Natural Capital Valuation for Business Decision Making

CPD

On the path to Nature positive and net zero

CAPITALS COALITION

Module 2

ASSESS

Chapters

1. Summary of Module 1
2. Learning objectives
3. Guest speaker
4. Stakeholder engagement
5. Assessment scope including value chain
6. Prioritization and materiality assessment with business example and exercise
7. Impact pathway, measurement and valuation
8. Key performance Indicators and dataset
9. Homework
10. Summary of key messages

Agenda

Time	Content
14.00	Questions and reflections on Module 1
14.15	Guest Speaker Pavan Sukhdev
14.45	Stakeholder Engament **Discussion**
	Assessment scope **Exercise 1**
15:20	Small break
15:45	Prioritization and materiality assessment **Exercise 2**
16.00	Impact measurement and valuation
16.20	**Key Performance Indicators**
16.30	Homework and Summary

Share your learnings

What's your "Aha" moment ?

- In the chat, share what you remember or have learned from the previous session

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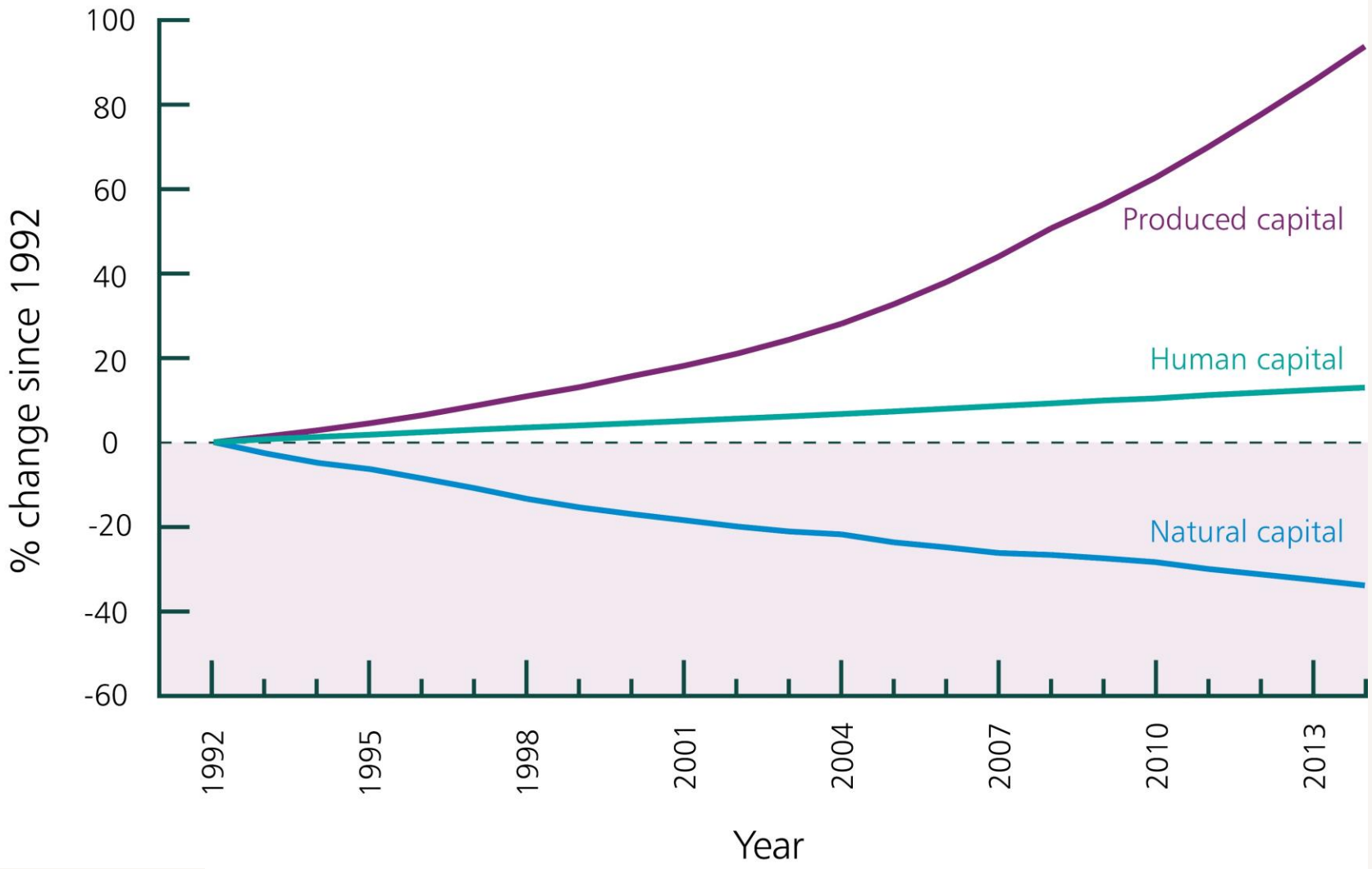
Module 2

Chapter 2.1

Summary of Module 1

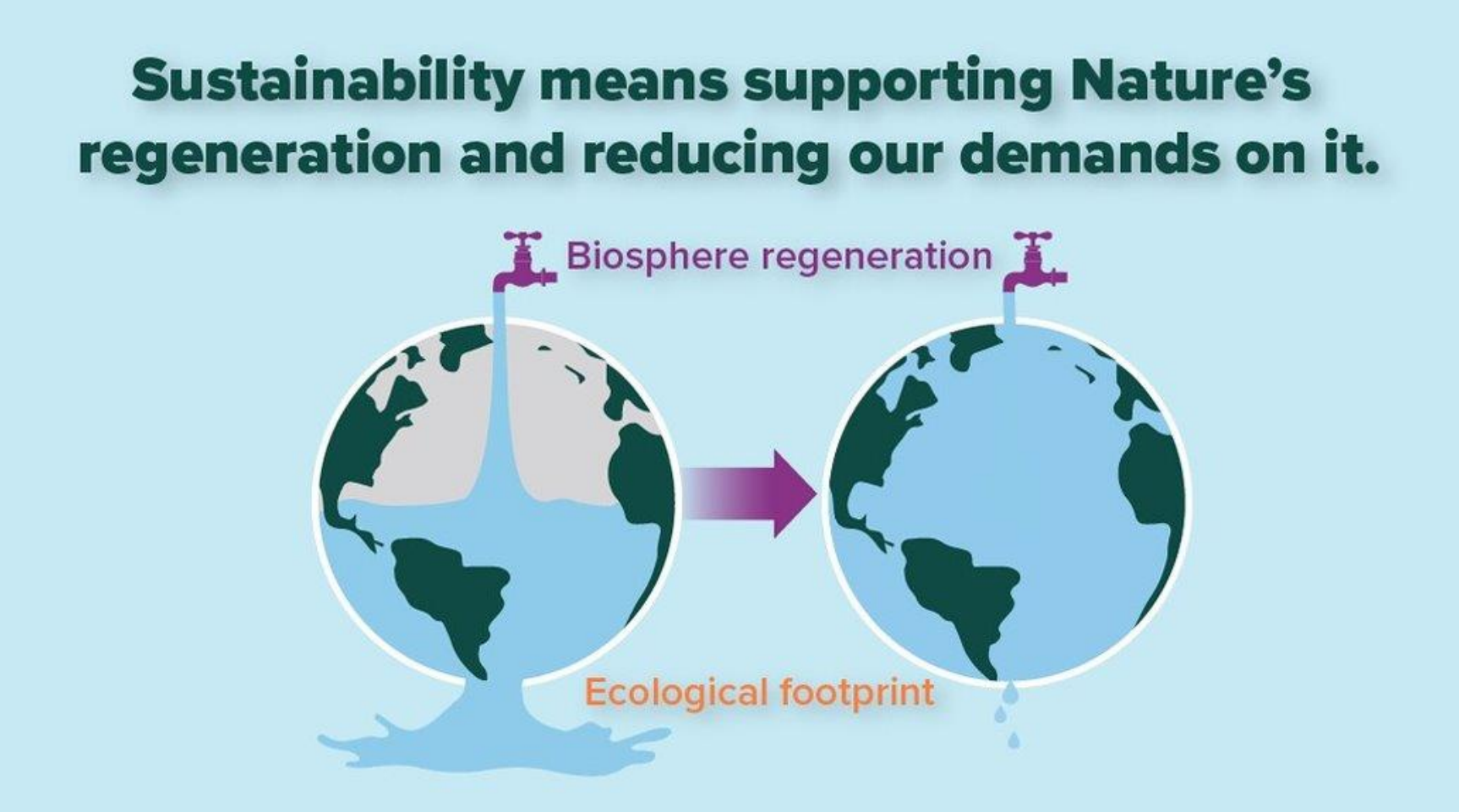
Erosion of nature is a fact



"There is no business on a dead planet"

Reference: The Economics of Biodiversity: The Dasgupta Review, 2021

The Solution: Preserve and create value

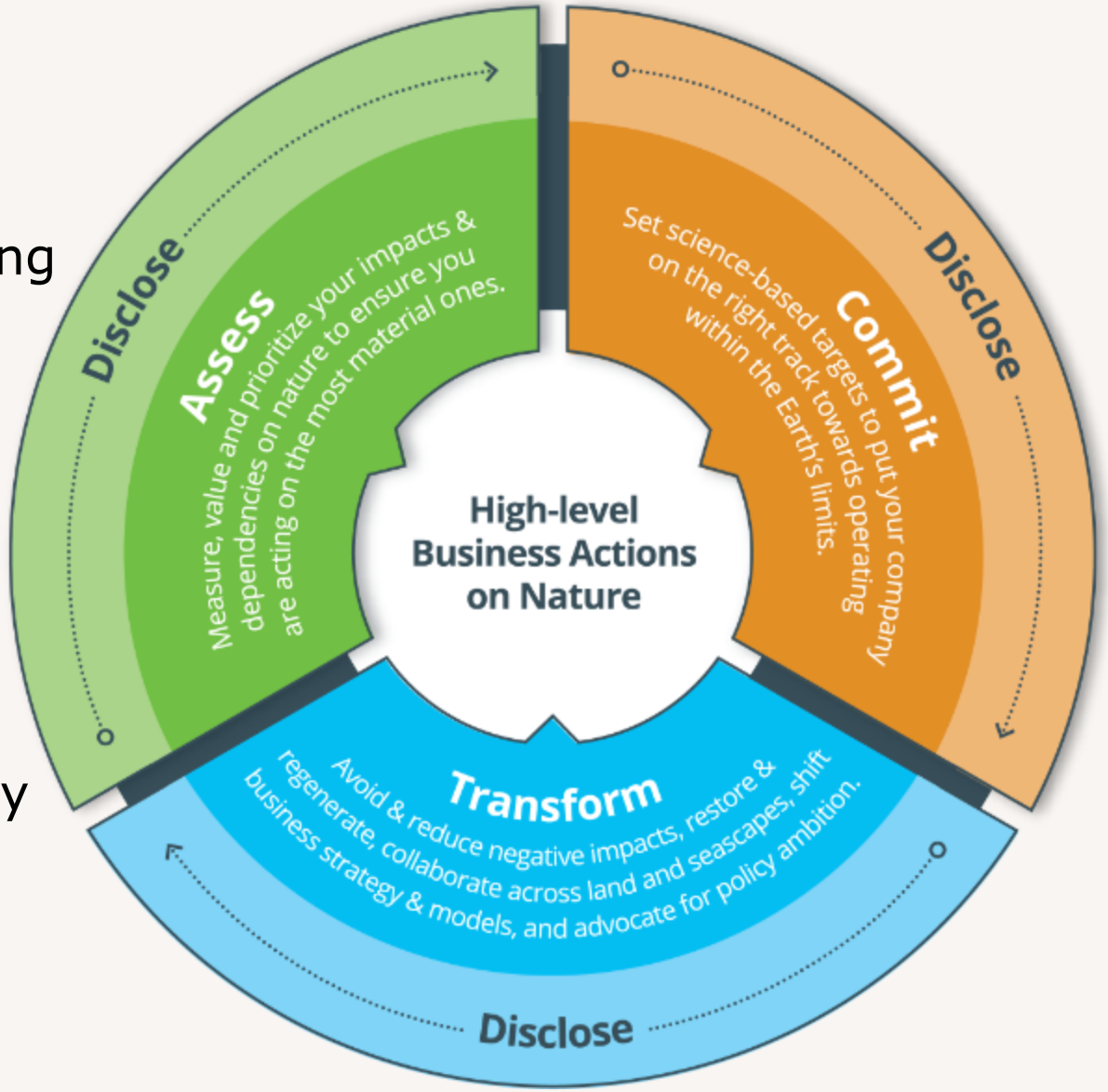


Source: The Economics of Biodiversity: The Dasgupta Review (Dasgupta, 2021)

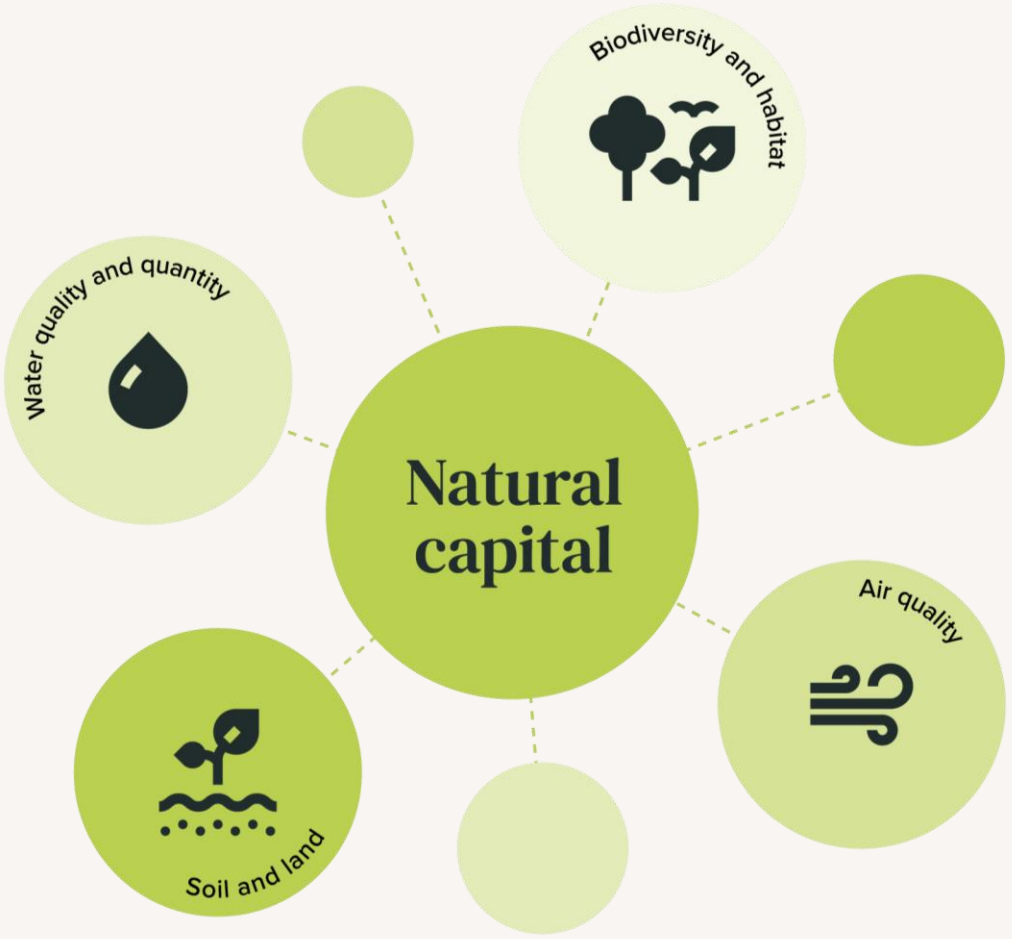
Transform in ACT-D

Contribute to systems transformation

1. **Avoid and reduce** negative impacts
2. **Restore and regenerate** ecosystems including forests, soils, freshwater environments and invest in nature-based solution
3. **Shift business strategy and model** to be "net-positive" and to "give back more than you take"
4. **Collaborate with your value-chain** and key stakeholders
5. **Advocate for policy ambition**



Natural capital definition

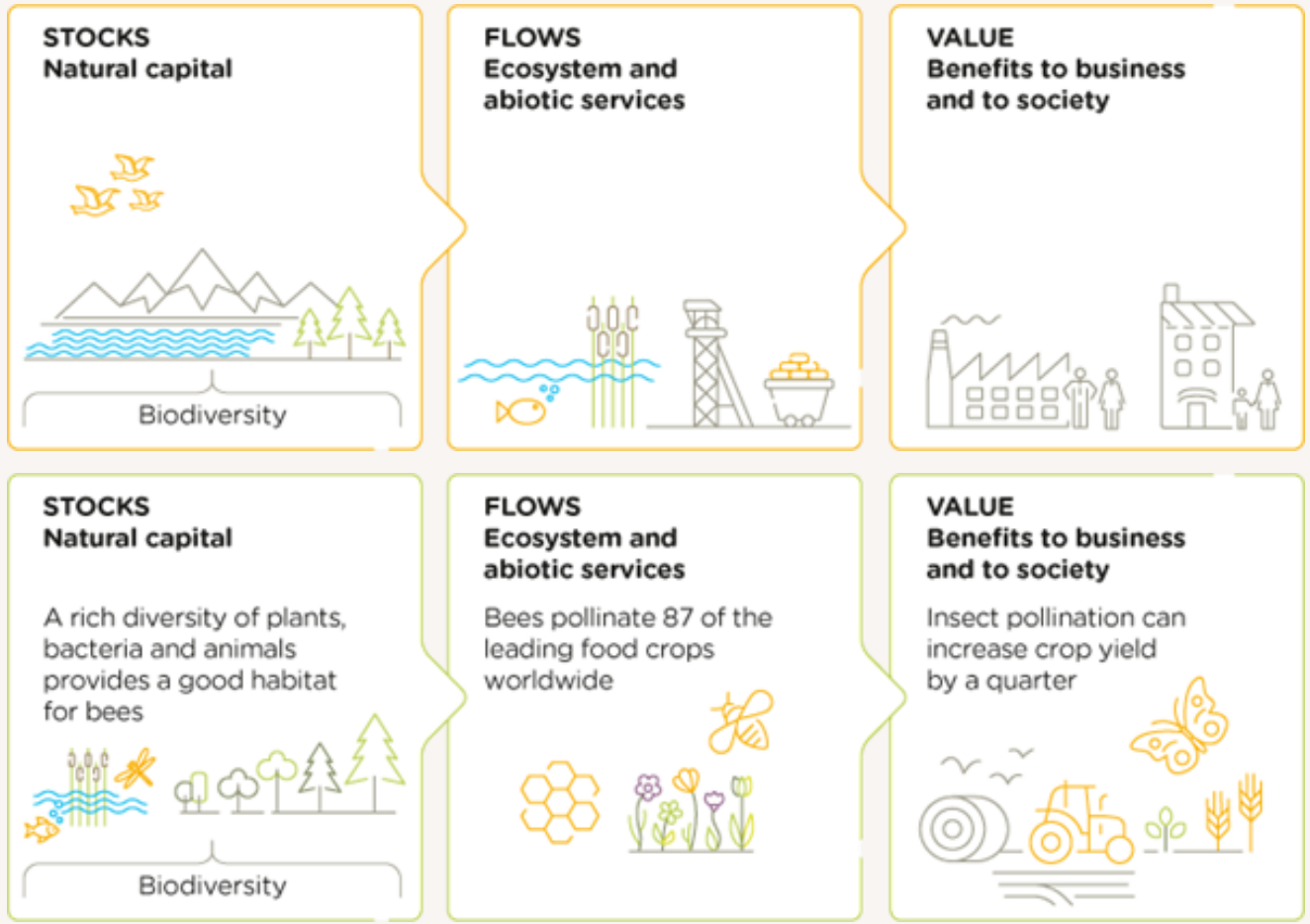


The stock of renewable and non-renewable natural resources that combine to yield a flow of benefits to people.

Natural capital stocks and flows

Among others, those **Natural Capital Stocks** are paramount for business that depends on it.
It's why Natural Capital stocks and flows need to be preserved, or it might thread business resiliency.

- Air
- Water
- Land & soil
- Biodiversity

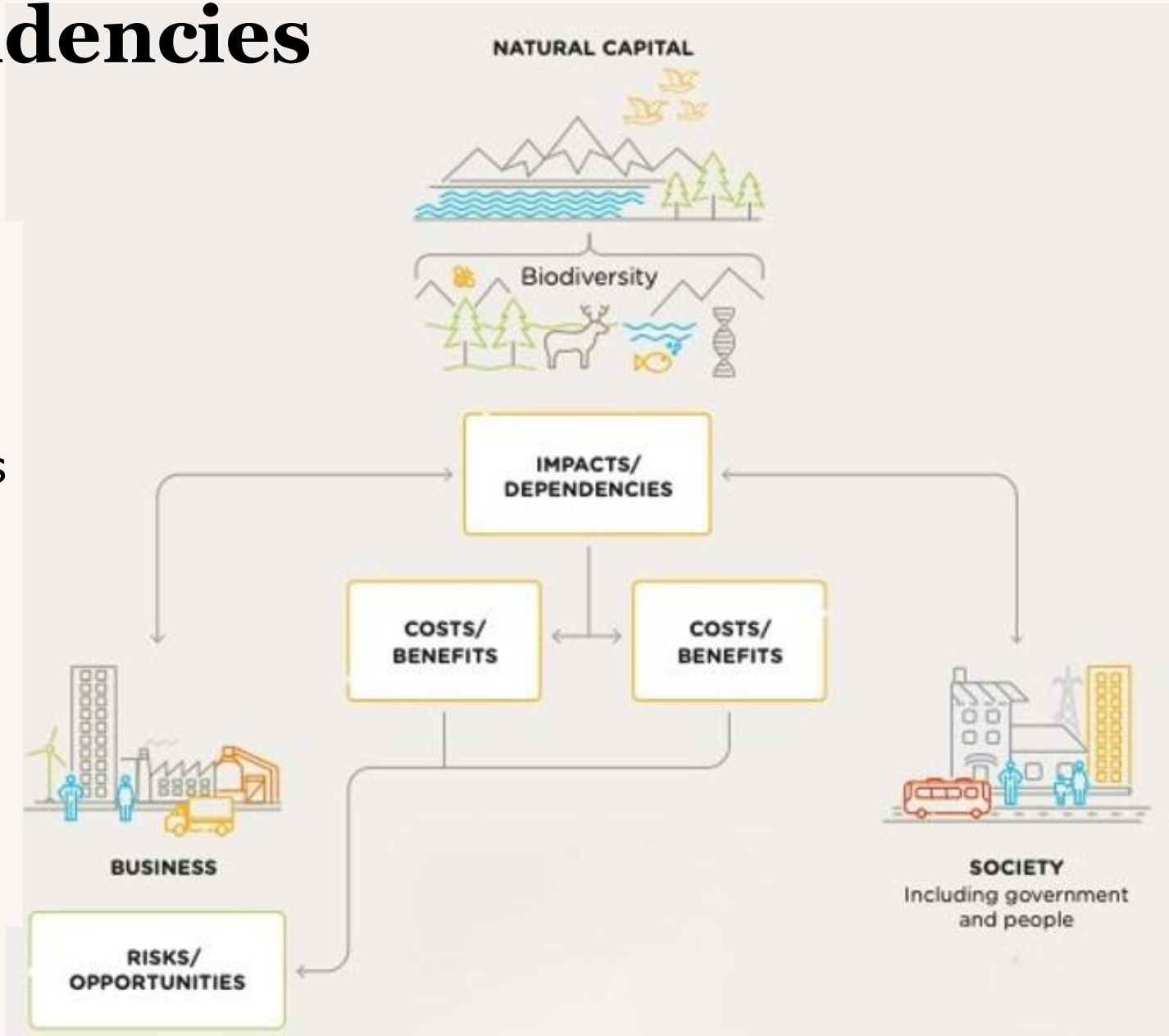


Potential benefits of a ‘Natural Capital Assessment’

- Inform **business core strategy**
- Support companies in achieving **sustainability goals**
- Improve **disclosure and reporting** to shareholders and investors
- Inform **investment priorities** based on the rate of return of natural capital
- Enhance **accounting practices** to embed natural capital assets in balance sheets
- Improve **risks management**

Impacts and Dependencies

- Every business **impacts and depends** in some way on **natural capital.**
- These impacts and dependencies create **costs and benefits** for business and society.
- Those **costs/benefits** create **risks/opportunities** for businesses as a correlated effect.



Exercise: set a potential objective

1. Assess which **business applications** would be pertinent to your business
2. Consider **impacts and dependencies** that your business has perhaps not considered before, but which may be relevant to your company and stakeholders.
3. Consider potential **risks and opportunities** from those impacts & dependencies
4. What could be the **anticipated benefits of a case?** Think about how better information on nature could be relevant to your company's decision-making processes.
5. Define who are the **target audience** (decisions-makers) and who should be consulted (stakeholders)
6. Start conversation internally to frame a **potential objective** and **business case**

Module 2

Chapter 2.2

Learning objectives

Overall course learning objective

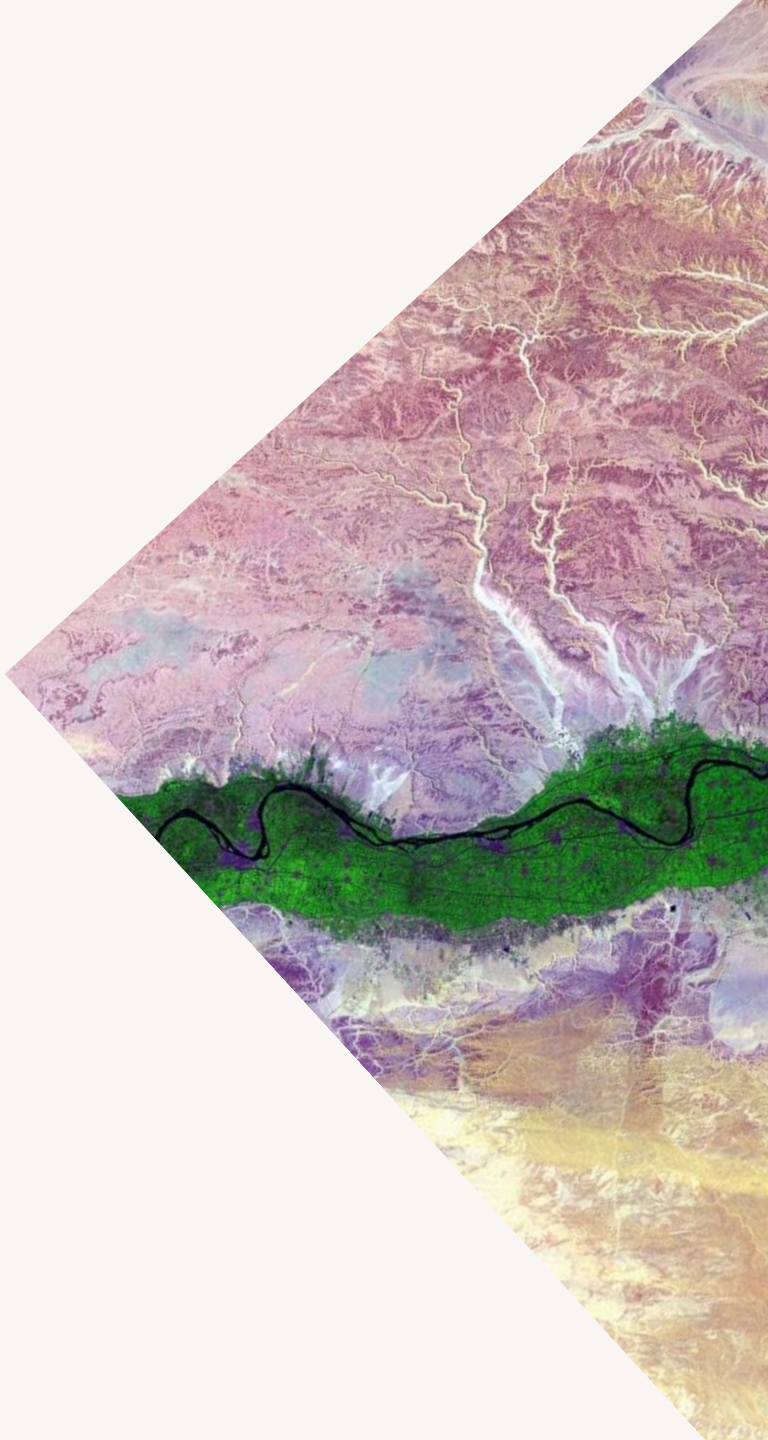
By the end of the course, you will have:

- Improved your **understanding** of the role of natural capital approach for **better business decision-making**.
- Discovered how to use **natural capital** assessments to identify and address business **risks and opportunities**.
- Acquired a foundational understanding of **assessing, measuring, and valuing impacts** on nature across operations and value-chains.
- Developed and exchanged interactive and engaging **methods for teaching** the course content to various audiences
- Be inspired to drive **change** within organizations through **target setting, commitments** and **transforming practices.**

Learning objective module 2

By the end of this module, you will:

- Learn how to help your training participants **scope a natural capital assessment.**
- Learn how to prioritize impacts and dependencies using a **prioritization matrix** as a basis for a materiality assessment.
- Be introduced to impact pathways, **measurement of indicators and valuation**.
- Be inspired by **real business examples** and be able to inspire your training participants.



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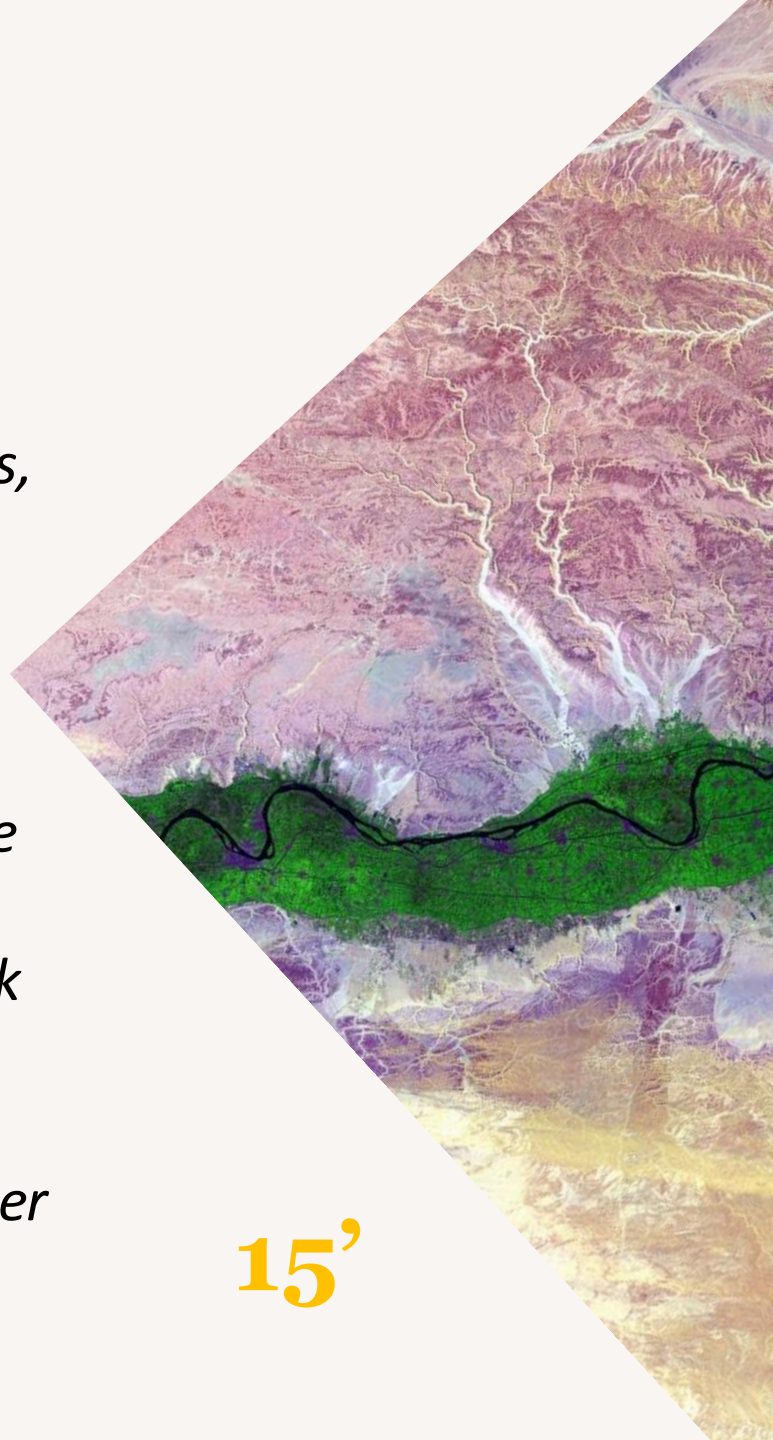
Module 2

Chapter 2.3

Guest speaker

Guest speaker: Pavan Sukhdev

Pavan is the founder and CEO of GIST Impact, a global leader in impact data and analytics which harnesses the power of impact economics, technology and AI to uncover a business's full value contribution to the world. A scientist by education, a banker by profession, and an environmental economist by passion, Pavan previously led the UN's Green Economy Initiative and The Economics of Ecosystems and Biodiversity (TEEB) study. His pathbreaking work has been recognised through several awards including the Blue Planet Prize (2016), the Tyler Prize (2020) and the EAERE European Practitioner Achievement Award in Applying Environmental Economics (2024).



15'

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Q & A

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Module 2

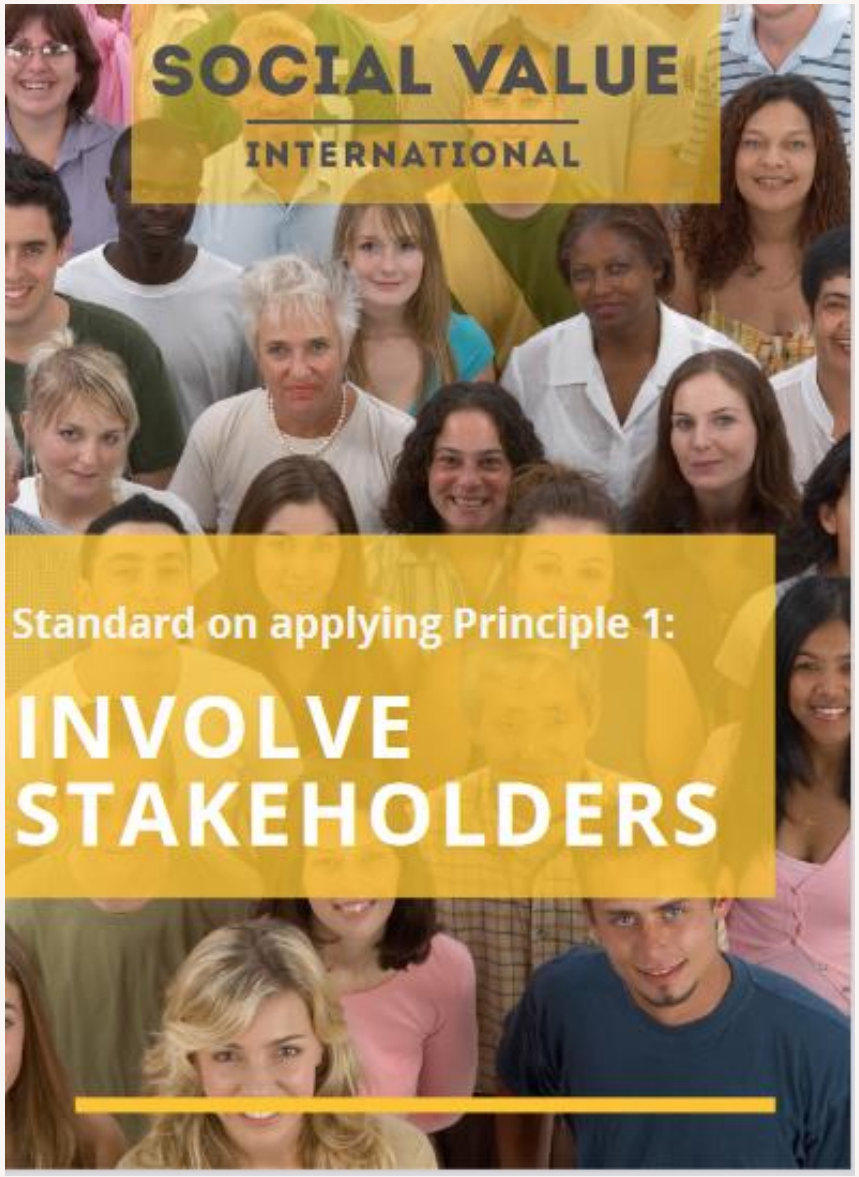
Chapter 2.4

Stakeholder engagement

Involve stakeholders

Individuals or group of individuals that can affect an activity, or are affected by it

- We are not just focused on those we intend to affect
- There may be some stakeholders who are **displaced** – they experience negative effects because of business activities
- There may also be others who experience positive changes
- Remember, what gets measured gets managed



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Why involve stakeholders?

Benefits of involving

- Highlight people business can affect and those that affect us
- Help ensure effective relationships
- Identify where the business create unintended negative outcomes
- Identify potential partnerships

Risks of not involving

- Unable to understand business impacts
- Missing opportunities to optimize impact
- Misalignment of intended impact

Stakeholder consultation

- **Stakeholders are central** to many aspects of a natural capital assessment and can play various roles.

- Engaging with stakeholders in the initial stages can help you **prioritize** material topics. They ensure you have **framed** and **scoped** your assessment correctly.

- Engaging with stakeholders throughout the assessment can be an **essential source of data** on impact and dependencies (for example, interviews and focus groups), they can also validate results and bring new insights.

- **Stakeholders can also be the target audience** (the decision-makers), or the group which are affected by impacts.

- They can co-create positive outcomes and create value for win-win situation.

Example Stakeholder categories

Value is experienced differently by stakeholders. Those are broad categories of **stakeholders that are experiencing different business impacts.** Age, gender and country are examples of diversity within stakeholders.

The **chosen value perspective** (business or society) will influence the results of an assessment.
Stakeholder consultation helps to gather accurate information to assess impacts and dependencies thoroughly.

Module 2

Chapter 2.5

Assessment scope

Natural Capitals assessment scope

- Assessment scope is completely up to you.
- If you are new you can make the scope narrow with a view to expanding it as your confidence grows.
- You can decide to conduct a natural capital assessment that is focussed and detailed on a small area or larger and more generalised.
- The scope can be continually reassessed depending on your resources and business needs.
- This course focusses on natural capital assessment but you may also wish to consider human capital and social capital too. Financial and produced capital may be already accounted for in standard accounting practices

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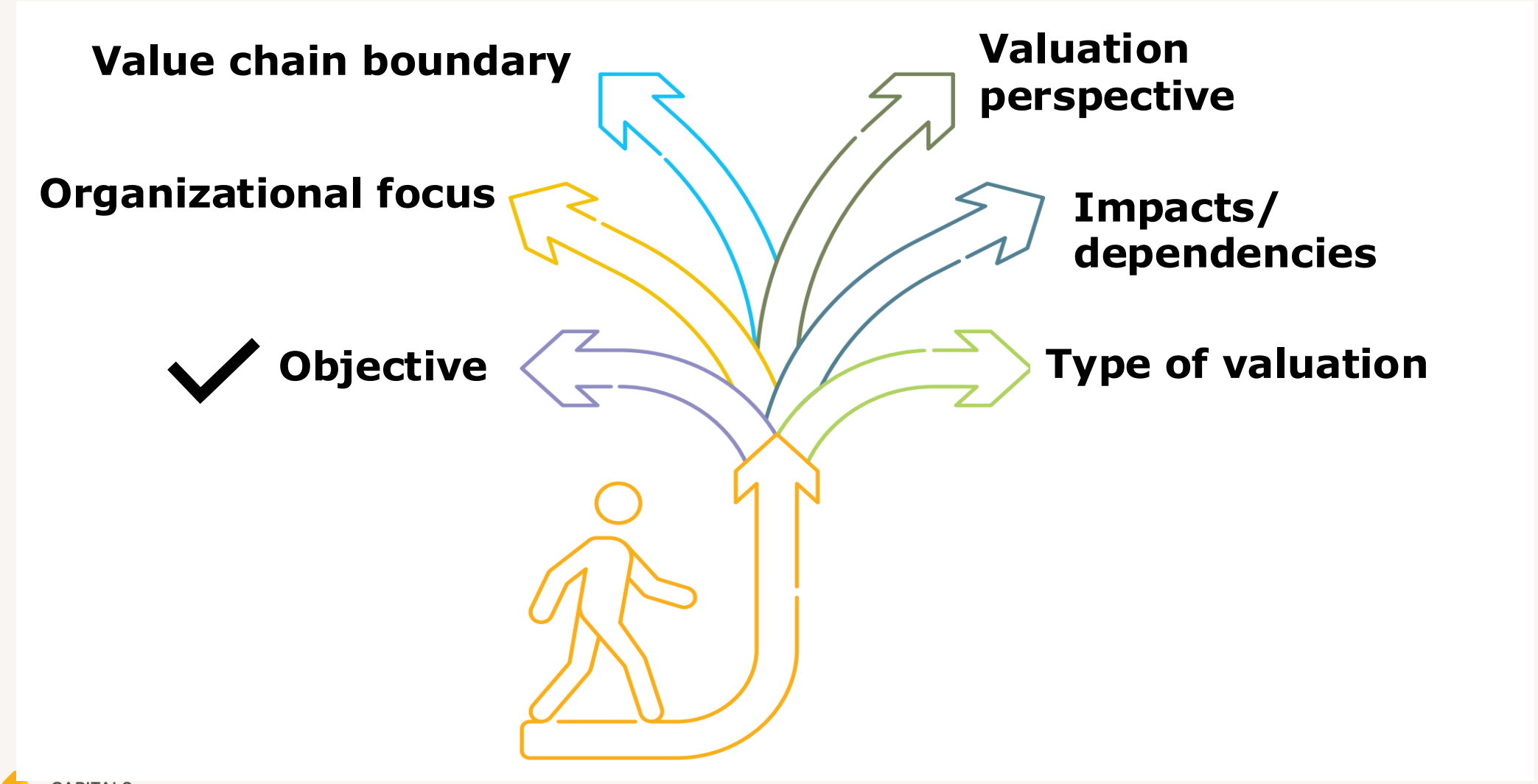
Assessment scope



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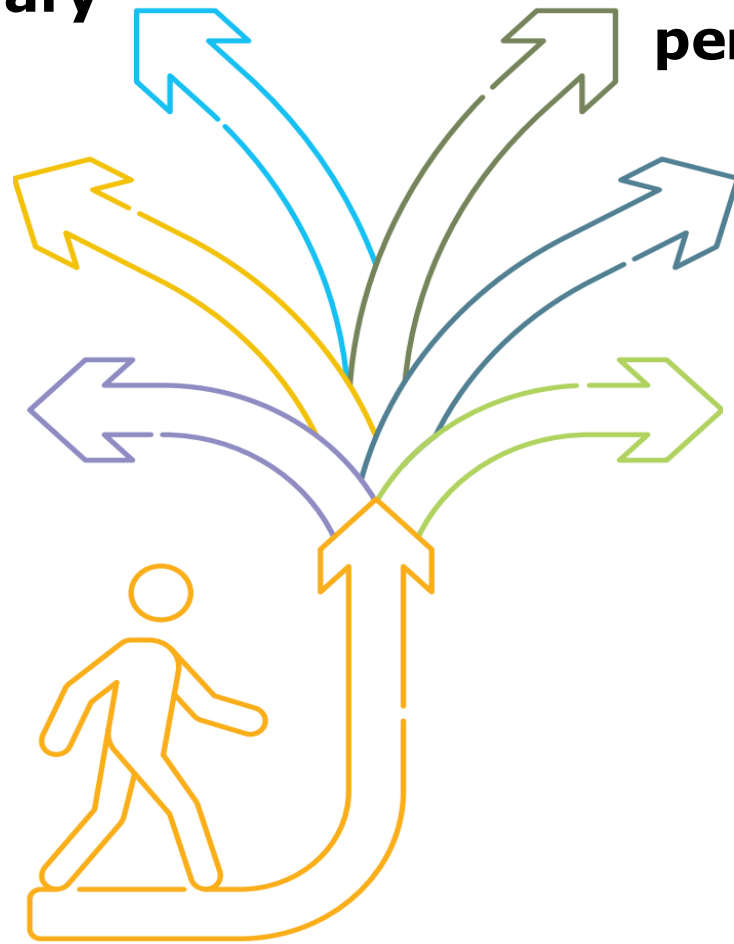
Assessment scope

Value chain boundary

Organizational focus

- Corporate
- Product
- Project

Objective



Valuation perspective

Impacts/ dependencies

Type of valuation

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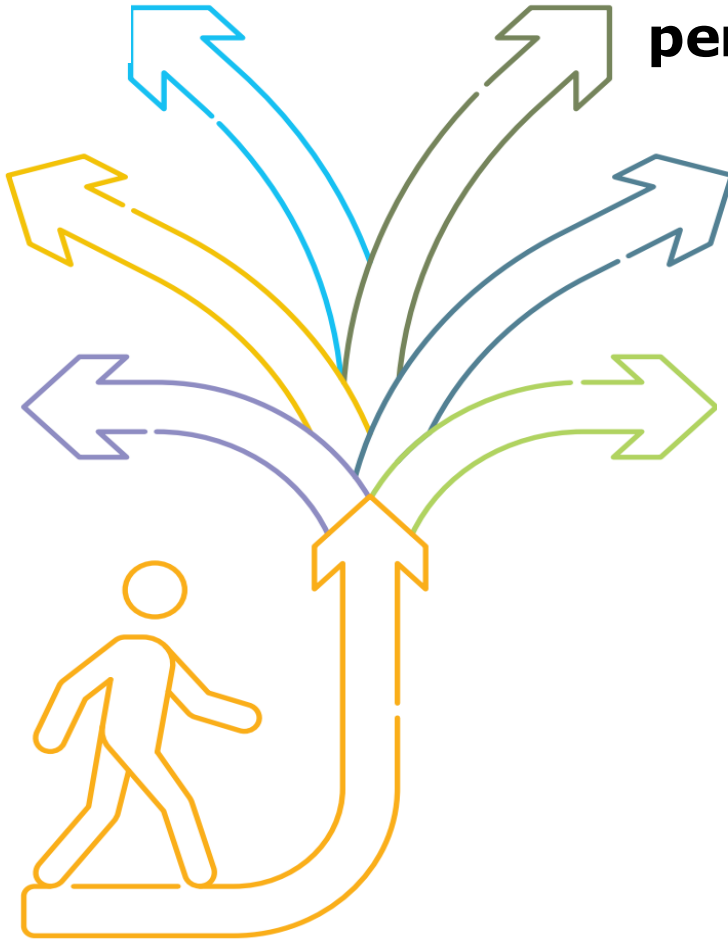
Assessment scope

Value chain boundary

- Operational
- Upstream
- Downstream

Organizational focus

Objective

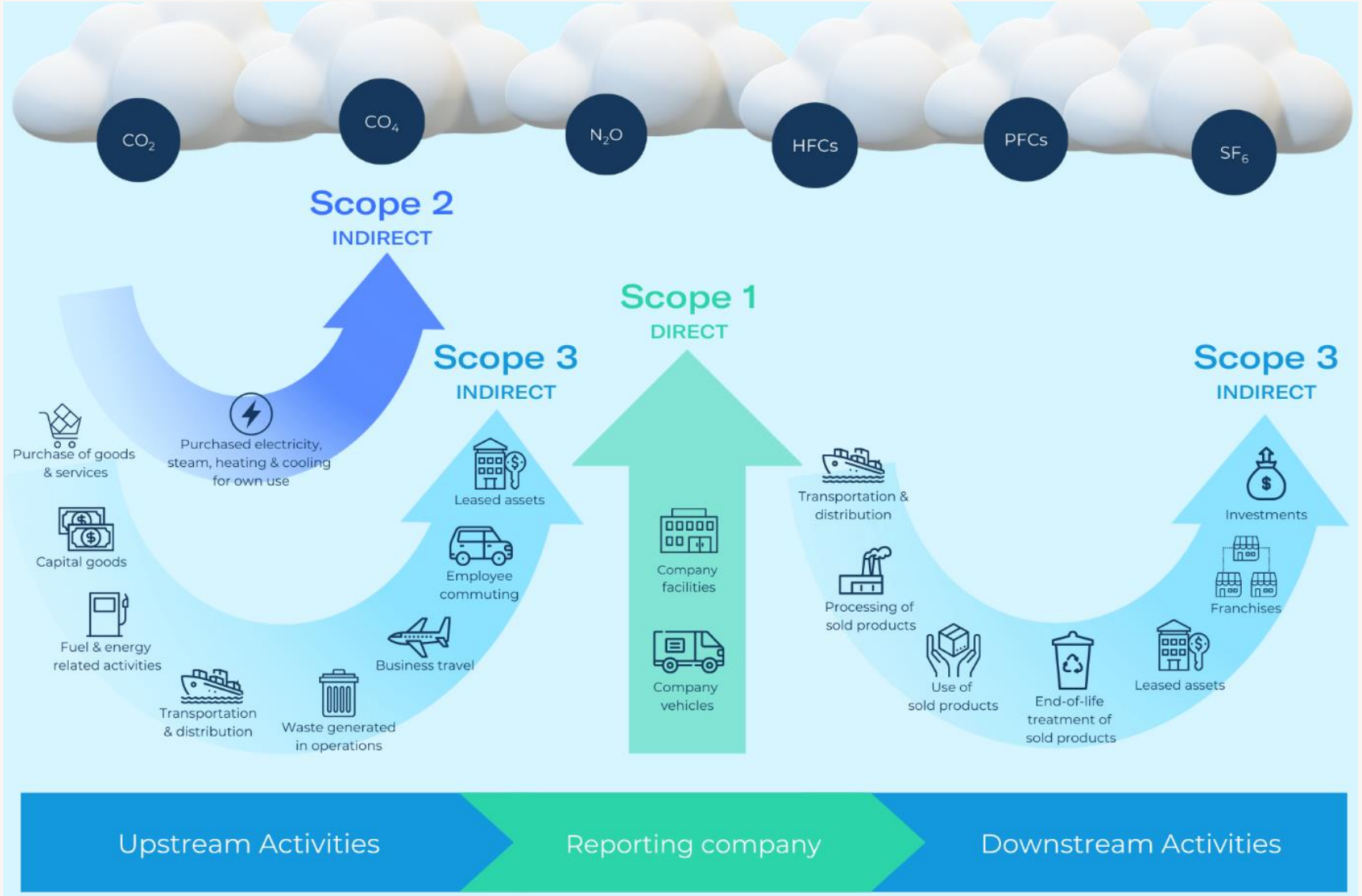


Valuation perspective

Impacts/ dependencies

Type of valuation

Example of Value Chain boundary



Examples of different scopes (1, 2, 3) for an assessment of *greenhouse gas emission*, taking reference to the GHG protocol.

Identify the **value-chain boundary you want to focus on for your natural capital assessment.** Aim not only to assess operations but also to assess upstream and downstream activities as business maturity evolves.

Source: Envoria

Assessment scope

Value chain boundary

Valuation perspective

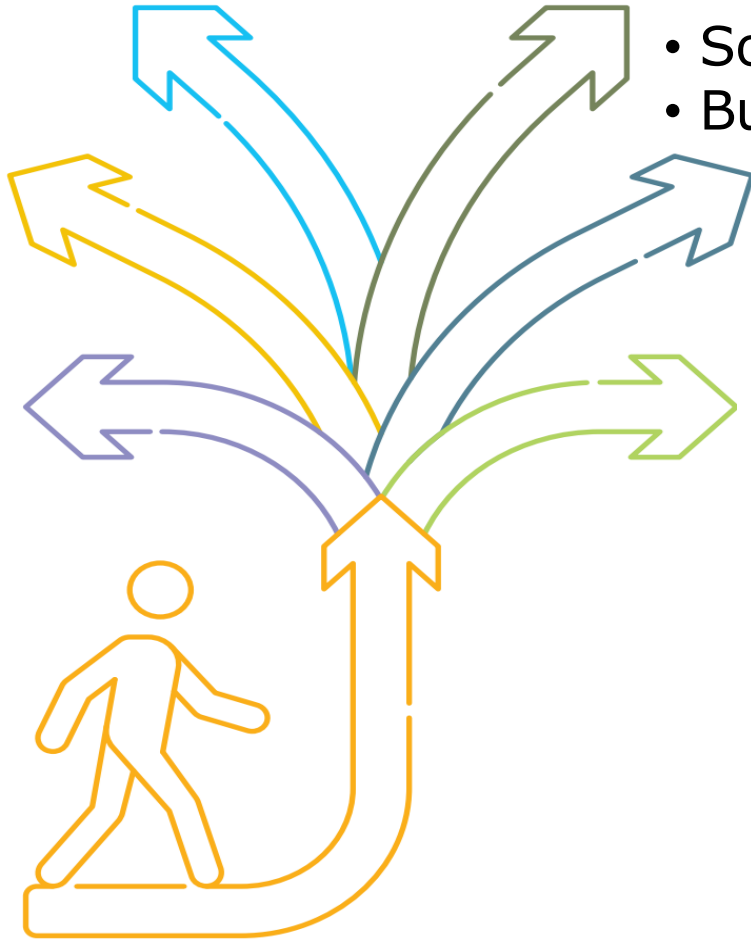
- Society (different stakeholders)
- Business

Organizational focus

Impacts/ dependencies

Objective

Type of valuation



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Valuation perspective

Society's perspective

Business's perspective

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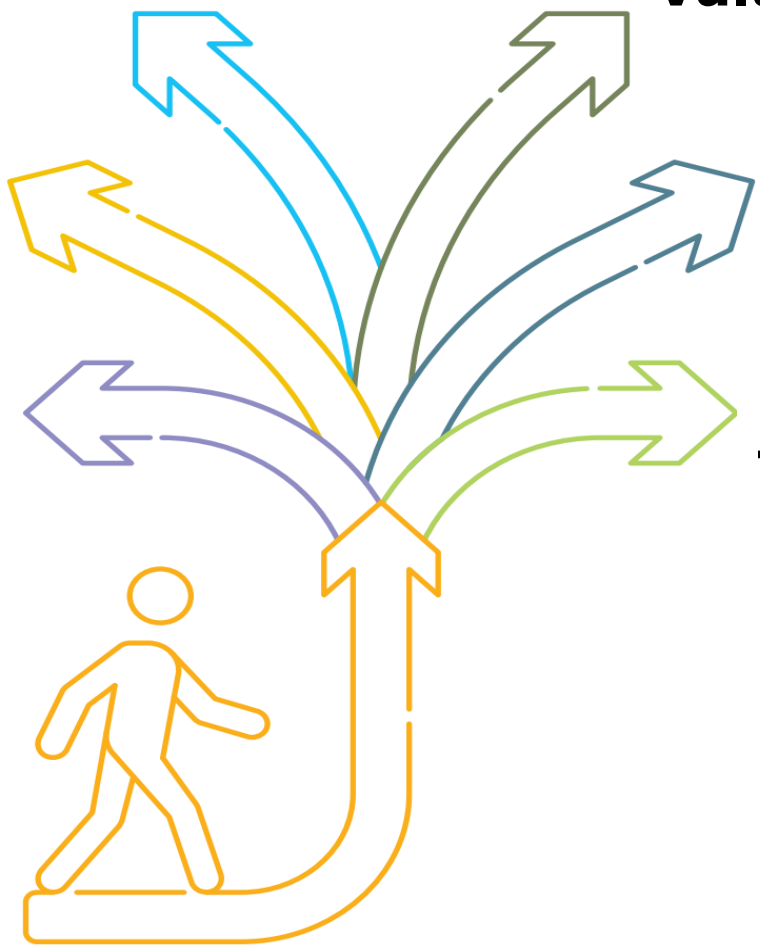
Assessment scope



Value chain boundary

Valuation perspective

Organizational focus

Impacts/ dependencies

Objective

Type of valuation

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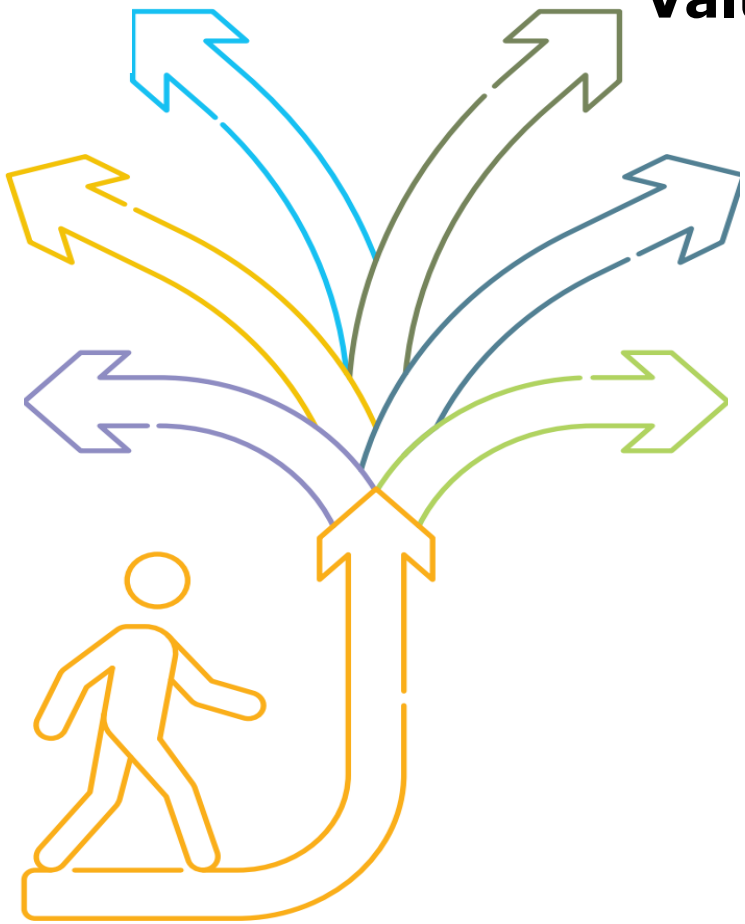
Assessment scope

Value chain boundary

Valuation perspective

Organizational focus

Impacts/ dependencies



Type of valuation

- Qualitative
- Quantitative
- Monetary

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Baseline, scenarios, boundaries

Baseline	Scenarios	Spatial boundaries	Temporal boundaries
Starting point for assessing the change in natural capital within your chosen value chain	Comparison of scenario with baseline	Geographical area of the assessment	Time frame of assessment (past, present, future) Yearly monitoring

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

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Questions?

Reactions?

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Break

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Module 2

Chapter 2.6

Prioritization and materiality assessment

List of potential impacts and/or dependencies

Impacts drivers Pressures from business activities		Dependencies For business activities
GHG Emissions ☐ Emission of non-GHG air pollutants ☐ Water use (quantity) ☐ Emission of pollution to water (quality) ☐ Terrestrial ecosystem use ☐ Marine and coastal ecosystem use ☐ Biodiversity population & species ☐ Introduction of invasive species ☐ Noise and light disturbance ☐ Land use ☐ Emission of pollutants to soil ☐ Material use - biotic and abiotic resource (ex :fish or mineral) ☐ Waste generation ☐ *Other:*	**Natural**	☐ Water supply ☐ Water purification ☐ Rainfall patterns regulation ☐ Soil quality ☐ Pollination and pest control ☐ Genetic material ☐ Land ☐ Energy ☐ Climate regulation Other:

Exercise 1: what is relevant for business?

5': Write all the impacts and dependencies that your business can have on nature (operations, upstream, downstream). Think about positive and negative.
Make sure you have your long list of all relevant impacts and dependencies.
5': In the breakout room, share your reflection and listen to others.

Impacts drivers **Pressures from business activities**		**Dependencies** **For business activities**
GHG Emissions ☐ Emission of non-GHG air pollutants ☐ Water use (quantity) ☐ Emission of pollution to water (quality) ☐ Terrestrial ecosystem use ☐ Marine and coastal ecosystem use ☐ Biodiversity population & species ☐ Introduction of invasive species ☐ Noise and light disturbance ☐ Land use ☐ Emission of pollutants to soil ☐ Material use - biotic and abiotic resource (ex :fish or mineral) ☐ Waste generation ☐ *Other:*	**Natural**	☐ Water supply ☐ Water purification ☐ Rainfall patterns regulation ☐ Soil quality ☐ Pollination and pest control ☐ Genetic material ☐ Land ☐ Energy ☐ Climate regulation Other:

Prioritization assessment

Which impact drivers or dependencies are a priority?

A. List **all** potential **impacts and/or dependencies**

B. Identify the **criteria** for prioritization.

C. Gather information and **rank** impacts and dependencies

D. Prioritize for assessment and action

Prioritization assessment

Which impact drivers or dependencies are a priority?

A. List **all** potential **impacts and/or dependencies**

B. Identify the **criteria** for prioritization.

C. Gather information and **rank** impacts and dependencies

D. Prioritize for assessment and action

Prioritization assessment

Which impact drivers or dependencies are a priority?

B. Identify the **criteria** for prioritization.

It can be from **risks & opportunities categories**

It can be from **double materiality**

It can be from **CSRD criterias** : 1) Severity, 2) Scale, 3) Likelihood to happen 4) Remediability

Prioritization assessment

Which impact drivers or dependencies are a priority?

3. Gather **relevant** information & **rank**

Have meetings with colleagues and stakeholders to know the relative importance of impacts and dependencies

For each criteria chosen, **rank** each impact/dependency:

- **not relevant**
- **low**
- **medium**
- **high**

Or with color coding

Prioritization

Objective of your assessment:

A. Potential impacts & dependencies	**B.** Criteria for prioritization					**D.** Prioritize for assessment & action
	X	X	X	X	X	

C. Gather information and rank using HIGH / MEDIUM / LOW

High	Medium	Low

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Arvind - India

1. **Objective:** To evaluate the human and ecological costs of water use per kg of seed cotton produced under Better Cotton Initiative (BCI) principles and compare this to conventional practices

A. Potential impacts & dependencies	**B.** Criteria for prioritization					
	Operational	Legal & regulatory	Reputational & marketing	Financial	Societal	Other
Water availability	High	Low	High	Low	High	XX
Water use	High	High	High	High	High	XX
Pesticide, herbicide and fertilizer use	High	High	High	High	High	XX
Skills and knowledge	Medium	Low	High	High	Low	XX
Accessibility to infrastructure	Low	Medium	High	High	Medium	XX
Salaries and benefits	High	High	High	High	High	XX

C. Gather information and rank HIGH / MEDIUM / LOW

High	Medium	Low

D.

Prioritize for assessment & action

1. **Water use**
2. **Pesticide, herbicide and fertilizer use**
3. **Salaries and benefits**

Forico Real materiality assessment. 2023 Natural Capital report

Driver Category	Driver	Natural Forest	Plantation	Materiality Assessment	Included in FY23
DEPENDENCIES					
Consumptive	Energy	✔	✔		Yes
	Water	✔	✔		Yes
	Nutrition	✔	✔		
	Materials (Fibre)	✔	✔		Yes
	Land use	✔	✔		Yes
	Regulation of physical environment (e.g. ecosystem providing water filtration)	✔	✔		Yes
Non-Consumptive	Regulation of biological environment (e.g. resilience against disease)	✔	✔		
	Regulation of waste and emissions (e.g. pollution assimilation by ecosystem)	✔	✔		

Likely to be significant Potential to be significant Unlikely to be significant or not applicable

✘/✔ refers to whether the forest management practice is typically associated with each forest type.[6]

Forico Real materiality assessment. 2023 Natural Capital report

Driver Category		Driver	Natural Forest	Plantation	Materiality Assessment	Included in FY23
IMPACTS						
Outputs		Carbon sequestration	✔	✔		Yes
		GHG emissions	✔	✔		Yes
		Non-GHG emissions	✘	✔		
		Water pollutants	✘	✔		
		Soil pollutants	✘	✔		
		Solid waste	✘	✔		
		Disturbance (noise & odour)	✘	✔		
Resource Use	Provisioning	Biomass for Timber	✘	✔		Yes
		Biomass for Fibre	✘	✔		Yes
		Cultivation of Food	✔	✘		
		Biochemicals, natural medicines and pharmaceuticals	✘	✘		
		Habitat for animals and plants	✔	✔		Yes
		Water filtration, purification and waste treatment (groundwater)	✔	✔		
		Water filtration, purification and waste treatment (surface water)	✘	✘		
		Water use (groundwater)	✔	✔		Yes

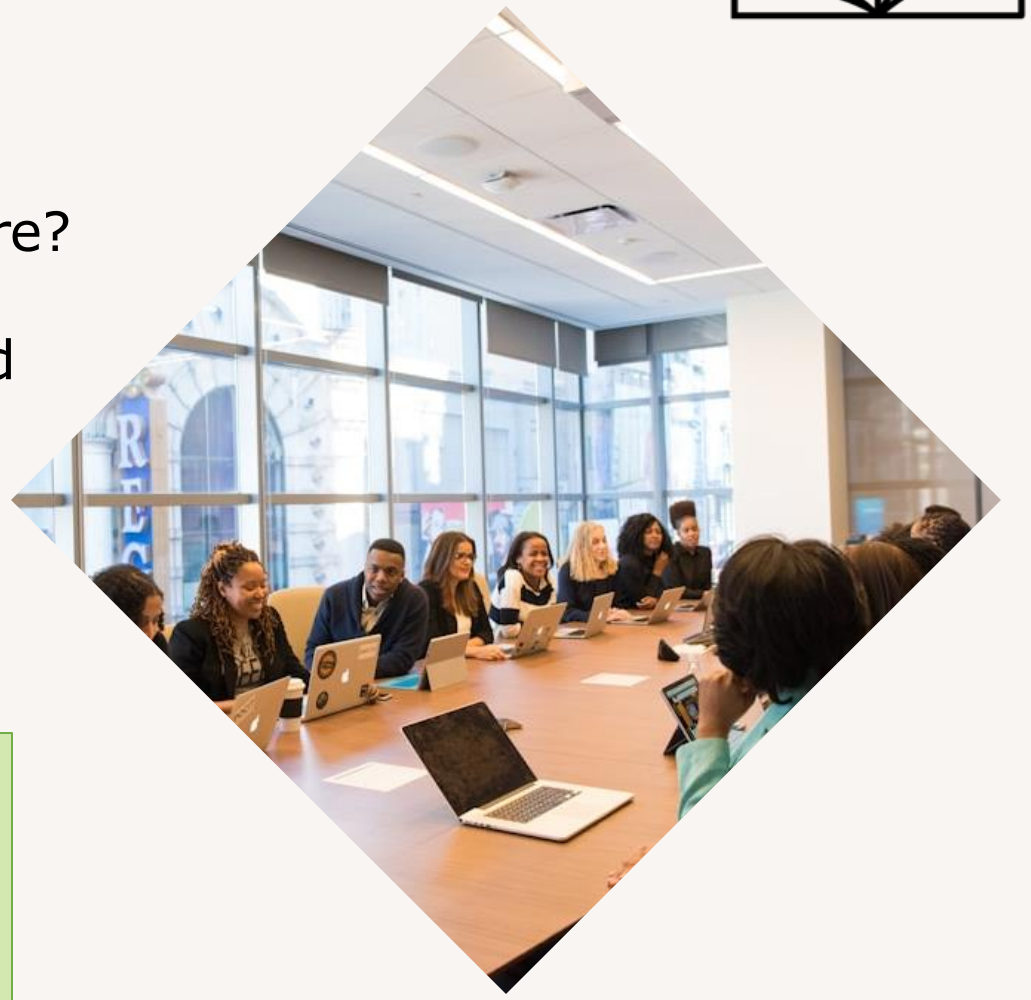
Questions?

Reactions?

Exercise 2 in breakout room

5’ Write what would be the benefits of doing a prioritization of impacts & dependencies on nature?

5’ Present your thoughts to others and how could you use it to make a real change in daily work?



Benefits of prioritization of impacts & dependencies:

How to use it to make a real change:

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Module 2

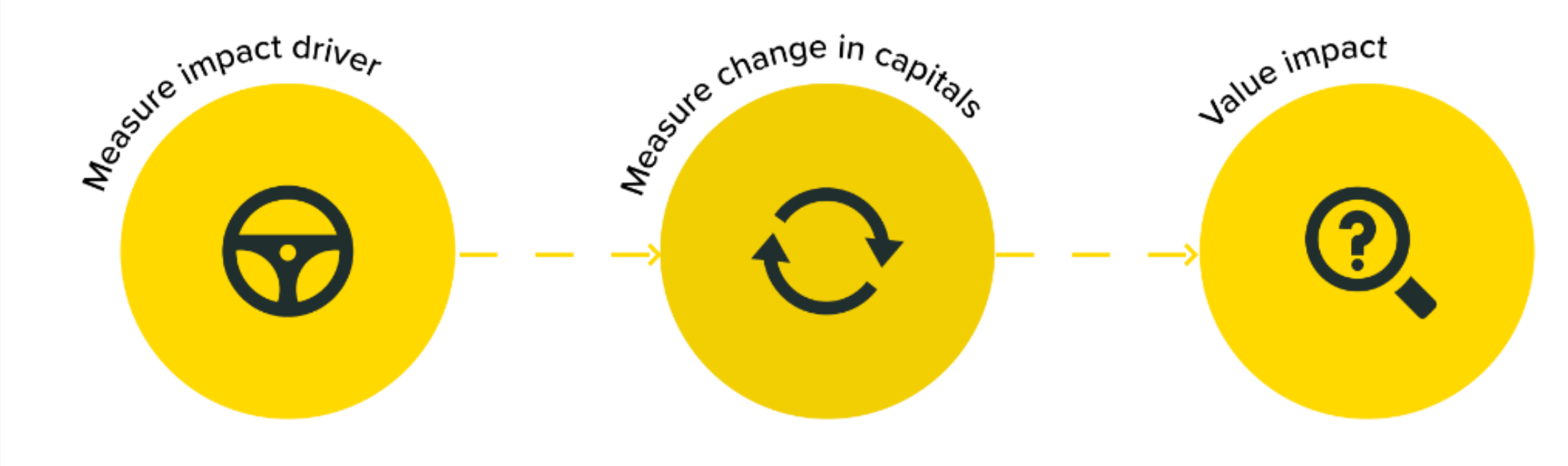
Chapter 2.7

Impact pathway, measurement & valuation

Impact pathway

Cause = impact driver

Consequences = final impact who has a value, also called outcomes



Impact pathway example

This can be measured

This impact has value; it is felt by the business and people

Understanding value is more meaningful. It allows us to manage risk and opportunity.

Valuation technique

To determine the positive and negative, with associated costs and benefits

Qualitative

- **Non-numerical**
- Opinion survey
- Deliberative approaches
- Expert opinion
- Relative valuation

e.g: "I value this" or "This is important to me"

Quantitative

- **Numerical**
- Structured surveys
- Indicators

e.g. % of the population with respiratory problems

Monetary

- **Currency**
- Market prices
- Production function
- Cost based approaches
- Revealed/stated preference approaches
- Value transfer

e.g. cost in $ for society and for the business linked to air emissions

Business example: quantitative valuation

YorkshireWater

What: Compared 5 options for investment in recreation uses of one of their reservoir

- ✓ Inclusive environment
- ✓ Active recreation
- ✓ Active biodiversity
- ✓ Sustainable farming
- ✓ Sustainable forestry

How?

✓ Assessed C02 removed from atmosphere

✓ Quality-adjusted life years

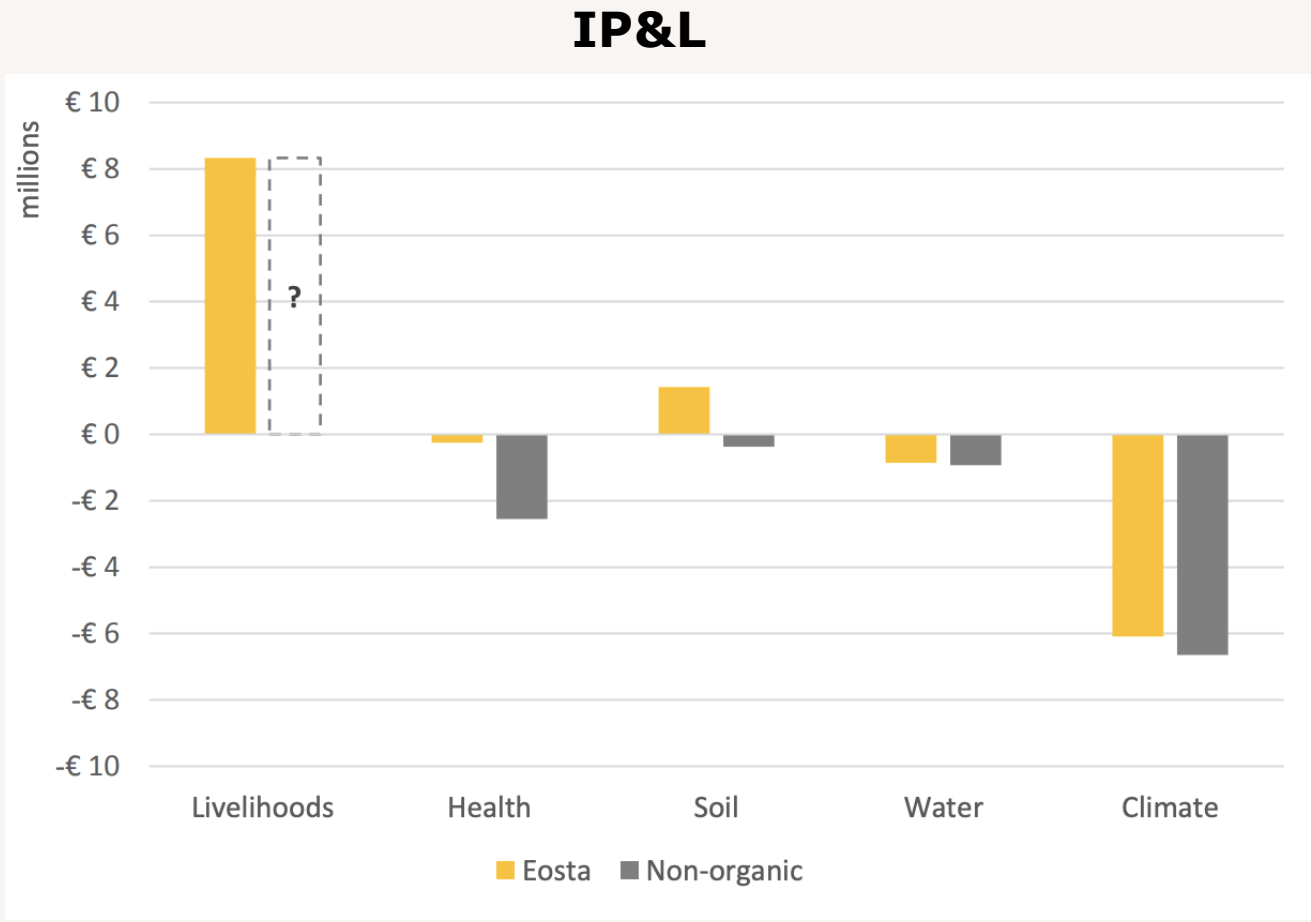
✓ Number of jobs created

Business example: monetary valuation

What? : Compared organic and non organic produce by quantifying the true cost of vegetables with an **Integrated profit & loss account**

How? Used different methodologies to measure and monetize impacts on

- **Livelihoods:** Gross Value Added
- **Health:** Human health impact of pesticide ingestion using DALYs
- **Soil:** Topsoil loss converted into external costs related to erosion per kg of product
- **Water:** Global Water Footprint Network guidelines
- **Climate:** Greenhouse Gas Protocol measured in Co_2e



Questions?

Reactions?

Module 2

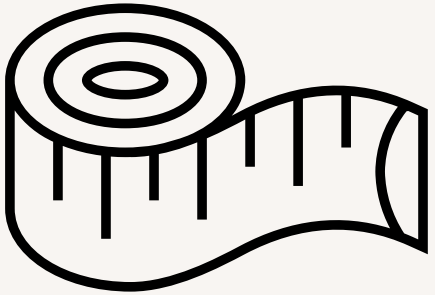
Chapter 2.8

Key Performance Indicators

KPI

Define which impact driver and/or dependency indicators you will measure

Indicators are used to **track the performance of a business over time or for comparative purposes.**



❖ Determine **what** you will be measuring: **the indicator**

❖ Once you have defined the indicator, you will need to define the **type of data needed**

❖ According to the valuation type, indicators can be **qualitative, quantitative, or monetary.**

KPI for Natural Capital

Impact	Indicator
GHG emissions	• Tons of CO2e per year • Tons of CO2e sequestred and removed from atmosphere
Biodiversity	• Population size as species count • Species diversity characteristics on-site and through time • Ecosystem extent (quantity of habitat) • Ecosystem conditions
Waste generation	• Tons of waste going to landfills. • Tons of waste reused or recycled

Dependency	Indicator
Water supply	• Cubic meters of water consumption, by watershed, per month
Soil quality	• Soil concentration on organic matter (gr per kilo of soil)

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For more on Biodiversity, see:
https://capitalscoalition.org/wp-content/uploads/2021/03/330300786-Align-Report_v4-301122.pdf

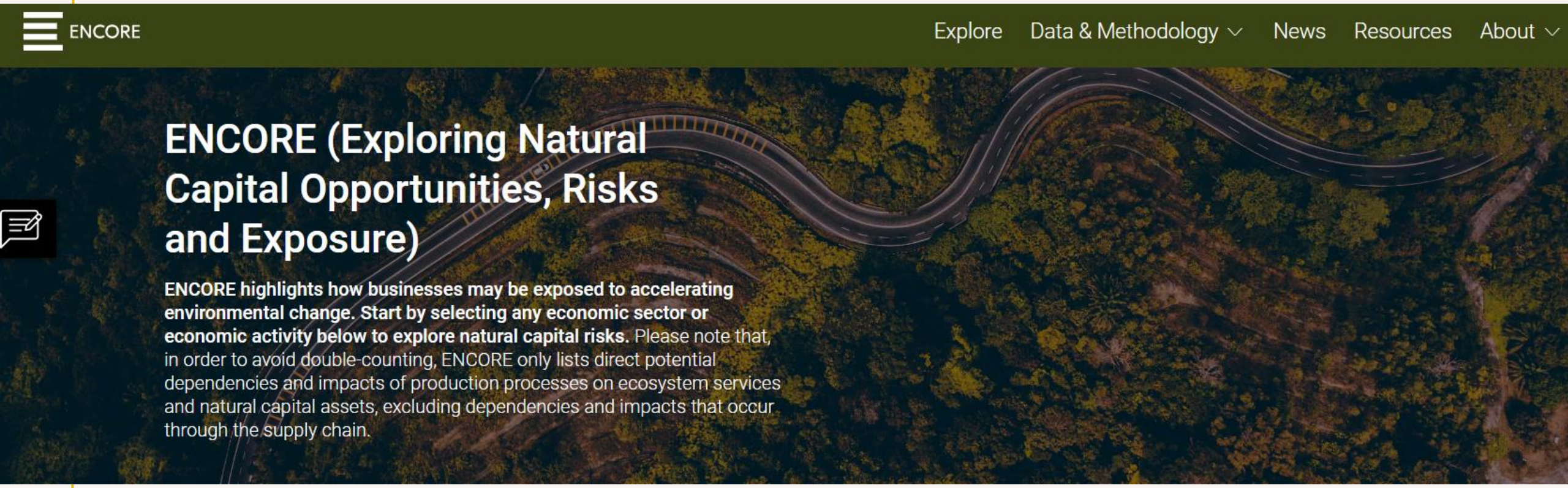
KPI for Natural Capital

Data collection

- **Direct Measurement** → Based on real life data collection
- **Indirect Measurement** → Methods that rely on secondary data or literatures to make estimates
- **Modelling** → Standardized or bespoke modelling

ENCORE database for geospatialized information

https://encorenature.org/en/explore



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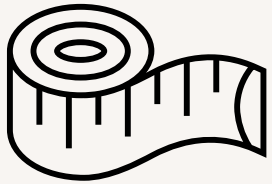
Discussion in plenary with Menti

Access menti.com Code: X

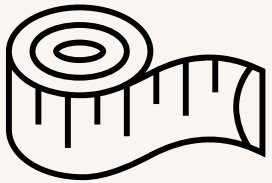
Which indicators could you use to measure the impacts drivers listed below?

Water quality



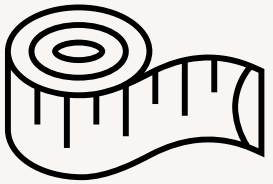
X

Biodiversity



X

Land Use



X

Plenary discussion on the suggested indicators and appropriate valuation technique

5’

Module 2

Chapter 2.9

Homework

Homework

For all

Revise exercises from modules 1 & 2 and have discussions with close colleagues on:

- potential impacts & dependencies and risks & opportunities
- potential objective
- long list of impacts and dependencies
- benefits of prioritization and how to use it to make a change

For more mature businesses

Based on the exercises, organize an internal meeting to discuss a potential objective along with impacts and dependencies. Exchange on how to complete the prioritization template.

Send us your workbook

Prioritization

Objective of your assessment:

A. Potential impacts & dependencies	**B.** Criteria for prioritization					**D.** Prioritize for assessment & action
	X	X	X	X	X	

C. Gather information and rank using HIGH / MEDIUM / LOW

High	Medium	Low

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Module 2

Chapter 2.10

Summary of key messages

Key highlights

- **Stakeholder consultation** is central to prioritizing impacts & dependencies, sense-checking the assessment process and providing data. Stakeholders also have different perspectives on the value of impacts and dependencies.
- An **appropriate scope** has to be articulated with the **objective** of your assessment. It includes the organizational focus, the value-chain boundary, the valuation perspective (business and/or society) and the type of valuation (qualitative, quantitative, monetary).
- Additionally, defining **baseline, scenarios, assessment boundaries** and planning the assessment is key.

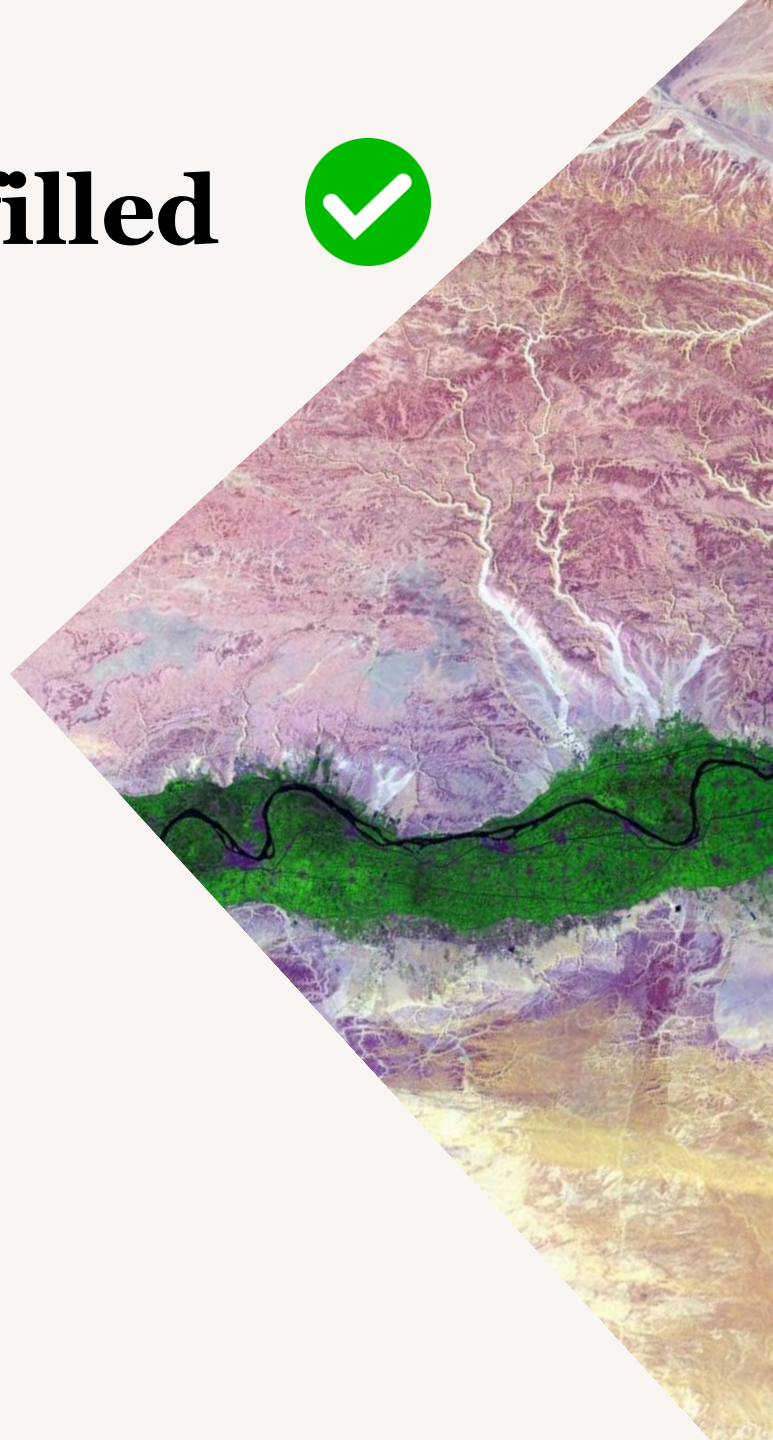
Key highlights

- There are many possible **impacts and dependencies** and businesses need to prioritize the most relevant ones. Using criteria for prioritization and ranking those in a matrix helps to know where to focus. It can pave the way for a materiality assessment.
- **Impact pathway** connects impacts/dependencies drivers (e.g. business activities) to changes in natural capital and the final consequences that have value.
- After selecting impacts/dependencies to measure and value, **defining indicators** to track performance & the **type of data** needed are practical ways to start.
- Valuation techniques can be qualitative, quantitative or monetary. Monetary valuation and natural capital accounting help determine the associated costs and/or benefits of impacts/dependencies.

Check-in: learning objective fulfilled

Now, you have:

- Learned how to help your training participants **scope a natural capital assessment**
- Learned how to prioritize impacts and dependencies using a **prioritization matrix** as a basis for a materiality assessment
- Understood the idea of impact pathways, **measurement of indicators and valuation.**
- Been inspired by **real business examples** and you are able to inspire your training participants.



Thank you for your participation

See you on module 3

20th February at 2 pm

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