Case study Summary sheet

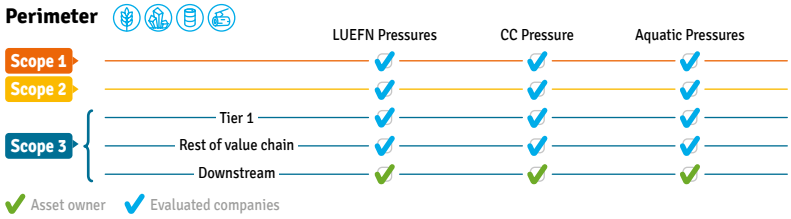
Context

CASE STUDY

Footprint use category: Corporate and portfolio
Assessment time: 2017

Business application: Assessment/rating by and for third parties with external data

Perimeter



COMPANY'S IDENTITY

mirova
Responsible Investing

Industry
Financial institution (asset manager)

Assets under management in 2019
EUR 12.5 billion

Why?
EXPLORE THE EVALUATION OF THE BIODIVERSITY FOOTPRINT OF COMPANIES MIROVA IS INVESTED IN BY LOOKING AT THE FOOTPRINT OF ONE SUCH COMPANY: BONDUELLE

When?
ASSESSMENT BASED ON 2017 REPORTED DATA

How often?
ONCE FOR THIS CASE STUDY, AIMING FOR ANNUAL UPDATES

What?
SCOPE 1, 2 AND 3 (UPSTREAM) IMPACTS OF BONDUELLE BASED FIRST ON PUBLICLY REPORTED DATA AND THEN ON REFINED DATA PROVIDED BY THE COMPANY

For who?
FOR MIROVA'S ANALYSTS AND ASSET MANAGERS, TO GUIDE THEIR INVESTMENT DECISIONS

How detailed?
RESULTS ARE REPORTED AT THE COMPANY LEVEL BUT CAN BE SPLIT BY SCOPES, PRESSURES, IMPACT TYPE FOR A BETTER UNDERSTANDING BY ANALYSTS AND ASSET MANAGERS.

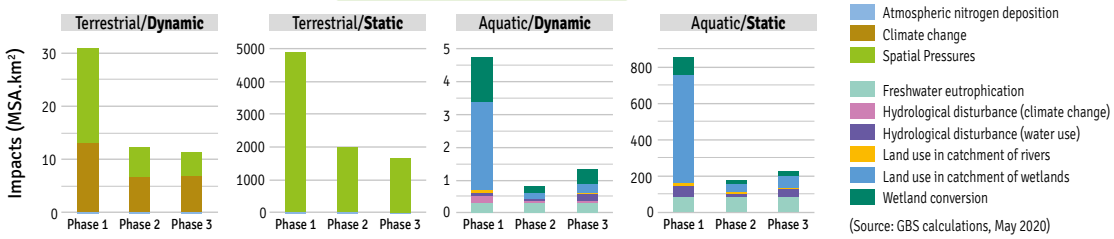
DATA COLLECTED

Item	Details	Source	Phase
Turnover (EUR million)	Global turnover and regional split for 2017	CSR Report	**1**
Cultivated area (km²)	Total cultivated area for Scope 1 and Scope 3 in 2017	CSR Report	**2**
Supply scheme	Vegetable supply scheme specifying sourcing type and location	CSR Report	**2**
Water consumption (m³)	Global water consumption (and not withdrawal) volume for Scope 1	CSR Report	**2**
Proxies	Proxies for spatialization of land occupation and water consumption	Mirova	**2**
GHG emissions (t CO_2-eq)	Estimations by Scope and by greenhouse gas	Carbone 4	**2 and 3**
Cultivated area (km²)	Spatialized cultivated area for Scope 1 and Scope 3 in 2017	Bonduelle	**3**
Water consumption (m³)	Spatialized water consumption (and not withdrawal) volumes for Scope 1	Bonduelle	**3**

Footprint analysis

RESULTS

Figure 34: Impacts of Bonduelle by type of pressure



(Source: GBS calculations, May 2020)

KEY MESSAGES

→ The workload required to conduct an assessment for one corporate is important. Extending it to a large perimeter of companies would be therefore an ambitious project if conducted manually by asset manager analysts. This calls for specialised data providers to produce such analyses.

→ By reporting quantified data on pressures on biodiversity, companies improves significantly biodiversity footprints accuracy.

→ The traceability of raw materials along the value chain is key to better assess biodiversity impacts when data on pressures is not retrievable.

IMPROVEMENTS

→ In future versions of the tool, CDC Biodiversité also aims at better integrating specific agricultural practices, labels and certifications as it could also allow companies to improve their footprint.

→ CDC Biodiversité will also build sectoral benchmarks to help investors compare corporate biodiversity performance.

4.3 Mirova

4.3.1 Context and objectives

Mirova is an asset manager specialized in sustainable investment and socially responsible investing. It seeks to provide its client with innovative investment solutions contributing to the transformation of the economy towards a sustainable model. In addition to its asset management practices, Mirova sees impact measurement as a key tool to pilot and demonstrate the environmental footprint of its investment choices. For Mirova, this case study is an opportunity to explore how corporate biodiversity footprint could be used by their Sustainable Responsible Investing (SRI) analysts and integrated into Mirova's investment decisions and portfolio-level impact monitoring.

This case study is an opportunity for CDC Biodiversité to better understand the practical constraints of the application of the GBS for asset managers, especially regarding data accessibility. Both CDC Biodiversité and Mirova are interested to understand the feasibility of such assessments for large universes of companies.

Several businesses operating in various industries were analyzed. We present hereafter the results obtained for the French food processor Bonduelle, world leader in ready-to-use vegetables. The overall footprint of Bonduelle over its Scopes 1, 2 and 3 upstream for the year 2017 was computed.

4.3.2 Methodology

Three phases can be distinguished regarding data collection. In **phase 1**, the GBS's (financial) default approach is used based on Bonduelle's financial activity data (turnover over the period) and the Input-Output module of the GBS (based on EXIOBASE). In **phase 2**, a refined assessment is implemented using figures provided by the analysts of Mirova specialized in the food sector. Those figures replace the default values for Scope 1 and 3 for the following inputs: land use (harvested areas), water consumption in the production processes and GHG emissions. For land use and water consumption they are based on Bonduelle's public data (from the company's CSR report[58]) and Mirova's in-house assumptions. For GHG emissions, Mirova uses data from Carbone 4 (detailed per GHG type and Scope). Phase 2 illustrates the type of assessments SRI analysts could conduct based on publicly reported data. Finally, in **phase 3**, dialogue was directly initiated with Bonduelle and data was partially adjusted for Scope 1.

For all three phases the static and dynamic biodiversity impacts due to **terrestrial pressures** (climate change, land use, encroachment, fragmentation and nitrogen deposition) and **aquatic pressures** (hydrological disturbance, land use in catchment of rivers and wetlands, wetland conversion and freshwater eutrophication) are considered, using the best available data.

4.3.3 Input data

A *PHASE 1: DEFAULT ASSESSMENT BASED ON MIROVA'S ACTIVITY SPLIT ESTIMATE*

The activity data provided by Mirova specify that Bonduelle's turnover in 2017 was EUR 2.78 billion, split between North America (47%), Europe (45%), Eurasia (6%) and Other countries (2%). The best match for Bonduelle's sector in EXIOBASE industry nomenclature is "Processing of food products, nec" ("nec" means "not elsewhere classified").

B *PHASE 2: REFINED ASSESSMENT BASED ON MIROVA'S INVENTORY AND PRESSURES ESTIMATE*

Land use: Bonduelle's CSR report shows high level of transparency compared to other companies from the same sector. The company reports its total cultivated area for Scope 1 and Scope 3, which is not common practice. The cultivated area reported is not broken down by geographic region which is a major obstacle for the calculation of an accurate biodiversity footprint. Therefore, Mirova's analysts used the turnover regional split and vegetable supply scheme reported by Bonduelle to estimate a spatial allocation of the cultivated area (Table 11). For land use type, cultivated area was considered to be irrigated (5% MSA remaining).

(58) https://www.bonduelle.com/fileadmin/user_upload/SITE_CORPO/FINANCE/Document_de_reference/document_reference_bonduelle_2017-2018.pdf

Water: Bonduelle reports a global water consumption (and not withdrawal[59]) volume for Scope 1 without spatialisation. Scope 3 water consumption is estimated by assuming that the water consumption intensity is the same for the vegetables purchased by Bonduelle compared to the vegetables the company produces itself. Scope 1 and Scope 3 water consumptions are broken down by country using the same data and principles as for land use (Table 12).

GHG emissions: estimations by Scope and by greenhouse gas provided by Carbone 4 are used. Calculations are performed using a global warming potential associated to a time horizon of 100 years.

C *PHASE 3 REFINED ASSESSMENT ADJUSTED WITH DATA NOT PUBLICLY DISCLOSED BUT PROVIDED DIRECTLY BY BONDUELLE*

Mirova's analyst communicated to Bonduelle their first estimate for spatialised land use and water consumption. On that basis, Bonduelle corrected Mirova's spatial allocation for land use and its global figure for Scope 3 water consumption. Then Mirova and Bonduelle agreed to use the updated (compared to phase 2) land use spatial allocation to distribute water consumption to countries in proportion of their respective cultivated area. The data obtained during phase 3 is confidential and thus not reported here.

(59) Water withdrawal is defined as "[water pumped out] of e.g. a groundwater body or diverted from a river", while water consumption is the water withdrawal minus the water which flows back to ecosystems (CDC Biodiversité 2019a).

Country	Scope 1 (km²)	Scope 3 (km²)	TOTAL (km²)
France	45	309	354
Germany	0	221	221
Spain	11	206	217
Italy	0	162	162
Portugal	0	133	133
Canada	11	133	144
Poland	0	74	74
Brazil	0	59	59
Hungary	0	29	29
United States	0	29	29
Russian Federation	22	15	37
TOTAL	*90*	*1 370*	*1 459*

Table 11: *Bonduelle's cultivated area breakdown per country and Scope estimated by Mirova*

4.3.4 Results and discussion

The total dynamic footprint of Bonduelle in 2017 assessed during phase 1 with the (financial) default assessment amounts to around 23 MSA.km² while the total static footprint reaches 5 000 MSA.km². Such a large static footprint is characteristic of agri-businesses as food production requires significant surfaces of croplands. Bonduelle is mostly a food processor so its impacts related to spatial pressures mainly occur within its Scope 3 (its suppliers).

The analysis of Bonduelle's public data on harvested areas and water consumption during phase 2 allowed to refine the assessment of land use impacts (Scope 1 and 3, static and dynamic) and hydrological disturbance impacts related to water consumption for the industrial processes. Refined impacts are smaller for terrestrial biodiversity but higher for aquatic biodiversity. It reveals that in that case, the financial default approach over-estimates the cultivated area and under-estimates water consumption.

Country	Scope 1 (10^3 m³)	Scope 3 (10^3 m³)	TOTAL
France	5 414	32 483	37 897
Germany	0	23 202	23 202
Spain	1 353	21 656	23 009
Italy	0	17 015	17 015
Portugal	0	13 921	13 921
Canada	1 353	13 921	15 275
Poland	0	7 734	7 734
Brazil	0	6 187	6 187
Hungary	0	3 094	3 094
United States	0	3 094	3 094
Russian Federation	2 707	1 547	4 254
TOTAL	*10 828*	*143 855*	*154 683*

Table 12: *Bonduelle's water consumption breakdown per country and Scope estimated by Mirova*

Terrestrial	Dynamic	11 MSA.km²
	Static	1 673 MSA.km²
Aquatic	Dynamic	1.3 MSA.km²
	Static	226 MSA.km²

Table 13: *2017 biodiversity impacts of Bonduelle calculated with phase 3 data*

4.3.5 Lessons learnt

While a previous case study with BNP Paribas Asset Management already showcased the application of the GBS financial default assessment on a portfolio (CDC Biodiversité 2019), this case study with Mirova goes further, as it is the first case study with an asset manager involving a refined assessment (using inventory and pressure data). It explores how asset managers can apply the GBS refined approach to publicly disclosed corporate data, and how it can better track the performance of companies within a given industry and inform investment decisions than GBS financial default assessments. It reveals to Mirova the workload required to conduct such an assessment, corporate by corporate, and highlights the gaps in data availability to scale up the approach and assess hundreds or thousands of businesses[60].

The assessment of Bonduelle demonstrates that, by reporting quantified data on pressures on biodiversity, companies improve significantly biodiversity footprints accuracy. As the critical data varies according to the industry in which companies operate, an efficient way for Mirova to better inform its investment decisions in line with ambitious biodiversity objectives would be to establish a list of such key data per industry. Carbon disclosure is already mainstreamed and still improving, which is very useful for biodiversity footprint assessments as climate change is one of the main drivers of biodiversity loss. Disclosure could be complemented by data relative to land occupation and land use change (critical for raw material intensive industries; land use data should include the land occupation of infrastructures), water consumption and withdrawal, pollution (critical for chemical, textile, paper and other industries). The Aligning Biodiversity Measures for Business collaboration provided a list of data common to multiple biodiversity footprint assessment tools which can inform data collection choices (*cf.* section 2.1)[61]. Some of these data are disclosed today by companies, either voluntarily or due to regulation. Making them fit for biodiversity assessment, essentially by ensuring their spatialisation, is a promising first step towards generalised refined biodiversity assessments. Also, and for all industries, the traceability of raw materials along the value chain is key to better assess biodiversity impacts when data on pressures is not retrievable.

In future versions of the tool, CDC Biodiversité also aims at better integrating specific agricultural practices, labels and certifications as it could also allow companies to improve their footprint.

(60) Mirova, AXA IM, BNPP AM and Sycomore AM joined forces in February 2020 to catalyze such a scaling up of the availability of data for biodiversity footprint assessments and called for expression of interest to develop a biodiversity data provider, see https://www.mirova.com/sites/default/files/2020-01/CEI%20-%20Biodiversity%20CP%20EN_FINAL.pdf

(61) Lammerant (2019)

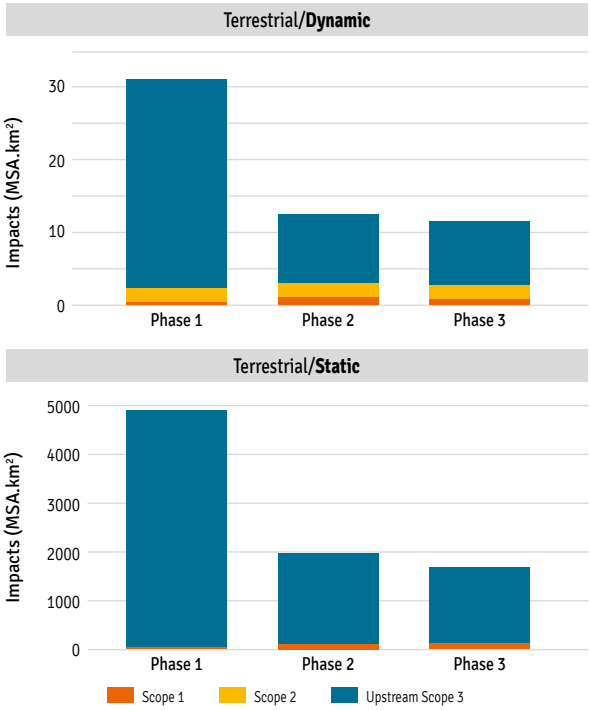


Figure 35: 2017 terrestrial biodiversity impacts of Bonduelle per Scope, phase 1 versus phase 3

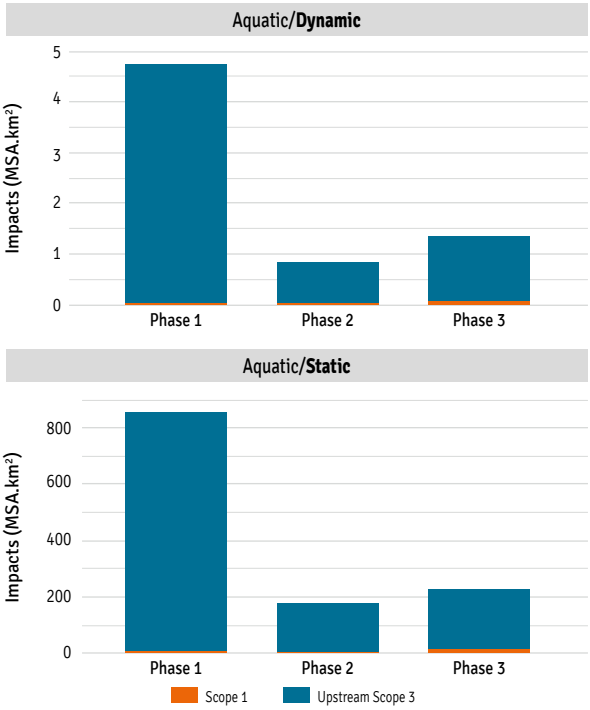


Figure 36: 2017 aquatic biodiversity impacts of Bonduelle per Scope, phase 1 versus phase 3