TCCC to **assess and communicate the variety of impacts** arising from their water programs.
- They are now planning to use the assessment as **input for decision making and an important communication tool.**

Source: Coca Cola Europe

https://naturalcapitalcoalition.org/wp-content/uploads/2016/07/Denkstatt_Natural_Capital_Accounting.pdf
Natural Capital Story of The Coca-Cola Company: https://wevaluenature.eu/node/304

Slide 90



- What would the **value-chain boundary** be?
  - Upstream
  - Direct operations
  - Downstream
- Would you assess **impacts and/or dependencies**?
  - **Impacts on your business** (as a result of your impacts on natural capital)
  - **Your impacts on society** (as a result of your impacts on natural capital)
  - **Your business dependencies** (benefits that your business receives from natural capital)
- Which **types of value** would you consider?
  - Qualitative
  - Quantitative
  - Monetary

Slide 91

Presenter to explain that companies are experimenting and learning. On the We Value Nature MeSlide library, you can find inspiring examples of (F&B) companies who have undertaken a natural capital assessment, including practical information and tips and key lessons learned.

Eosta: a NL based, international distributor of organic fruits and vegetables. Eosta valued the true cost of various fruits and vegetables through developing an integrated profit and loss account of these products based on true cost accounting. It was the first Small and Medium sized enterprise (SME) in the food & agribusiness to do so.
To inform better and more sustainable decision-making, EOSTA decided to develop a practical tool for True Cost Accounting in the Financial, Food and Farming Sectors (TCA-TFFF) that includes environmental and social values for a range of products. By monetizing their impacts, EOSTA moved up along their natural capital journey towards full integration of natural capital into business decision making.
https://wevaluenature.eu/node/303

Metro: a leading international specialist in food wholesale. METRO AG compared the hidden costs and benefits of METRO's Food Service Distribution (FSD) business model with those of its traditional wholesale stores by monetizing their impacts on the society and the environment. In 2015, METRO started rolling out their Food Service Distribution model next to their traditional model of direct buying (Cash & Carry). To understand whether this was a positive development, METRO initiated an assessment to assess how these different business models impact the society and the environment. With the support of Denkstatt, METRO conducted sustainability accounting and found that the new FSD model was

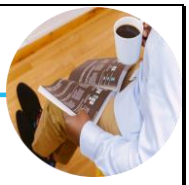
inherently more sustainable, offering additional benefits for customers, the society and the environment, valued at € 60 per € 1000 of sales.
https://wevaluenature.eu/node/301

The Coca-Cola Company: The Coca-Cola Company (TCCC) quantified ecosystem services related to freshwater sources to better capture and communicate impacts of water community projects beyond replenishment.
Having invested a lot in water replenishment projects, TCCC was driven to understand the variety of benefits that these projects provide to people and society beyond water volumes only. A natural capital assessment was initiated to monetize the ecosystem services in order to identify opportunities and maximize impact. Together with their partners, they developed and piloted a methodology in seven of their European projects. While monetizing impacts was not always easy, the results were clear: water restoration projects can enhance a range of other ecosystem services. If done right, these benefits outweigh the original project investment in a limited period of time. The assessment helped TCCC progress on their natural journey.
https://wevaluenature.eu/node/304

Jeronimo Martins: a Portugal-based international group operating in the Food Distribution and Specialized Retail sectors. Jerónimo Martins applied the Natural Capital Protocol to measure and value the comparative life cycle societal impacts of PVC use and alternative plastic materials in packaging components.
The environmental performance of PVC in packaging was highlighted as a key issue which triggered Jerónimo Martins to further research its effects and their options for sustainable packaging. Jerónimo Martins carried out an in-house natural capital assessment. While challenged by the lack of data, the assessment helped build in-depth knowledge on the societal impacts of the use of PVC, and prepared the company for comprehensive future assessments. In 2019, a roadmap on eliminating PVC from Private Brand packaging was defined.
https://gulbenkian.pt/en/publication/the-natural-capital-protocol-challenge-jeronimo-martins/

Slide 92

Where are we in the learning objectives



The aim of today's training is:

- ✓ To understand how to **identify natural capital impacts and dependencies** that are **important** to your business
- ✓ Acquire the necessary tools, resources and understanding to **scope your own assessment**
  - ❖ To be introduced to the key **practical considerations and steps** to take when undertaking a first natural capital assessment as well as some **tools** to help undertake an assessment

92

The objectives for today are…

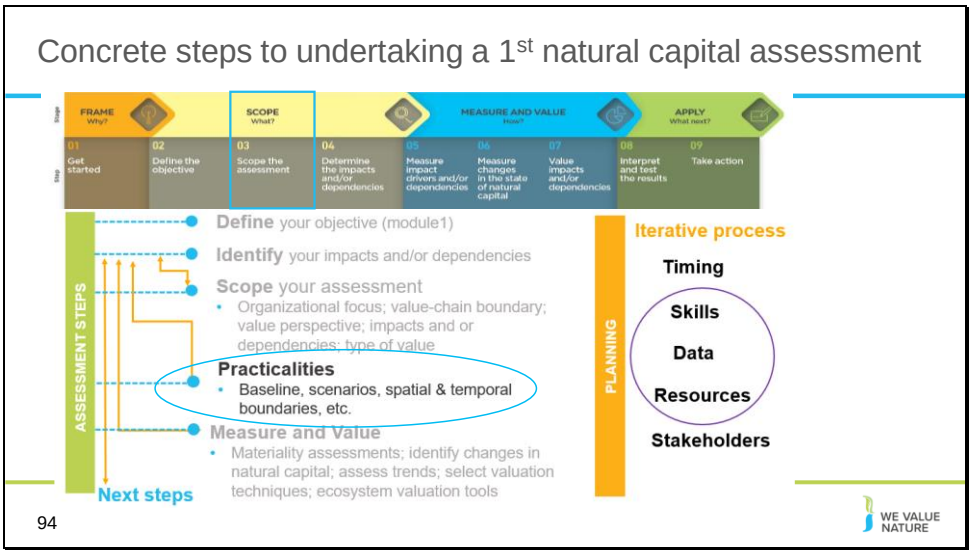
Slide 93

Agenda – 2 hour training

TO ADAPT

Time (xxx)	Session
15	**Welcome** – Agenda, objectives, material & introductions
10	**Setting the scene and a brief re-cap on natural capital**
5	**Engaging the supply chain on natural capital**
5	**Identifying natural capital impacts & dependencies**
30	**Group exercise**
10	*Coffee Break*
20	**Scoping an assessment** – Key steps to take
15	**Practical considerations** – Planning an assessment
20	**Optional: Case study presentation**
10	**Wrap-up –** Key take-aways, wrapping-up

Slide 94



The following step is practicalities, which addresses technical issues and key planning issues.

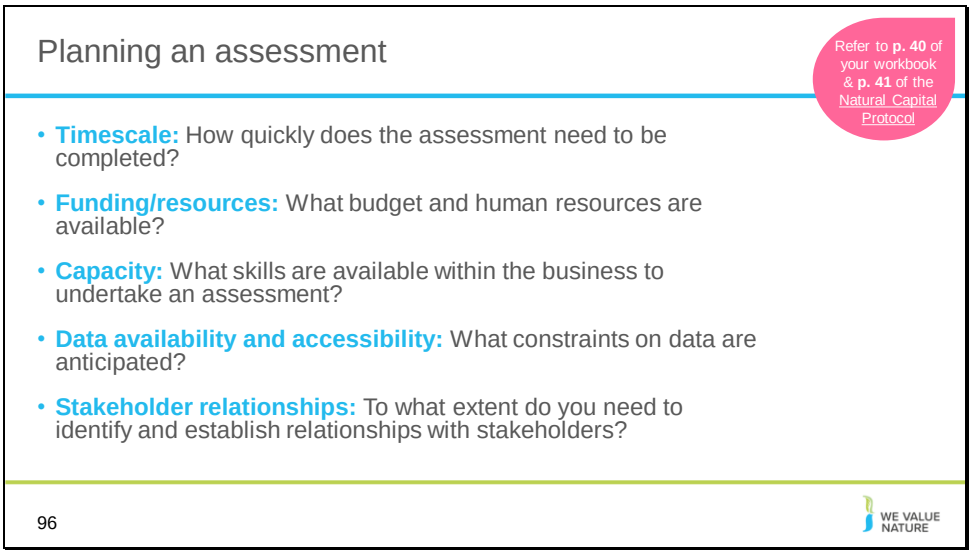
Slide 95

Nature^Squared CONNECTING ECOLOGY AND ECONOMICS

WE VALUE NATURE

Practical considerations

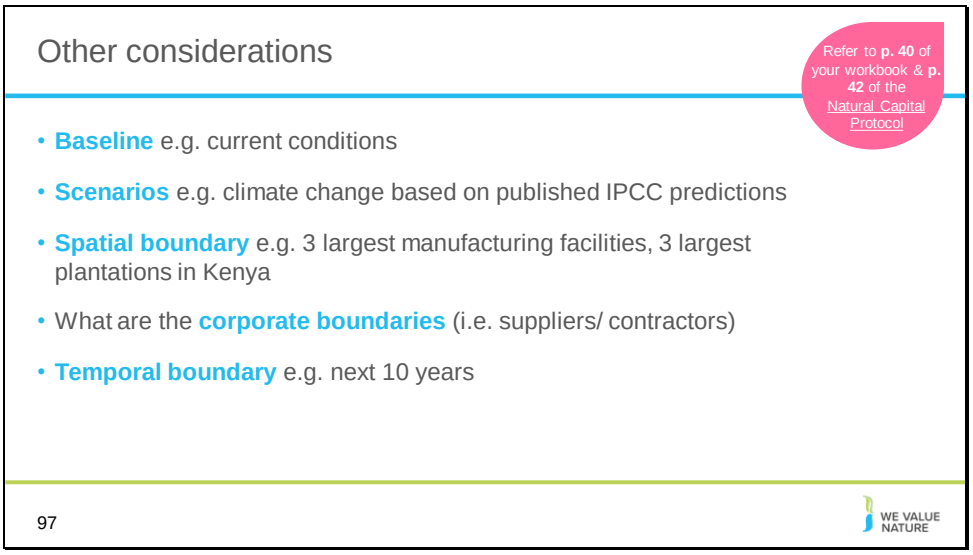
Slide 96



Your answers to the scoping questions outlined in the slides before may need to be adjusted in light of planning and resource constraints, which will determine what scope is actually achievable. These constraints may also be considered as “critical success factors”:

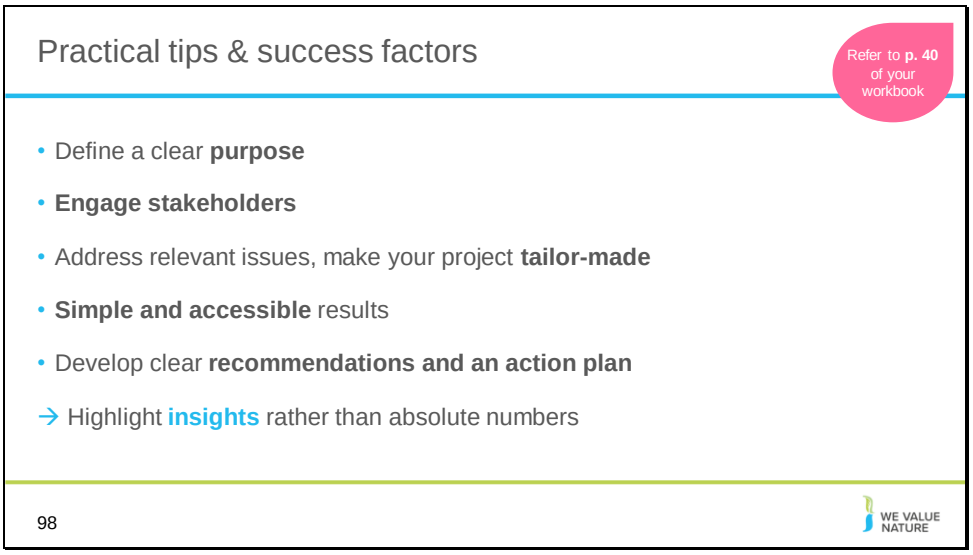
- Timescale
- Funding/resources
- Capacity
- Data availability and accessibility
- Stakeholder relationships

Slide 97



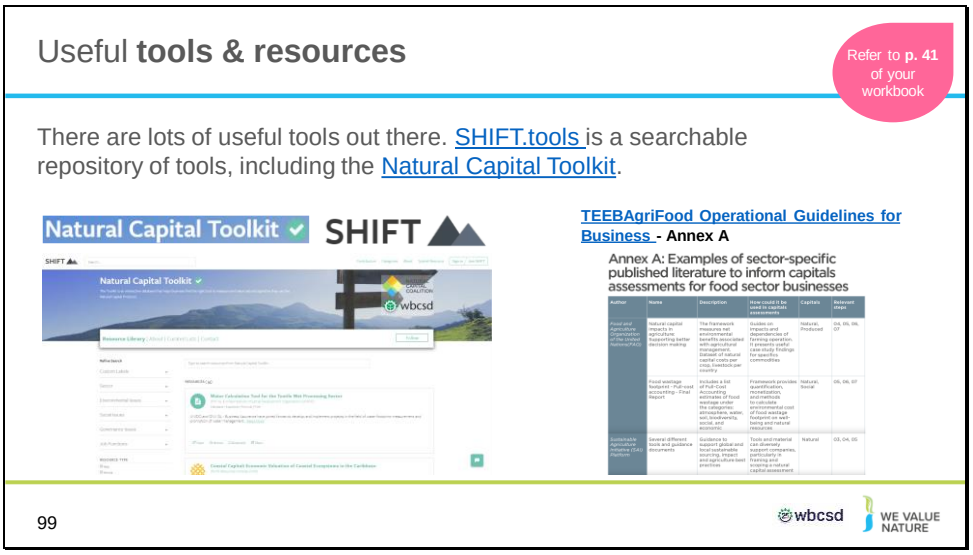
- Baseline: is the starting point or benchmark against which changes in natural capital can be compared.
- Scenario: The concept of valuation is based on being able to compare outcomes and impacts across at least two scenarios: the baseline discussed above, and a chosen scenario that is being “valued”.
- Spatial boundary: Establishing the spatial boundary means deciding what geographic area the assessment will consider. The answer depends on various factors, including the organizational focus, value-chain boundary, and chosen value perspective, which you will have already decided earlier.
- Temporal boundary: Identifying a temporal boundary means determining an appropriate time frame for the assessment (i.e., over how many days, months, or years should impacts and/or dependencies be assessed and compared?). The assessment period should relate to your objective and correspond to the organizational focus and material impacts and/or dependencies under consideration.

Slide 98



Some extra practical tips & success factors are..

Slide 99



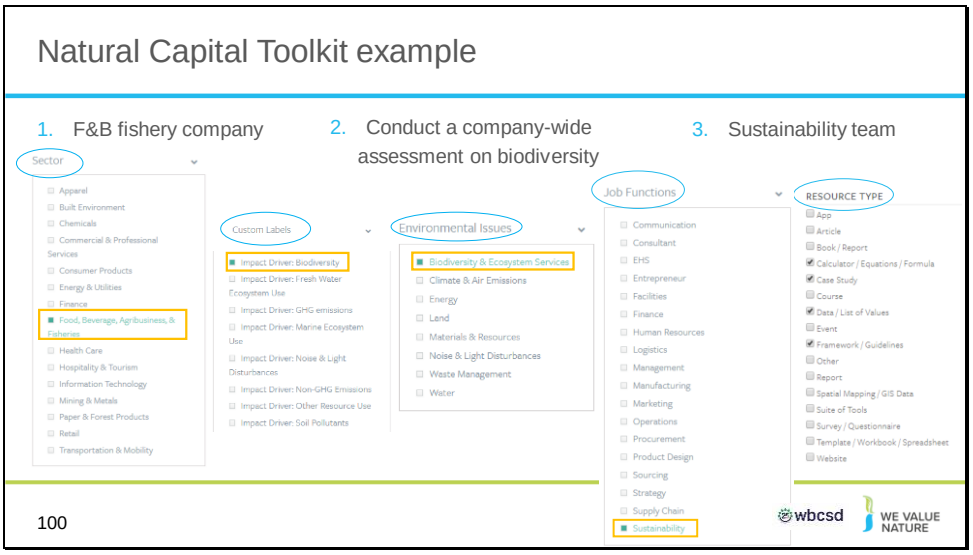
The slide shows that there are many tools out there, many of which are freely accessible and readily available for companies to use and start assessing their natural capital impacts and dependencies.

Briefly explain SHIFT platform, that it is a searchable repository of tools. It is an interactive database for businesses to find the right tools(s) to assess their relationship with nature or ‘’natural capital’’. The SHIFT platform includes the Natural Capital Toolkit . Can give further background on the reason why this toolkit was transferred onto the SHIFT platform – to encourage standardization & harmonization of tools.

The TEEBagrifood Operational Guidelines for Business brings together the TEEBAgrifood Evaluation Framework and the Capitals Protocol. The guidelines:
• Provide context on why capitals are relevant to any business in the food system and how businesses benefit from them.
• Develop the business case for integrated capitals assessments in the food sector.
• Identify material impacts and dependencies on different capitals relevant to businesses across the value chain of the food sector.
• Use practical examples to demonstrate sector-specific business applications.

SHIFT.tools: https://shift.tools/
Natural Capital Toolkit: https://shift.tools/contributors/551
TEEBAgriFood: Operational Guidelines for Business :
https://capitalscoalition.org/teebagrifood-operational-guidelines-for-business-launch/

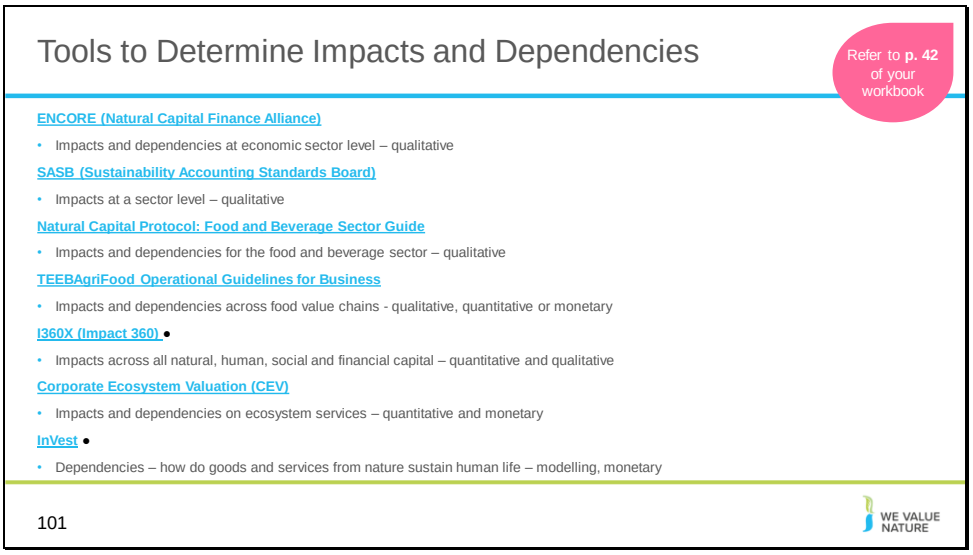
Slide 100



An example of how the platform works, providing a fictional scenario.
Conclusion is that:
There are no perfect answers!
The choice of tool will depend on various factors:

- What is the objective / what are you trying to achieve? / What decision are you trying to inform? – Is it to inform business strategy? Business management? Or operating decision?
- What is the scope? Are you looking at product, corporate level?
- What perspective are you looking at? Business? Societal? Both?
- How much resources do you have available to conduct the assessment?
- How much information / data do you already have?
- Will you need external help?
- Etc.

Slide 101



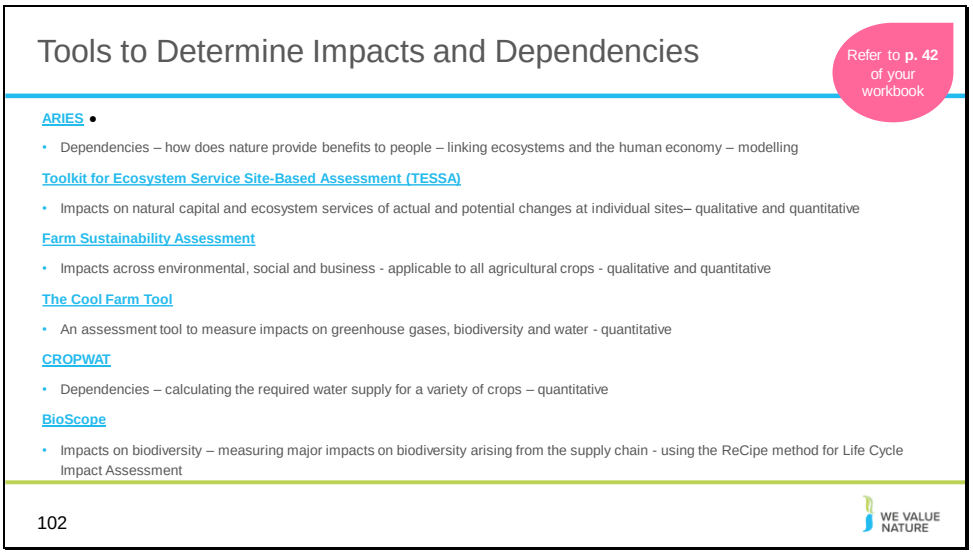
Presenter to point out that there are a lot of useful tools out there that businesses can use to determine their impacts and dependencies. The tools differ in their focus: impacts/dependencies or both, the types of natural capital they include (only water, biodiversity?), and the method of valuation (qualitative, quantitative, monetary). Qualitative valuation is often considered to be very important at the start of an assessment as it can give businesses a good understanding of where their main impacts and dependencies are and where additional information may be needed to inform decision-making. The black dots mark the tools that require more technical knowledge and that are more difficult to implement.

- **ENCORE (Natural Capital Finance Alliance):** The aim of the project is to help financial institutions to better understand, assess and integrate natural capital risks in their activities. It helps measure impacts and dependencies in a qualitative way. https://encore.naturalcapital.finance/en
- **SASB (Sustainability Accounting Standards Board):** Focus on financially material information on environmental and social topics and the governance of those topics. By focusing on financially material issues, SASB aims to help companies around the world to report on sustainability topics that matter most to investors. https://www.sasb.org/
- **Natural Capital Protocol: Food and Beverage Sector Guide:** Guide specified to the Food & Beverage sector. Through a stepwise approach, the Guide helps F&B companies to determine their main impacts and dependencies. https://naturalcapitalcoalition.org/natural-capital-protocol-food-and-beverage-sector-guide/
- **TEEB AgriFood Operational Guidelines for Business:** Developed to support businesses in implementing the TEEBAgriFood Evaluation Framework, these Guidelines provide a practical way for businesses to understand and act upon their impact and

dependency on natural, human, social, and produced capital. https://naturalcapitalcoalition.org/wp-content/uploads/2020/08/DRAFT-TEEBAgriFood-Operational-Guidelines.pdf

- **I360X (Impact 360):** The tool can be used to make a qualitative and quantitative assessment of the sustainability impacts on a range of capitals, including natural, social and human capital. https://www.gistimpact.com/i360xn.php
- **Corporate Ecosystem Valuation (CEV)**: This first-of-its-kind framework enables companies to consider the actual benefits and value of the ecosystem services they depend upon and impact, giving them new information and insights to include in business planning and financial analysis. https://www.wbcsd.org/Programs/Redefining-Value/Business-Decision-Making/Assess-and-Manage-Performance/Resources/Guide-to-Corporate-Ecosystem-Valuation
- **InVEST:** InVEST is a suite of free, open-source software models used to map and value the goods and services from nature that sustain and fulfill human life. If properly managed, ecosystems yield a flow of services that are vital to humanity, including the production of goods (e.g., food), life-support processes (e.g., water purification), and life-fulfilling conditions (e.g., beauty, opportunities for recreation), and the conservation of options (e.g., genetic diversity for future use). https://naturalcapitalproject.stanford.edu/software/invest

Slide 102



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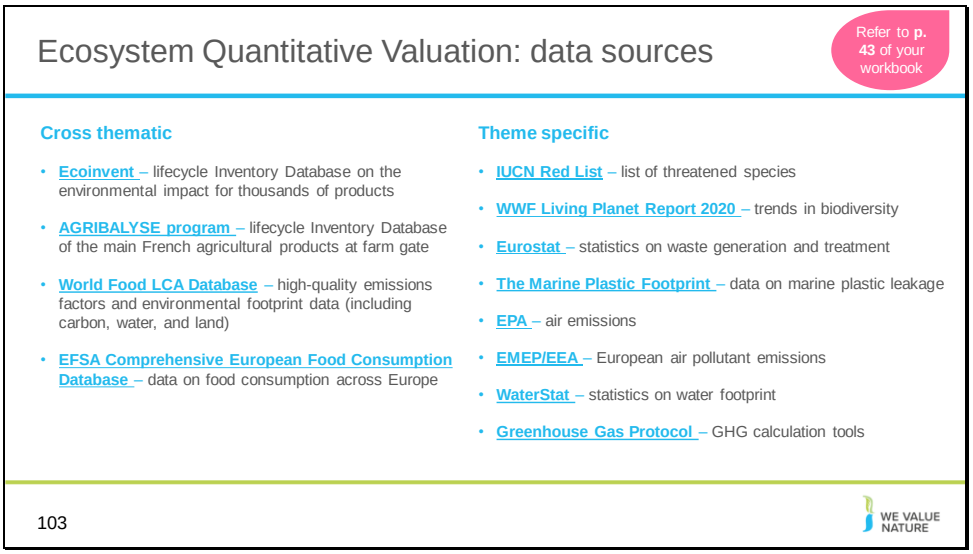
- **ARIES:** ARIES redefines ecosystem services assessment and valuation in decision-making. The ARIES approach to mapping benefits, beneficiaries, and service flows is a powerful new way to visualize, value, and manage the ecosystems on which the human economy and well-being depend.
  http://shift.tools/iframe/1377?
- **Toolkit for Ecosystem Service Site-Based Assessment (TESSA):** Understanding the impacts on natural capital and ecosystem services of actual and potential changes in state at individual sites to promote better planning decisions and support biodiversity conservation and ecosystem service delivery. This toolkit is designed to provide practical guidance on how to identify which services may be significant at a site of interest, what data are needed to measure them, what methods or sources can be used to obtain the data and how to communicate the results.
  http://tessa.tools/
- **Farm Sustainability Assessment (FSA):** is a set of tools for food and drink businesses that want to assess, improve and validate on-farm sustainability in their supply chains. The

tools enable effective and efficient supply chain collaboration right down to the level of the farmer.
https://saiplatform.org/our-value/what-we-do/#Programmes_and_Tools:

- **The Cool Farm Tool:** An online greenhouse gas, water, and biodiversity calculator for farming (free for farmers)
https://coolfarmtool.org/coolfarmtool/
- **CROPWAT:** CROPWAT is a decision support tool developed by the Land and Water Development Division of FAO. It facilitates the calculation of crop water requirements and irrigation requirements based on soil, climate and crop data. CROPWAT informs the development of irrigation schedules for different management conditions and the calculation of required water supply for varying crop patterns.
http://teebweb.org/wp-content/uploads/2018/11/Ch7.pdf
- **BioScope:** Platform BEE's BioScope provides businesses with a simple and fast indication of the most important impacts on biodiversity arising from their supply chain. The focus is on climate change and agricultural land occupation as these are the two main impact drivers on biodiversity.
https://bioscope.info/

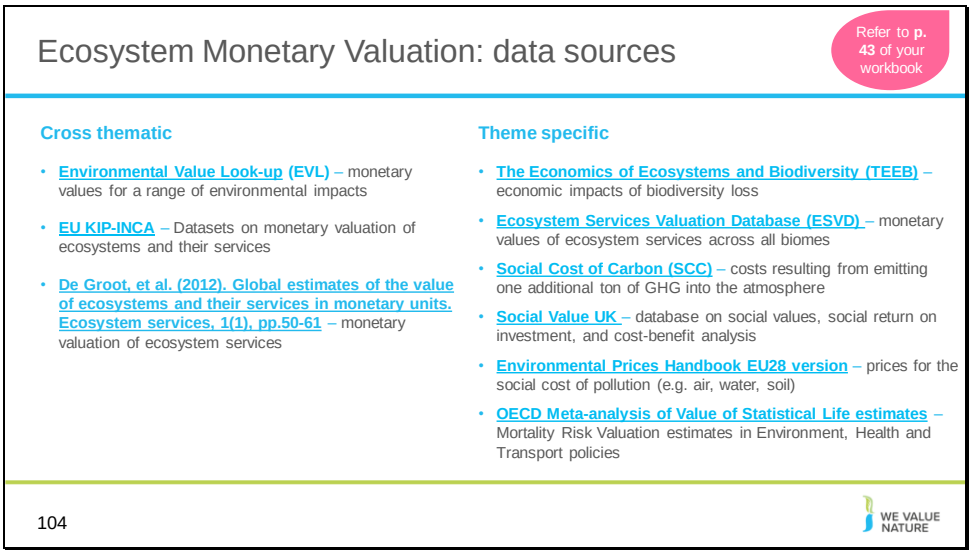
Slide 103



- **Ecoinvent**: a life cycle inventory database. The ecoinvent database provides process data for thousands of products, helping you make truly informed choices about their environmental impact.
  https://www.ecoinvent.org/
- **Agribalyse program**: The AGRIBALYSE® program consisted in elaborating a database of Life Cycle Inventories (LCI) of the main French agricultural products at the farm gate.
  https://www.ademe.fr/en/agribalyse-program
- **World Food LCA Database**: The World Food LCA Database provides players across the agri-food value chain with high-quality emissions factors and environmental footprint data (including carbon, water, and land) to help them better understand the impacts of their products and bolster decision-making.
  https://quantis-intl.com/metrics/databases/wfldb-food/
- **EFSA Comprehensive European Food Consumption Database**: a source of information on food consumption across the European Union (EU). It contains detailed data for a number of EU countries. The database plays a key role in the evaluation of the risks related to possible hazards in food in the EU and allows estimates of consumers' exposure to such hazards.
  https://www.efsa.europa.eu/en/food-consumption/comprehensive-database
- **IUCN Red list**: The International Union for Conservation of Nature's Red List of Threatened Species is the world's most comprehensive information source on the global conservation status of animal, fungi and plant species.
  https://www.iucnredlist.org/
- **WWF Living Planet Report (2020):** The Living Planet Report documents the state of the planet—including biodiversity, ecosystems, and demand on natural resources—and what it means for humans and wildlife.
  https://www.worldwildlife.org/publications/living-planet-report-2020

- **Eurostat – waste:** Eurostat produces regular statistics on waste generation and treatment for the whole economy and on specific waste streams.
  https://ec.europa.eu/eurostat/web/waste
- **The Marine Plastic Footprint:** a comprehensive framework to measure the inventory of marine plastic leakage, step-by-step and using a life-cycle perspective. It also offers generic data that can be used to calculate marine plastic leakage for a defined list of identified sources, including plastic waste, textile fibres, tyre dust, micro beads in cosmetics, and fishing nets.
  https://portals.iucn.org/library/node/48957
- **EPA – air emissions:** Emissions factors are tools for building emissions inventories, guiding air quality management decisions and developing emissions control strategies. This website provides current information on these tools and provides support for using them.
  https://www.epa.gov/air-emissions-factors-and-quantification
- **EMEP/EEA:** The EMEP/EEA air pollutant emission inventory guidebook is prepared by the UNECE/EMEP Task Force on Emissions Inventories and Projections (TFEIP) and published by EEA. The Guidebook provides a guide to European atmospheric emissions inventory methodologies and emission factors
  https://www.eea.europa.eu/themes/air/links/guidance-and-tools/emep-eea-air-pollutant-emission
- **WaterStat:** statistics on the water footprint. Part of the Water Footprinting - the Global Water Footprint Assessment Standard lays out the internationally accepted methodology for conducting a Water Footprint Assessment.
  https://waterfootprint.org/en/resources/waterstat/
- **Greenhouse Gas Protocol:** Greenhouse Gas Protocol provides the world's most widely used greenhouse gas accounting standards for companies.
  https://ghgprotocol.org/calculation-tools

Slide 104



- **EVL:** The Environmental Value Look-Up (EVL) Tool is a searchable database which contains indicative monetary values for a range of environmental impacts. https://shift.tools/search/full-text?q=evl%20tool
- **EU KIP-INCA:** An integrated natural accounting system for ecosystems and their services and associated data sets is being developed by the Knowledge Innovation Project (KIP INCA). https://ec.europa.eu/environment/nature/capital_accounting/index_en.htm
- **De Groot et al. (2012):** This paper gives an overview of the value of ecosystem services of 10 main biomes expressed in monetary units. https://www.sciencedirect.com/science/article/pii/S2212041612000101
- **TEEB:** The aim of TEEB is to assess the economic impacts of biodiversity loss and to offer practical responses to ecosystem decline http://teebweb.org/publications/teeb/
- **ESVD:** The Ecosystem Services Valuation Database (ESVD) is a follow-up to the "The Economics of Ecosystems and Biodiversity" (TEEB) database which contained over 1,300 data points from 267 case studies on monetary values of ecosystem services across all biomes. https://www.es-partnership.org/esvd/
- **Social Costs of Carbon:** The SCC is a tool that estimates, in dollars, the economic damages that would result from emitting one additional ton of greenhouse gases into the atmosphere https://www.rff.org/publications/explainers/social-cost-carbon-101/
- **Social Value UK**: database of over 800 social value, SROI and cost benefit analysis report. https://socialvalueint.org/resources/report-database/

- **Environmental Prices Handbook EU28 version** – Environmental prices are prices for the social cost of pollution, expressed in Euros per kilogram pollutant. Environmental prices indicate the loss of economic welfare that occurs when one additional kilogram of the pollutant finds its way into the environment. Captured in a single monetary unit. https://www.cedelft.eu/en/publications/2191/environmental-prices-handbook-eu28-version
- **OECD Meta-analysis of Value of Statistical Life estimates** - It is increasingly common to include estimates of value of statistical life (VSL) in analyses of proposed policies that affect people's mortality risks.The analysis is presented in the publication Mortality Risk Valuation in Environment, Health and Transport Policies. https://www.oecd.org/env/tools-evaluation/env-value-statistical-life.htm

Slide 105

Ecosystem (Monetary) Valuation Tools

Refer to p. 44 of your workbook

	ENCORE	NatCap checker	TESSA	CEV	ARIES	InVEST
Identifying new investments, markets, prices and products				✓	✓	
Managing risks	✓	✓	✓	✓	✓	✓
Articulating environmental performance and costing environmental impacts			✓	✓	✓	✓
Difficulty to implement	•	•	••	••	•••	•••

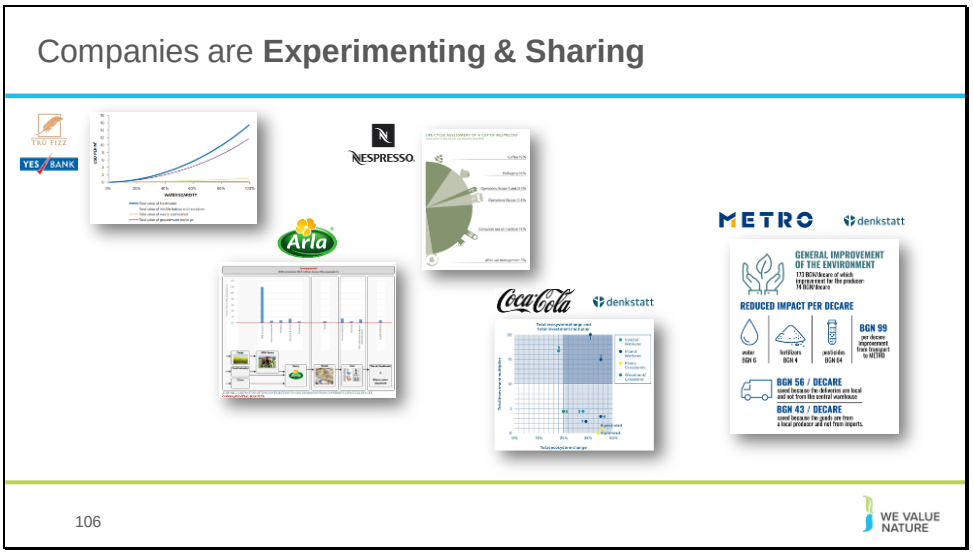
105

WE VALUE NATURE

- **ENCORE:** The aim of the project is to help financial institutions to better understand, assess and integrate natural capital risks in their activities. It helps measure impacts and dependencies in a qualitative way.
  https://encore.naturalcapital.finance/en
- **NatCap checker**: The Natural Capital Checker (NatCap Checker) provides a self-assessment tool to enable users to assess, communicate and improve the level of confidence in their natural capital assessment.
  https://capitalscoalition.org/events/natcap-checker-beta-launch-webinar/
- **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).
  http://tessa.tools/
- **CEV**: This first-of-its-kind framework enables companies to consider the actual benefits and value of the ecosystem services they depend upon and impact, giving them new information and insights to include in business planning and financial analysis.
  https://www.wbcsd.org/Programs/Redefining-Value/Business-Decision-Making/Assess-and-Manage-Performance/Resources/Guide-to-Corporate-Ecosystem-Valuation
- **ARIES**: ARIES redefines ecosystem services assessment and valuation in decision-making. The ARIES approach to mapping benefits, beneficiaries, and service flows is a powerful new way to visualize, value, and manage the ecosystems on which the human economy and well-being depend.
  http://shift.tools/iframe/1377?
- **InVEST**: InVEST is a suite of free, open-source software models used to map and value the goods and services from nature that sustain and fulfill human life.
  https://naturalcapitalproject.stanford.edu/software/invest

Note: some of these tools (e.g. ARIES and InVEST) require a lot of data and effort. But there are also less complicated tools (e.g. Encore and NatCap checker – but these are not monetary valuation tools)

Slide 106



ATTENTION should talk through at least one of these with some information as to the use of the data and what it has helped the company to achieve!

Can ask after explaining this slide, what are participants' corporate culture when it comes to this? What would their senior management team prefer?

Tru Fizz & YES Bank: YES BANK carried out the natural capital assessment for Trufizz. The overall nature and extent of business, and societal costs and benefits gives rise to significant concerns as according to the assessment done for the company, 98% of the potential revenue is at risk because of the water quantity risk. One of the key objectives of this assessment was to report and disclose the results with Trufizz's stakeholders and increase engagement with them. This will be done both with external as well as internal stakeholders.

Arla: Arla Foods conducted an E P&L and found that the following impact categories were most significant: Global Warming (CO_2, CH_4, N_2O), Respiratory inorganics (air emissions: particles, ammonia, NOx, SO_2), Nature occupation (biodiversity). The results are calculated based on comprehensive data collection and life cycle assessments. The E P&L can help focusing on the most important impacts. Furthermore, the account can be used as a baseline to which different improvement options are evaluated.

Nespresso: Conducted a Life Cycle Assessment (LCA). Within LCA, Nespresso has chosen the carbon indicator to guide integrated and consistent actions on climate change. Nespresso today commits that every cup of Nespresso coffee, both for at-home and for professional customers, will be carbon neutral by 2022.

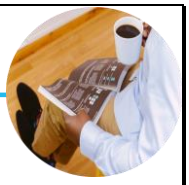
Metro & Denkstatt: Sustainability accounting using the Natural Capital and Social Capital Protocol. In Bulgaria, Denkstatt had assessed the benefits for the economy and the

environment resulting from the Food Service Delivery (FSD) business model and the program “Nurtured with care in Bulgaria”. As part of the traditional delivery model of METRO AG, the customer buys from Cash & Carry stores. In the FSD model, professional customers make orders and METRO delivers from its central warehouse. One of the conclusions is that the chain has a positive impact on the environment, directing producers to more environmentally friendly agricultural practices.

Coca Cola & Denkstatt: The Coca-Cola Company has set an ambitious global water stewardship target, which includes protecting water resources, reducing water use, treating all process water and returning it to the environment in a clean state, and replenishing product-related water use by 2020, with the goal of water-neutral. Together with Denkstatt, an ecosystem services valuation (ESV) tool was developed and applied to 8 water replenishment projects. Most projects lead to high ecosystem change but generate a lower return on investment for the environment (lower right quadrant).

Slide 107

Where are we in the learning objectives



The aim of today's training is:

- To understand how to **identify natural capital impacts and dependencies** that are **important** to your business
- Acquire the necessary tools, resources and understanding to **scope your own assessment**
- To be introduced to the key **practical considerations and steps** to take when undertaking a first natural capital assessment as well as some **tools** to help undertake an assessment

107

The objectives for today are…

Slide 108

Agenda – 2 hour training

TO ADAPT

Time (xxx)	Session
15	**Welcome** – Agenda, objectives, material & introductions
10	**Setting the scene and a brief re-cap on natural capital**
5	**Engaging the supply chain on natural capital**
5	**Identifying natural capital impacts & dependencies**
30	**Group exercise**
10	*Coffee Break*
20	**Scoping an assessment** – Key steps to take
15	**Practical considerations** – Planning an assessment
20	**Optional: Case study presentation**
10	**Wrap-up –** Key take-aways, wrapping-up

Slide 109

Speakers from different companies will be invited to the training to share their experience in integrating natural capital into their business decision-making processes.

Speakers will be encouraged to share:
- Their experience
- The solutions put in place
- Challenges/barriers faced, how these were overcome and what would they do differently looking back
- Collaboration with stakeholders involved in the process – who was key in supporting the solution, making it happen and perhaps also discussion around communications, how do you have to communicate differently e.g. if trying to convince risk management vs

During presentation of case studies, participants will be encouraged to take note of:
- Challenges & barriers
- Solutions, activities
- Key stakeholders / enablers in the process

Encourage case studies speakers to also discuss how they would have done things differently.

Slide 110

Case study presentation from xyz

Refer to **p. 46-51** of your workbook

Pay attention to the following elements while listening to the presentation:

- Barriers, challenges and how overcame these
- Objective of assessment & process undertaken (incl. tools, methodologies adopted)
- Decision-making, collaboration, next steps

Slide 111

Agenda – 2 hour training

TO ADAPT

Time (xxx)	Session
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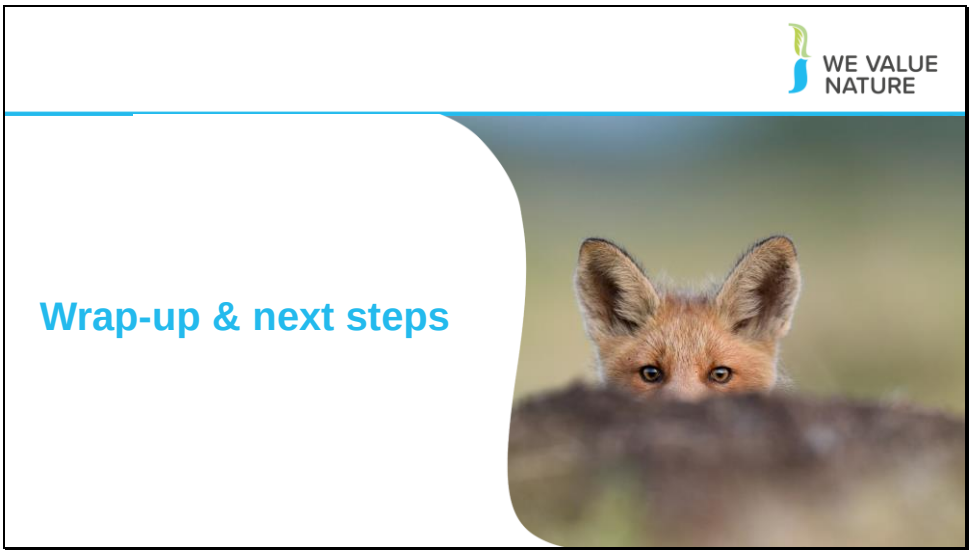
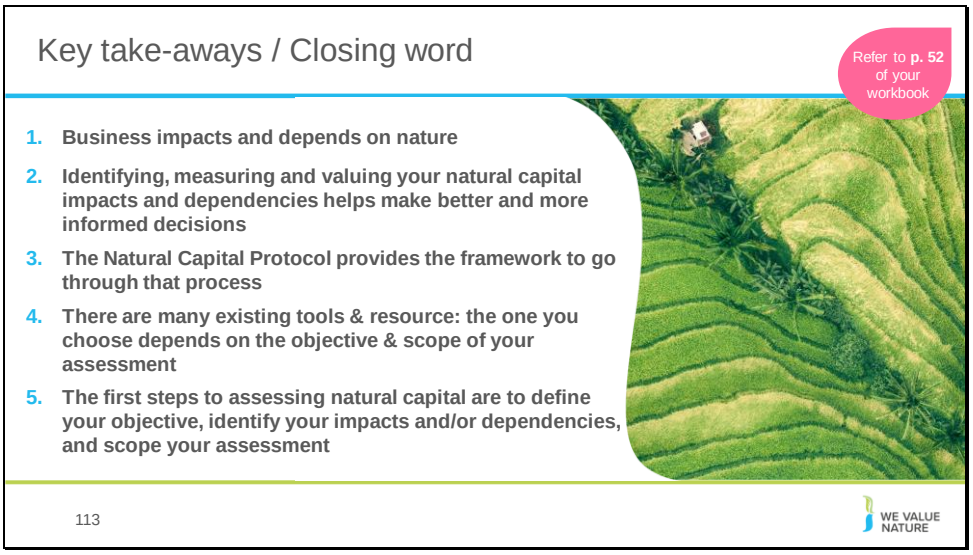
20	**Case study presentation**
10	**Wrap-up – Key take-aways, wrapping-up**

Slide 112



Slide 113



- **Business impacts and depends on nature**
- **Identifying, measuring and valuing your natural capital impacts and dependencies helps make better and more informed decisions**
- **The Natural Capital Protocol provides the framework to go through that process**
- **There are many existing tools & resource: the one you choose depends on the objective & scope of your assessment**
- **The first steps to assessing natural capital are to define your objective, identify your impacts and/or dependencies, and scope your assessment**

ADDITIONAL BACKGROUND INFORMATION

How much will an assessment cost?

Some of the Protocol pilot testers - like our members Nestlé and Roche - estimated they spent about USD $50,000 on consulting services for their assessments over a six-month period. Some companies spend less, others spend more.

Dow, Kering and Natura have invested significantly more over a longer term, for in-depth assessments that contribute to their multi-year strategic ambitions

The Protocol can help companies navigate these kinds of situations by making sure the services required align with the assessment's objective.

Skills & data needed:

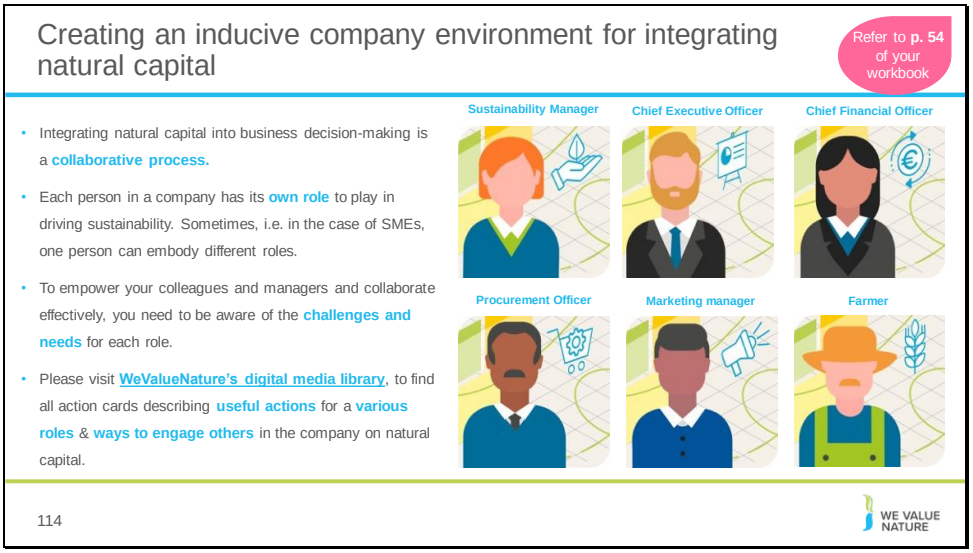
It's usually much more efficient to build on existing data that's readily available in-house, and the Protocol provides guidance on gathering and using that data too.

For example, many companies have data on their own GHG emissions, water, waste, and some also have results of product Life Cycle Assessments - this existing information can provide a really good starting point for a natural capital assessment. How applicable it is will depend on the objectives and scope of the assessment though, so it's important to find the balance between getting perfect data (e.g. from monitoring in the field) and using proxies that are not as accurate but can be more practical and still lead to better decisions.

Internal buy-in:
In many cases, natural capital assessments can be a bottom-up effort. Trying to drive natural capital assessments from sustainability, environment or health and safety departments is sometimes difficult, but nevertheless, the Protocol provides guidance on integrating the assessment into the business itself.
One way to facilitate engagement internally can be to show that "many companies are already doing natural capital assessments; they're just using different terminology and steps. To support this engagement, it is important to look beyond those benefits that can be valued through the natural capital assessment itself, and acknowledge how a natural capital approach can motivate organizational change in support of broader business goals." This means that there will be more leadership from the top to better measure, value and then integrate natural capital into business.

The bottom line is that although carrying out a natural capital assessment is technical, it's also achievable. Not every assessment has to be a huge undertaking, so companies should start off with a scope that makes most sense to their situation. The Protocol will help you do this.
Finally, we must make sure the information obtained from the assessment is included in core business decision-making. This will ensure you have the best possible impact on your business, and on the environment.

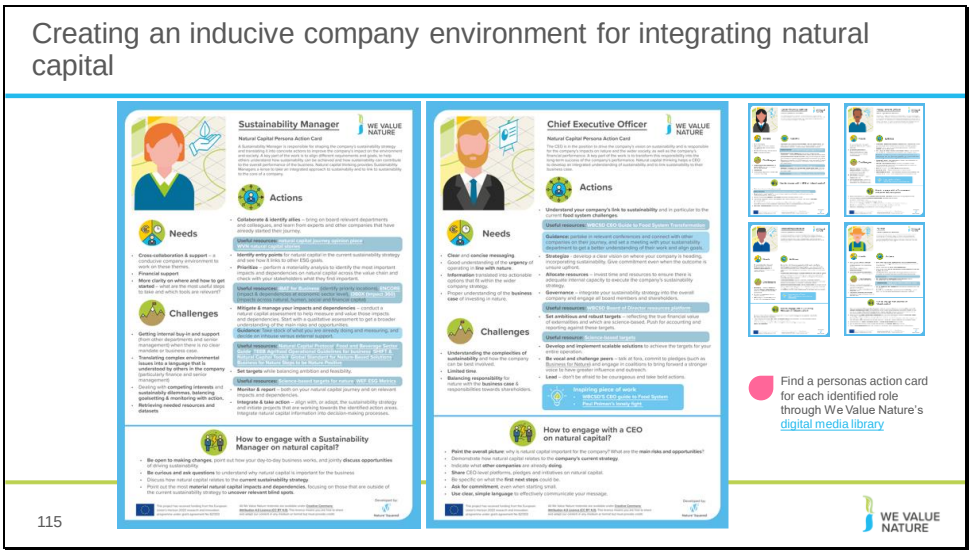
Slide 114



Companies need to secure internal buy-in to get the green light for starting a natural capital assessement and to ensure that the results will be used in future decision-making proceses. Point out that under WeValueNature's meSlide library, participants can find **persona actions cards** for key roles within a company (e.g. CEO, CFO, sustainability manager, procurement manager, marketing manager, farmer), describing useful actions that he/she can take, the challenges and needs, and guidance for effectively engaging on the topic of natural capital.

All cards can be retrieved through: https://wevaluenature.eu/meSlide-item/307

Slide 115



Sustainability Manager

Actions

- Collaborate & identify allies
- Identify entry points
- Mitigate & manage your impacts and dependencies
- Set targets
- Monitor & report
- Integrate & take action

Needs

- Cross-collaboration & support
- Financial support
- More clarity on how and where to get started

Barriers

- Getting internal buy-in and support
- Translating complex environmental issues into a language that is understood by others
- Retrieving needed resources and datasets

How to engage?

- Be open to making changes

- Be curious and ask questions
- Discuss how natural capital relates to the current sustainability strategy
- Point out the most material natural capital impacts and dependencies

CEO
Actions
- Understand your company's link to sustainability
- Strategize and allocate resource
- Governance
- Set ambitious goals and targets
- Develop and implement scalable solutions
- Be vocal and challenge peers
- Lead

Needs
- Clear and concise messaging
- Good understanding of the urgency and business case
- Information translated into actionable options

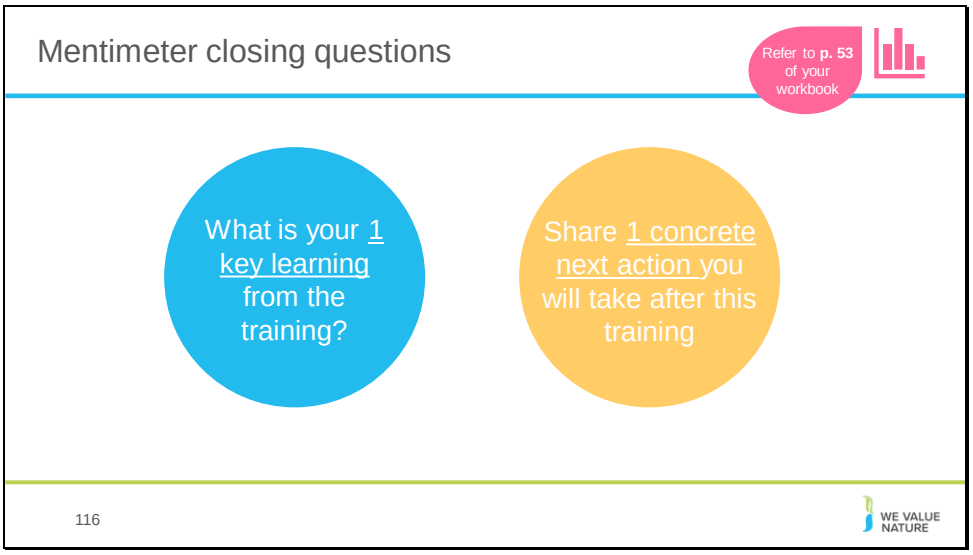
Barriers
- Understanding the complexities of sustainability
- Limited time
- Balancing responsibility for nature with responsibilities towards shareholders

How to engage?

- Paint the overall picture of why NC is important to the company
- Show how NC related to the current strategy
- Indicate what other companies are already doinng
- Ask for commitment, even when starting small

All cards can be retrieved through: https://wevaluenature.eu/meSlide-item/307

Slide 116



Through Mentimeter, we will ask you to share:

2 key learnings that were most useful to you today,

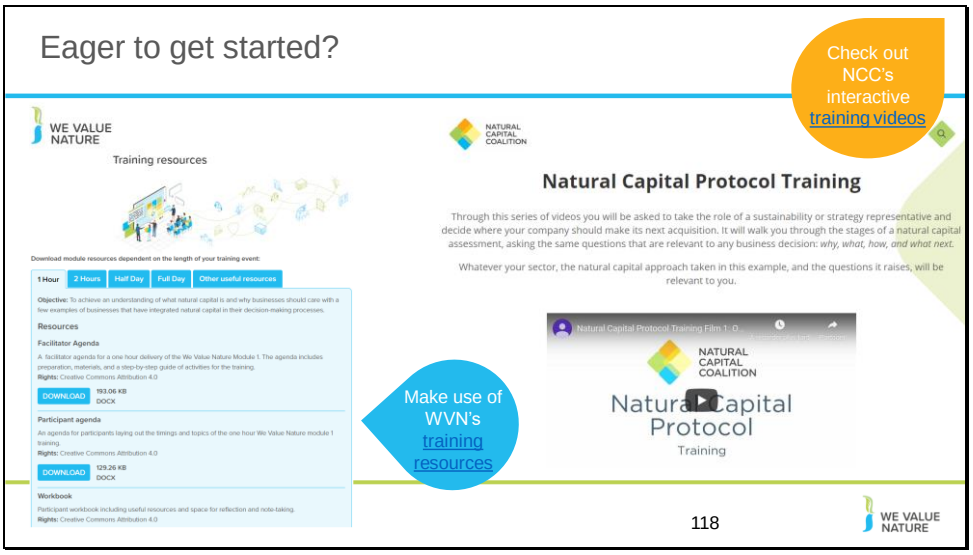
1 concrete next step / activity you could take to move your company forward in the natural capital journey?

Slide 117

How to use Mentimeter

1. Go to **www.menti.com**
2. Enter this code: **XXXXXX**
3. Submit your answer

Slide 118



The Natural Capital Coalition has recently launched a set of training videos that will guide you in an interactive way through a light natural capital assessment to explore just how much can be achieved with limited resources. Interested to learn more? Check out these videos here: https://naturalcapitalcoalition.org/protocol-training/

Link to WVN training resources: https://wevaluenature.eu/training-resources

Slide 119

Next steps that YOU can take

TO ADAPT

- Download & familiarize yourself with the **Natural Capital Protocol -** Food and Beverage sector guide
- **Share training learnings & material** with colleagues and your manager over coffee
- Use & present the training slides to your team & manager – You want to **find some allies!**

Slide 120

WHAT ELSE would you need? What support would you need?
Sign-up for in-person day training, t-t-t
If want support, need to fill out survey (Google form survey)
Refining training further, keen to know how have used this training and catch-up via call (if don't want to, let us know)

https://wevaluenature.eu/

Slide 121


Nature^Squared
ICAEW
wbcsd
IUCN
oppla
WE VALUE NATURE
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
www.wevaluenature.eu
info@wevaluenature.eu
@WeValueNature

Slide 122

Disclaimer

Disclaimer

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February 2021