Cell 4 Food

Sustainability Report

ESG

Environmental, Social, and Governance

SDG

Sustainable Development Goals

2024

www.cell4food.eu

Company Overview
Company Name: Cell4Food – Cellular Culture, S.A.
Industry: Cellular Agriculture & Biotechnology
Location: Matosinhos, Portugal
Business Model: B2B licensing of cell-based seafood technologies
Team: Cell4Food employed in 2024 15 people, including 8 women and 7 men. Eleven of them are hired on a full-time basis, while the remainder work part-time. All employment contracts are based in Portugal
Legal form: Public Limited Company (Sociedade Anónima)
NACE Code: 8945004OG6DOCDGUBV19

Cell4Food is organized in several locations with
• *Headquarters* in CIIMAR - Interdisciplinary Centre of Marine and Environmental Research, Porto Cruise Terminal. Avenida General Norton de Matos, S/N, 4450-208 Matosinhos, Portugal.
• *Offices* in Edifício Olympus II. Avenida D. Afonso Henriques, 1462, R/C, 4450-013 Matosinhos, Portugal.
• *Research lab* and business incubation in TERINOV - Science and Technology Park of Terceira Island. Terra Chã, 9700-702 Angra do Heroísmo, Azores, Portugal.
• *Research lab* in the Institute of Science and Innovation for Bio-Sustainability (IB-S) at the University of Minho. Edifício 18, Lab 3.03, Campus de Gualtar, 4710-057 Braga, Portugal.
• *Research lab* and business incubation in Taguspark Incubator. Edifício Inovação II, R/C, Off 06/Lab 08/Lab 09 Porto Salvo, 2740-122 Oeiras, Portugal.
• *Collaborative product development lab* with Colab4Food in National Institute of Agrarian and Veterinary Research (INIAV). Rua dos Lagidos, Lugar da Madalena, 4485-655 Vairão, Vila do Conde, Portugal.

Company business
Cell4Food is an R&D-focused deep tech startup developing cellular agriculture technologies for fish, molluscs, and crustacean cell-based food products. As a technology provider, office and-lab based company, its ESG priorities focus on responsible sourcing, operational sustainability, and ethical governance.

Compensation and Collective Agreements
Salaries: Cell4Food salaries are above the national minimum wage and are reviewed annually.
Collective Bargaining: N/A

Company licencing object
BlueCell: A technology platform combining cell lines, tailored media, and bioreactor systems to develop marine cell-based seafood biomass through cellular aquaculture.

Company ESG commitment

The ESG commitments are an extension of our mission to pioneer sustainable seafood production through cutting-edge cellular aquaculture. These commitments not only ensure compliance but also reinforce our competitive advantages in responsible innovation and sustainability leadership.

This report adheres to 2024 version of the basic module of the **Voluntary Sustainability Reporting Standard for SMEs** (VSME ESRS) and demonstrates compliance with green financing eligibility through the following key assessments:

1. *Alignment* with *VSME ESRS Reporting Structure*
- Covers Environmental, Social, and Governance (ESG) categories
- Metrics are quantifiable, trackable, and material to the business
- Supports transparency and stakeholder engagement

2. *Green Financing Eligibility*
- Environmental metrics contribute to climate impact reduction
- Demonstrates resource efficiency (e.g., water, waste, energy)
- Includes sustainable procurement practices
- Shows compliance with EU sustainability regulations

Structure and Transparency of the Report

This report of sustainability was prepared according to the basic module of the Voluntary Sustainability Reporting Standard for non-listed SMEs (VSME). The basic module covers key sustainability topics, including greenhouse gas emissions, energy consumption, waste management, and social aspects, focusing on essential governance practices and environmental impact.

The report does not omit any information considered sensitive. All information presented reflects Cell4Food's internal practices and policies, being transparent and accessible to our stakeholders.

This report was prepared based on the operations of Cell4Food – Cellular Culture, S.A., covering all its operations in Portugal.

This document was revised through a Gap Analysis by Kiwa Sativa.

This document was designed by Sofia Pinheiro and verified by Mariana Roriz.

Board member coordinating and in charge of ESG:

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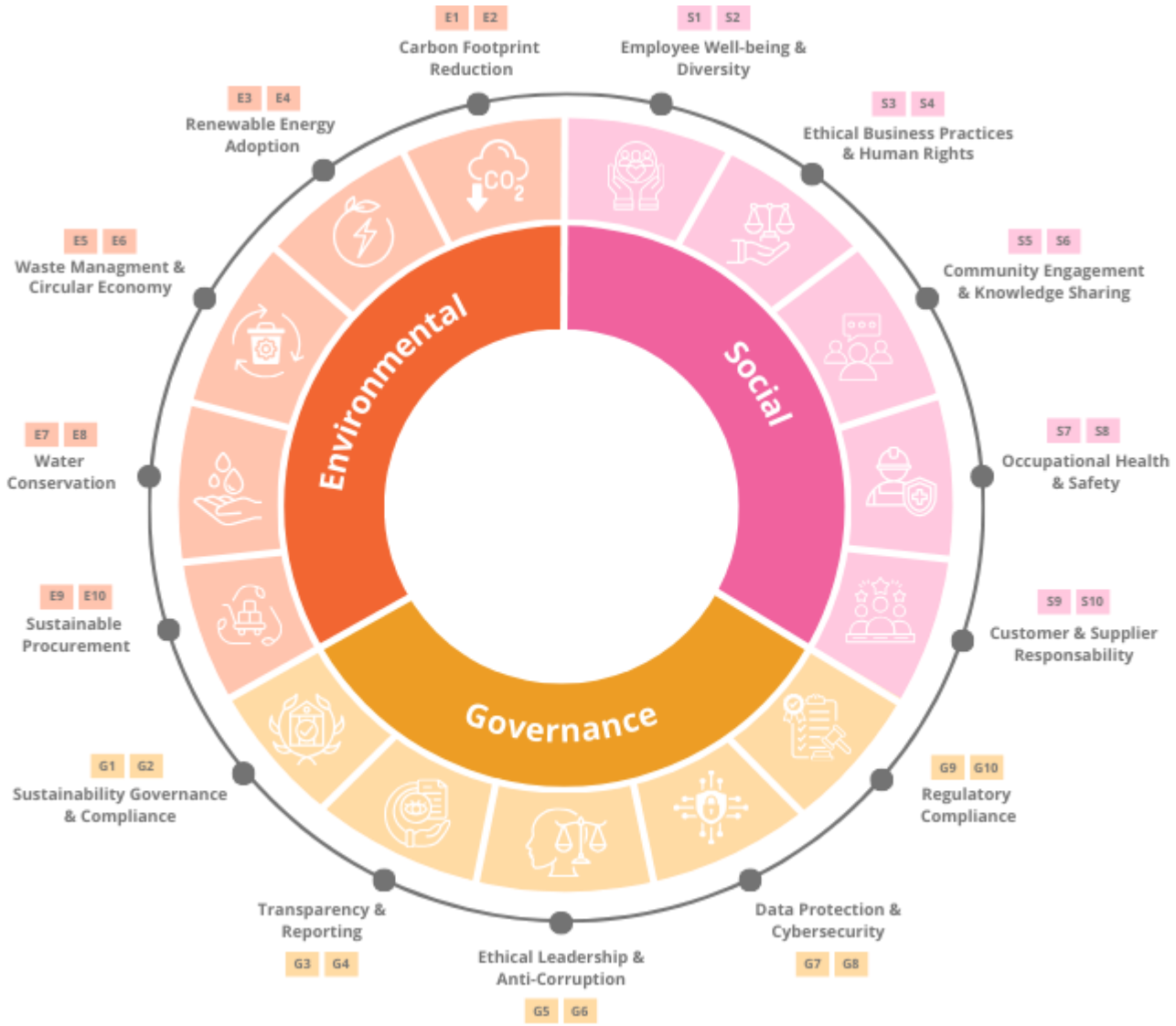
1. ESG Commitments

The Cell4Food Onboarding Manual (*Guia de Acolhimento*) provides essential guidance to all team members, ensuring alignment with our Environmental, Social, and Governance (ESG) framework. In accordance with the Voluntary Sustainability Reporting Standard for SMEs (VSME ESRS) 2024, we are committed to structured ESG reporting, enhancing transparency and accountability in our sustainability efforts.

The ESG report aims to improve our organizational performance, credibility with investors and stakeholders, facilitating access to funding, strengthening partnerships, being a sustainability-driven company. It also helps track key metrics such as carbon footprint reduction, ethical supply chain management, and governance integrity, reinforcing our commitment to responsible innovation in cell-based seafood. By integrating these ESG principles, we contribute to a more sustainable and resilient food system while positioning Cell4Food as a leader in the cellular aquaculture sector.



References:

Voluntary Sustainability Reporting Standard for SMEs (VSME ESRS) – 2024 | www.efrag.org

Global Reporting Initiative (GRI) Standards | www.globalreporting.org/standards/

Task Force on Climate-Related Financial Disclosures (TCFD) Framework | www.fsb-tcfd.org/

2. ESG Key Metrics

	Metrics	Annual Performance 2024
E1.	Annual CO_2 emissions from business travel (kg CO_2 per employee).	Total average annual CO_2 emissions from business travel (Porto–Angra do Heroísmo round trip) is 13,248 kg for three employees (368 kg × 12 trips × 3 persons).
E2.	Percentage of non lab remote work adoption to reduce commuting impact.	3 non lab personnel = in 15 days / 6 remote = 40% (the lab team cannot work remotely due to the nature of their tasks).
E3.	Percentage of office electricity from renewable sources.	71% renewable, (2024) average in Portugal.
E4.	Implementation of energy-efficient office equipment.	Labs and offices are rented, limiting the ability to make direct changes. However, the team raises awareness and encourages energy-efficient practices.
E5.	Reduction in paper usage per employee (tracked via printing logs).	All collaborators are provided a computer HP with tablet and writing pen to reduce paper use.
E6.	Waste management.	Cell4Food generated a total of 142-143 kg of waste, with 12-13kg classified as hazardous waste and 130kg as non-hazardous waste. With 61% incinerated waste and 39% being recycled.
E7.	Office water consumption per employee (litters per month).	Water consumption per employee is 25 L/day, based on 20 working days per month. Additionally, all team members are encouraged to drink at least 1L of water per day.
E8.	Water consumption per employee and reduction target per year.	The reduction target through utilities beyond Cell4Food's control, but the entire team is encouraged to actively support and promote reduction efforts.
E9.	Percentage of lab and office materials sourced from eco-friendly suppliers.	Whenever possible eco-friendly are specifically preferred for all suppliers and at least 50% target is pursued.
E10.	Number of sustainable procurement policies applied in supplier contracts.	Suppliers are streamlined to ensure that only the most sustainable options are chosen, with optimized delivery and logistics.
S1.	Employee retention rate over time.	Since 2022 we have 100% retention of employees.
S2.	Percentage of team members participating in health or wellness programs.	10 out of 17 team members engage in weekly gym sessions or equivalent activities. Additionally, the team participates in biannual team-building activities.
S3.	Percentage of suppliers assessed for ethical and fair labour practices.	1 in 10 suppliers (10%) have been accessed for ethical and sustainable practices, with a formal complaint process in place.
S4.	Number of ethical compliance training sessions attended by employees.	**Not achieved** – under development – Internal compliance sessions are planned.
S5.	Number of partnerships with universities and research institutions.	Formal partnerships with 4 universities and 6 research institutions.
S6.	Number of public events, webinars, or industry talks given by Cell4Food.	During the year of 2024, Cell4Food was involved in 4 events.
S7.	Number of reported workplace incidents or hazards per year.	No incidents were reported. With no deaths or health problems work-related.
S8.	Employers training.	On average, each employee at Cell4Food completed between 40 and 50 hours of training, with no distinction made between genders.
S9.	Supplier ESG performance monitoring (e.g., audits or self-assessments).	**Not achieved** – under development – no audits to suppliers were made in 2024.
S10.	Time to stakeholder (supplier/investor) inquiries about sustainability.	During 2024 there were 2 inquires about ESG from stakeholders and the time to reply was less than 5 days.
G1.	Number of ESG strategy meetings or board discussions per year.	There was one meeting and one board discussion in 2024. The goal is to increase this to 2 board meetings per year and 1 meeting with the entire team.
G2.	ESG criteria in decision-making (e.g., project funding approval).	**Not achieved** – under development – planned for 2025.
G3.	Frequency of ESG data disclosures or sustainability reports published.	**Not achieved** – under development – planned for 2025.
G4.	Key stakeholders engaged in ESG-related discussions annually.	Three stakeholders (Investors) have been engaged with ESG- related discussions in 2024.
G5.	Internal audits conducted on ethical business practices.	**Not achieved** – under development – planned for 2025.
G6.	Percentage of employees trained in ethical decision-making.	**Not achieved** – under development – planned for 2025.
G7.	Number of cybersecurity incidents reported per year.	No cybersecurity incidents reported in 2024.
G8.	Percentage of employees trained in GDPR data protection best practices.	All relevant Cell4Food employees have been trained in GDPR data protection best practices. Cell4Food has a Data Management Plan (DMP) developed for EIC Accelerator.
G9.	Company policies aligned with EU sustainability regulations.	Cell4Food pays attention to EU Taxonomy for Sustainable Activities and - Eco-design for Sustainable Products Regulation (ESPR).
G10.	Number of ESG compliance gaps identified and addressed per year.	25% gaps were identified in 2024 and will be improved in 2025.

*CO_2 emissions were calculated based on Scope 3 of the GHG Protocol using the recommended methodology for calculating emissions from air travel and electricity consumption.

3. SDG Report for Cell4Food

Complementary to ESG (2024)

Sustainable Development Goals

3.1 About Cell4Food Commitments with SDG

Cell4Food is Committed with the SDGs

Cell4Food is a biotech startup pioneering cell-based seafood in an innovation-driven industry that intersects sustainability, food security, and climate action. Aligning with the United Nations Sustainable Development Goals (SDGs) is not just a corporate responsibility, but a strategic advantage that drives business growth, investment potential, and market positioning. We embrace the SDGs as a comprehensive framework for human, social, and environmental development, consisting of 17 goals, 169 targets, and 232 indicators. Our alignment with these goals reflects our commitment to sustainable and responsible innovation in the food industry.

Reference: *Sustainability 2019, 11(7), 1961*; https://doi.org/10.3390/su11071961

Why SDG Alignment is a Strategic Priority for Cell4Food

Integrating SDG principles into our work highlights Cell4Food's contribution to sustainable food production while reinforcing our long-term business growth. Aligning with the Sustainable Development Goals (SDGs) helps us to build a responsible and future-ready company, contributing to global sustainability efforts. This alignment supports us in:

- Attracting investors looking for sustainable and innovative food solutions.
- Building strategic partnerships with industry players, researchers, and policymakers.
- Ensuring compliance with emerging sustainability and food safety regulations.
- Positioning our company in the growing market for responsible seafood alternatives.
- Mitigating risks related to environmental challenges and resource constraints.

Summary of Cell4Food's SDG Impact Ranking

3.2. Ranking of Cell4Food Impact and Contribution to the SDG Targets

Direct Contribution

These targets are closely aligned with Cell4Food core activities in biotech-driven, sustainable seafood production.

Goal #	SDG Target	Justification
Goal 2	**Target 2.4** – Promote sustainable food security.	Cell4Food directly enhances food security by developing alternative seafood through **protein source diversification**, that reduces reliance on wild-caught fish, molluscs, and crustaceans, helping to stabilize seafood supply chains and mitigate overfishing pressures.
Goal 3	**Target 3.9 –** Reduce illness from pollution.	Cell-based seafood **eliminates contaminants** such as mercury, microplastics, and antibiotic residues, which are prevalent in traditional seafood due to ocean pollution and intensive aquaculture. This provides a safer and healthier protein source for consumers.
Goal 6	**Target 6.3 –** Improve water quality.	Cultivated seafood production platform eliminates waste discharge, antibiotics, and excessive nutrient runoff, associated with conventional aquaculture (which contribute to water contamination, eutrophication, and habitat degradation in marine and freshwater ecosystems).
Goal 8	**Target 8.2 –** Innovation-driven economic growth.	By pioneering food biotech innovation, Cell4Food contributes to the growth of the **protein source diversification**, creating new markets, jobs, and investment opportunities in sustainable food production.
Goal 8	**Target 8.4 –** Decouple economic growth from resource use.	Cell-based seafood requires significantly **less land, water and energy**, (than traditional fisheries and aquaculture), reducing environmental pressure while enabling sustainable economic development.
Goal 9	**Target 9.5 –** Enhance scientific research and innovation.	As an R&D-driven biotech startup, Cell4Food advances **protein source diversification** technology by providing new additional protein sources, offering a **complementary solution** to existing seafood production and contributing to global food system resilience.
Goal 12	**Target 12.1 –** Promote sustainable production.	Cell-based seafood reduces industrial fishing pressure, lowers bycatch, and **minimizes resource-intensive practices** in seafood supply chains, promoting more sustainable and responsible food production.
Goal 12	**Target 12.3 –** Reduce food waste.	Cell-based seafood **eliminates unnecessary seafood waste** by preventing bycatch, spoilage, and inefficiencies in the supply chain, ensuring more efficient resource utilization.
Goal 14	**Target 14.1 –** Reduce marine pollution.	By providing another solution for the need for large-scale fishing and aquaculture, Cell-based seafood helps **reduce plastic pollution** from fishing gear, bycatch waste, and nutrient runoff, directly benefiting marine ecosystems.
Goal 14	**Target 14.5 –** Enhance marine conservation.	Cell4Food's technology **reduces human impact on marine biodiversity**, providing a sustainable seafood alternative that allows fish populations and marine habitats to recover.
Goal 17	**Target 17.1 –** Mobilize funding for sustainability.	Cell4Food secures biotech financing through public and private **investments that are aligned with ESG principles**, supporting the development of sustainable food solutions that align with global sustainability goals.
Goal 17	**Target 17.6 –** Foster international tech cooperation.	Through partnerships with global researchers, seafood companies, and industry leaders, Cell4Food contributes to **knowledge-sharing, technology transfer**, and collaborative innovation in sustainable food production.

Indirect Contribution

These targets benefit from Cell4Food actions but are not the company primary mission.

Goal #	SDG Target	Justification
Goal 9	**Target 9.1 –** Develop sustainable infrastructure.	Cell4Food's technology development contributes to enhancing **food production infrastructure** by promoting biotech-driven seafood alternatives (reducing reliance on traditional fishing and aquaculture systems) and supporting the transition to more sustainable and resilient food supply chains.
Goal 10	**Target 10.2 –** Promote economic inclusion.	By offering sustainable and scalable seafood alternatives, Cell4Food supports greater food accessibility and contributes to economic inclusion by **making nutritious, ethical protein sources** available to broader markets, including regions affected by overfishing and declining seafood stocks.
Goal 13	**Target 13.2 –** Integrate climate policies.	Cell-based seafood **reduces greenhouse gas emissions** by eliminating fishing fleet fuel consumption, minimizing the environmental footprint of fisheries and aquaculture (and reducing the need for resource-intensive feed production) making it an important tool for climate-friendly food production.
Goal 13	**Target 13.3 –** Raise awareness on climate action.	Through engagement in **sustainable food advocacy**, partnerships, and industry dialogue, Cell4Food raises awareness about the climate impact of traditional seafood production, encouraging more sustainable consumer and business choices.
Goal 17	**Target 17.10 –** Promote inclusive trade.	Cell4Food contributes to global food trade innovation by establishing a new **protein source diversification** sector, fostering economic opportunities for biotechnology startups, food companies, and investors, and enabling a more sustainable and equitable seafood industry.
Goal 17	**Target 17.14 –** Improve policy coherence.	The company aligns with **national and international regulatory frameworks** for biotechnology, food safety, and sustainability, ensuring its technology and products meet global standards for responsible food innovation.
Goal 17	**Target 17.16 –** Strengthen multi-stakeholder partnerships.	Cell4Food actively collaborates with seafood companies, researchers, regulatory bodies, and investors to accelerate the adoption of cultivated seafood, fostering **strong industry partnerships** that contribute to shared sustainability goals.

4. Cell4Food alignment with the European Sustainable Finance Disclosure Regulation (SFDR)

Cell4Food follows the framework proposed by the Global Impact Investing Network (GIIN) using IRIS+ as a comprehensive system designed to help investors and companies measure, manage, and optimize their social and environmental impact.

https://iris.thegiin.org/

IRIS+ Alignment Assessment:

1. Impact Goals and Strategies:

- Alignment: Cell4Food focus on cell-based seafood aligns with the IRIS+ Impact Themes of "Sustainable Agriculture", "Climate Change Mitigation", and "Biodiversity & Ecosystem Conservation." They also show alignment with "Clean Energy" due to renewable energy adoption.
- Plans for 2025: Refine impact goals to specifically address how their B2B licensing model will contribute to these themes. For example, how will their technology reduce pressure on wild fish stocks or lower emissions compared to traditional seafood production at scale. Define clear target outcomes for their licensees.

2. Key Performance Indicators:

- Alignment: The report includes some relevant KPIs, such as annual CO2 emissions from business travel (E1), percentage of remote work adoption (E2), and percentage of eco-friendly sourced materials (E9).
- Plans for 2025: Given their research stage, prioritize leading indicators that predict future impact. Examples include:
  - Research & Development Expenses Allocated to Sustainability Improvements (OI1012): Quantify the investment in developing more sustainable cell-based seafood technologies.
  - Number of Licensees Committed to Specific Sustainability Targets: Track commitments from future licensees to adhere to environmental standards.
  - Projected Reduction in Environmental Impact Compared to Conventional Seafood Production (Based on Modelling): Use lifecycle assessments to estimate the potential positive impact of their technology at scale.
  - Collaboration with Research Institutions: Track the "Number of Partnerships with Universities and Research Institutions (S5)" to measure knowledge sharing and innovation.

3. Stakeholder Engagement:

- Alignment: The report mentions engagement with investors and the time to respond to inquiries.
- Plans for 2025: Focus on engaging potential licensees and understanding their needs and sustainability goals. Use metrics such as:
  - Number of Potential Licensees Engaged in Sustainability Discussions: Track efforts to educate and influence future partners.
  - Feedback from Potential Licensees on the Sustainability Aspects of the Technology: Gather data on how potential partners value the environmental benefits.

4. Impact Due Diligence:

- Alignment: The report indicates planned ESG criteria in decision-making (G2).
- Future objectives: Develop a framework for assessing the potential impact of future licensees:
  - Sustainability requirements for licensees: Integrate this in their contracts.
  - Monitoring the actual impact of licensees: Develop a method to track environmental and social metrics once their technology is commercialized.

5. Alignment with Other Standards:

- Alignment: The report references VSME ESRS, GRI, and TCFD.
- Future objectives: Continue to monitor relevant standards and frameworks, adapting their reporting as needed.

6. Reporting and Transparency:

- Alignment: The report demonstrates a commitment to transparency.
- Future objectives: Focus on building systems for data collection and reporting that will be scalable as the company grows. Start collecting baseline data now to track progress over time.
- Frequency of ESG data disclosures or sustainability reports published (G3).

Specific IRIS+ Metrics Alignment (Revised):

Relevant IRIS+ metrics, tailored to Cell4Food B2B research stage:

- OI1012 - Research and Development Expenses.
- PD8191 - Licenses Granted: Track how many licenses were granted/sold in the reporting period.
- OA2851 - Types of Stakeholders Engaged: Specify the types of stakeholders engaged in the company.
- OA8271 - Description of methods to assess and prioritize stakeholder engagement.

Future Directions:

- Prioritize building systems for future impact measurement: Given Cell4Food's research stage, focus on establishing robust systems for data collection and analysis that will be scalable as the company grows and commercializes its technology.
- Focus on leading indicators: Track metrics that predict future impact, such as R&D spending on sustainability and licensee commitments to environmental standards.
- Engage potential licensees: Understand their needs and sustainability goals to ensure the technology meets their requirements.
- Develop a framework for assessing the impact of future licensees: This will ensure that the technology is used in a way that maximizes its positive impact.
- Refine SDG alignment: While the report demonstrates good alignment with SDG Goals, it could benefit from more specific alignment with SDG targets using relevant IRIS metrics.

By focusing on these recommendations, Cell4Food will strengthen its alignment with IRIS+ principles and demonstrate its commitment to sustainability to investors and other stakeholders.

Responsibility and Limitation Statement

This ESG and SDG Report of Cell4Food – Cellular Culture, S.A. has been prepared based on the best information available at the time of its issuance and in accordance with the Voluntary Sustainability Reporting Standard for SMEs (VSME ESRS) – 2024.

The metrics, commitments, and objectives described herein represent the company's ongoing efforts to improve its environmental, social, and governance (ESG) performance. They do not constitute any binding guarantee or future commitment towards third parties.

This report does not replace external audits and should not be used in isolation for investment or financing decision-making purposes without proper verification and contextual assessment.

Cell4Food – Cellular Culture, S.A. reserves the right to review, update, or correct the information presented herein whenever necessary or whenever new information or circumstances justify such changes.