



GREEN ZERO

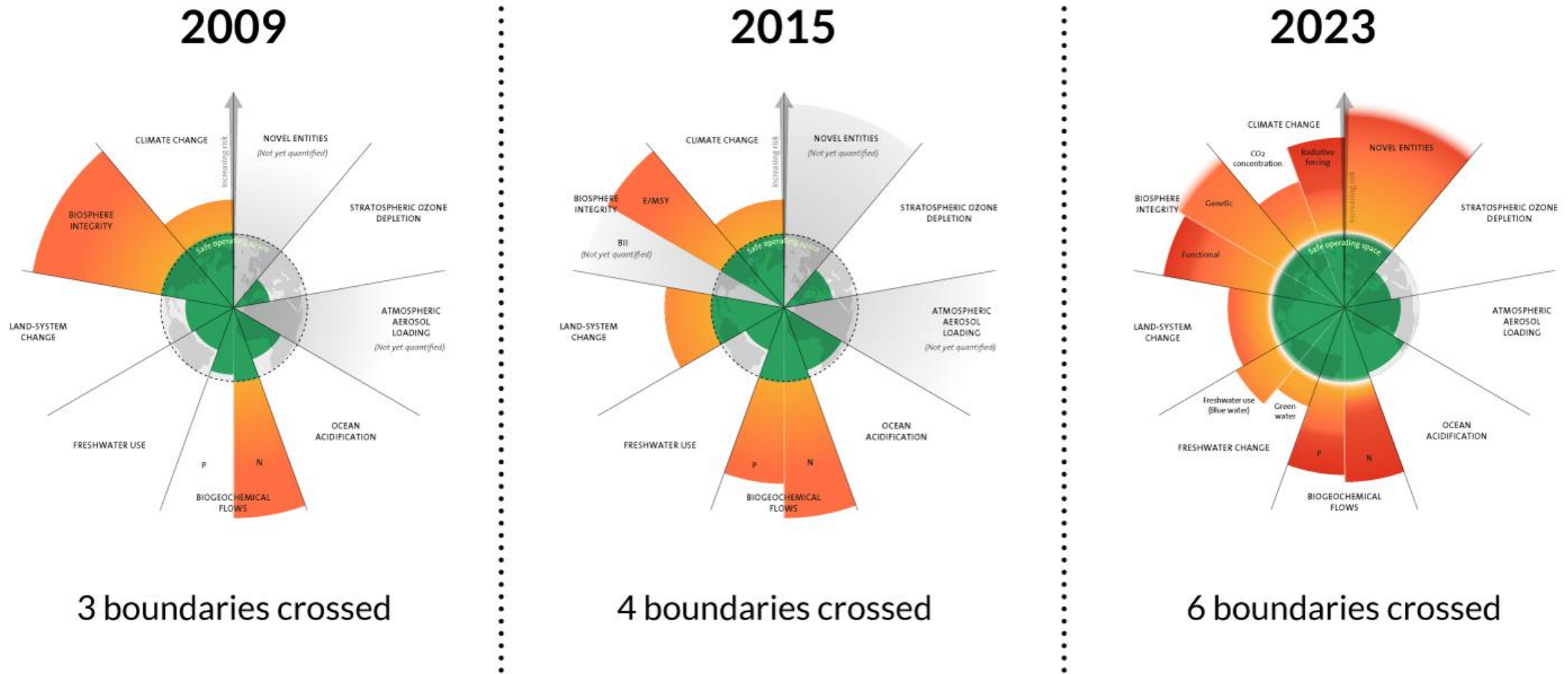
- Gemeinsam
umweltneutral
handeln

GREENZERO Standard

Dr. Dirk C. Gratzel

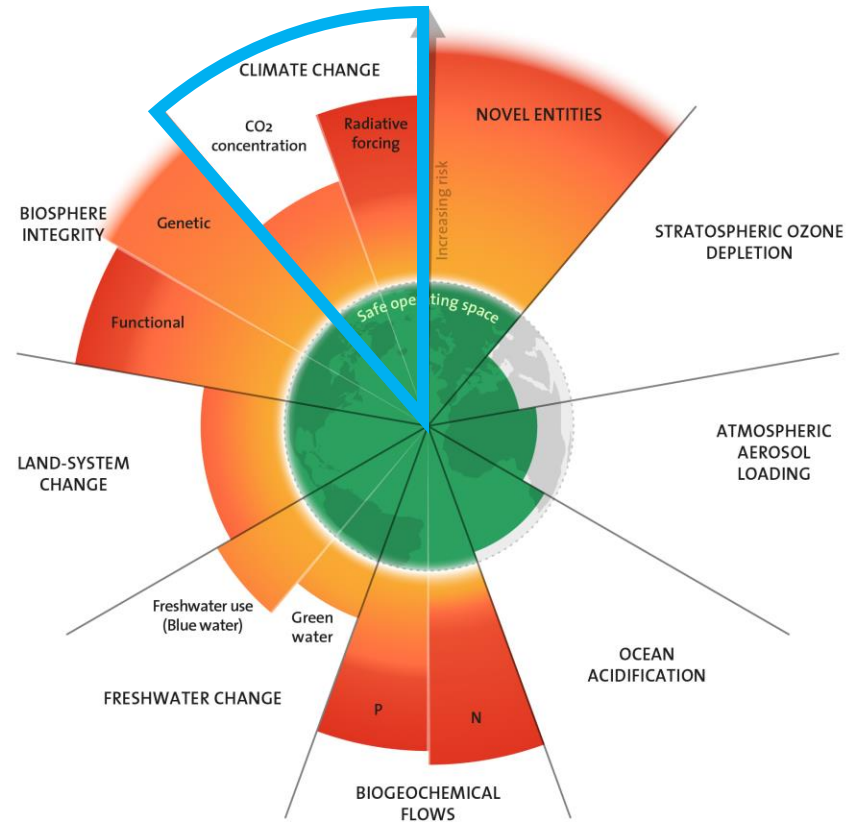


THE PROBLEM IS BIGGER THAN CLIMATE CHANGE ... AND IT'S INCREASING.



Source: [All planetary boundaries mapped out for the first time, six of nine crossed](#) - Stockholm Resilience Centre

CLIMATE CHANGE IS JUST ONE PART.



Source: [All planetary boundaries mapped out for the first time, six of nine crossed](#) - Stockholm Resilience Centre

Challenge

THE MOST IMPORTANT ISSUE IS THE LOSS IN BIODIVERSITY.



The basis of our existence is threatened by global destruction of the environment.

Without comprehensive, active measures the viability of the biosphere is put into question already in the next decades.

As a consequence of the overutilization since 1970 – i.e. a little more than 50 years - almost

70%

of insects, mammals, birds, fish, reptiles and amphibians has been lost.

Source: Living Planet Index 1970 = 100% WWF / ZSL 2022

PLANTING TREES IS OF LIMITED HELP.

•CO2 Removal Process:

- Final removal of CO2 necessitates it becoming abiotic.
- This transformation takes millennia.

•Challenges in Tree-Based Solutions:

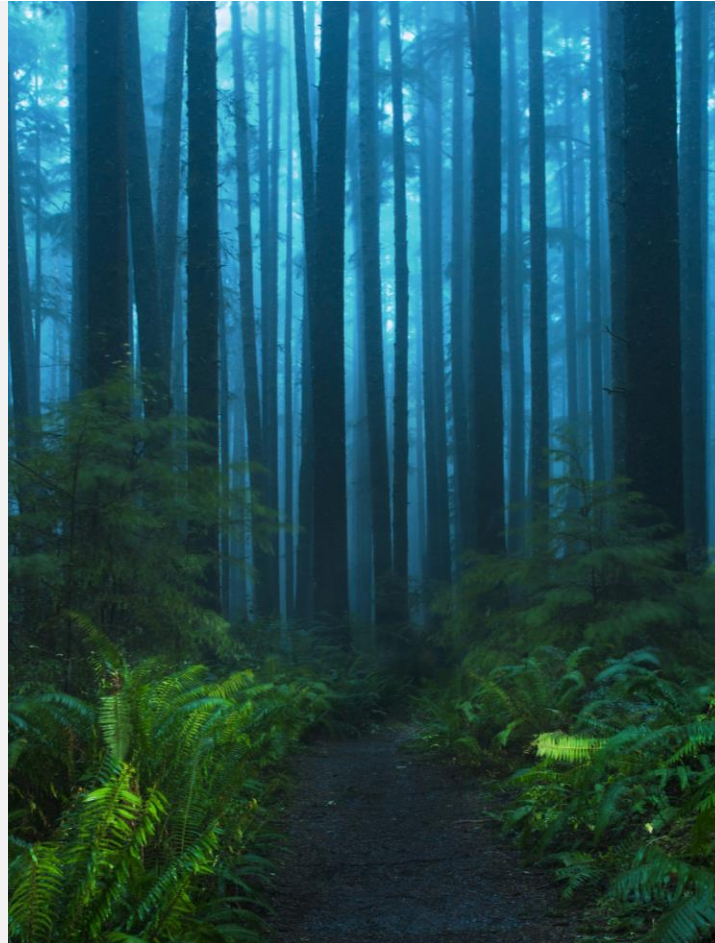
- CO2 retention in newly planted trees is gradual and faces risks like fire, forest clearing, and dry conditions.

•Biodiversity Concerns:

- Monocultures contradict the biodiversity concept.

•Limited Scope of Consideration:

- Other impact categories (acidification, eutrophication, water usage) are not accounted for.



•Exclusion of 1:1 Offset:

- In other impact categories, a 1:1 offset is excluded for natural scientific reasons.

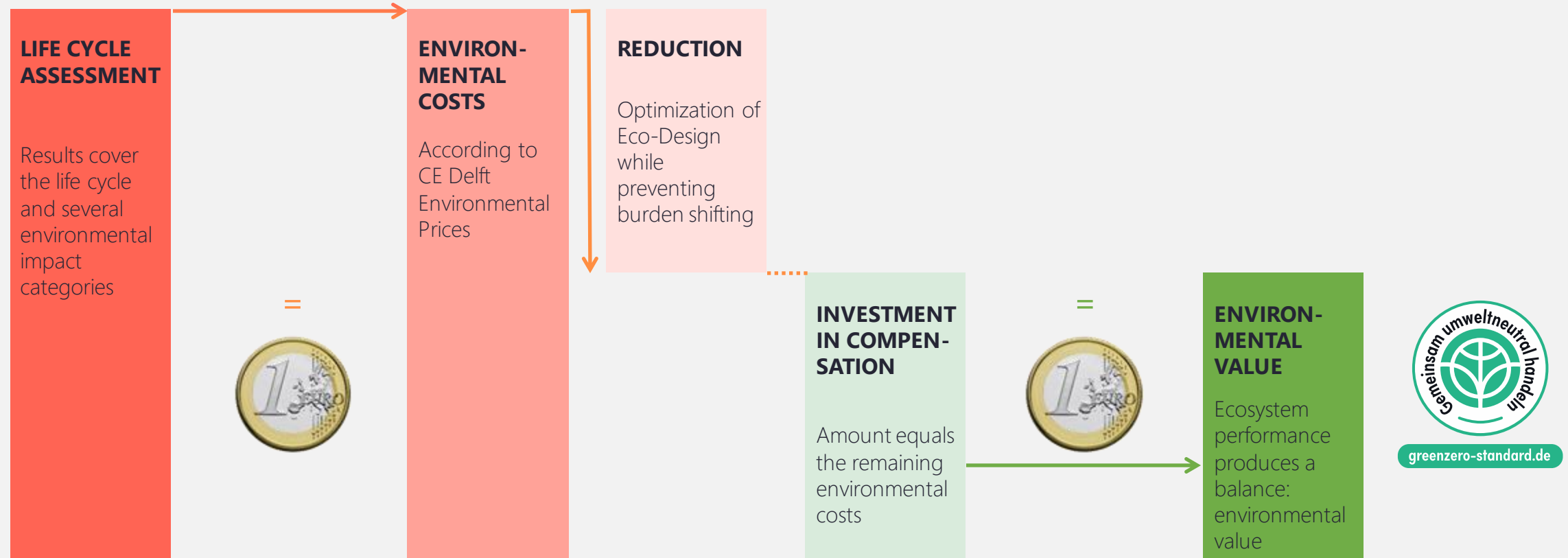
•Shift in Goal:

- The goal is not material restitution but achieving an even balance between environmental damage and environmental value.

•Alignment with Global Initiatives:

- This approach aligns with the United Nations' Decade for Biodiversity.
- It supports the EU-Naturschutzgesetz from 2023.

ECOLOGICAL AND ECONOMIC PROCESSES



COMPREHENSIVE COMPENSATION: BEYOND MATERIAL OFFSETTING

Analysis and reduction of environmental impacts of products, organizations or quarters based on LCA principles:

Establishes damages to health, biodiversity and infrastructure



Environmental Costs
as bottom line for these consequences



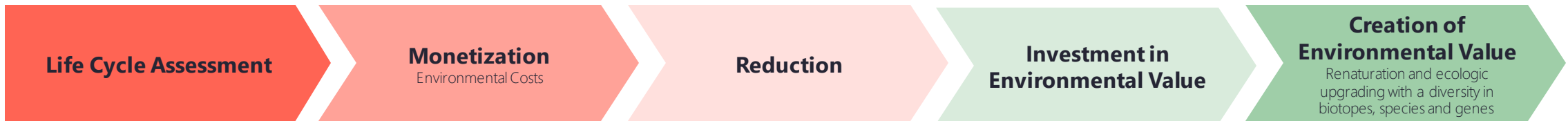
Compensation by investing in biodiversity:

Strengthening ecosystems.

Expert led upgrading of degraded or devastated areas to biotopes and living spaces with improved conditions for biodiversity, health and infrastructure.



Investment in **Environmental Value** as a compensation for environmental costs.



INTERNALIZATION OF ENVIRONMENTAL COSTS

Journal of Environmental Management 329 (2023) 117068



Contents lists available at [ScienceDirect](#)

Journal of Environmental Management

journal homepage: www.elsevier.com/locate/jenvman



Research article

Offsetting environmental impacts beyond climate change: the Circular Ecosystem Compensation approach

Daniel Moore^{a,*}, Vanessa Bach^a, Matthias Finkbeiner^a, Theresa Honkomp^{b,c}, Heinz Ahn^b, Madlen Sprenger^c, Linda Froese^c, Dirk Gratzel^c

^a Chair of Sustainable Engineering, Technische Universität Berlin, Straße des 17. Juni 135, 10623, Berlin, Germany

^b Innovationsgesellschaft der Technischen Universität Braunschweig MbH, Wilhelmgarten 3, 38100, Braunschweig, Germany

^c HeimatERBE GmbH, Im Welterbe 1-8, 45141, Essen, Germany



INTERNALIZATION OF ENVIRONMENTAL COSTS

The overall goal is to integrate environmental costs into economic considerations, fostering accountability and encouraging practices that are environmentally responsible.

1.Monetization of LCA Results:

Environmental impacts across different categories are converted into a single monetary unit

2.Determining Total Environmental Costs:

By monetizing LCA results, the total environmental costs can be calculated for a broad set of impact categories.

3.Attribution of Responsibility:

The sum of environmental costs, expressed as a single monetary value, enables the attribution of responsibility for environmental impacts to the polluter.

4.Compensation by the Polluter:

The polluter is expected to compensate for the environmental impacts based on the determined costs.

5.Contributing to Environmental Solutions:

This internalization of environmental costs, coupled with compensation, aims to address urgent environmental issues like climate change and biodiversity loss.

Creating Environmental Value

THIS IS HOW WE GET AN AREA IN THE BEGINNING ...



Creating Environmental Value

THIS IS HOW WE GET AN AREA IN THE BEGINNING ...



Creating Environmental Value

THIS IS HOW AN AREA CHANGES ...

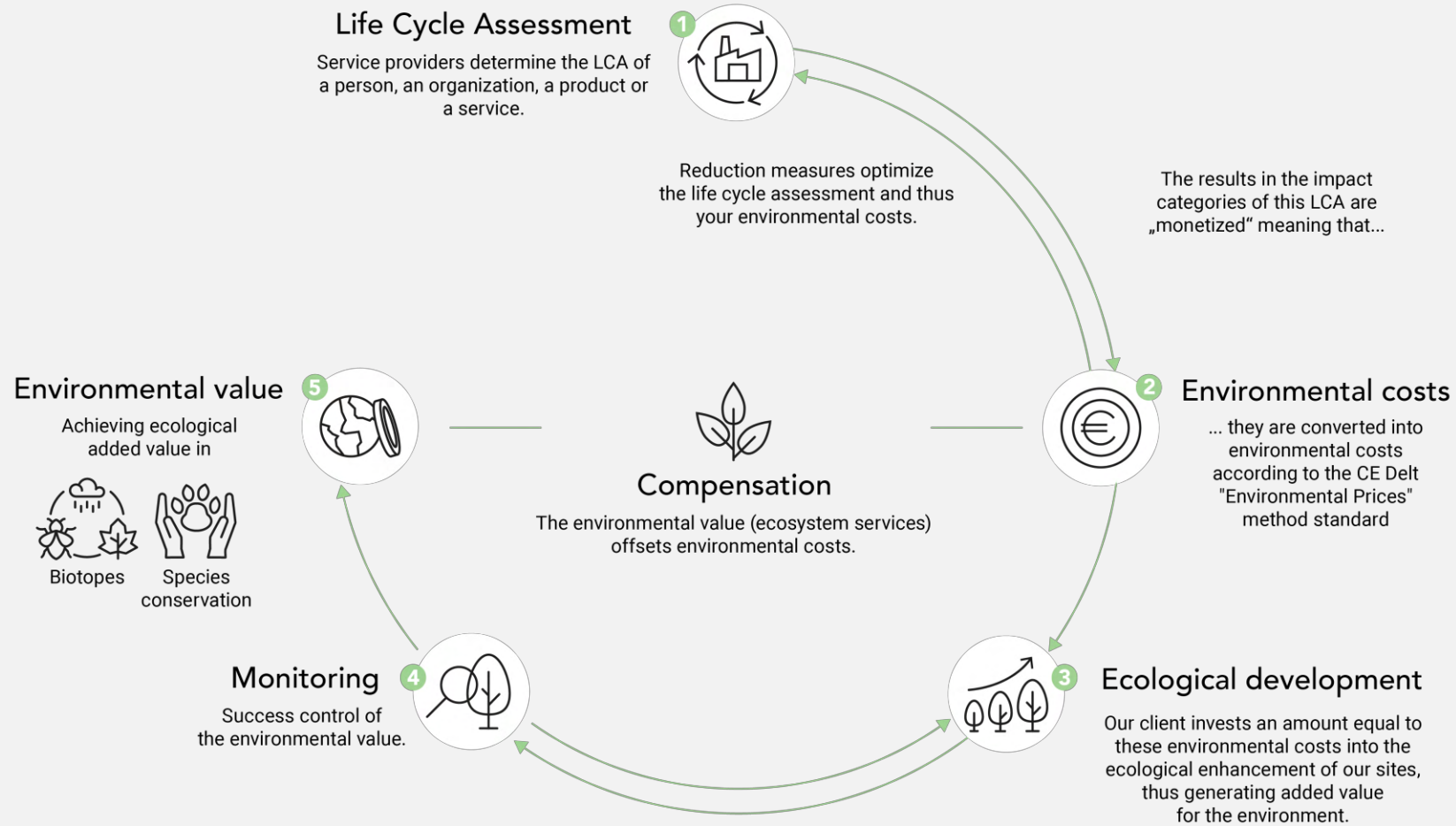


Creating Environmental Value

THIS IS HOW AN AREA CHANGES ...



ENVIRONMENTAL VALUE ENABLES A NEW BALANCE OF ECONOMY AND ECOLOGY



Challenges become chances

GREEN CLAIM DIRECTIVE AND LESSONS FROM LEGAL JUDGMENTS

1.Transparent Communication:

Clearly communicate environmental claims on products and ensure accessibility of information to build trust.

2.Verification and Compliance:

Implement rigorous verification for accuracy and ensure compliance with regulations and certifications.

3.Holistic Environmental Approach:

Address various environmental impacts and clearly communicate reduction and compensation efforts.

4.Avoid Ambiguity:

Steer clear of ambiguous terms in claims and use terminology accurately reflecting impact and measures.

5.Accessible Information:

Make environmental information easily accessible and provide details about compensation projects.

UN Secretary General urges companies to take responsibility

António Guterres at UN Biodiversity COP15

A photograph of António Guterres, the UN Secretary General, speaking at a clear acrylic podium. He is wearing a dark suit and a light-colored tie. The background is a lush green wall of tropical plants. A semi-transparent white box is overlaid on the bottom right of the image, containing a quote.

"[...] the private sector must recognize that **profit and protection must go hand-in-hand**. It means [...] taking their impacts on **nature into account in their business plans**. [...] It means tough regulatory frameworks and disclosure measures that end greenwashing and hold the private sector accountable for their actions **across every link of their supply chains**. "

What if every country spent 5% of their gdp for restoration efforts?

VISION

For a country like Germany that would be approximately 200 billion €/year, which could make a huge difference:

1.Enhanced Biodiversity:

Increased funding revitalizes biodiversity and protects endangered species and critical ecosystems.

2.Climate Change Mitigation:

Restoration mitigates climate change impacts. It sequesters carbon and promotes sustainable practices.

3.Clean Air and Water:

Restoration improves air and water quality, which benefits ecosystems and human well-being.

4.Sustainable Land Use:

Investments enable sustainable land practices and support regenerative agriculture and afforestation.

What if every country spent 5% of their gdp for restoration efforts?

VISION

5. Job Creation:

Restoration generates employment opportunities and fosters economic growth in rural areas.

6. Resilient Communities:

Restoration strengthens community resilience and reduces risks of natural disasters.

7. Green Innovation:

Funding drives innovation in restoration and advances sustainable and green solutions.

8. Global Leadership:

Allocating funds sets an example for nations and encourages global cooperation on environmental challenges.

→ This investment in our planet, that we suggest, is high.. But the costs, if we don't act now, will be much higher!