## **HSLU** Lucerne University of Applied Sciences and Arts

## **Engineering and Architecture** BSc. Energy and Environmental Systems Engineering Bachelor-Thesis

# Towards Sustainable Land Use and Biodiversity Conservation: Integrating SDG 15 in Industry Operations

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## 1. Background, Challenge & Objectives

#### Background

SDG 15 involves the protection, restoration, and sustainable management of ecosystems and forests. SDG 15 is prioritized the lowest even though it impacts forests, and land area that make up 30% of the Earth. The project aims to provide recommendations for integrating SDG 15 into the operations of the Industrial Partner.

#### **Research Question**

How can the Industrial Partner integrate SDG 15 into its operations and supply chain to achieve biodiversity conservation and sustainable land use?

## **3.** Results

#### Top six quick wins



#### Objectives

- Research existing standards and goals towards implementing SDG 15 by conducting a literature review to gain a deeper understanding of existing projects, targets and indicators.
- 2. Evaluate current sustainability practices of Industrial Partner by means of collaboration and reviewal of supported documents like sustainability reports, and LCAs.
- 3. Propose specific recommedations to Industrial Partner to achieve low hanging fruits in terms of implementing SDG 15 into their operations.

## 2. Methodology and Materials

#### Methodology

The methodology consists of an assessment of Industrial Partner's current practices and evaluates their alignment with SDG 15.It also examines existing SDG 15 assessment frameworks to identify relevant criteria. Secondly, it analyzes the high-impact areas within the Partner's operations. Thirdly, it includes a comparative analysis of operations from certified best practices company. Finally, based on the findings and analyses, the methodology generates actionable recommendations for implementing SDG 15 in Industrial Partner's operations and supply chain.

Assessment Analysis Suggestions

*Figure 2: Top six quick wins compiled from assessment of current practices and hotspot analysis – these are areas with high impact potential* 

#### **Applying SDG Compass Framework to this project**

(1) Understand SDG 15 by analyzing goals and targets (2) Define priorities by mapping value chain and highlighting hotspots (3) Set goals and KPIs (4) Integrate SDG 15 across functions within company (5) Report and communicate according to other standards such as GRIs

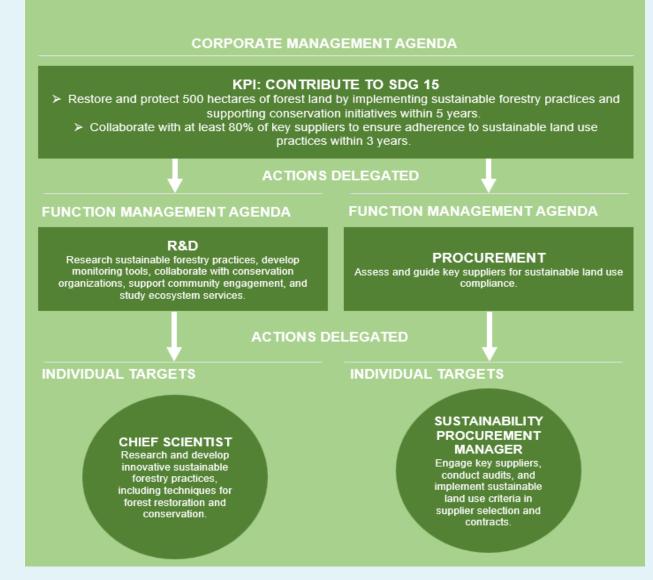
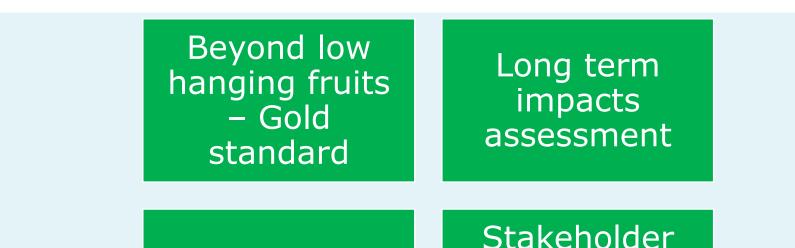


Figure 3: Example on how to embed two recommendable actions for SDG 15 into the company (Step 4)

### 4. Recommendations



Sustainability report, annual report
Life Cycle Assessments (LCAs),

Declarations (EPDs), associated company documents that help to assess current practices • Guidelines such as SDG

Compass, SDG Industry Matrix

Environmental Product

Research
Case studies from CENIBRA and Caterpillar Inc.

Literature reviewA • Roadmap of solutions

Figure 1: Methodology flowchart

#### **Data sources**

- United Nations frameworks such as SDG Compass, SDG Blueprint, and SDG Industry Matrix, which offer guidance for implementing SDGs into businesses.
- The sustainability report, LCA data, Scope 3 emission protocols, and Environmental Product Declarations of the Industrial Partner.
- Sustainability reports from Caterpillar Inc. and CENIBRA® to understand industry best practices.

## **FH Zentralschweiz**

Comparative en Analysis



*Figure 4:Recommendations and suggestions for future research* 

#### Literature

- United Nations. (2015). Goal 15. Department of Economic and Social Affairs. <u>https://sdgs.un.org/goals/goal15</u>
- GRI, United Nations Global Compact, & World Business Council for Sustainable Development. (n.d.). SDG Compass: The guide for business action on the SDGs. Retrieved May 23, 2023, from <u>www.sdgcompass.org</u>

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