

Corporate Environmental Footprint Overview, Opportunities & Challenges

March 2015



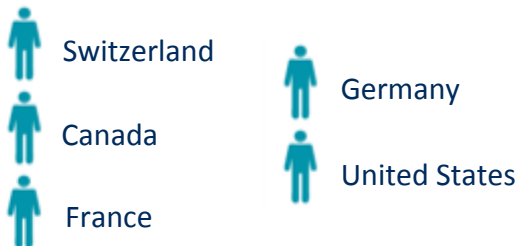
Michael Spielmann
Managing Director, Quantis Germany
✉ michael.spielmann@quantis-intl.com
☎ 0049 172 15 69 609

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Corporate Environmental Footprint (CEF)

Guiding Questions



- **Q1: What is an Corporate Environmental Footprint?**
- Q2: How to integrate Corporate Environmental Footprinting?
- Q3: Where are we today & What are the challenges?

Q1: What is a Corporate Environmental Footprint

What standards are available

ISO/TS 14072: Organizational Life Cycle Assessment (OLCA)

This international Technical Specification (TS) provides additional requirements and guidelines for an effective application of ISO 14040 and ISO 14044 to organizations in 2014

EC: Organisation Environmental Footprint (OEF)

Published together with the Product Environmental Footprint Guide as part of the Single Market for Green Products Initiative of the European Commission in 2013



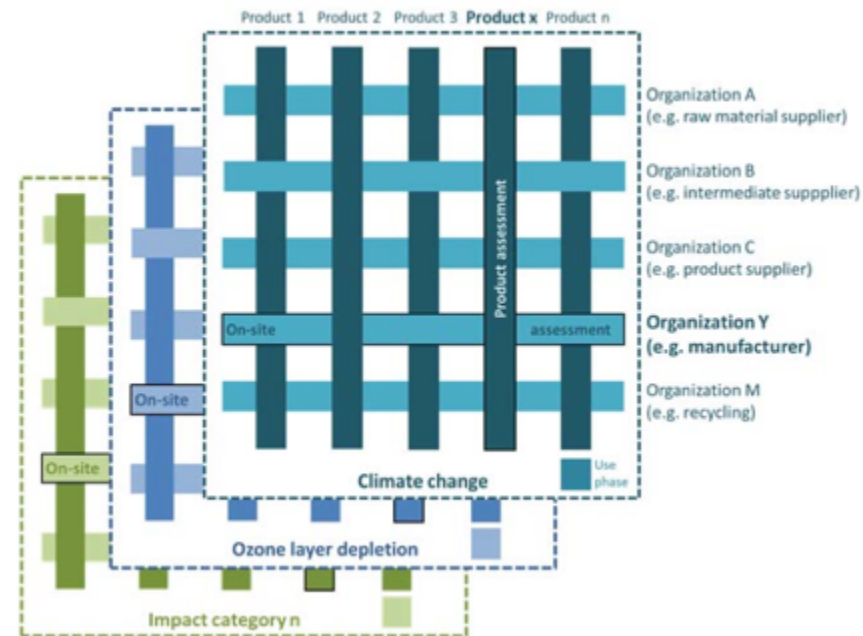
Official Journal
of the European Union



Q1: What is a Corporate Environmental Footprint

Common Guiding Principles

- Support the organisation's environmental performance tracking
- Life Cycle Assessment Logic (cradle to gate/grave)
- Multi-criteria environmental assessment applying LCIA methodology to avoid trade-offs
- Following ISO 14'044
- Transparency
- Product Portfolio Focus



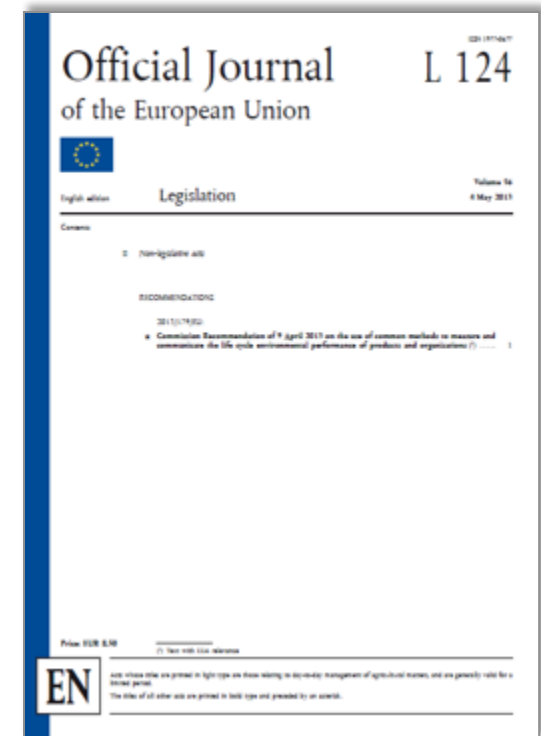
Q1: What is a Corporate Environmental Footprint

Additional Guiding Principle & Requirements EC OEF

Additional Guiding Principle:

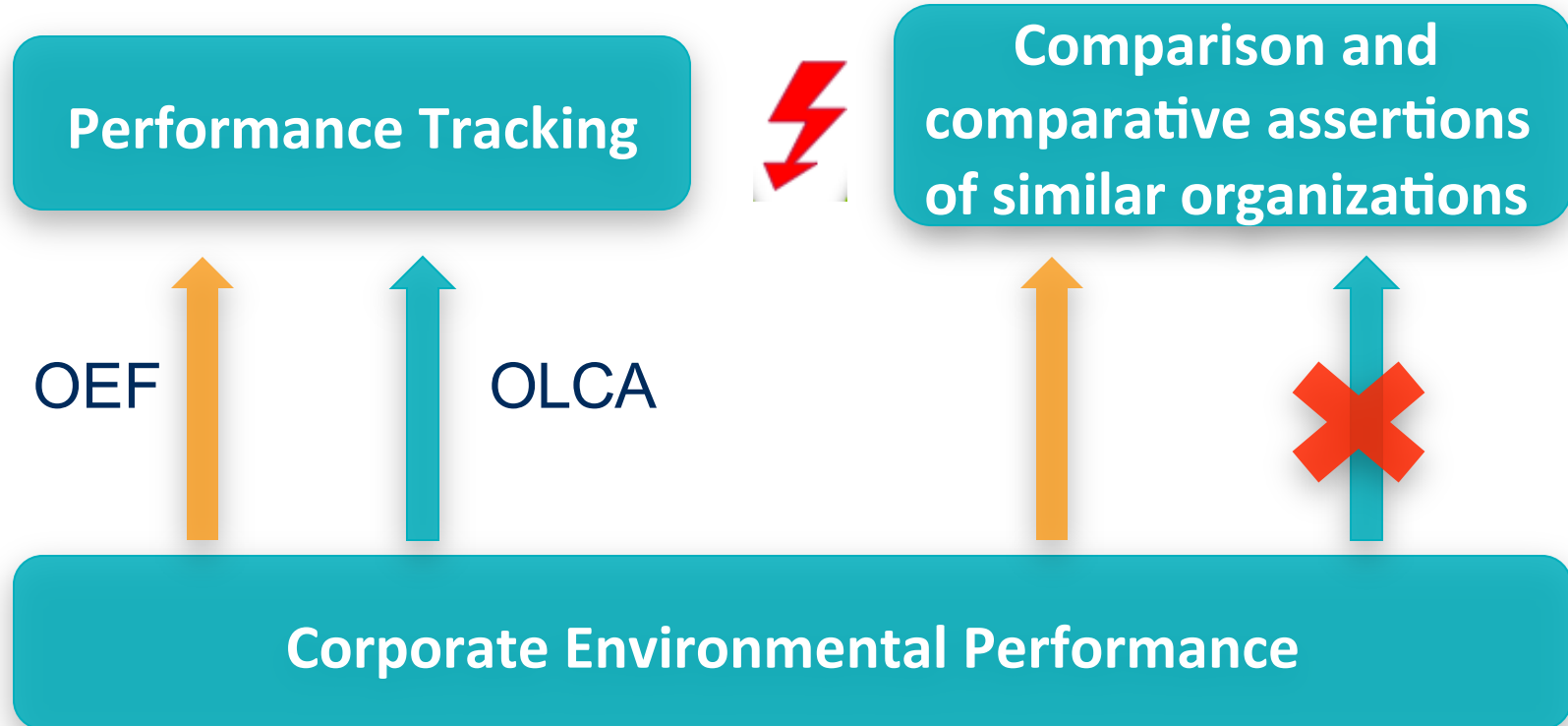
Comparability shall be given priority over flexibility

- Mandatory system boundaries following operational AND financial control approach
- Default set of 15 mid-point impact categories and specified impact assessment models.
- Data Quality Requirements
- Further specifications in OEF Sector Rules (OEFSR)



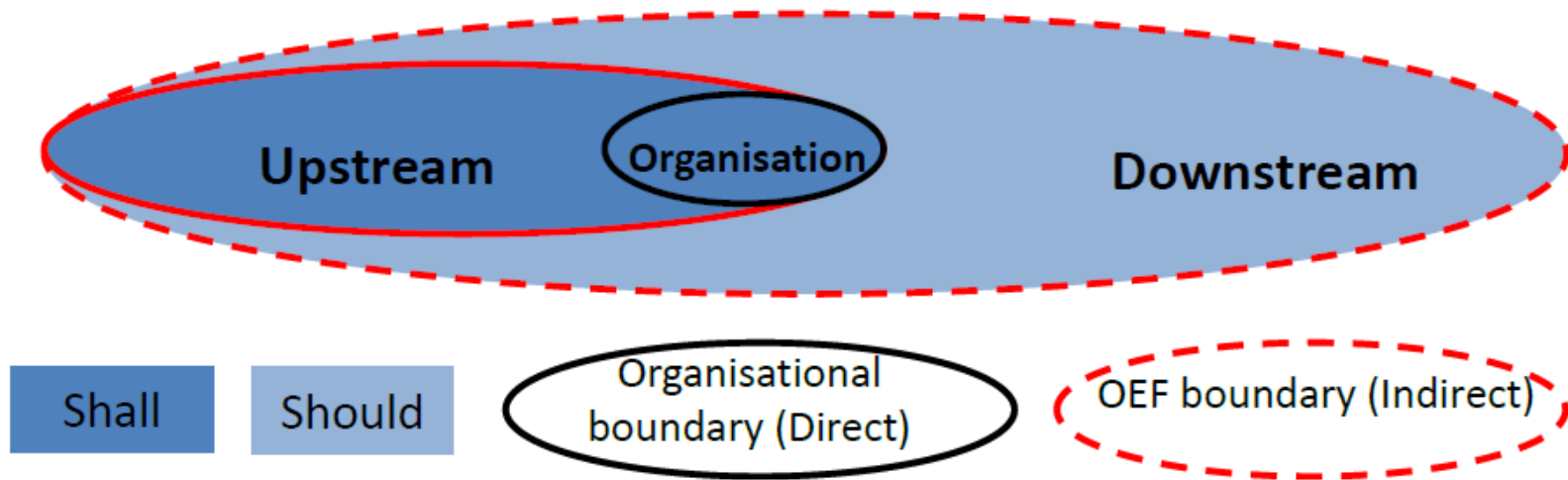
Q1: What is a Corporate Environmental Footprint

The controversial topic: Use of Results



Q1: What is a Corporate Environmental Footprint

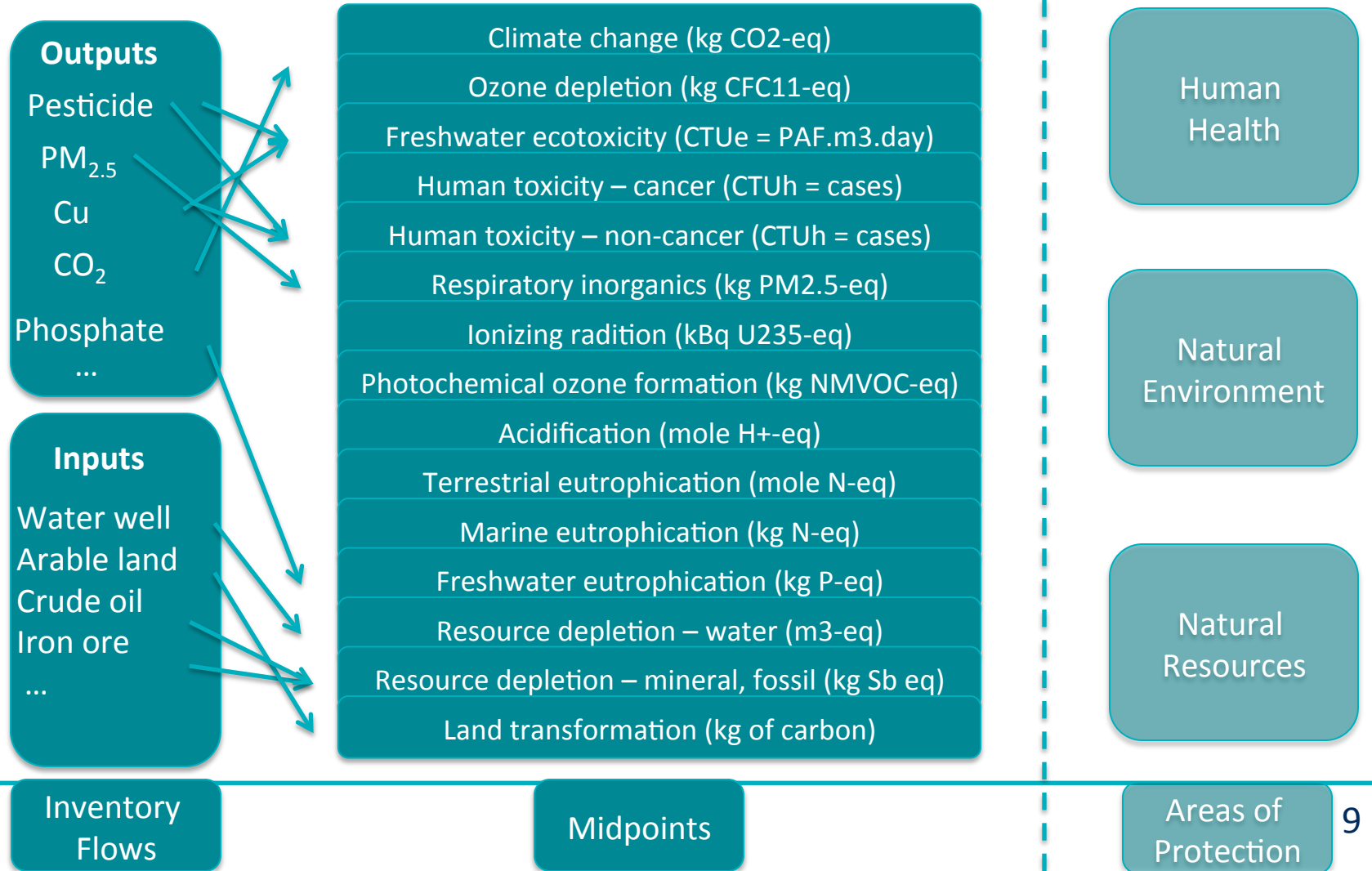
System Boundaries: Entire Value Chain



Any exclusion, e.g. downstream processes, must be justified

Q1: What is a Corporate Environmental Footprint

How is it calculated



Corporate Environmental Footprint

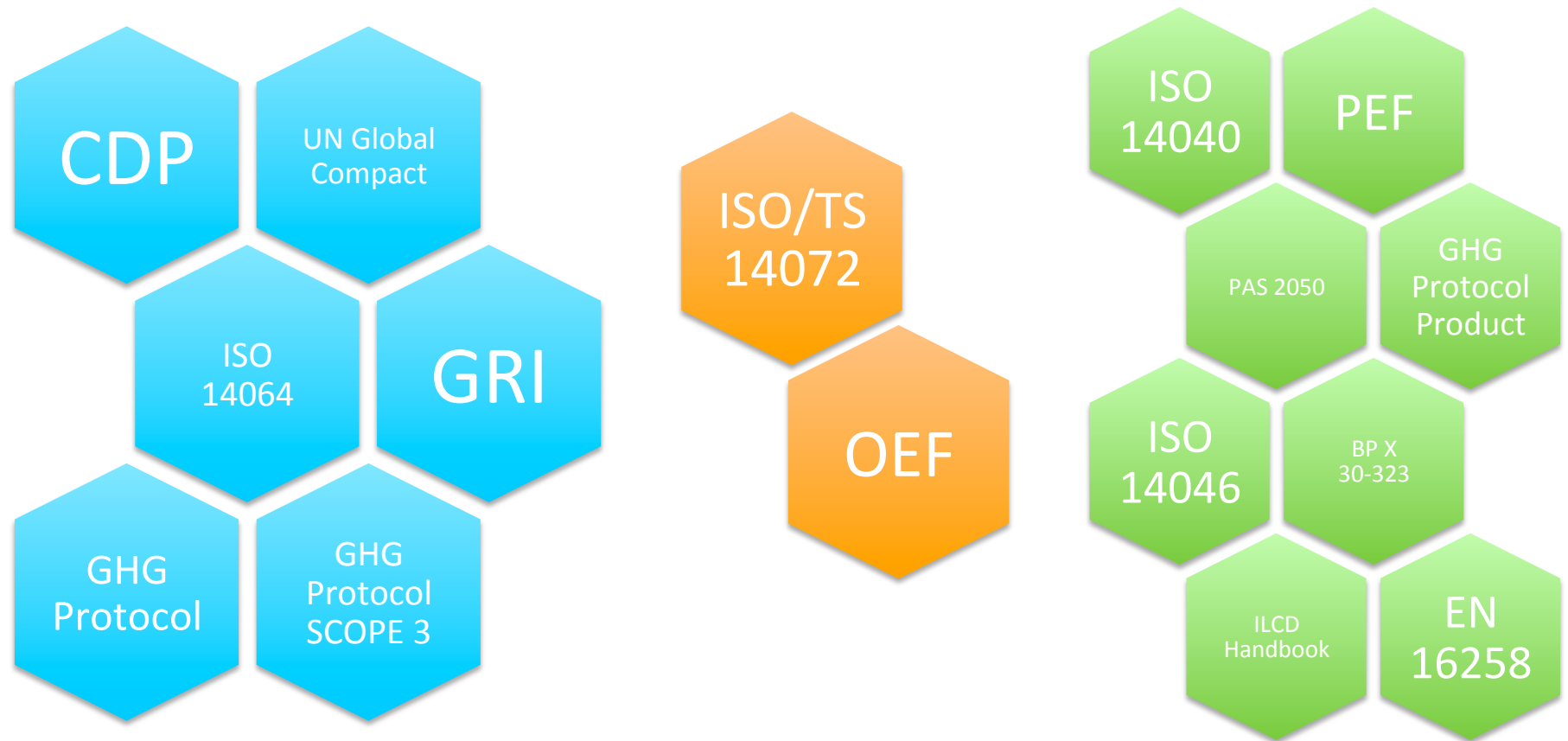
Guiding Questions



- Q1 What is an Corporate Environmental Footprint ?
- **Q2 How to integrate Corporate Environmental Footprint ?**
- Q3: Where we are today & What are the challenges ?

Q2: How to integrate Corporate Environmental Footprint

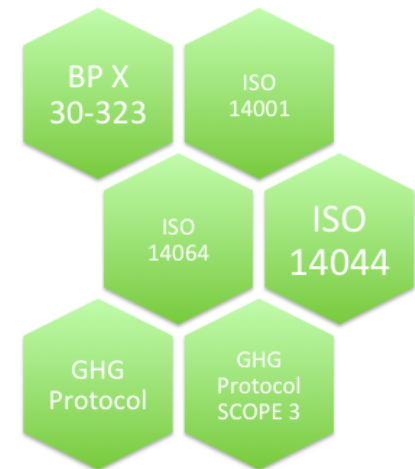
Corporate Environmental Footprinting in Context



Q2: How to integrate Corporate Environmental Footprint

Generate CEF & Use CEF

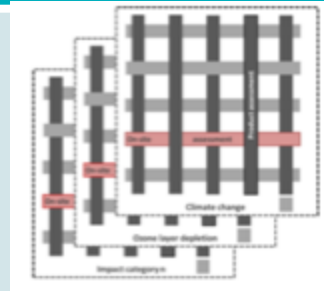
- How can the organization use previous experience and information?
- What can Corporate Environmental Footprinting contribute to the organization's environmental reporting & strategy?



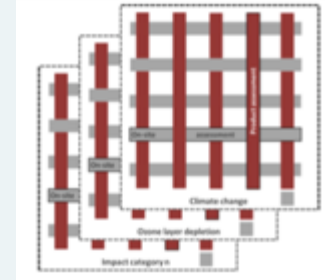
Q2: How to integrate Corporate Environmental Footprint

Approach (point of departure)

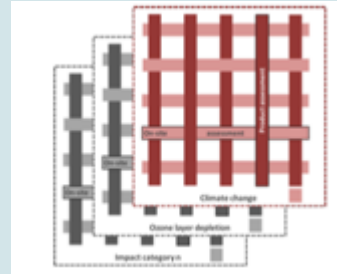
1. Use existing environmental assessment gate-to-gate (e.g. ISO 14001, GHG Protocol)



2. Use existing product LCA studies (e.g. ISO 14044)



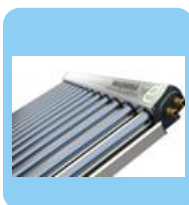
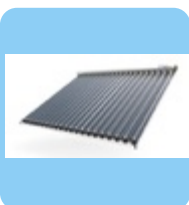
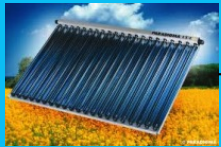
3. Use existing single-indicator environmental assessment (e.g. GHG scope 3)



Q2: How to integrate Corporate Environmental Footprint

Generate CEF: An example

Organisation Environmental Footprint



Product Environmental Footprints

- Solar Thermal Panels based on existing LCA of various products
- Gate to Gate included from GHG-Inventories and extensions.
- Pellets and Gas Boilers determined based on purchased intermediates and raw materials and using LCA inventory data

Q2: How to integrate Corporate Environmental Footprint

What Environmental Impact are reported: Findings of UNEP Flagship Project

'First Mover' story	Environmental impacts category										Inventory-level indicator			
	Climate change	Eutrophication	Water footprint	Land use	Acidification	Photochemical ozone creation	Ozone layer depletion	Human toxicity potential	Others	Single-score	Water use or consumption	Waste generated	Energy consumption	Raw materials consumption
Accor	●	●									●	●	●	
BASF	●		○	●	●	●	●	●		●		●	●	●
Colruyt Group	●	●	●	●	●	●	●	●	●					
Inghams ⁴⁵	●	●		●	●	●	●	●	●	●	●			
KPMG	●	●		●	●	●	●	●		●			●	
Mondelēz International	●			●							●			
Natura	●										○	○		
Shiseido	●										●			
Storengy (GDF SUEZ)	●				●	●					○		●	
Unilever ⁴⁶	●										●	●		
Volkswagen	●													

● Indicators assessed by the organization.
 ○ Indicators with no complete data and/or not detailed in the reference documents of the organization.

Q2: How to integrate Corporate Environmental Footprint Use of CEF: Reporting Support as identified in UNEP Study

Corporate Environmental Footprinting for Environmental Reporting

- provides a complete set of the relevant scope 3 carbon footprint categories for inclusion on the company's CDP reporting, → higher scores in this part of the CDP assessment.
- helps the company to quantify the areas of improvement that can be reported to CDP,
- providing evidence to support its statements in its carbon reduction strategy.

Q2: How to integrate Corporate Environmental Footprint

Use of CEF: Strategy Development

Corporate Environmental Footprinting Results for Strategy Development:

- guide the development of sustainability strategy and activities e.g.,
 - to identify and prioritize hotspots,
 - and ensure appropriate resource allocation.
- cross-referencing CEF data with risk information (e.g. WWF) to identify detailed plans of action.

Corporate Environmental Footprint

Guiding Questions



- Q1 What is an Corporate Environmental Footprint ?
- Q2 How to integrate Corporate Environmental Footprint ?
- **Q3 Where we are today & What are the challenges ?**

Q3: Where we are today & What are the challenges ?

Conclusions & Outlook

- CEF still in its infancies: first movers only.
- Various Approaches are available to generate CEF based on previous environmental accounting.
- Carbon Footprint results as part of the Environmental Footprinting have been demonstrated to be useful for reporting & strategy development.
- However: The use of CEF beyond Carbon for reporting and strategy development may be limited by current LCA praxis:
 - Are the right impacts addressed ? (How to determine relevant impacts)
 - Are important impacts addressed appropriate? Regionalisation ?
 - Midpoint Impact Categories vs. Areas of Protection

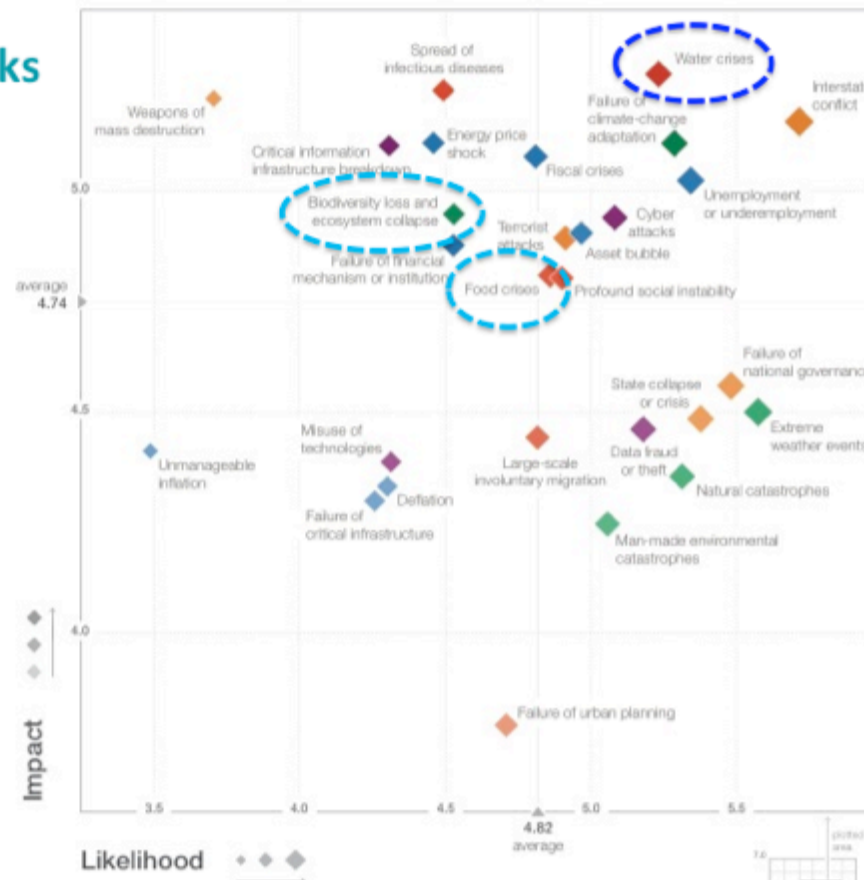
Q3: What are the challenges

Environmental Topics of Relevance

Figure 1: The Global Risks Landscape 2015

WEF Global Risks Report 2015

Water is the risk with the highest impact, and in the top ten in term of likelihood



Q3: What are the challenges

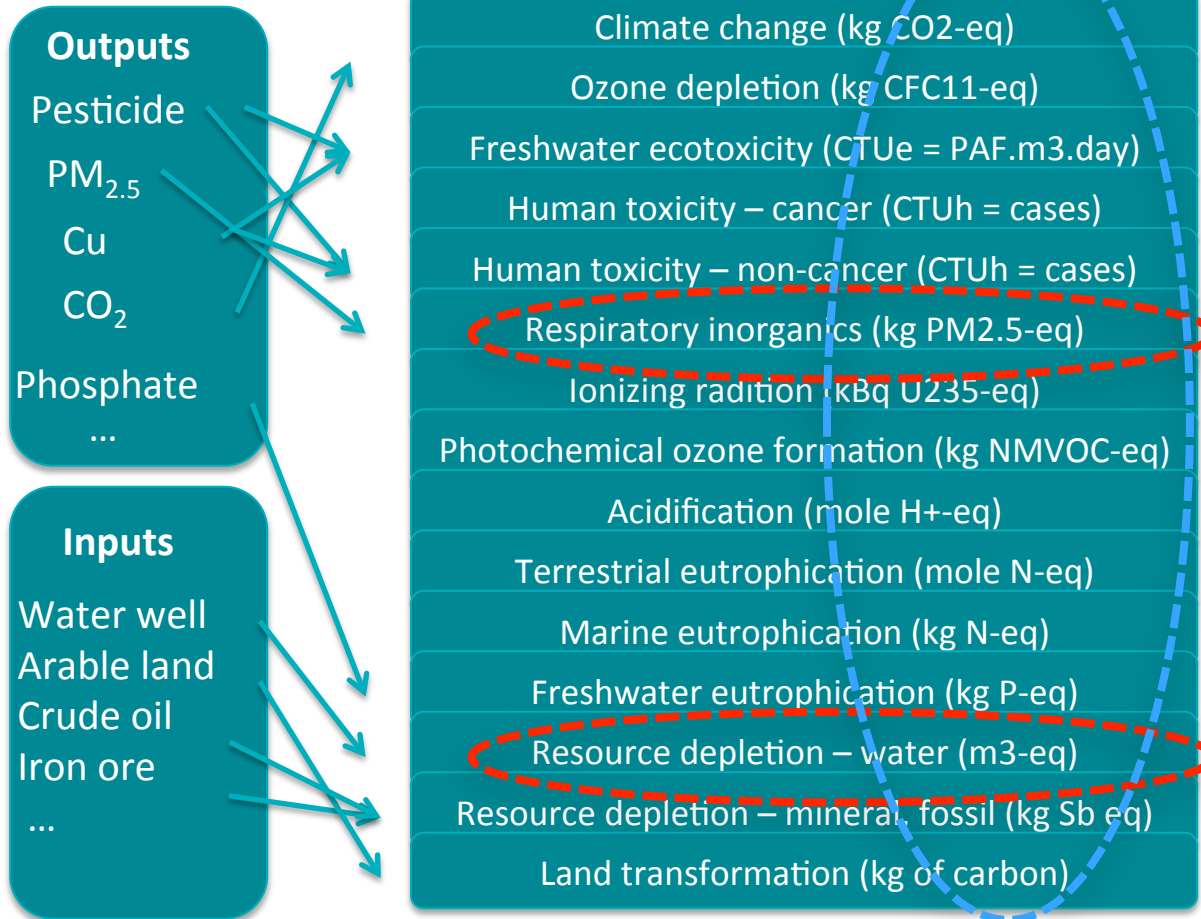
Environmental Impacts beyond Carbon



- Should be **life-cycle based**
- Could be “**stand-alone**” or part of a full Life Cycle **Assessment**
- Results should include **impact assessment (volumes not sufficient)** and address **regional issues**
- Both **quantity and quality** should be considered
 - → Comprehensive impact assessment related to water (not only water use but all impacts related to water)
- Can result in **one or several indicators (a “profile”)**

LCIA method recommended by PEF/OEF

Methodological challenges



Regionalized impact categories

(archetypes for particles, regions for water consumption, etc.)

Identification of « most relevant » impact categories?

→ explore damage methods such as IMPACT World+ and think about areas of protection



DANKE !

Michael Spielmann

Managing Director Quantis Germany

+49 172 15 69 609

Michael.spielmann@quantis-intl.com

Corporate Environmental Footprint

RESERVE

Standards vs. Initiatives

CDP

CDP
Water

United
Nations
Global
Compact

GRI

BP X
30-323

ISO
14001

ISO
14064

ISO
14044

GHG
Protocol

GHG
Protocol
SCOPE 3

Corporate Environmental Footprint

How it is calculated



=

Activity Data x Emission Factor x Impact Factor (e.g. GWP)

Direct Process Emission

x Impact Factor

Life Cycle Inventory

LC Impact Assessment

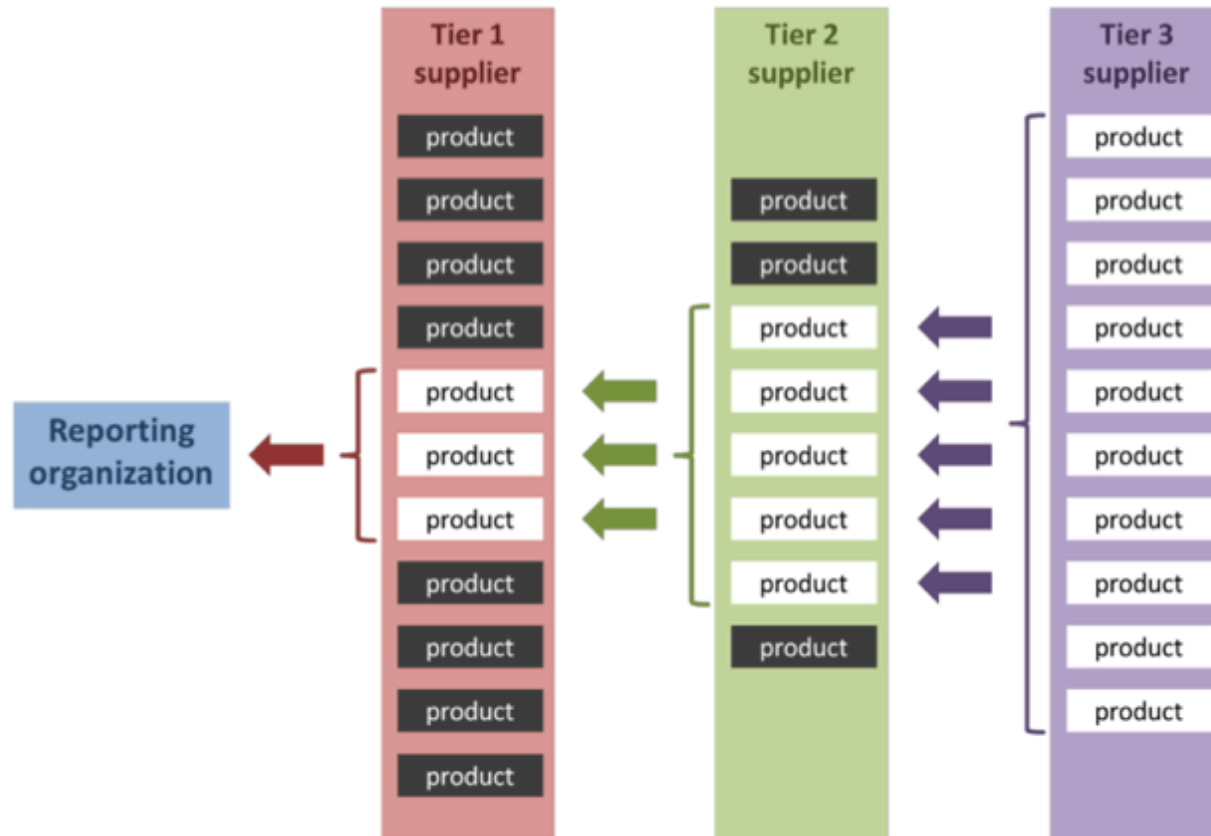
Corporate Environmental Footprint

Additional Requirements Specifications OEF

- **Generation of energy** resulting from combustion of fuels in stationary sources
- **Physical or chemical processing** (e.g. from manufacturing, processing, cleaning, etc.);
- **All transport processes performed in vehicles owned and/or operated by the Organisation (resources and emissions from the combustion of fuels):**
 - Employees commuting.
 - Business travel
 - Client and visitor transportation
 - Transportation from suppliers & Transportation of materials, products and waste
- **Capital equipment** when built/produced by the Organisation (e.g. machinery, buildings, office equipment, transport vehicles, transportation infrastructure).
- **Disposal and treatment of waste** (composition, volume) when processed in facilities owned and/or operated by the Organisation;
- **Emissions from intentional or unintentional releases** (e.g. Hydrofluorocarbon (HFC) emissions during the use of air-conditioning)

Q2: How to integrate Corporate Environmental Footprint

Use of CEF: Supply Chain Screening & Prioritisation



PEF/OEF Initiative: Timelines

