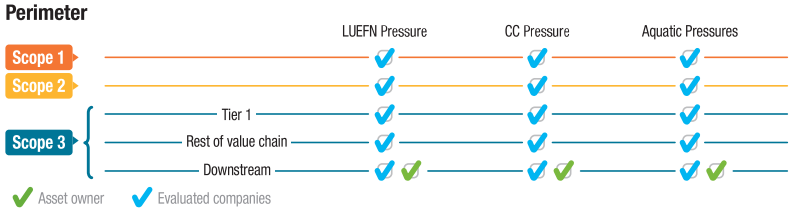
Case study Summary sheet

Context

CASE STUDY

Footprint use category: Financial assets
Assessment time: Based on the most recent data available for each company (often 2020)
Business application: Assessment/rating by and for third parties with external data

Perimeter



COMPANY'S IDENTITY

Financial asset's identity
Two fictionnal portfolios of 10 companies, selected by Amundi Asset Management and Ofi Invest Asset Management

Asset class Listed equity

Underlying entities
20 listed companies of the sector "Agriculture and fisheries in Europe"

Asset under Management (AuM)
EUR 25 billion

Why?

Apply the LEAP approach of the TNFD at two different levels (company and portfolio) and report on the main challenges and limits.

When?

Computation in January 2023 based on the most recent data available for each company (often 2020).

How often?

One off

What?

Interface with nature, e.g. overlap of sites with protected areas, biodiversity impacts and dependencies, nature related risks and opportunities.

For who?

Internal use

How detailed?

Results are available at company and portfolio levels, broken down by Scope, pressure and product.

DATA COLLECTED

Item	Description	Source
Land occupation	Turnover by sector and country	Carbon4 Finance's database CRIS
GHG emission data	CO2-eq emissions by company and by Scope	Carbon4 Finance's database CIA
Tonnes of final products	Tonnages of final products produced by the companies, e.g., milk, butter, cereals...	Data collected by Carbon4 Finance using annual reports and public sources
Other	Company locations, biodiversity strategies	Data collected by CDC Biodiversité using annual reports and public sources

Footprint analysis

RESULTS

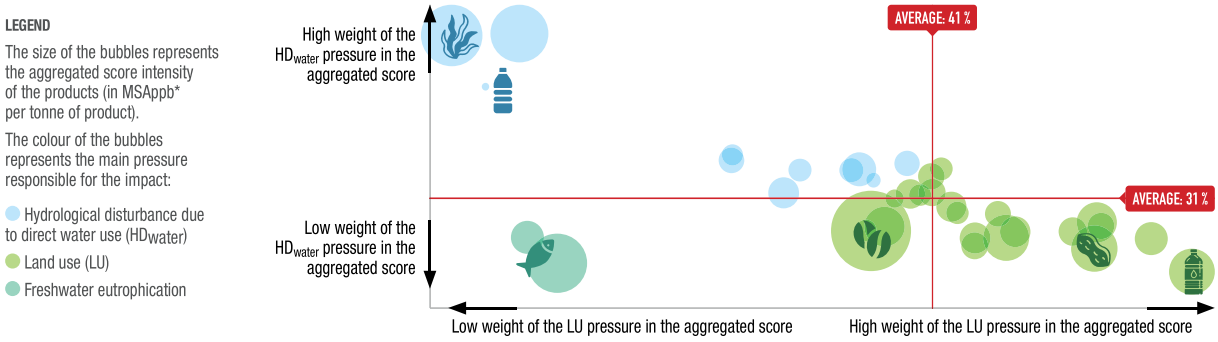


Figure 20: Contribution of the Land Use and Hydrological disturbance due to direct water use (HD_{water}) pressures to the aggregated score for the different products of the portfolios (Source: Trial version of BIA-GBS, GBS 1.1.0 computation, Feb. 2023, Julie BONNET)

KEY MESSAGES

- Even focusing on only a couple of companies, conducting an exhaustive Locate phase is challenging, as it requires the location of all sites involved in direct operations and the supply chain. However when the locations are known, existing tools like IBAT are relevant to study the interface with nature.
- Biodiversity footprinting is relevant to conduct the Evaluate phase of the LEAP approach. The bottom-up approach of the BIA-GBS database allows for an important granularity in the results, by distinguishing impacts between companies, realms, Scopes, pressures and even products.

IMPROVEMENTS

- For the Locate phase, the interface with nature was only studied on one site for both focus companies. Indeed, applying the Locate phase to a portfolio is very time-consuming and unrealistic and faces challenges to access relevant location data.
- The bottom-up approach of the BIA-GBS database for the Agrifood sector allows to differentiate companies depending on the products they manufacture, but does not yet take into account specific practices, such as the use of less intensive farming techniques or deforestation free commitments.

5.2 How BIA-GBS can be used to disclose in line with the TNFD framework? The case of agriculture and fisheries in Europe

5.2.1 Context and objectives

The Taskforce on Nature-related Financial Disclosure (TNFD) was set up to develop a risk management and disclosure framework for organisations. As financial institutions are an important end-user of this framework, it is crucial to assess the feasibility of the framework for them. In this context, CDC Biodiversité and Carbon4 Finance took part between September 2022 and March 2023 in the pilot testing conducted by UNEP FI on the sector "Agriculture and fisheries in Europe", with Amundi Asset Management and Ofi Invest Asset Management, two asset managers. The objective of this TNFD pilot programme was to assess the feasibility of v0.2 and v0.3 of the TNFD beta framework for financial institutions (TNFD 2022; 2023a). The first version of the TNFD recommendations was then published in September 2023 (TNFD 2023c), but the lessons learnt during this pilot and disclosed in this publication are still relevant. Different outcomes were expected in this pilot:

- To apply the LEAP approach at **two different levels**: for each asset manager, a **portfolio of 10 companies of the agri-food sector** and a **"focus company" within this portfolio** were selected. The two focus companies were MOWI ASA for Amundi Asset Management, and Danone SA for Ofi Invest Asset Management;
- To study the role of biodiversity footprinting in the TNFD framework;
- To test possible future features of the GBS tool and the BIA-GBS database, such as the overfishing module and the bottom-up approach;
- Report on the **main challenges and limits** of the TNFD framework as part of the TNFD piloting.

The availability and quality of data is a key challenge for financial institutions when evaluating their interactions with biodiversity, as very little public data on companies and biodiversity is available. The assessment was made using data publicly available, *i.e.*, annual or sustainability reports. The associated data is self-reported and can thus be partial, *e.g.*, only part of the Scope 3 reported.

The absence of asset-level databases[16] for the agrifood sector made the Locate phase particularly complex to achieve. Most of the impact of the sector occurs in the production of raw ingredients, in the upstream value chain of the companies of the portfolio, which are mostly manufacturing or processing companies and not agriculture companies, thus further complicating the data collection.

5.2.2 Methodology

The methodology for this pilot follows the TNFD's LEAP approach, which is separated in four phases: Locate, Evaluate, Assess and Prepare (TNFD 2023b). Each phase is then separated in different steps. An overview of the methodology used for each phase is presented in Figure 21.

The **Locate** phase focuses on identifying and studying the **interface with nature**. The preliminary Scoping phase for financial institutions, referred to as LEAP-FI in the TNFD drafts, allowed to skip the Locate phase for listed equity, as it would require exhaustive data on the location of the entire value chain of the entire portfolio. It was however decided to conduct this phase for one site of the two focus companies, to go beyond the TNFD's recommendations and conduct a proof of concept for this Locate phase.

The **Evaluate** phase focuses on **impact and dependencies** and was conducted both at the portfolio and company level, on the entire value chain. Indeed, assessing only Scope 1 impacts would lead to an important underestimation of the risks, as all the impacts and dependencies related to agriculture would not have been considered. The dependencies were assessed with the BIA-GBS database (see section 2.1.2 for the methodology), and the impacts with the BIA-GBS database with a bottom-up approach (see section 2.1.3 for the methodology). This new bottom-up approach is still exploratory and was used in the context of this pilot to go further and allow for intra-sectoral analysis. However, the underlying data used still needs to be consolidated, and results should be taken with caution.

The **Assess** phase focuses on **risks and opportunities** and was conducted at the company level. First, the risks and opportunities of the focus company were assessed qualitatively. Then, the nature-related risks were assessed quantitatively using the beta-version of a stress-test methodology developed by CDC Biodiversité, which will be detailed in a future publication.

5.2.3 Results

LOCATE

By consulting companies' activity reports, partial information can be found on production sites, or on the supply chain, like the location of Danone's palm oil suppliers, and therefore partially complete the Locate phase. However, the level of data available varies greatly between companies. In this pilot, the IBAT tool was used for one site of each focus company, and allowed to identify the protected areas, Key Biodiversity Areas and endangered species in a perimeter of 50 km around the site. If this analysis was replicated across the portfolio, sites could be prioritised depending on different criteria, like the number of protected areas, and their importance.

(16) Databases listing the locations of companies' factories, offices, cropland areas, etc.

EVALUATE

The Evaluate phase consists in the identification and measurement of impact and dependencies. Considering the dependencies, the companies of the two portfolios have activities in four different EXIOBASE industries of the Agrifood sector, which correspond to two ENCORE processes: "Processed food and drink production" and "Alcoholic fermentation and distilling". Their average Scope 1 dependency scores are presented in Figure 22, with a distinction between the different ecosystem services. The highest dependencies are to water-related ecosystem services, such as surface water, ground water and water quality, which are crucial to manufacturing activities. Furthermore, the upstream dependencies are high for these sectors: between 65 and 75 % of their upstream supply chain is critically dependent on at least one ecosystem service.

Considering the impacts, Figure 23 shows for instance the impact of the five drink companies in the portfolios. The impact per tonne of product sold varies greatly depending on the products. Distilled alcohols have the highest impact intensities, followed by beer, and finally non-alcoholic drinks which have a relatively lower impact intensity. This highlights the interest of the bottom-up methodology: it allows to differentiate between these five companies in the same sector, which would not be possible using the statistical methodology of BIA-GBS, described in section 2.3.2.

The pressures contributing the most to the portfolio aggregated score are **Land use** and **Hydrological disturbance due to direct water use (HD_{water})**, due to water consumption and withdrawal. These two pressures account for 72 % of the overall aggregated score of the portfolios, highlighting that land occupation and water consumption are crucial for the agrifood sector. Since the bottom-up approach allows for comparison at product level, the share of the two pressures was studied for each product in Figure 20.

The Land use pressure is the main driver for 22 products associated with a high land occupation such as coffee and butter. On the other hand, HD_{water} is the main pressure for 11 products associated with intensive water use such as algae or bottled water. Finally, the main pressure identified for fish products is freshwater eutrophication[17]. The most intensive products can be associated with animal products or a high deforestation rate, like fish, butter, coffee, or vegetable oil[18]. No meat products, such as beef or pork, were present in the portfolios, explaining why they are not represented on the graph.

5.2.4 Lessons learnt

This pilot was an important first step to highlight the current feasibility of the LEAP approach for financial institutions, and the role of biodiversity footprinting within this framework:

- This pilot confirmed that applying the Locate phase to a listed equity portfolio is very time-consuming and unrealistic and faces challenges to access relevant location data, for the agrifood sector at least. It however demonstrated a methodology to start addressing this challenge.
- It was the opportunity to test the bottom-up approach of the BIA-GBS database for the Agrifood sector, which will keep being improved. It allows to evaluate the impacts on biodiversity of the industry more accurately and provides valuable insights on the most significant pressures.

(17) Fish products also have a high impact on marine biodiversity, which is not yet evaluated in BIA-GBS.

(18) These products are partly included in the SBTN's High Impact Commodity List, under the following names: wild capture seafood, dairy (derived from Cattle), coffee (bean), oil palm and rapeseed oil.

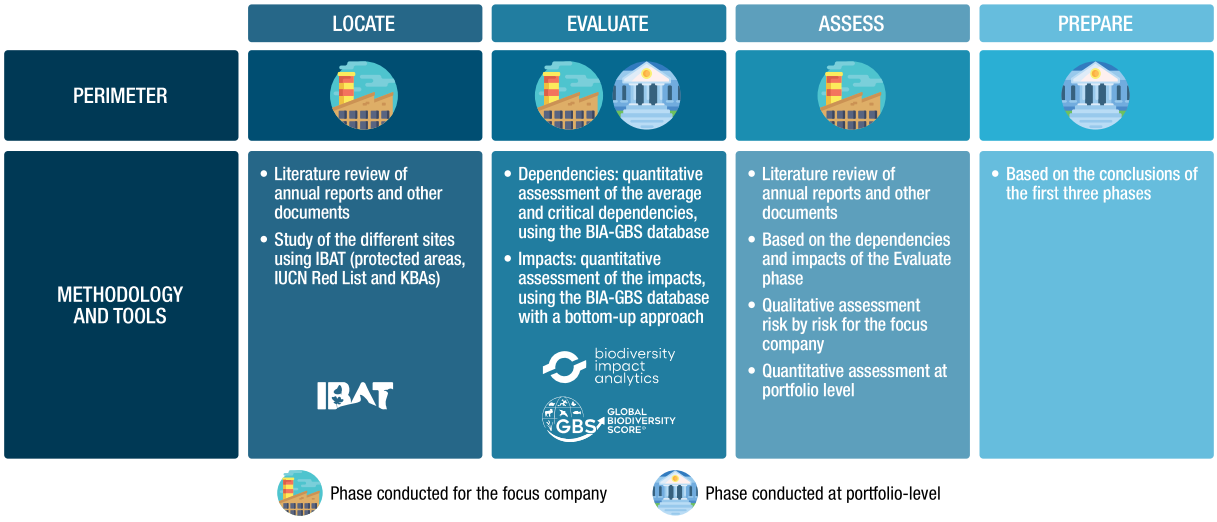


Figure 21: Overview of the methodology used for each phase of the pilot

- The quantitative analysis led with BIA-GBS needs to be completed by a qualitative analysis at the company level to assess the magnitude and likelihood of nature-related risks. The analysis led for the Assess and Prepare phases will be further described in future publications.

The pilot also contributed to improving the TNFD framework as the following challenges were reported for v0.3 and v0.4 of the framework, and taken into account for the v1 version:

- The **scope of the evaluation in terms of the value chain** was not clearly specified in the LEAP approach. **It was therefore recommended to specify that the entire LEAP process must be carried out over the entire value chain**. The framework now specifies that the objective should be to consider the entire value chain, and to report openly on the perimeter considered.
- It was **regrettable that the Evaluate phase should only be carried out on the priority areas,** defined as ecosystems of low integrity, high biodiversity importance and/or areas of water stress. Indeed, some impacts in low priority areas may have **spill-over effects** into priority areas, or companies can have important impacts on **pristine ecosystems.** In the v1, the areas where an entity has **important impacts and dependencies** also need to be included in the Evaluate phase.

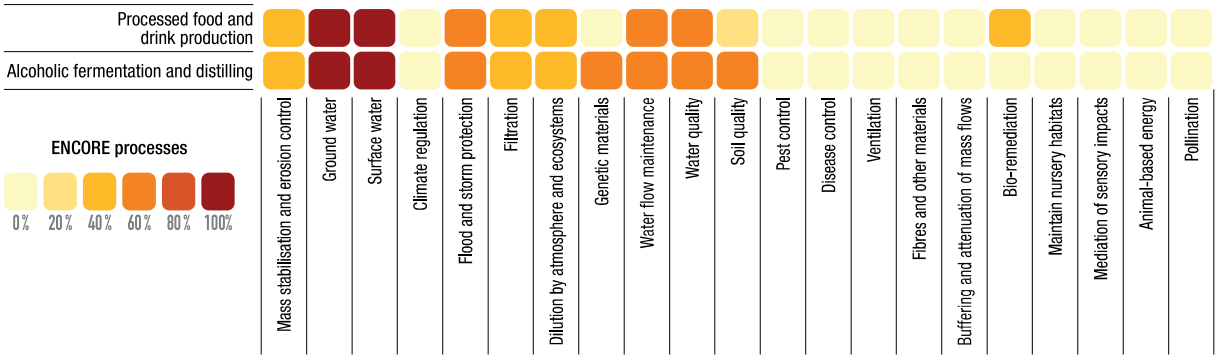


Figure 22: Heatmap of the Scope 1 average dependencies of the sectors (Source: GBS 1.1.0 computation, Feb. 2023, Julie BONNET)

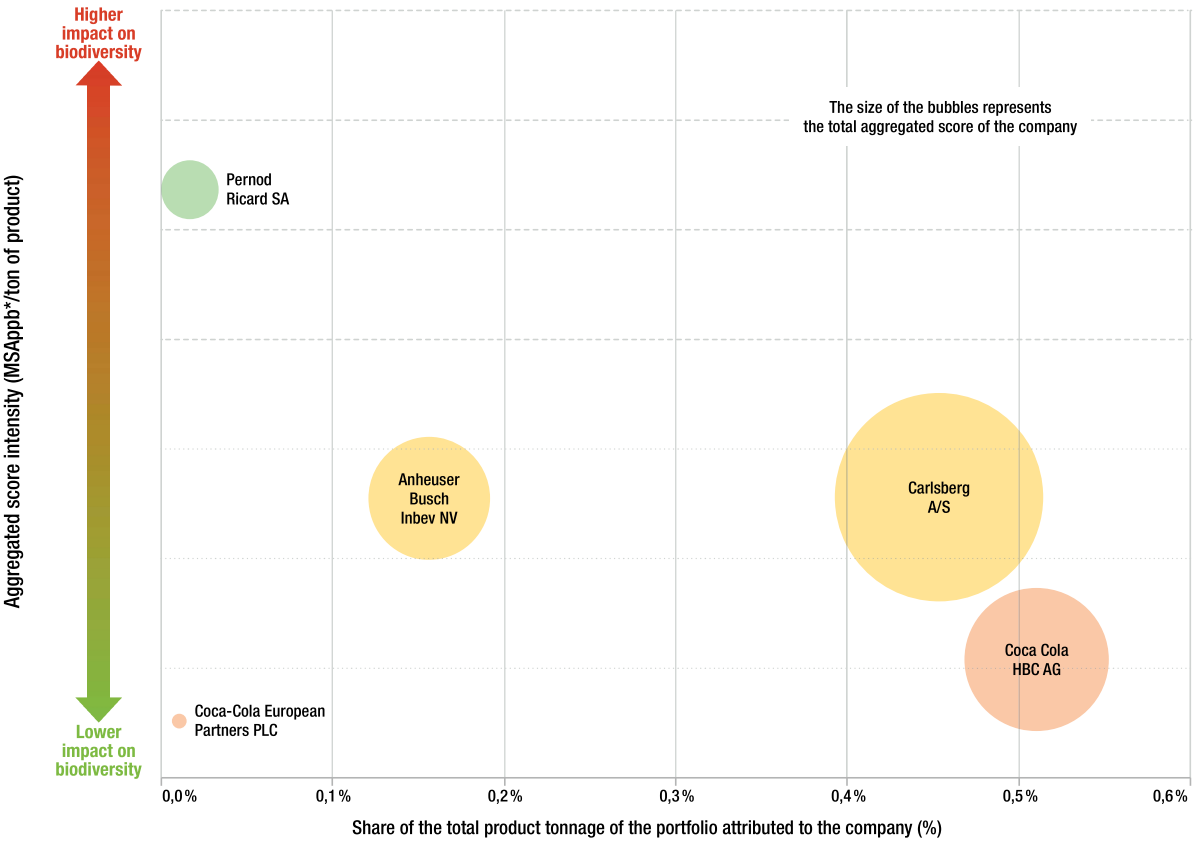


Figure 23: Aggregated score of the drink companies in the portfolios (Source: Trial version of BIA-GBS, GBS 1.1.0 computation, Feb. 2023, Julie BONNET)