

## 20 NOVEMBER 2023 07:00-08:00 CST/14:00-15:00 GMT/ 15:00-16:00 CET

## Integrating nature into business as usual

How far do Food & Agriculture companies understand their relationship with nature and how can biodiversity footprinting help?









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### Integrating nature into business as usual

### During the webinar...



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**Rename yourself** in Zoom (*participants – plus – rename*)







14:45 - 15:00	Waiting room for participants	
15:00 - 15:05	Welcoming words	<b>Elisa Magueur</b> B4B+Club Project Officer CDC Biodiversité
15:05 - 15:25	Presentation of the World Benchmarking Alliance 2023 Nature Benchmark	<b>Jennifer Black</b> Nature Transformation Lead World Benchmarking Alliance
15:25 - 15:45	Presentation of CDC Biodiversité & reminders on the Global Biodiversity Score (GBS)	<b>Claire Blery</b> B4B+Club & Trainings Lead
	Presentation of CDC Biodiversité's work: benchmark analysis of the Agriculture & Agrifood sector	<b>Elisa Magueur</b> B4B+Club Project Officer CDC Biodiversité
15:45 - 16:00	Q&A and Closing	











## Presentation of the World Benchmarking Alliance 2023 Nature Benchmark



Jennifer Black Nature Transformation Lead World Benchmarking Alliance





## World Benchmarking Alliance 2023 Nature Benchmark

## **Benchmarking for a better world**



The **World Benchmarking Alliance (WBA)** is a nonprofit organisation holding 2,000 of the world's most influential companies accountable for their part in achieving the Sustainable Development Goals.

- Free and publicly available benchmarks compare companies' performance across seven transformation
- They recognise **leadership** and embed **corporate accountability**
- Realise impact together with our multi-stakeholder alliance comprising 350+ organisations



WBA's seven areas of transformation

## What do we assess?



- We want to clarify stakeholder expectations for companies – so our methodology is multistakeholder.
- Expert review committee: the Science Based Targets Network, TNFD, WBCSD, WWF, the Capitals Coalition and the Columbia Center on Sustainable Investment, UNEP-Fl.



## **Nature Benchmark Methodology**



### (A) Governance and Strategy A1. Sustainability strategy 2/6 of the A2. Accountability for sustainability strategy weight A3. Stakeholder engagement 1/6 of the (~33%) A4. Lobbying and advocacy Core social weight A5. Circular and nature-positive transition indicators (~16%) (B) Ecosystems and biodiversity B1. Assessment of nature impacts (C) B2. Assessment of nature dependencies B3. Key areas important for biodiversity and community **B4.** Key species **B5.** Ecosystem conversion NATURE B6. Ecosystem restoration B7. Resource exploitation and circularity performance **BENCHMARK** B8. Soil health B9. Water withdrawal B10. Water quality B11 Hazardous substances and waste B12 Plastic use and waste B13. Air pollutants B14. Scope 1 and 2 GHG emissions (B) B15. Scope 3 GHG emissions Ecosystems and B16. Invasive alien species biodiversity 3/6 of the (C) Social inclusion and community impact weight C1. Right to a safe, clean, healthy and sustainable environment (~50%)

- C2. Indigenous Peoples' rights
- C3. Land rights
- C4. Water and sanitation
- +18 core social indicators shared by all benchmarks



## 2023 Key Findings

## **2023 Nature Benchmark Findings**



O companies holistically assess and disclose their dependencies on nature



- 2% [8] of the 350 companies we looked at currently assess and disclose their environmental impacts.
- 0% [0] holistically address their dependencies on nature.
- Companies often only cover a fraction of their operations or don't publish the results.
- To bridge this gap, companies should adopt a risk management and disclosure framework.

## **2023 Nature Benchmark Findings**



Only 6% of companies have a timebound target to eliminate deforestation



- Agricultural expansion drives almost 90% of global deforestation.
- This sits at the nexus of efforts to address climate change and nature loss.
- Almost half of the companies we benchmarked have commitments on climate.
- Despite this, only 13% [46] of companies have a commitment to zero ecosystem conversion.
- 6% [22] have a timebound target to eliminate deforestation.

## **2023 Nature Benchmark Findings**





- This is already a visible and chronic problem -72% of the world's population is water insecure.
- Around 30% of companies are reporting water use reductions [98] or disclosing water usage from water-stressed areas [107].
- 12% [41] of companies are reporting metrics on discharged pollutants, and just 2% [7] have set targets to reduce them.
- Companies can access comprehensive guides and expectations for water stewardship (e.g. SBTN Freshwater Targets, Ceres Corporate Expectations for Valuing Water).



## Where does footprinting fit?



- A tool to measure impacts on biodiversity and make more informed decisions.
- Insights can help inform decisions by companies and investors, policymakers etc.
- But when integrating results into decisions, also remain aware of the limitations of the tool, and how to supplement with other sources of information.





## Summary

- Overall performance is lacking many companies taking some action, but often not in a comprehensive way.
- Nature is a rapidly evolving agenda, and many recent developments (launch of TNFD, UNGA resolution etc.)
- Companies need to prepare themselves for more interest and scrutiny – and to make the most of the opportunities.
- The Nature Benchmark will continue to hold companies accountable, working in alignment with other actors.
- Company assessments will track progress over time.
- We are launching a Collective Impact Coalition on assessing and disclosing impacts/dependencies on nature.





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## Presentation of CDC Biodiversité & reminders on the Global Biodiversity Score



Claire Blery B4B+Club & Trainings Lead CDC Biodiversité



## CDC Biodiversité, a company dedicated and committed to biodiversity

- > Private subsidiary of the Caisse des Dépôts et Consignations Group, the largest public financial institution in France.
- CDC Biodiversité is a French consulting & engineering firm specialized in positive actions for biodiversity, biodiversity sustainable management, and the measurement of corporate biodiversity footprint.

### CDC Biodiversité has a wide range of services for different stakeholders with the aim of protecting biodiversity



### Renature Offsetting, nature in cities & zero artificialisation

- Ecological compensation actions for companies
- ✓ Voluntary ecological restoration actions
- Provision of long-term land investments for the conservation of natural areas
- $\checkmark$  Promoting biodiversity in cities

 Image: Constraint of the second se

- actors
- Development and implementation of biodiversity footprint measurement solutions for public and private actors
- Creators of the Global Biodiversity Score



### Advise, train & publications

- ✓ Strategy and integration of biodiversity into economic models
- Research and publication on economics
   & biodiversity topics
- Realization and presentation of training modules for all economic actors





First biodiversity footprint assessments: Schneider Electric, Hermès, Nestlé Waters France...

- Strong support of our shareholder Caisse des Dépôts
- Road-test and support from the companies of the B4B+ Club
- Team of > 20 people fully dedicated to the project



GBS's metric: MSA% - describes ecosystem's integrity between 0% and 100%

### FOREST ECOSYSTEM



### PASTURE ECOSYSTEM



## The GBS evaluates the fraction of biodiversity integrity lost or gained on a given surface, in MSA.km<sup>2</sup>

The unit used by the GBS integrates the MSA on the impacted surface

MSA x km<sup>2</sup>

Biodiversity loss or gain in % MSA Impacted surface in km<sup>2</sup>

An impact of 1 MSA.km<sup>2</sup> is equivalent to the destruction of 1 km<sup>2</sup> of undisturbed natural ecosystem





## The GBS covers the key pressures for terrestrial and freshwater biodiversity



Source: IPBES 2019

DIRECT DRIVERS

Land/sea use change Direct exploitation

Pollution Invasive alien species Othore



## The concept of "Scopes" allows to consider the impacts of the entire value chain





## GBS accounts separately for static (stocks) and dynamic impacts (variation of stocks)



Periodic gains or losses



Current impacts at the beginning of the assessment What is the area equivalent to the impacts of activities on biodiversity to date ? Impact evolution during the assessment period What is the area equivalent to the new impacts of activities on biodiversity during the assessment period ?



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![](_page_24_Picture_3.jpeg)

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![](_page_24_Picture_5.jpeg)

![](_page_24_Picture_6.jpeg)

![](_page_24_Picture_7.jpeg)

![](_page_25_Picture_0.jpeg)

![](_page_25_Picture_1.jpeg)

## Presentation of the CDC Biodiversité's benchmark analysis of the Agriculture & Agrifood sector

![](_page_25_Picture_3.jpeg)

Elisa Magueur B4B+Club Project Officer CDC Biodiversité

![](_page_25_Picture_5.jpeg)

Benchmark analysis provides information on sector's biodiversity performance

![](_page_26_Picture_1.jpeg)

## Main objectives

![](_page_26_Picture_3.jpeg)

- Sector's current contribution to biodiversity loss
- How the sector will be **affected by biodiversity loss**
- What **possible actions** can be taken to reduce its impact on biodiversity

- **Companies:** to estimate their impact and the main pressures on biodiversity but also to compare their impact to the sector average
- Investors: to rate the performance of certain companies against sectorial benchmarks
- Feed into the work of the **EU Green Taxonomy** by identifying low impact activities

![](_page_26_Picture_10.jpeg)

![](_page_27_Picture_1.jpeg)

• Context: Action 31 of the French national biodiversity plan - "by 2022, we will support 4 priority industries so that they significantly reduce their biodiversity footprint throughout the production and supply chain [...]"

Sector	Status	High-priority sector targeted by the National Biodiversity Action Plan						
Agriculture Agri-food	Published	Х						
Raw material extraction	Published (draft version)							
Construction sector	Published (draft version)	Х						
Chemicals industry	Published	Х						
Energy	Published (draft version)	X						
Manufacture of electrical equipment	Under development							
Manufacturing industry	Under development							
Manufacturing of basic and fabricated metals	Under development							
Distribution sector								
Waste and waste management sector								
Transport								
Financial services								
Non-financial services and other activities								

![](_page_27_Picture_4.jpeg)

### The Agriculture & Agrifood benchmark factsheet

![](_page_28_Picture_1.jpeg)

B4B GBS/ Billion

### Aim of the factsheet

The benchmark factsheet is designed for companies or investors to assess EXIOBASE in a sector's impact on biodiversity. Companies can use the factsheet to a sector simplex of sources sin, compare their impacts (e.g. assessed with the Global Biodiversity Score tool) to the sector average or to estimate their impact and main hunting and related service pressures on biodiversity. Also, investors can use it to screen their biodiversity impact, or rate specific companies' performance against sectoral benchmarks. Finally, factsheets will nourish the work of the EU Green Taxonomy by identifying low impact companies. It is supported by an explanatory appendix

Natural capital is fundamental to the food sector to promote resilience

Natural capital is the basis for provisioning and regulating ecosystem services (crops pollination, climate and pest regulation, clean water, etc) that enable the reduction of external inputs and thus costs. Natural capital increases the resilince of the production systems to holds and strates is used for cross holds and strates, including the effects of climate change. Along, genetic diversity in crops and livestock enables to cope with divers production environments and adaptic future challenges.

![](_page_28_Figure_10.jpeg)

![](_page_28_Figure_11.jpeg)

and whose roles in supplying ecosystem services are poorly understood.

### The graph showing results per sub-sector and per Scope are displayed in MSA.m<sup>2</sup>/kEUR of turnover of the whole sector The sector strongly contributes to changes in the state of natural canital Agriculture and Agrifond

through land use change and overuse of natural resources. Indeed, over one third of the terrestrial land surface is used for crop production or animal husbandry, and three quarters of the available freshwater resources are devoted to crop and livestock production. These impacts The results show that the industry group "Crop and animal production, hunting and related activities" impacts of are more than those larger than those of manufactured food products. Indeed, primary production consumes more land These immediate drivers are enhanced by climate change, but also international markets, demography, urbanization, trade and consumer preferences that lead to decreasing crop diversity. and water

CDC RICOVERSITÉ

Division 01: Crop and animal production, hunting and related

service activities Division 10: Manufacture of food

What does the sector include?

also for micro-organisms and invertebrates which are often not identifie

activities

Manufacture of food products

Manufacture of beverages

and water. The sector exhibits substantial impacts in both Scope 1 and Scope 3. Among the industries of the sector, two patterns can be distinguished The impacts of the industries related to Manufacture of food products and beverages fall mostly in Scope 3 (more than 96%), while those of the industries related to Crop and animal production are spread between Scope 1 (more than 68%) and Scope 3 (more than 25 %).

These results are consistent with the structure of the value chain in the agrifood sector: food manufacturing activities are buyers of agricultural raw materials, their Scope 3 impacts thus corresponding to Crop and animal prod Scope 1 impacts.

### Impact drivers breakdown: what are the main ones?

![](_page_28_Figure_18.jpeg)

Breakdown by EXIOBASE industry group and Scope

Sector average World average

Scope 1 Scope 2 Scope 3, ter 1 Regt of upstres

Benchmark factsheet

restrial Dynamic, vertically integra

Impact intensity in MSA m<sup>2</sup>/kEUR

The split by industry (see 3.2.8 in the annex) shows that climate change accounts for a larger share of the impacts of the industries related to attle breeding. This is consistent with the high contribution to climate change of these methane emitting attivities logy calls for further work

()) 200 m	BAB (#P	Factsh	eet: Agriculture	and	A			coc od	BIOON	/ERSITÉ	() ethan
	Science Different ef trajectories o for the whole - Reach a g - Return in	<ul> <li>Based Target for fort distribution methods h if reducing global impact on bi e world (not only the Agricultuu lobal no net loss in 2030, mear the "zone of functional integri</li> </ul>	Biodiversity ave been defined to draw different odiversity. The trajectories are designed e and Agrifood's sector) to co ing a world dynamic impact of 0 in 2030 ty of the Earth system" by 2050 <sup>1</sup>	Agriculto 100% -200%	ire and i	agrifoo	d sector	's effor	t per all	ocation sy	stem
	Allocation	Approach	Data used	0 10 500%							
ter 1	Equality	Everyone has the same right	Number of employees in the sectors (2010)	-800%	+Equa	lity				$ \setminus $	
	Efficiency	Efficiency Cost-effectiveness Cost of restoration (€.MSA/m <sup>2</sup> ) (2020)									$\backslash$
	Capability	Capability Industries' ability to pay Turnover (MK) (2011)				onty calents					
Costes	Sovereignty	Grandfathering	2020 dynamic impact (MSA.km*/year)	38-1400%	2020	2025	2120	2025	2040	2045	205.0

	Raw material production	Processing and manufacturing
Scope 1	Practice of particion agrowhere needus the use of chemicals and watter, e.g. down princips replants. Marrian genetic diversity of needus, banks and livestock town input formula yorksmin integrated includuse approaches including restoration approximation is not and biorastic activity the norma carbon approximation of an and interconsing patient management, operandicus of anomal field obtaines in biorastice activity approximation approximation (a).	Minimis food wate in manufacturing geosterion Less energy-consuming manufacturing processes
Scope 2	Use renewable electricity with demonstrated low-impacts on biodiversity increase energy efficiency of equipment	Use renewable electricity with demonstrated low-impacts o biodiversity increase energy efficiency of buildings and processes throug redesign (and equipment improvement)
Upstream scope 3	Switch to a lower impact, mainly plant-based diet in order to reduce the consumption of agricultural commodities	Minimise food loss and waste across the system by reducing supply chain inefficiencies
Downstream scope 3	Repurpose agricultural waste Industrial usage of compost	Addressing the recyclability and degradability of the packaging Shift diets: support consumers to make healthy an sustainable dietary choices, while shaping demand throug new product formulations and effective marketing

GLUE

Some impacts and impact drivers are not yet covered by the GBS methodology. They should not be ignored when defining the biodiversity action

- plan. For example: Avoid locating activities on or near sites of high environmental value or establish a specific management plan. For instance, avoid deforestation and encroachment on protected areas for livestock or crop production (in Brazil, Congo, etc.); Take measures to limit the spread of invasive species, particularly during the transport of marine species. Implement measures to detect and
- The green taxonomy describes Do No Significant Harm for ecosystems (DNSH) for the growing of perennial crops, the growing of non perennial crops and
- estock production. The activities: should "ensure the protection of solis, particularly over winter, to prevent erosion and run-off into water courses/bodies and to maintain soli organi
- hould not result in a decrease in the diversity or abundance of species and habitats of conservation importance or co
- management plans or conservation objective "where activities involve the production of novel non-native or invasive alien species, their cultivation should be subject to an initial risk asses

and on going monitoring to prode to ensure that sufficient safeguards are in place to prevent escape to the environment "should not lead to overgrazing other forms of degradation of grasslands."

### EU Technical Expert Group on Sustainable Finance (2020)

![](_page_28_Picture_33.jpeg)

![](_page_28_Picture_34.jpeg)

### Technical annex

![](_page_29_Picture_1.jpeg)

![](_page_29_Figure_2.jpeg)

The technical annex completes the factsheets by detailing the methodology and references and adding further results.

For the Agriculture & Agrifood benchmark factsheet, the technical annex includes:

- General technical elements & methodology explanations
- The detailed perimeter of the factsheet
- Additional results and graphs which could not fit into the factsheet
- EU taxonomy guidelines

You can read the document directly on : Technical annex to the factsheet

![](_page_29_Picture_10.jpeg)

## Perimeter of the Agriculture & Agrifood benchmark factsheet

![](_page_30_Picture_1.jpeg)

Crop & animal production, hunting and related service activities

Growing of non-perennial crops Growing of perennial crops Plant propagation Animal production Mixed farming Support activities to agriculture & post-harvest crop activities Hunting, trapping and related service activities Processing and preserving of meat and production of meat products Processing and preserving of fish, crustaceans and molluscs Processing and preserving of fruit and vegetables Manufacture of vegetable and animal oils and fats Manufacture of dairy products Manufacture of grain mill products, starches and starch products Manufacture of bakery and farinaceous products Manufacture of other food products Manufacture of prepared animal feeds

Manufacture of food products

Manufacture of beverages

Manufacture of beverages

![](_page_30_Picture_7.jpeg)

Biodiversity impacts of the Agriculture & Agrifood sector: one of the most impacting industries

![](_page_31_Picture_1.jpeg)

![](_page_31_Figure_2.jpeg)

\*excluding static Climate change.

Source: GBS 1.4.7 computation, Nov 2023, Elisa Magueur

![](_page_31_Picture_5.jpeg)

(1) The vertically integrated results refer to the sum of Scope 1, 2 and upstream Scope 3 impacts.

(2) The aquatic dynamic impact is not included in this factsheet due to the lack of reliability of the results.

![](_page_31_Picture_8.jpeg)

Source: GBS 1.4.7 computation, Nov 2023, Elisa Maqueu

![](_page_32_Picture_1.jpeg)

### Scope 1 dependencies for the Agriculture & Agrifood industries

![](_page_32_Figure_3.jpeg)

The GBS assesses the dependency on ecosystem services for direct operations and the supply chain. The score ranges from 0 % (no known dependency) to 100 % (very high dependency).

### FOCUS ON ECOSYSTEM SERVICES

Ecosystem services are services provided by biodiversity that enable or facilitate human activities, particularly economic ones.

The ENCORE database lists 21 ecosystem services based on CICES (Common International Classification of the Ecosystem Services) classification. To obtain the definition of the 21 ecosystem services are available on ENCORE website.

![](_page_32_Picture_8.jpeg)

Agriculture and Agri-Food - Wool, silk-worm cocoons -													i.								
Agriculture and Agri-Food - Sugar refining -																					
Agriculture and Agri-Food - Raw milk -																					
Agriculture and Agri-Food - Production of meat products nec-																					
Agriculture and Agri-Food - Processing vegetable oils and fats -																- L					
Agriculture and Agri-Food - Processing of meat poultry -																					
Agriculture and Agri-Food - Processing of meat pigs -	•																				
Agriculture and Agri-Food - Processing of meat cattle -																					
Agriculture and Agri-Food - Processing of Food products nec-	-																				
Agriculture and Agri-Food - Processing of dairy products -																					
Agriculture and Agri-Food - Processed rice -	-															)					
Agriculture and Agri-Food - Poultry farming -																í .					
Agriculture and Agri-Food - Pigs farming-	- 1															Sc	оре	e 1			
Agriculture and Agri-Food - Meat animals nec-	- 1															de	per	nden	cy sco	bigh	
Agriculture and Agri-Food - Manure treatment (conventional), storage and land application -	-																			ingii	
Agriculture and Agri-Food - Manure treatment (biogas), storage and land application -	-																1	80 %	high		
Agriculture and Agri-Food - Manufacture of fish products -					-			-								-	- (	60 %	mediu	m	
Agriculture and Agri-Food - Manufacture of beverages -	-															- ]		40 %	low		
Fishing, operating of fish hatcheries and fish farms; service activities incidental to fishing (05)-												_				<b>F</b>	-	20 %	very lo	W	
Agriculture and Agri-Food - Cultivation of wheat -	-																	0 % r	no knov	vn depe	ndencv
Agriculture and Agri-Food - Cultivation of vegetables, fruit, nuts -	-																				,
Agriculture and Agri-Food - Cultivation of sugar cane, sugar beet -	-																				
Agriculture and Agri-Food - Cultivation of plant-based fibers -	-																				
Agriculture and Agri-Food - Cultivation of paddy rice -	-																				
Agriculture and Agri-Food - Cultivation of oil seeds -	-																				
Agriculture and Agri-Food - Cultivation of crops nec-	-																				
Agriculture and Agri-Food - Cultivation of cereal grains nec-	-															V					
Agriculture and Agri-Food - Cattle farming -																					
Agriculture and Agri-Food - Animal products nec-								Ļ								<u>ار ا</u>					
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![](_page_33_Picture_1.jpeg)

![](_page_33_Figure_2.jpeg)

63 %

Crop & animal production

29 %

Manufacture of beverages

27 %

Manufacture of food products

![](_page_33_Picture_9.jpeg)

Source: GBS 1.4.7 computation. Nov 2023. Elisa Magueur

## Focus on the dependencies of the Agriculture & Agrifood sector

![](_page_34_Picture_1.jpeg)

![](_page_34_Figure_2.jpeg)

![](_page_34_Figure_3.jpeg)

Upstream average dependencies

29 %

Manufacture of food products

26 %

Crop & animal production

20 %

Manufacture of beverages

## Share of global terrestrial static impacts<sup>(1)</sup> - GBS 1.4.7

![](_page_35_Picture_1.jpeg)

![](_page_35_Picture_2.jpeg)

![](_page_35_Picture_4.jpeg)

## Share of global terrestrial dynamic impacts<sup>(1)</sup> - GBS 1.4.7

![](_page_36_Picture_1.jpeg)

![](_page_36_Picture_2.jpeg)

![](_page_36_Picture_3.jpeg)

Key results

Two types of industries to distinguish: intensity breakdown by group of industry and by Scope

![](_page_37_Picture_1.jpeg)

**CDC** BIODIVERSIT

### Terrestrial dynamic and static impact intensities (MSA.m<sup>2</sup>/kEUR) by group of industry and by Scope.

![](_page_37_Figure_3.jpeg)

Two types of industries to distinguish: crops and livestock husbandry with very significant Scope 1 impacts, and processing & manufacturing, which require crops and animal products and thus have very large Upstream Scope 3 impacts.

Two types of industries to distinguish: breakdown by industry and by Scope (terrestrial static)

![](_page_38_Picture_1.jpeg)

### Zoom on the impact intensities by EXIOBASE industry and by Scope. Industries to distinguish: crops & husbandry vs. manufacturing & processing Breakdown by EXIOBASE industry and Scope Terrestrial Static, Vertically integrated Cattle farming -Processing of meat cattle Meat animals nec -Cultivation of oil seeds -Cultivation of wheat Cultivation of paddy rice -Cultivation of cereal grains nec-Raw milk · Processed rice · lines Processing vegetable oils and fats industry Sector average Pigs farming -World average Cultivation of sugar cane, sugar beet -Animal products nec -EXIOBASE Scope Cultivation of vegetables, fruit, nuts -Processing of meat pigs -Scope 1 Processing of Food products nec-Scope 3, tier 1 Sugar refining -Rest of upstream Scope 3 Processing of dairy products -Poultry farming Production of meat products nec-Cultivation of crops nec -Cultivation of plant-based fibers -Manufacture of beverages -Manufacture of fish products Processing of meat poultry -Wool, silk-worm cocoons -60000 10000 20000 30000 40000 50000 70000 80000

Impact intensity in MSA.m<sup>2</sup>/kEUR of the EXIOBASE industry

Key impact drivers for the sector: Land use and Climate change (breakdown by industry and by pressure)

![](_page_39_Picture_1.jpeg)

### $\bigcirc$ Dynamic and static impact intensities (MSA.m<sup>2</sup>/kEUR) by industry and by pressure (vertically integrated).

![](_page_39_Figure_3.jpeg)

## Examples of possible actions to reduce the impact on biodiversity

![](_page_40_Picture_1.jpeg)

	Raw material production	Processing and manufacturing
Scope 1	<ul> <li>Practice of precision agriculture to reduce the use of chemicals and water</li> <li>Maintain genetic diversity of seeds, plants and livestock</li> <li>Integrated pest management</li> <li>Low-input farming systems</li> <li>Integrated landscape approaches including restoration</li> <li>Climate smart agriculture practices which help increase carbon sequestration in soil and biomass (fallow land, agroforestry)</li> <li>Optimization of animal feed choices (to minimize nitrogen excretion or methane production)</li> </ul>	<ul> <li>Minimise food waste in manufacturing operations</li> <li>Less energy-consuming manufacturing processes</li> </ul>
Scope 2	<ul> <li>Use renewable electricity with demonstrated low-impacts on biodiversity</li> <li>Increase energy efficiency of equipment</li> </ul>	<ul> <li>Use renewable electricity with demonstrated low-impacts on biodiversity</li> <li>Increase energy efficiency of buildings and processes through redesign (and equipment improvement)</li> </ul>
Upstream scope 3	• Switch to a lower impact, mainly plant-based diet in order to reduce the consumption of agricultural commodities	• Minimise food loss and waste across the system by reducing supply chain inefficiencies
Downstream scope 3	<ul><li>Repurpose agricultural waste</li><li>Industrial usage of compost</li></ul>	• Shift diets: support consumers to make healthy and sustainable dietary choices, while shaping demand through new product formulations and effective marketing

![](_page_40_Picture_3.jpeg)

One of the most impacting industries (the Scope 1 terrestrial dynamic impacts are on average 8 times higher than the world average).

Two types of industries to distinguish: crops and livestock husbandry with very significant Scope 1 impacts, and processing & manufacturing which purchase crops and animal products and thus have very large Scope 3 Upstream impacts.

The key impact drivers to monitor and reduce are mainly land use and climate change. For the aquatic impacts, the key drivers include also wetland conversion and land use in catchments of wetlands (linked to pollution).

![](_page_41_Picture_4.jpeg)

![](_page_42_Picture_0.jpeg)

![](_page_42_Picture_1.jpeg)

## Q&A and closing

![](_page_42_Picture_3.jpeg)

![](_page_43_Picture_0.jpeg)

Integrating nature into business as usual

Ask your questions on Mentimeter

![](_page_43_Picture_3.jpeg)

Go to <u>www.menti.com</u> and enter the code: **3467 7414** 

![](_page_43_Picture_5.jpeg)

![](_page_43_Picture_6.jpeg)

![](_page_43_Picture_7.jpeg)

![](_page_44_Picture_0.jpeg)

![](_page_44_Picture_1.jpeg)

Food & Agriculture companies

# Thanks for your participation!

![](_page_44_Picture_4.jpeg)

![](_page_44_Picture_5.jpeg)

![](_page_44_Picture_6.jpeg)